



# Virginia Farm to School Network 2018 Evaluation Report

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## **Virginia Department of Education**

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## Executive Summary

The Virginia Farm to School Network aims to develop Farm to School opportunities within Virginia for schools, farmers, and students. This evaluation project was designed to get a snapshot of the Virginia Farm to School program in order to describe activities currently taking place, understand perceptions of the program, and identify ways to strengthen the Virginia Farm to School Network. Throughout winter 2017-2018, two surveys were developed to assess the perceptions, barriers, and opportunities associated with the Farm to School program in Virginia. The first survey was administered to nutrition directors and associated personnel (N=145). The second survey was administered to farmers and other agricultural producers (N=212). Surveys were open for five weeks throughout March and April of 2018. The survey was collaboratively analyzed by the Virginia Department of Education Office of School Nutrition Programs and Virginia Tech. Overall, the findings from this study shed light on perceptions, current Farm to School activities, opportunities, and areas for improvement within the Virginia Farm to School Network.

These findings have led the evaluation team to arrive at key recommendations to improve opportunities for participation in Farm to School. These recommendations are grouped within three key areas, below:

1. *Develop trainings and resources for school nutrition professionals on:*
  - 1.1. How to track local food purchases.
  - 1.2. The social, economic, and environmental importance of Virginia's agrifood system.
  - 1.3. Streamlining local purchase procedures and integrating local procurement into common purchasing habits.
  - 1.4. How to support nutrition education through school gardens, classroom and curricular connections, and community partnerships such as SNAP-ed and Master Gardeners
  - 1.5. The marketing and promotional advantages to Farm to School to improve external perceptions of school nutrition programs.
  - 1.6. Effective methods for finding local foods for school use.
  - 1.7. Efficiency as it relates to kitchen preparation, financial management, USDA foods, and inventory management to make time and funds available for increased local food use.
  - 1.8. Developing a definition of "local" for each school division.
2. *Develop interagency collaboration to connect local products with school nutrition purchasers and track local sales to schools.*
  - 2.1. Develop technical infrastructure and training to establish networks and connect buyers and vendors through programs such as Virginia MarketMaker. [Aligns with objective 2.7 of the Virginia Farm to Table Plan.]

- 2.2. State agency collaboration and support is needed to help develop better aggregation, delivery, ordering, and invoicing systems.
3. *Work with Virginia Cooperative Extension, Virginia State University's Small Farm Outreach Program, and Virginia Department of Agriculture and Consumer Sciences (VDACS) to plan and implement trainings for farmers on:*
  - 3.1. Developing meaningful market relationships with community schools.
  - 3.2. The social, economic, and environmental benefits of selling to schools.
  - 3.3. Developing transparent food safety plans, Good Agricultural Practices (GAP) plans, or other similar plans.
  - 3.4. Procurement procedures for working with schools, including how to develop a forward contract (contracting in advance for food delivered seasonally).
  - 3.5. Maximizing sales opportunities with child nutrition programs, including season extension possibilities, summer feeding programs, and preschool sales.
  - 3.6. Selecting desirable crops to grow for schools.
  - 3.7. Applying for available grants to support Farm to School activities.
4. *Develop evaluation methods to determine whether increasing access to healthy, local foods and education opportunities surrounding Farm to School activities can result in healthier communities and individuals through rural economic development and obesity prevention.*

## Introduction

The Virginia Farm to School Network aims to elevate the health and well-being of Virginia's students, and desires to create and strengthen markets for Virginia grown products (Benson & Bendfeldt, 2010). In 2016, 64 percent of Virginia school divisions had active Farm to School programs, which ranked the Commonwealth 16<sup>th</sup> in an analysis of states' Farm to School programs (Lyson, 2016). Our study finds that number has grown, so that in 2018, 75 percent of Virginia school divisions are actively participating in Farm to School programs. The Virginia Farm to School program is an important part of the initiative to improve access to healthy, fresh foods for all Virginia children. Additionally, the Farm to School program has great opportunity to improve economic viability of direct marketing farms in Virginia. This program represents mutually beneficial connections for children, farmers, suppliers, educators, administrators, and other Farm to School stakeholders across Virginia.

Total dollars spent on locally sourced foods in Virginia, during the 2016-2017 school year, as reported among nutrition directors survey respondents, was \$15,441,213.46. This shows an increase from the 2013-2014 school year, in which \$7,778,180 was spent on local foods in



Virginia schools, as reported in the USDA Farm to School Census (2018). This figure demonstrates significant interest in local food procurement, and shows how school nutrition professionals are actively establishing means through which to connect to local farmers and suppliers. Expenditures on locally sourced foods is likely to continue to

increase in future years as the Farm to School Network builds connections among farmers, local food suppliers, and school nutrition professionals.

Farmers and school nutrition professionals uniquely understand the challenges and opportunities of participation in the Virginia Farm to School Program. In order to gather perspectives from key stakeholders in Farm to School, we conducted surveys of Virginia farmers/producers (N=212) and school division nutrition directors and associated personnel (N=145). We asked for feedback on perceived benefits of Farm to School, challenges in marketing and procuring farm products in Virginia schools, and perspectives on potential barriers to providing farm fresh products in Virginia schools. With the information collected throughout this evaluation, we seek to improve the ways we help farmers market to schools and other institutions, and how we improve procurement, to continue to improve opportunities to get nutritious, farm fresh foods onto the table in Virginia schools, summer feeding sites, and early child care institutions.

The 2018 Farm to School survey has been funded by a USDA Farm to School Grant and is part of a larger project to evaluate and develop Farm to School opportunities within Virginia. It is sponsored by the Virginia Department of Education and Virginia Polytechnic Institute (Virginia Tech). This evaluation aims to inform the development of more targeted support to help farmers meet their business goals for developing new and existing institutional markets for farm fresh products. This evaluation also aims to improve ways to get fresh fruits, vegetables, and other farm products on the menu at Virginia schools.

Several key recommendations generated in the [Virginia Farm to Table Plan](#) inform the Virginia Farm to School Network, reported in Table 1. The Virginia Farm to Table Plan (Bendfeldt, Tyler-Mackey, Benson, Hightower, & Niewolny, 2012) was developed collaboratively with stakeholders to identify issues facing farmers, innovators across the food system, and communities across the state, and to suggest how those can be addressed to strengthen Virginia’s overall agrifood system. Several key recommendations generated in the plan inform the Virginia Farm to School Network, reported in Table 1.

**Table 1: Recommendations from the Virginia Farm to Table Plan that inform the Farm to School Program**

<p><b>Recommendation 3.5:</b> Provide education, resource, and policy support for the Virginia Farm to School program to increase the amount of local food procured in Virginia’s public schools (p. 43)</p>
<p><b>Recommendation 3.6:</b> Gather and suggest adjustments for purchasing policies of local and state government entities to encourage or incentivize local food procurement.</p>
<p><b>Recommendation 3.7:</b> Assess the current capacity and participation of localities and permitted waste management facilities in food waste diversion and composting programs.</p>
<p><b>Recommendation 4.1:</b> Identify programs/curricula in Virginia (or elsewhere) that focus on healthy eating and cooking with local and regional foods, focusing first on hands-on, experiential school programs to empower K-12 youth and then to a broader community with topics including:</p> <ol style="list-style-type: none"> <li>a. Food choices/origins</li> <li>b. Safe food preparation and preservation</li> <li>c. Home and community gardening</li> <li>d. Food waste awareness</li> <li>e. Composting and alternative reuse options.</li> </ol>
<p><b>Recommendation 4.5:</b> Conduct a cost and ecological analysis comparing local/regional foods to foods purchased and transported from other states, regions, and countries</p> <ol style="list-style-type: none"> <li>a. Consider economic costs, direct, indirect and induced effects, and ecological footprints,</li> <li>b. Create educational materials and/or a social marketing campaign to share findings from the analysis and embed materials within educational programs/curricula identified under 4.1.</li> </ol>

**Recommendation 4.7:** Establish a community food system recognition program and a central information hub for hospitals, restaurants, schools, universities and other institutions to award and voluntarily list commitments to procurement of locally-grown Virginia foods.

**Recommendation 4.8:** Establish Virginia as host site for the Food Corps program, similar to Virginia Tech's Sustainable Food Corps, to give young adults work and skill training, while addressing food access and security issues.

In 2007, the General Assembly passed Senate Joint Resolution 347, which requested that the Secretary of Agriculture and Forestry and the Secretary of Education establish a Farm to School Task Force to develop a plan for implementing a Farm to School Program in the Commonwealth. SJR 347 also asked this panel to determine the best method of providing information to educational institutions. The Virginia Farm to School Task Force comprised stakeholders and key informants knowledgeable about school nutrition and agricultural production. They recommended:

1. Strengthen the Task Force's partnerships between the Virginia Department of Agriculture and Consumer Sciences and the Virginia Department of Education.
2. Redesign the Virginia Farm to School web resources to target farmers, distributors/suppliers, and educational institutions.
3. Locate funding sources for Good Agricultural Practices (GAP), and Good Health Practices (GHP).

In 2012, Virginia Tech conducted a Farm to School Program Assessment (Benson & Niewolny, 2012), The Virginia Department of Education assisted in the evaluation process, which was funded by a United States Department of Agriculture Specialty Crop Block Grant. This assessment surveyed nutrition directors (n=85), finding a significant desire to serve local meals in schools, participate in Farm to School Month, and support their local economies. Nutrition directors provided feedback as to what kind of support they would like to see to connect them with local farmers. This feedback has informed Farm to School Network programming and provides a background for the assessment reported here.

This evaluation has been oriented toward understanding current Farm to School activities, perceptions of the program, barriers to participation, opportunities for improvement, and specific areas for future consideration for the program.



## Survey Methodology

Throughout winter 2017-2018, two surveys were developed to assess the perceptions, barriers, and opportunities associated with Farm to School. This survey was collaboratively developed between the Virginia Department of Education, Office of School Nutrition Programs, and Virginia Tech's Department of Agricultural, Leadership, and Community Education. Most of the survey instruments were authored originally, but several were modified versions from a 2011 survey conducted in partnership with Virginia Tech, the Virginia Department of Education, and Virginia Department of Agriculture and Consumer Service (VDACS) Virginia Grown Program (Benson & Niewolny, 2012).

The first survey was administered to nutrition directors and associated personnel (N=145). The survey was disseminated through the central office of the Virginia Department of Education's Office of School Nutrition Programs. While the nutrition personnel were encouraged to respond to the survey, it was not a mandatory requirement that they respond.

The second survey was administered to farmers and other agricultural producers (N=212). Survey recruitment materials indicated that this was a survey to improve the Virginia Farm to School Network, and thus, farmers who were more interested in the Farm to School program, generally speaking, may have self-selected to complete the survey. The farmer respondents of the survey may therefore be understood as farmer stakeholders in Farm to School, more than a simple general representation of the entire population of Virginia farmers.

Surveys were open for five weeks throughout March and April of 2018. The survey was collaboratively analyzed by the Virginia Department of Education Office of School Nutrition Programs and Virginia Tech. The Virginia Tech Institutional Review Board reviewed the survey and granted approval for administration of the two questionnaires (#18-039).

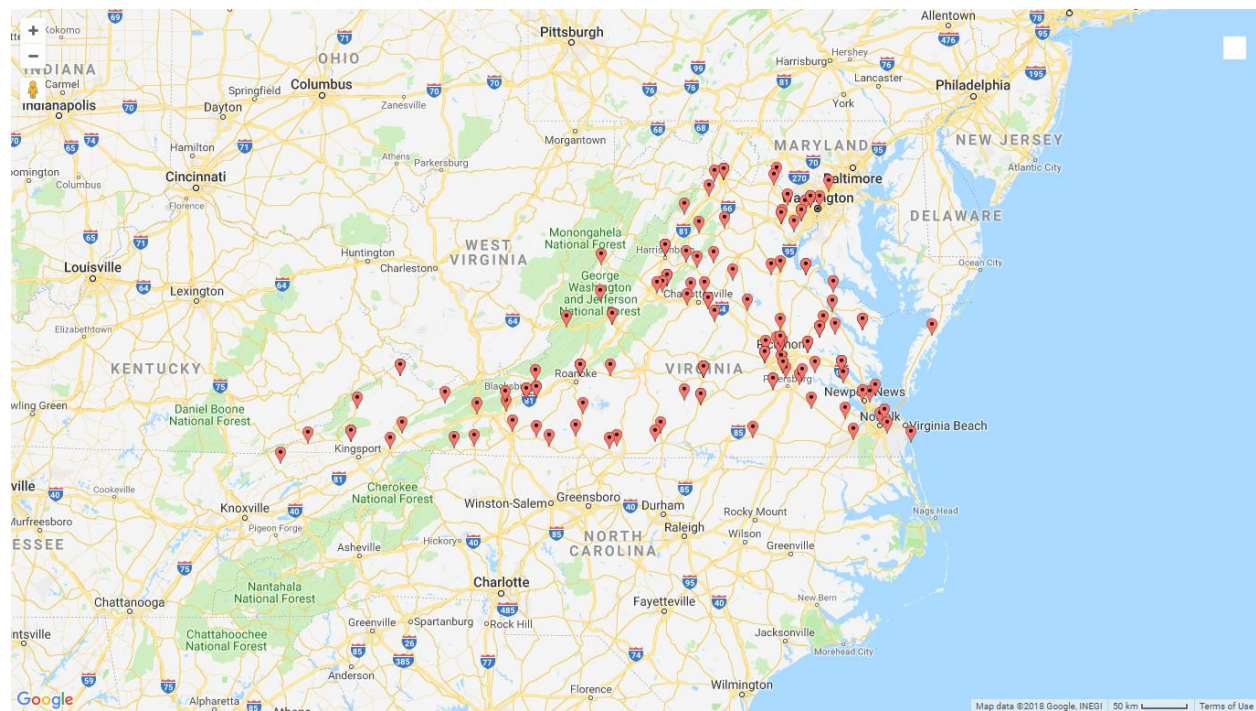
Data for this study were analyzed using Microsoft Excel Data Analysis and the SPSS statistical package. A total of 145 individuals accessed the online school nutrition personnel survey instrument during the time it was available, while a total of 212 individuals accessed the online farmer/producer survey instrument during the time it was available.

# Survey Respondents

## Nutrition Directors and Associated Personnel Survey Respondents

There were a total of N=145 total responses, and n=125 validated responses. Responses were defined as validated when the survey respondent answered at least one question. Because several counties are repeated, 105 school districts reported, out of 132 school divisions, for a 79.5 percent response rate.

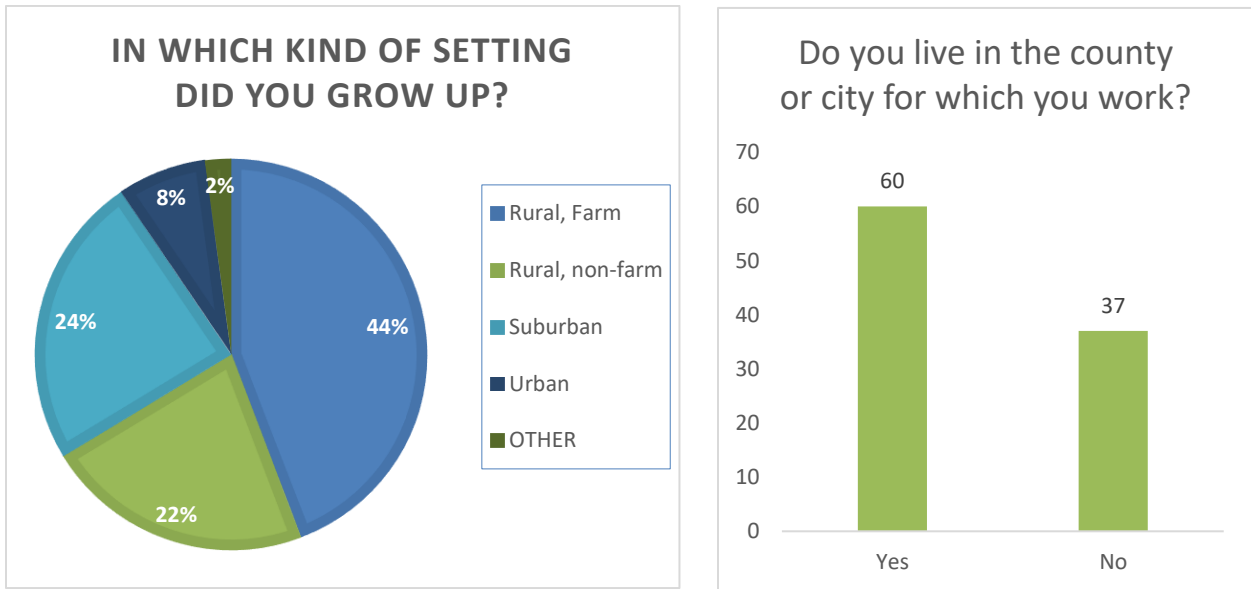
**Figure 1: Geographical dispersion of Nutrition Directors and associated personnel survey respondents**



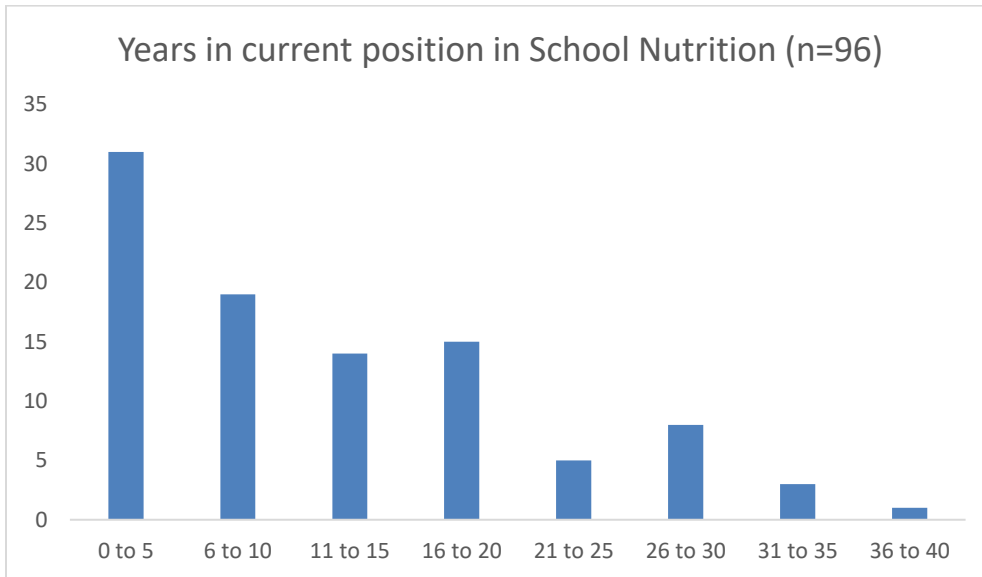
Most school divisions had only one survey response, with very few repeats. We can therefore cautiously surmise that each survey response represents a school division. Data was cleaned for the analysis in order to eliminate repeated school divisions wherever appropriate. Of school divisions responding to the survey, the median number of schools in the division was six, whereas the number of schools in the division varied widely from one to 189. Thus, the average number of schools in reporting divisions was 15. Please see Appendix A for a breakdown of school divisions responding to the nutrition directors' survey.

Who are the individuals who make the Farm to School decisions? The survey asked respondents where they had grown up to see how this interacts with other Farm to School activities. As the below chart demonstrates, 44 percent grew up on a rural farm, and 66 percent grew up in a rural area. A majority live in the county or city in which they work.

**Figure 2: School Nutrition Personnel Background**



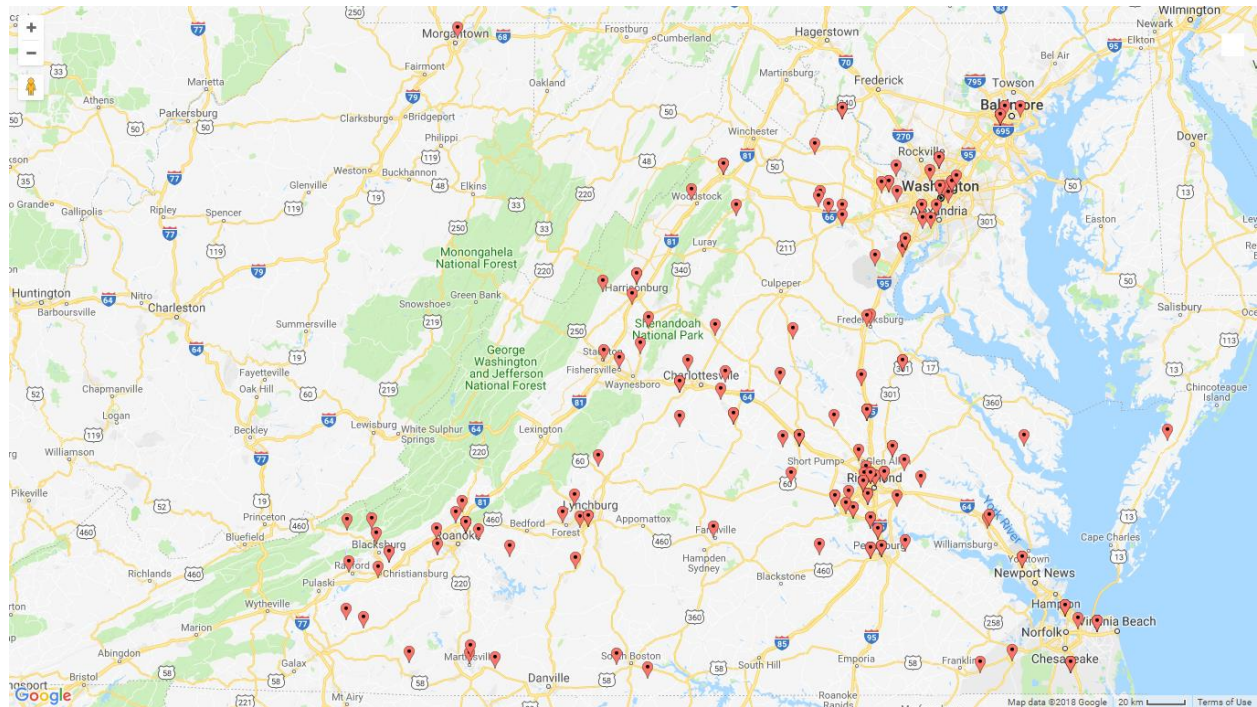
The average number of years that respondents reported working in their current position in School Nutrition is 12.0 years, but as the below demonstrates, a majority have worked there ten years or less.



## Farmer/Producer Survey Respondents

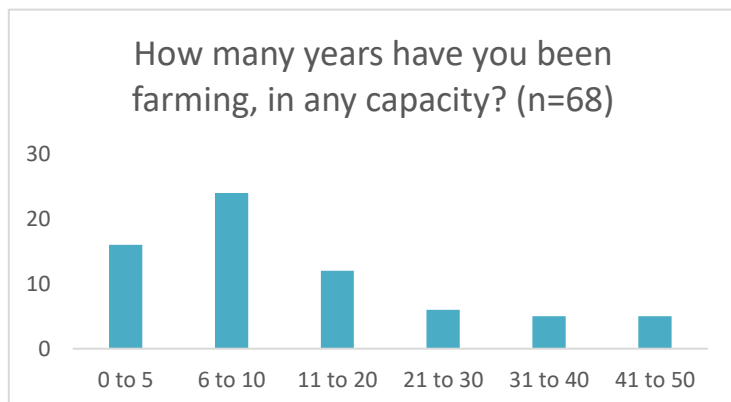
There were a total of N=212 responses and n=197 validated responses. Responses are defined as validated when the survey respondent answered at least one question. Because multiple agricultural organizations were utilized for survey dissemination, the response rate is unknown. The geographical distribution shows sufficient dispersion of responses. Respondents had a wide and dispersed age range, and a good gender balance; 49 percent reported as female, 51 percent reported as male.

**Figure 3: Geographical dispersion of farmer/producer survey respondents.**



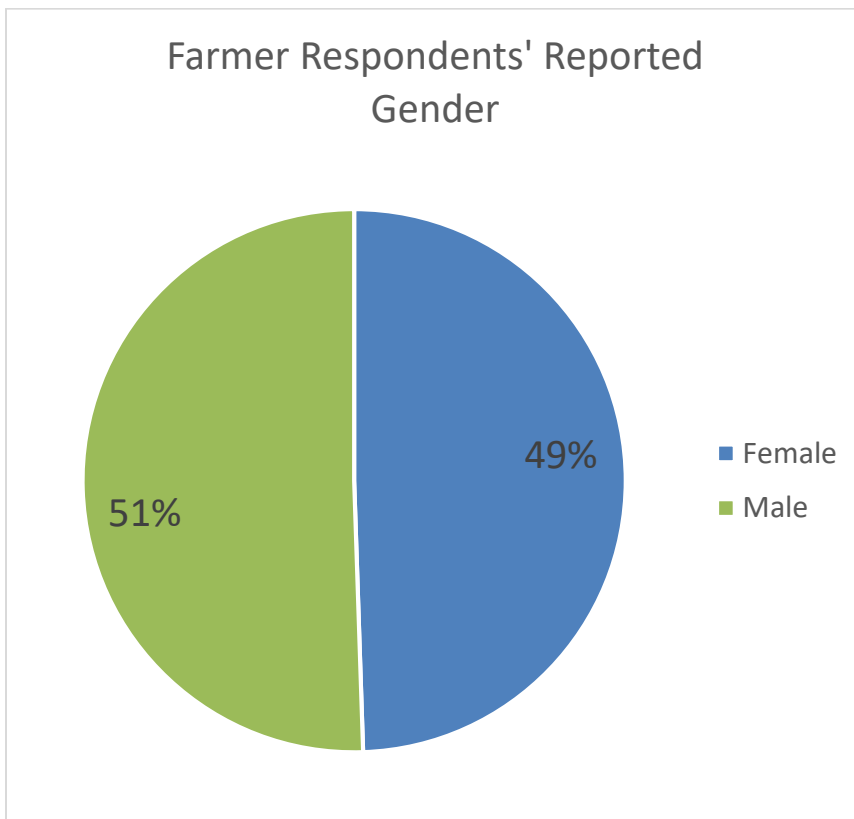
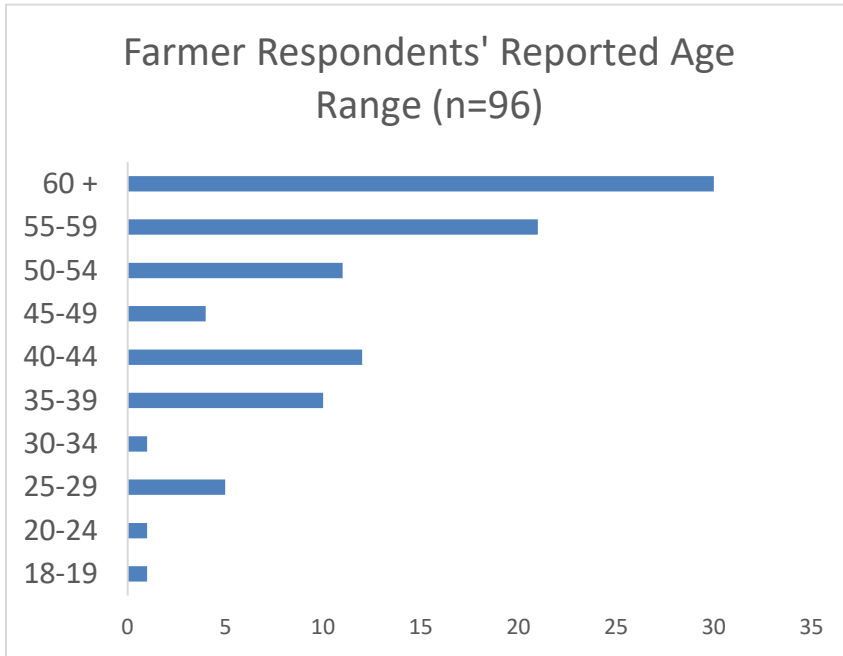
Who are the farmers who replied to the Farm to School farmer/producer survey? First, they have diversified farming systems, as demonstrated in the below figure. Most common farm product, by far, is vegetables, followed by eggs, herbs, fruits, and beef, respectively. Respondents selected an average of 3.3 different products from the list of products, which shows that most respondents had diversified farming operations.

As per the graph (right), farmer respondents skewed towards being newer to farming, with many who meet the USDA definition for



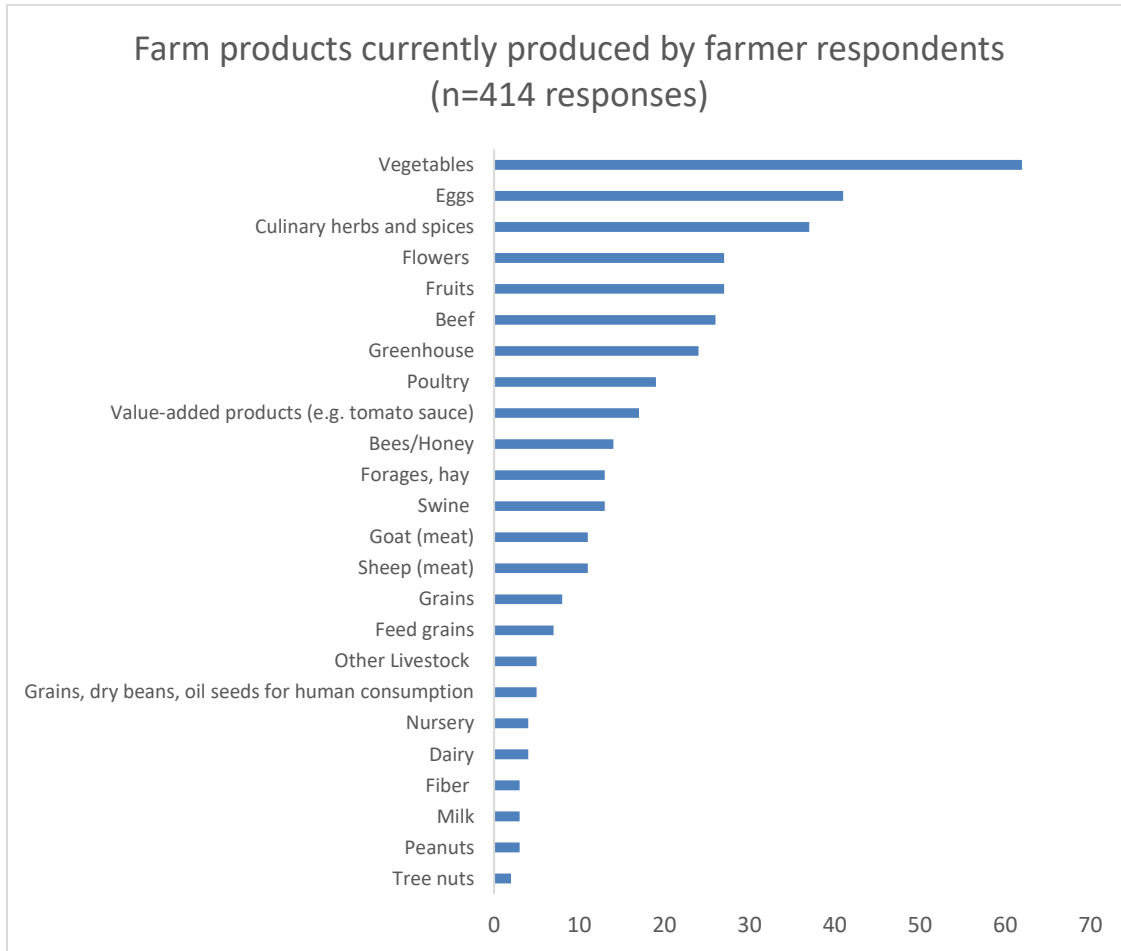
beginning farmers (farming ten years or less).

Although there were a wide range of responses, farmer respondents tended to be an older age, and there was an even split between male and female farmers.

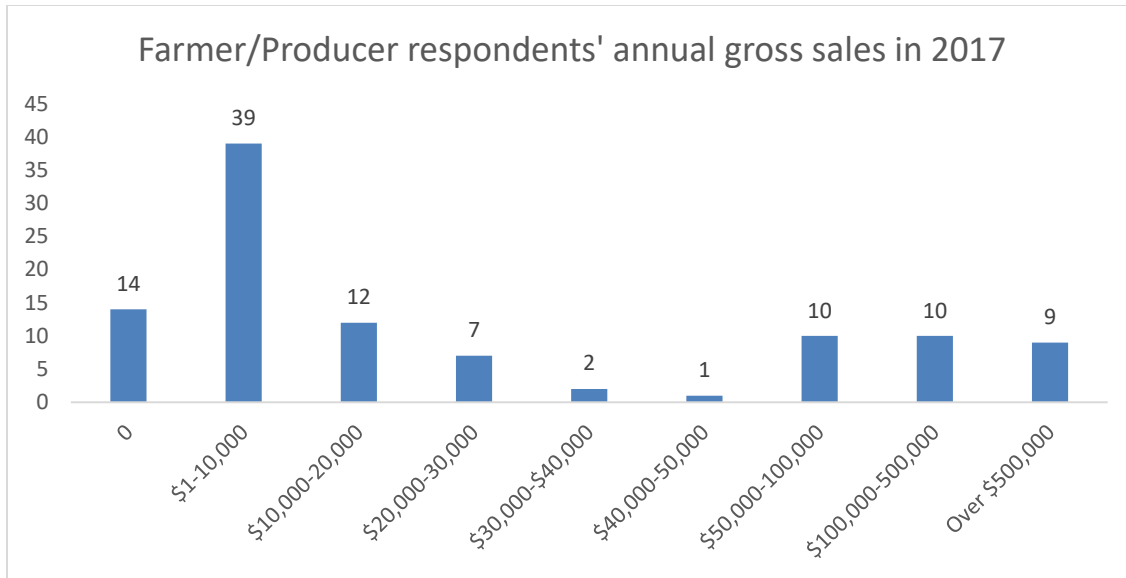


The selection of farm products varied widely among farmer respondents, but the most common farm product that farmer respondents were currently producing were vegetables. This is common for the small, diversified farms that are likely to be expanding their markets.

**Figure 4. Farmer Survey Question: “What does your farm currently produce?” Please note that most farmers answered that they produced more than one product on their farm.**



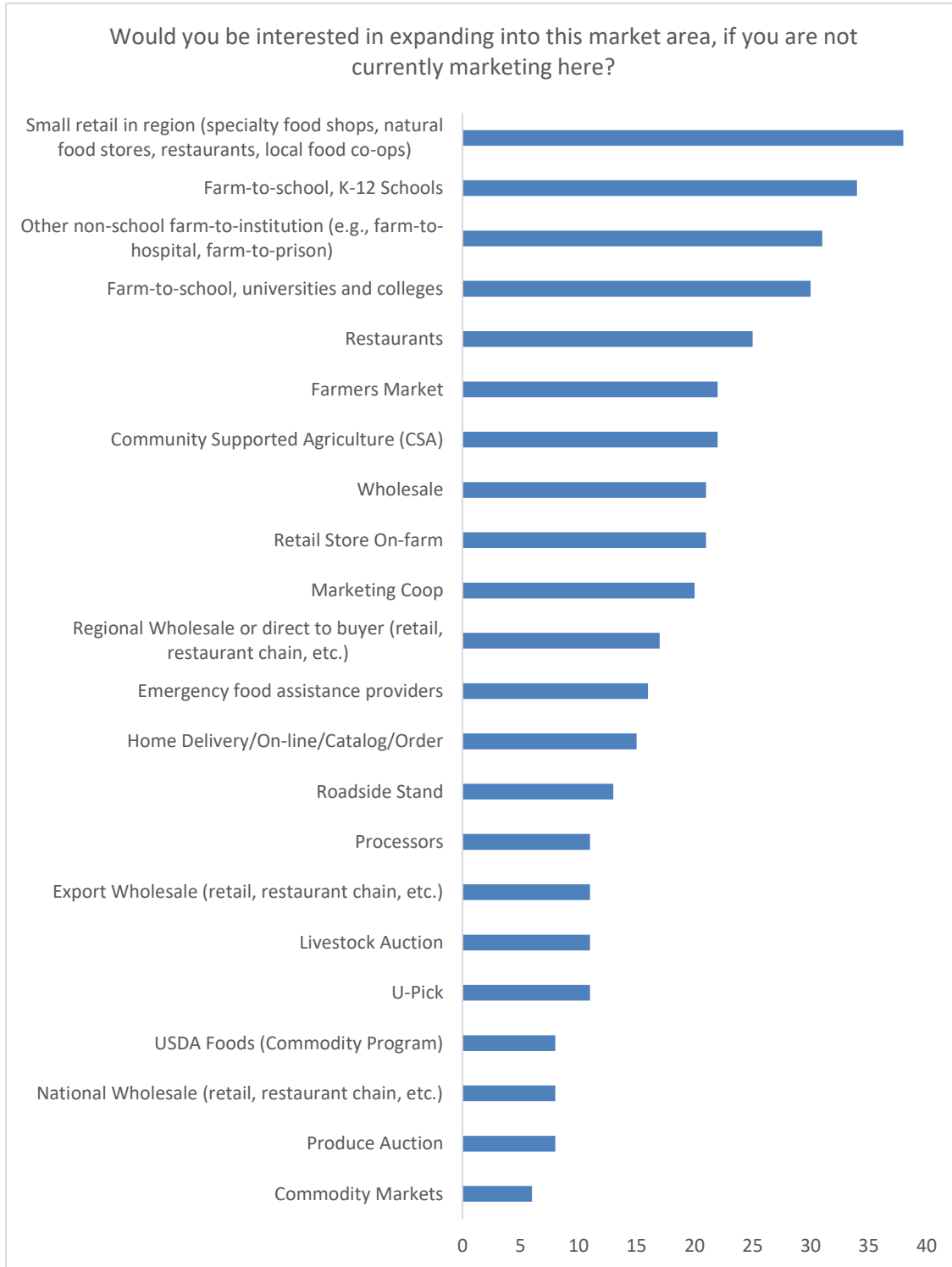
Farmers/Producers also reported their annual gross sales for last year. As the below graph shows, represented producers are typically small scale, with most less than \$50,000 in annual sales, although there were some much larger farms represented. Please see the below chart for a summary of farmer/producer respondents’ annual gross sales.



Farmers reported that they commonly market through farmers market, CSA, farm store, wholesale, and livestock auction. A very small percentage of average sales went to K-12 schools, colleges and universities, or other institutions.

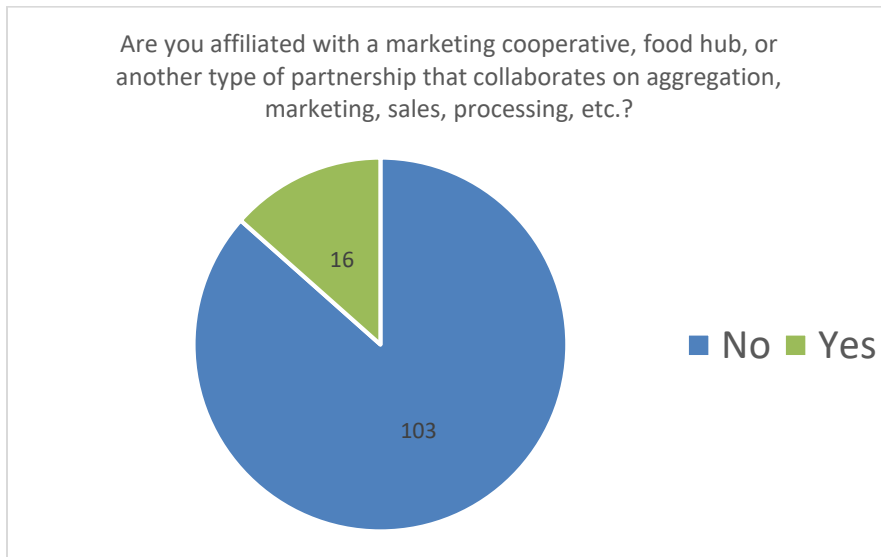


However, there is a definite interest in marketing farm products to K-12 schools and universities and colleges, as the below figure shows. While respondents may have self-selected as interested parties due to their decision to answer this survey, it is still noteworthy the magnitude of this interest in Virginia.





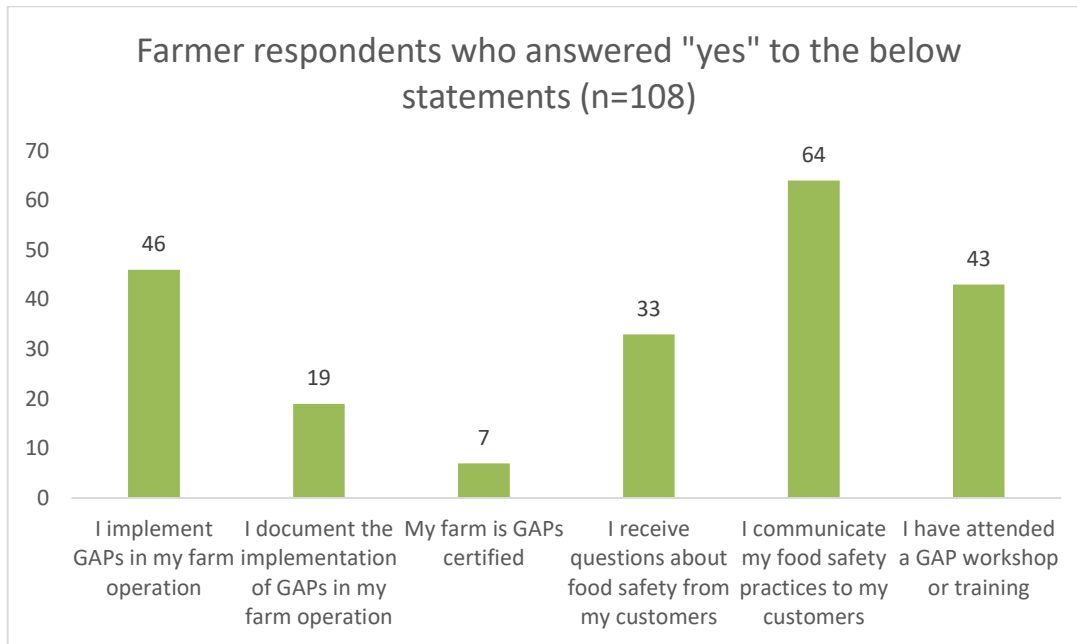
Farmers/producers were asked if they participated in a number of food aggregators or distributors. As the below chart shows, most said that they were unaffiliated, although a small proportion were affiliated with these collaborative efforts.



Those farmers who said “yes,” that they do market through another entity, were asked to specify which one. Answers included: Dairy Farmers of America, Eatwild Virginia, Feeder Cattle Association, Local Food Hub, Loudoun Valley Homegrown Market Coop, Loudoun Valley Sheep Producers, Marketing Firm, Southern Virginia Food Hub, Virginia Artisan Trail Network, Virginia Department of Corrections; other farms, and an online farmers market. This shows a wide array of marketing strategies used by farmers.

Many farmers are certified through Good Agricultural Practices (GAP). The below chart indicates farmer respondents’ involvement in GAP. Few survey respondents are GAP certified, but many communicate their food safety practices to customers in other ways. Please note: GAP certification is a strictly voluntary program for farmers, and it is not a requirement to market to k-12 schools, although farmers and nutrition directors alike may have misconceptions concerning GAP certification and/or requirements.

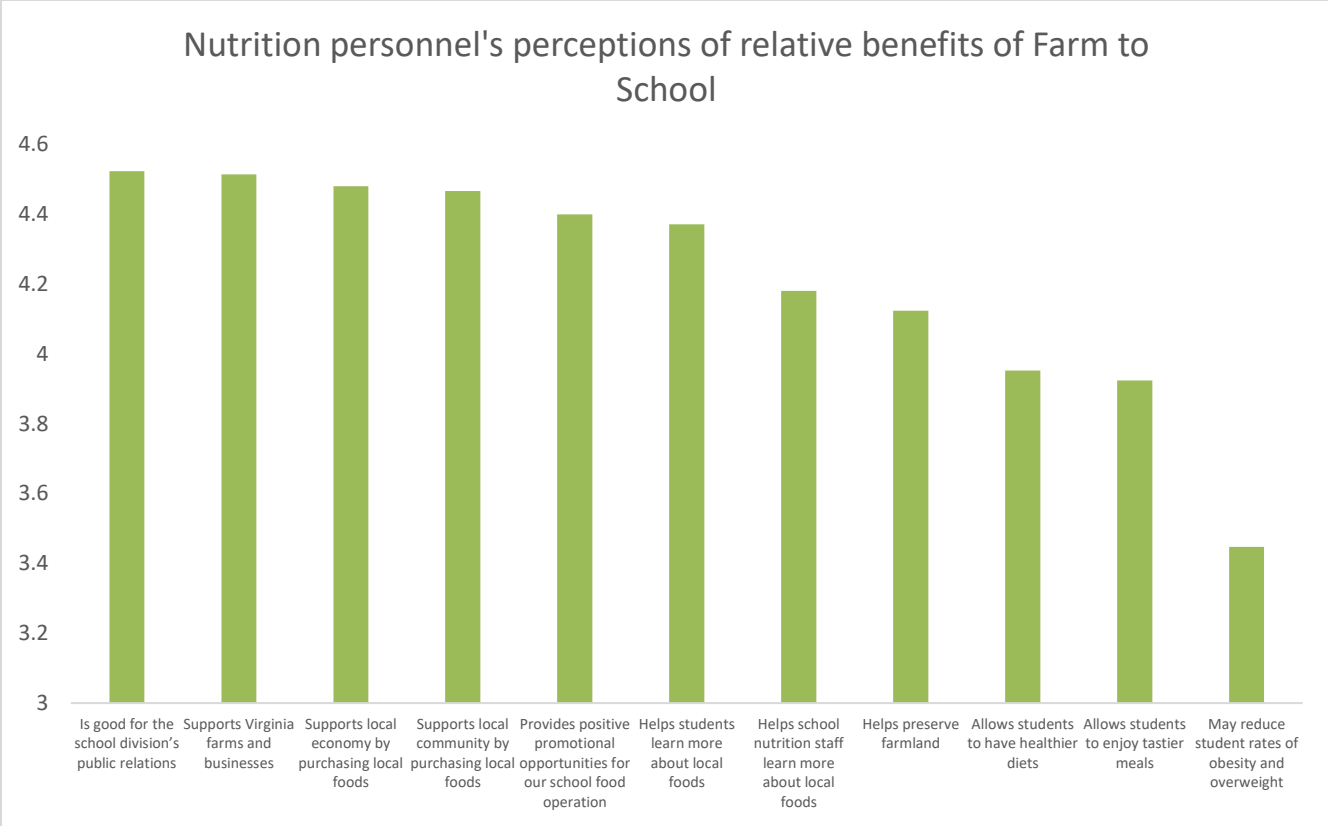
**Figure 5: The below is a count of farmer respondents who answered “yes” in response to the below statements about their involvement with Good Agricultural Practices.**



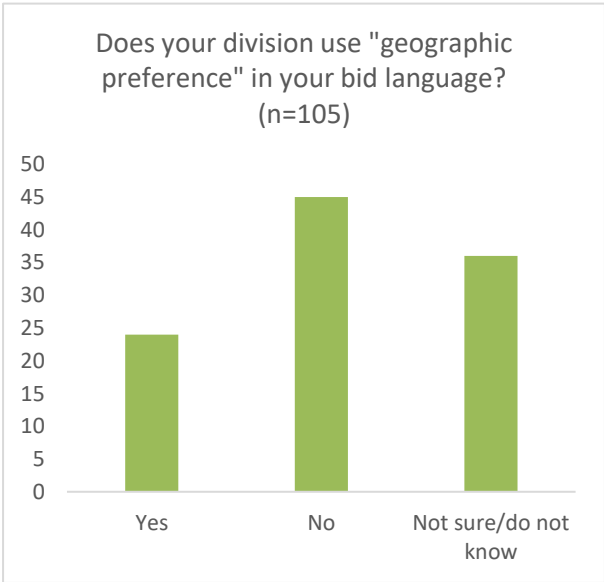
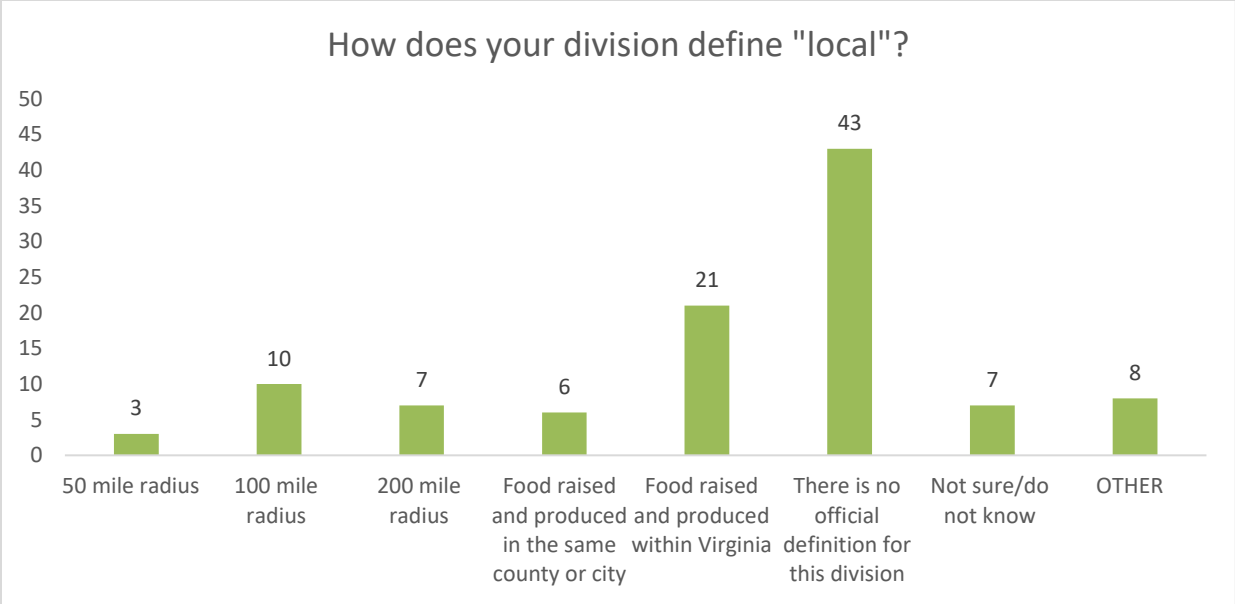
It is also common for farmers and producer respondents to hold up to \$1 million (39 percent) or \$2 million (13 percent) in product liability insurance, but a significant proportion do not carry any product liability insurance (28 percent) or do not know (18 percent). Only four respondents total were Certified Organic, and only four respondents were HACCP certified. Common write-in third party certifications included “Certified Naturally Grown,” “Clean and Green,” and “Beef Quality Assurance Certified.”

## How Farm to School is Viewed by School Nutrition

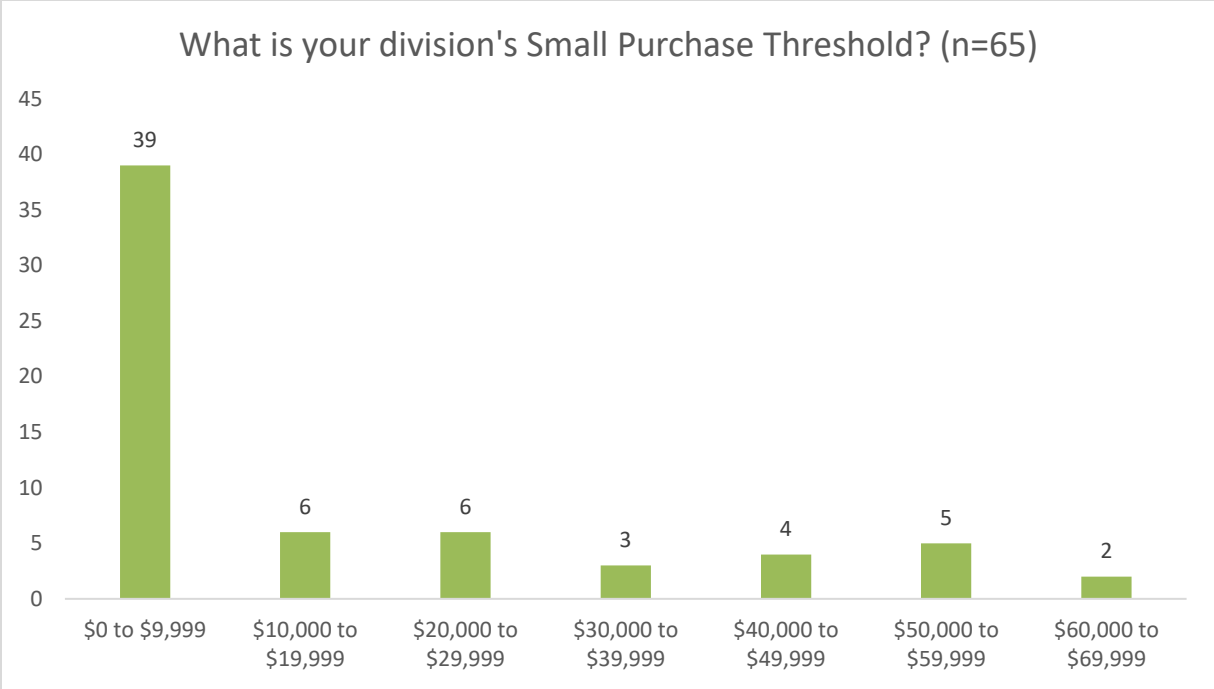
School nutrition personnel were asked to report how strongly they agree with statements about the benefits of Farm to School. While generally, most respondents agreed with most statements, in the below figure, we can see that most respondents believed that it was good for the division’s public relations, and that it helped local farmers, economy, and community. There was relatively less agreement with how Farm to School has positive impacts on students and school personnel. The perception of benefits was not affected by the number of years a school nutrition personnel had been in their position.



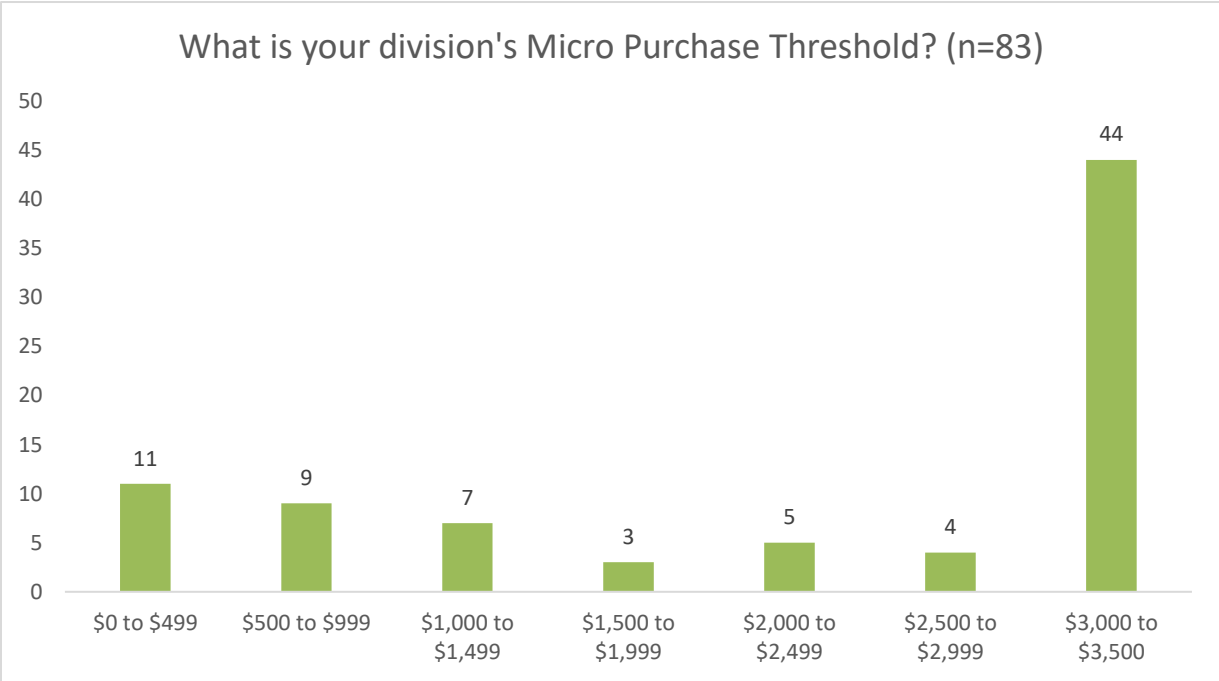
School nutrition respondents were asked to report how their division defined local, and to report a few specifics about their policies pertaining to local food procurement. As we can see in the below responses, many divisions have not yet developed a definition of local, even though the USDA gives the authority to define “local” to each school division’s nutrition program (USDA, 2018). The most common definition used by divisions in Virginia is that the food is grown within Virginia, but many also utilize a mileage radius for location where food is grown, ranging from 100-250 miles. Please also see this [USDA Fact Sheet](#) on using geographic preference in school nutrition bid language.



Nutrition directors were also asked to report their division’s small purchase thresholds and micro-purchase thresholds. At the time of this report writing, the USDA Office of Management and Budget has just released a [memorandum](#) that significantly increases the allowable small and micro-purchase thresholds (to \$250,000 and \$10,000, respectively). Survey respondents indicated here that the most common Small Purchase Threshold was less than \$10,000.



Nutrition directors reported that their micro purchase threshold is most often the maximum allowed at the time the survey was open, as the below figure demonstrates.

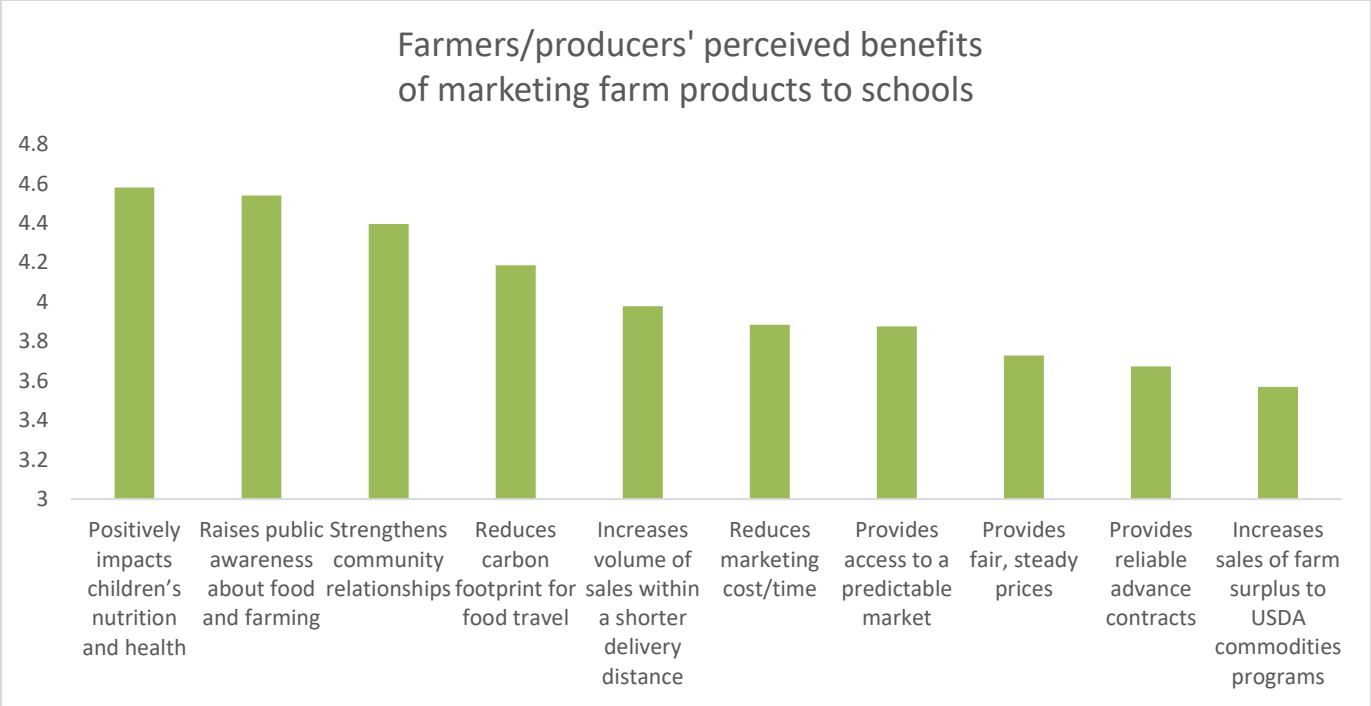


School nutrition personnel were also asked to rate how interested they would be in Farm to School training opportunities if they were offered. Top training opportunities that generated interest had to do with local food accessibility and food safety issues related to local food.

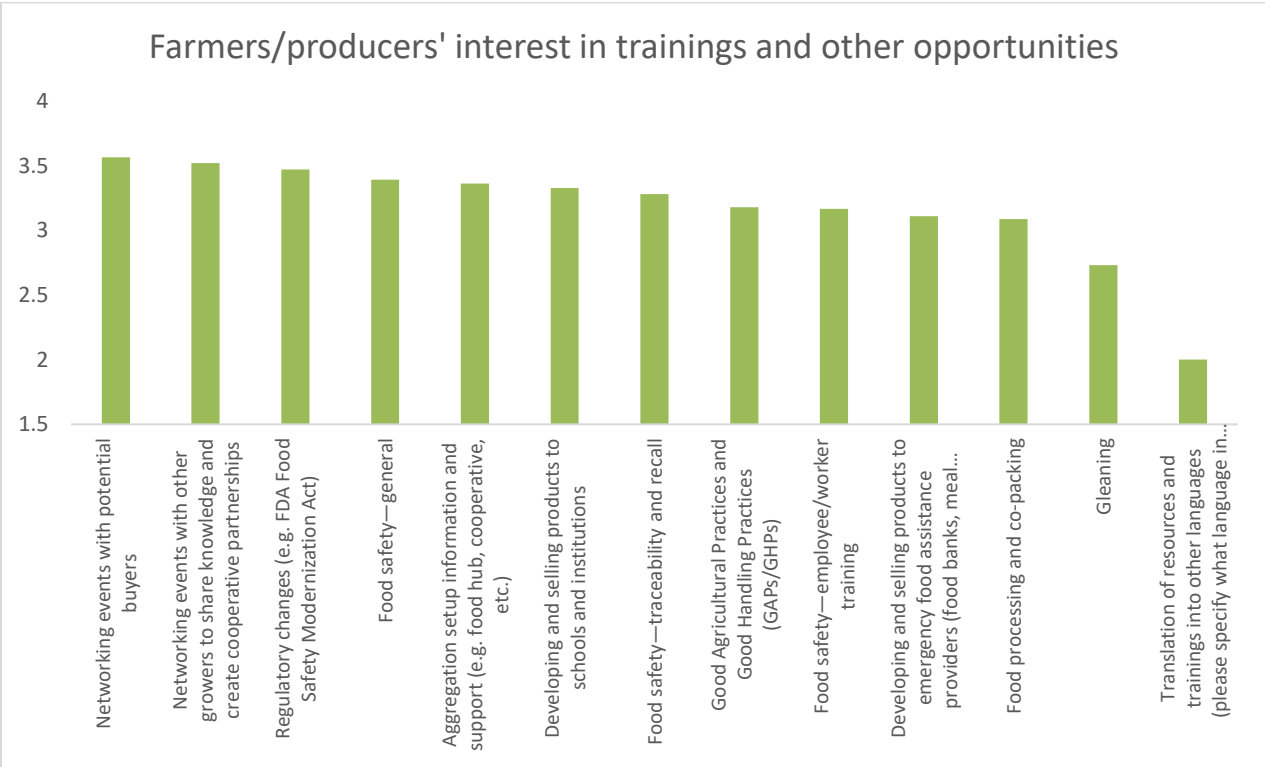
<b>Training Opportunity</b>	<b>Average Interest</b> (on a 1 to 5 scale where 5 is "most interested")
How to encourage produce companies and distributors to carry local products	3.6289 <b>[MOST]</b>
Safe food handling processes on local farms	3.524
Using farm fresh food in the kitchen: efficient procedures for washing and preparing seasonal, local foods	3.5143
Safe food handling processes in school gardens	3.5004
Integrating lessons into the lunch room	3.4366
Regional farmer/ distributor/processor networking meetings	3.3903
Marketing your Farm to School program to the public	3.3716
Writing invitations for bids (IFBs) to include opportunities to purchase local products	3.2473
Forward contracting—getting farmers to grow specific products for you	3.2192
How CTE classes can help your school food operations	3.2001
Using “geographic preference” in invitations for bids (IFBs)	3.1046
Farm to Summer (SFSP)	3.0382
Farm to Preschool/Early Child Care (CACFP)	2.7337
Composting in the Café	2.6763
Canning and preserving foods for year-round use	2.3426 <b>[LEAST]</b>

## How Farm to School is Viewed by Farmers/Producers

Farmers/producers were asked their perceptions of the benefits of Farm to School. While all of the proffered benefits of farm to school were mostly agreed with by respondents, interestingly, they rated slightly higher the benefits to society and to children, rather than reporting business-related benefits such as access to stable markets and reliable contracts, etc.

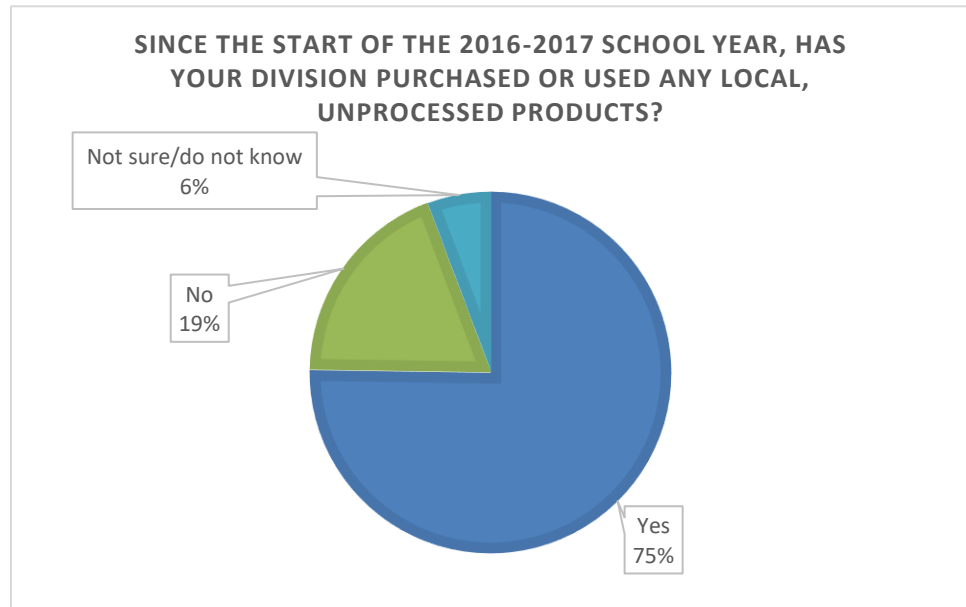


Farmers/producers were also asked how interested they would be in certain training and related opportunities. They overall indicated an interest in networking events, especially with potential buyers.



## How are School Nutrition Professionals implementing Farm to School Programming?

The survey inquired as to how school divisions are currently participating in Farm to School activities. In the chart (right), we can see that 75 percent of respondents say that their division has purchased or used local, unprocessed products since the start of the 2016-2017 school year.



Total dollars spent on locally sourced

foods in Virginia, during the 2016-2017 school year, as reported among nutrition directors survey respondents, was \$15,441,213.46. This shows an increase from the 2013-2014 school

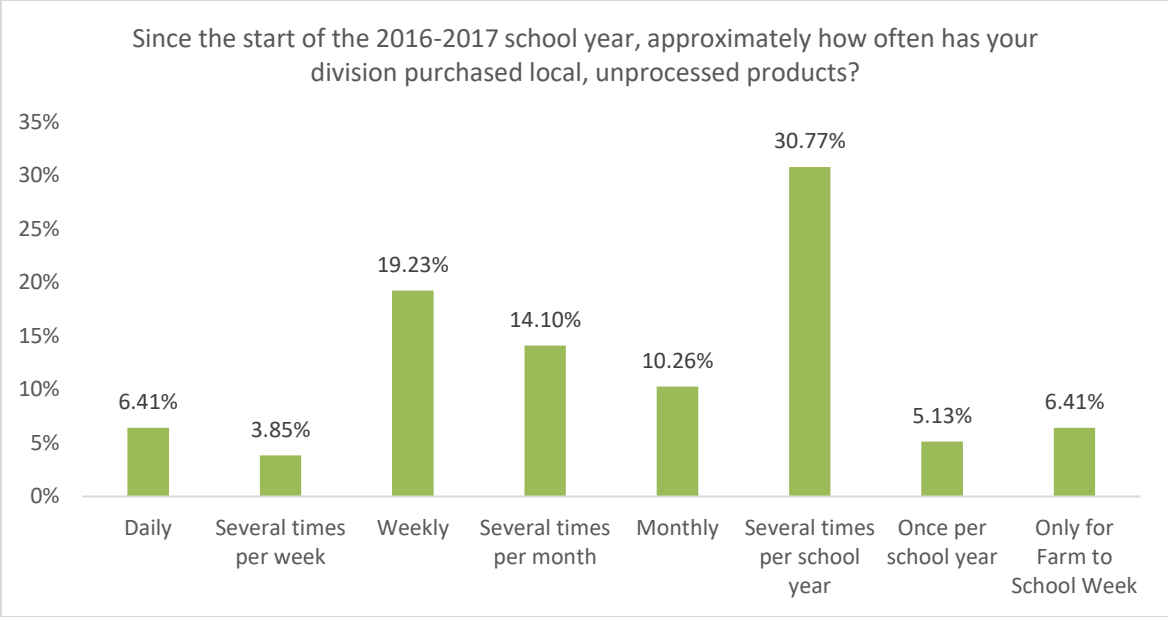


year, in which \$7,778,180 was spent on local foods in Virginia schools, as reported in the USDA Farm to School Census (2018). This figure demonstrates significant interest in local food procurement, and shows how school nutrition professionals are actively establishing means through which to connect to local

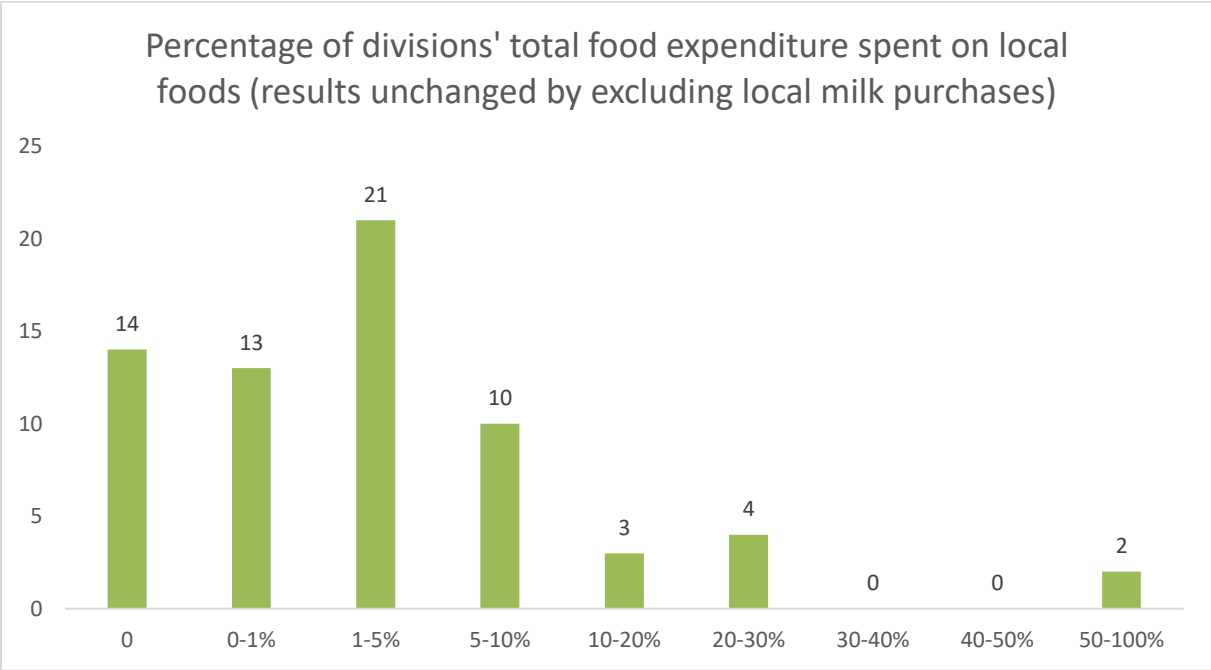
farmers and suppliers. Expenditures on locally sourced foods is likely to continue to increase in future years as the Farm to School Network builds connections among farmers, local food suppliers, and school nutrition professionals.

And as per the below chart, a majority have provided this local, unprocessed foods in their cafeterias at least several times per school year, and many have done so far more frequently than that.

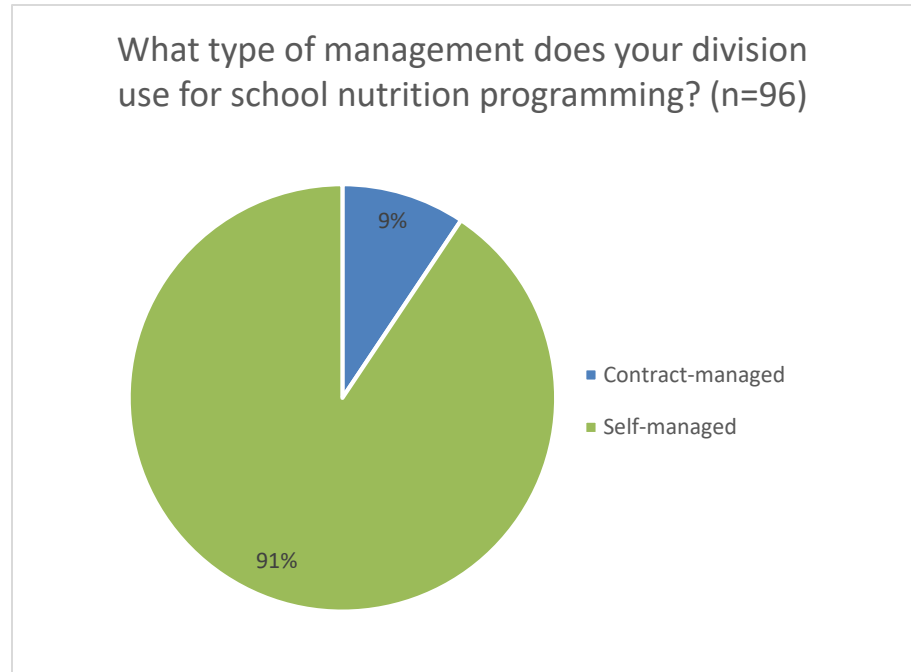




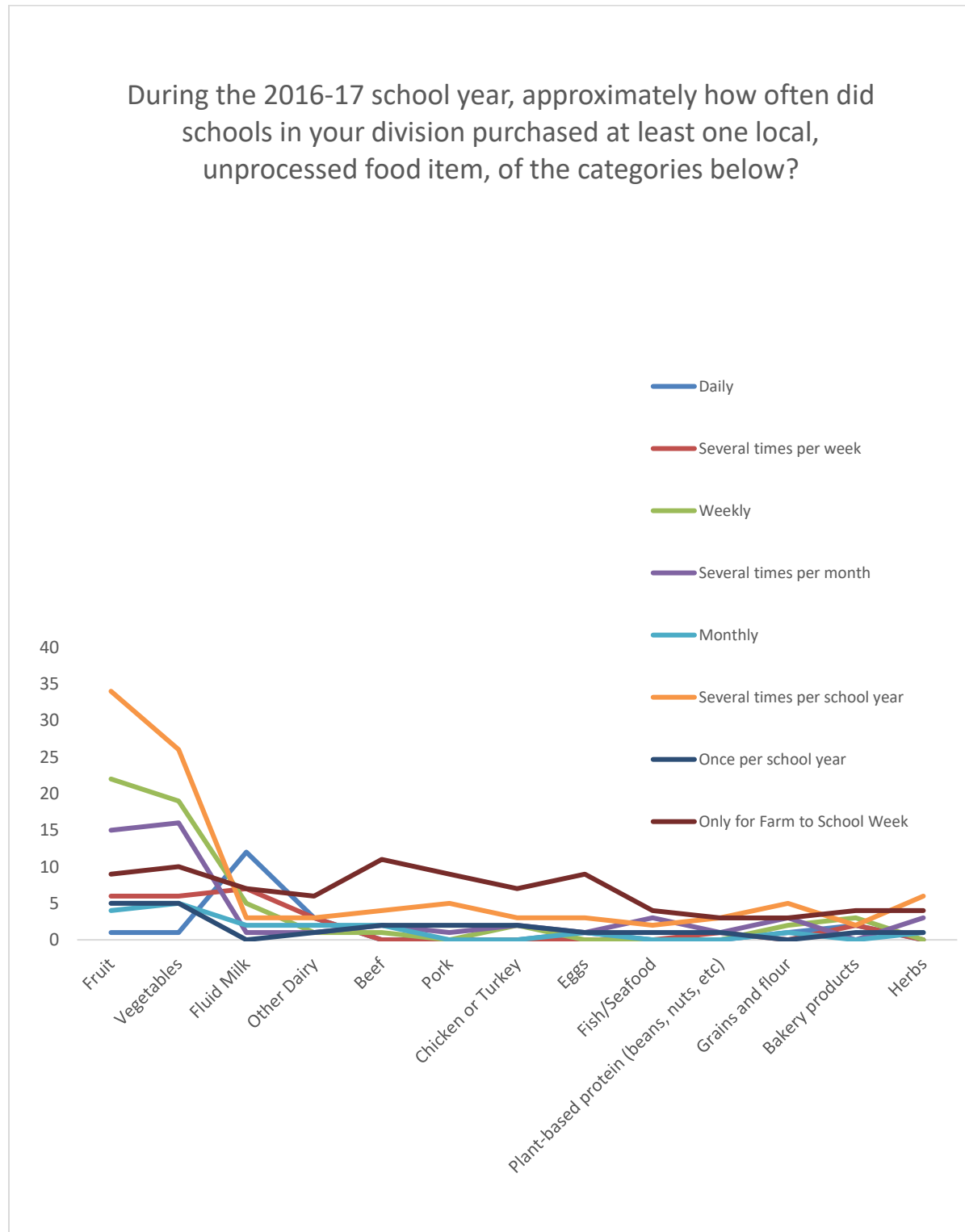
School nutrition personnel also reported how much of their total food expenditure was going towards locally sourced products. The below chart shows that most spend under 10 percent of their total food expenditure on locally sourced food, and a majority were under 5 percent, with a significant proportion who spent 0 percent of total food expenditures on locally sourced foods.



Nutrition directors were also asked if their division utilizes a contract management entity for their school nutrition purchase management. A small proportion reported that their division does, as the chart (right) indicates. This informs how to best support school nutrition professionals in their procurement processes, since 91 percent manage their own school nutrition programming.

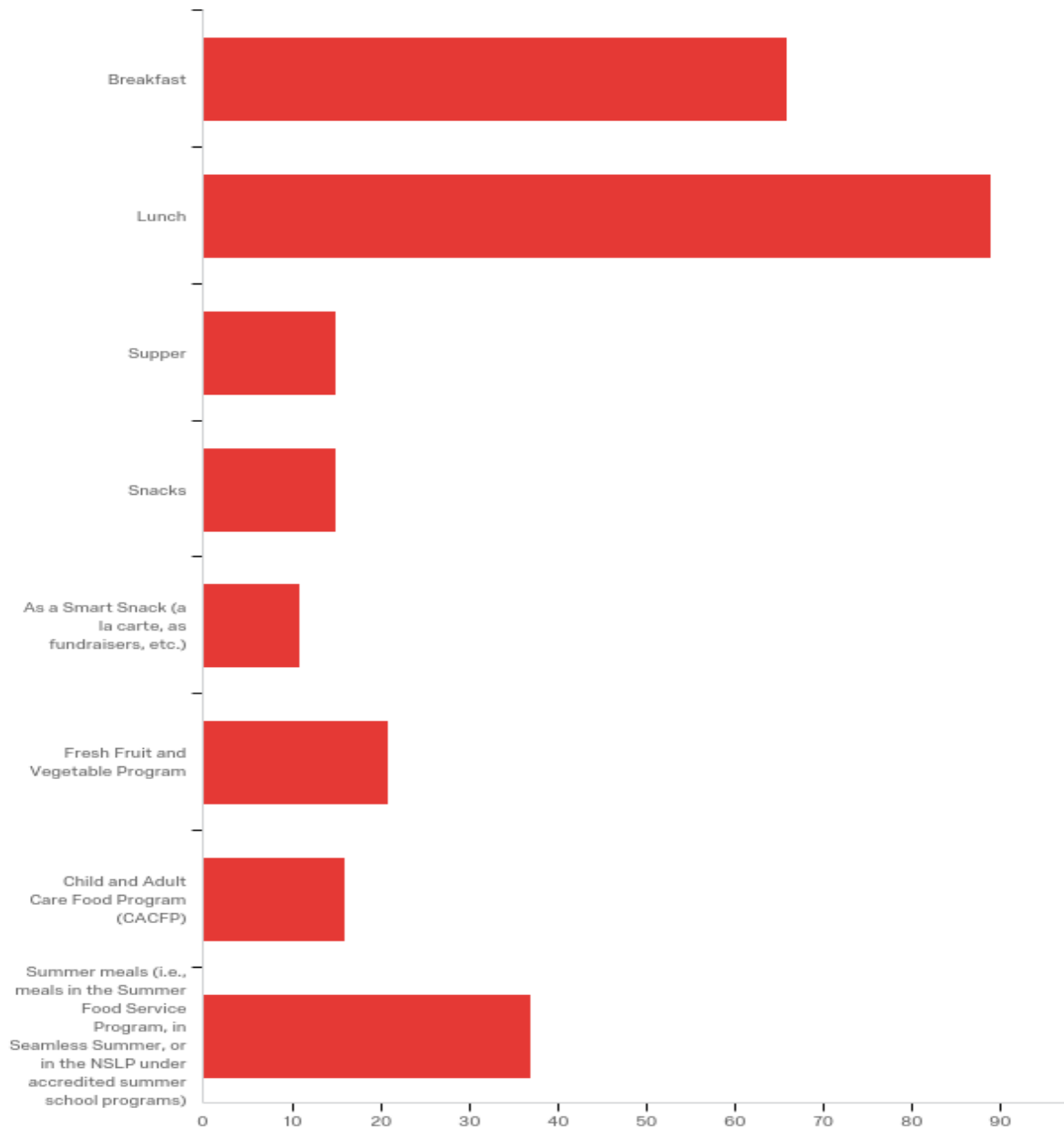


In addition, nutrition directors were asked how often they had purchased at least one local food in the following category. The data showed that fruits, vegetables, and fluid milk were the most commonly purchased local foods. Please see the below figure for a summary.

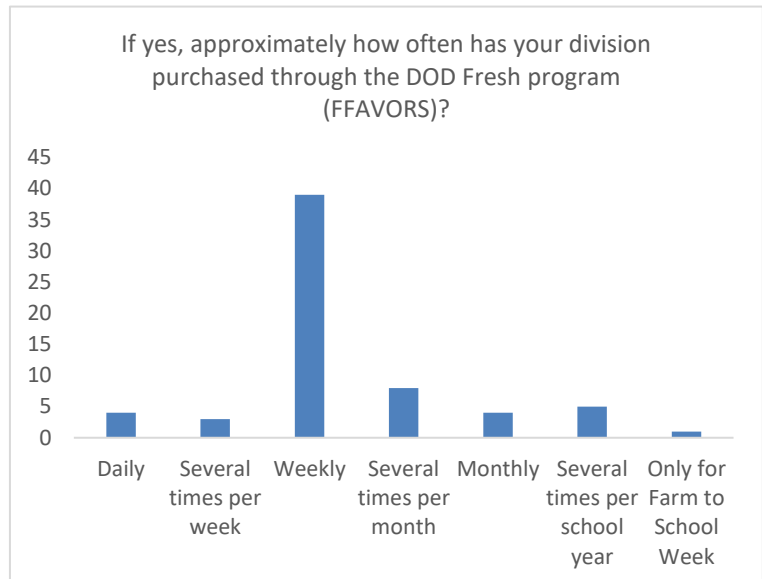
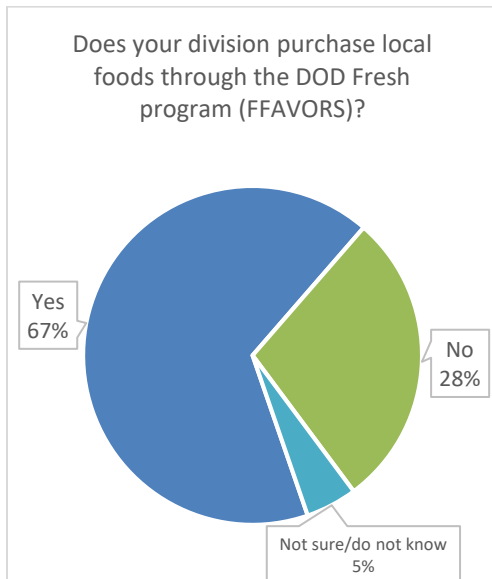


Nutrition directors reported that local food is often used in breakfasts, lunches and summer programs, as per below.

**Figure 6: Nutrition Director's Survey Question: Please indicate whether any of the schools in your division used local products in any form (fresh, minimally processed, or processed) for any of the following child nutrition programs during the 16-17 school year.**



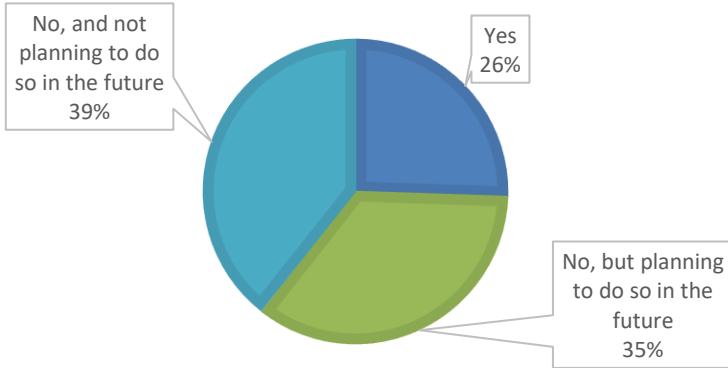
Nutrition personnel were also asked if their division purchases local foods through the DOD Fresh program (FFAVORS), and if they answered “yes,” they were asked, “since the start of the 2016-2017 school year, approximately how often has your division purchased through the DOD Fresh program (FFAVORS)?” Respondents indicated that many (67 percent) have been purchasing through the DOD Fresh program (FFAVORS). Of those respondents, many are purchasing weekly, as the below figure shows.



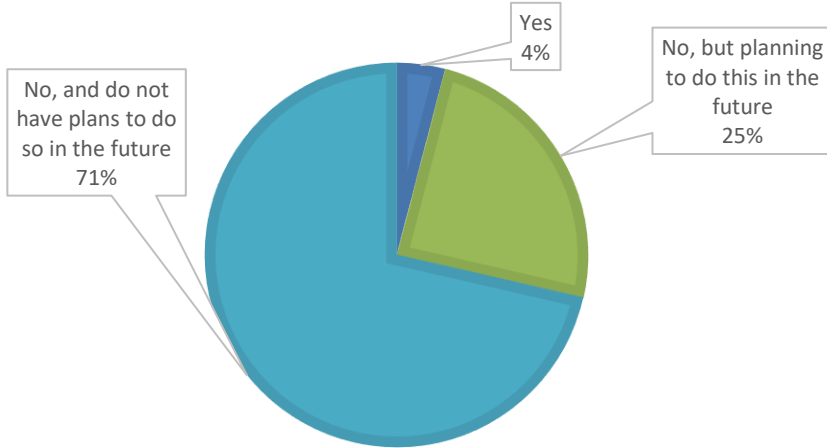
## School Garden Activities

One important way that school nutrition offices are implementing Farm to School is through school gardening activities. Our survey asked school nutrition personnel to report a number of things about their activities related to school gardening. Interestingly, only 4 percent of nutrition directors who responded to the survey reported that they used school nutrition funds to purchase supplies for school gardening (see below figure, left), which means school divisions are using other means to support their school garden programs. There is plenty of room for growth, since 25 percent have plans to use school nutrition funds to support school gardens in the future. Also, as the below figure shows, 39 percent of school nutrition personnel are not planning to use student-grown products in school cafeterias, which also indicates room for growth.

**DO YOU USE ANY STUDENT-GROWN GARDEN PRODUCTS  
IN YOUR SCHOOL CAFETERIAS?**

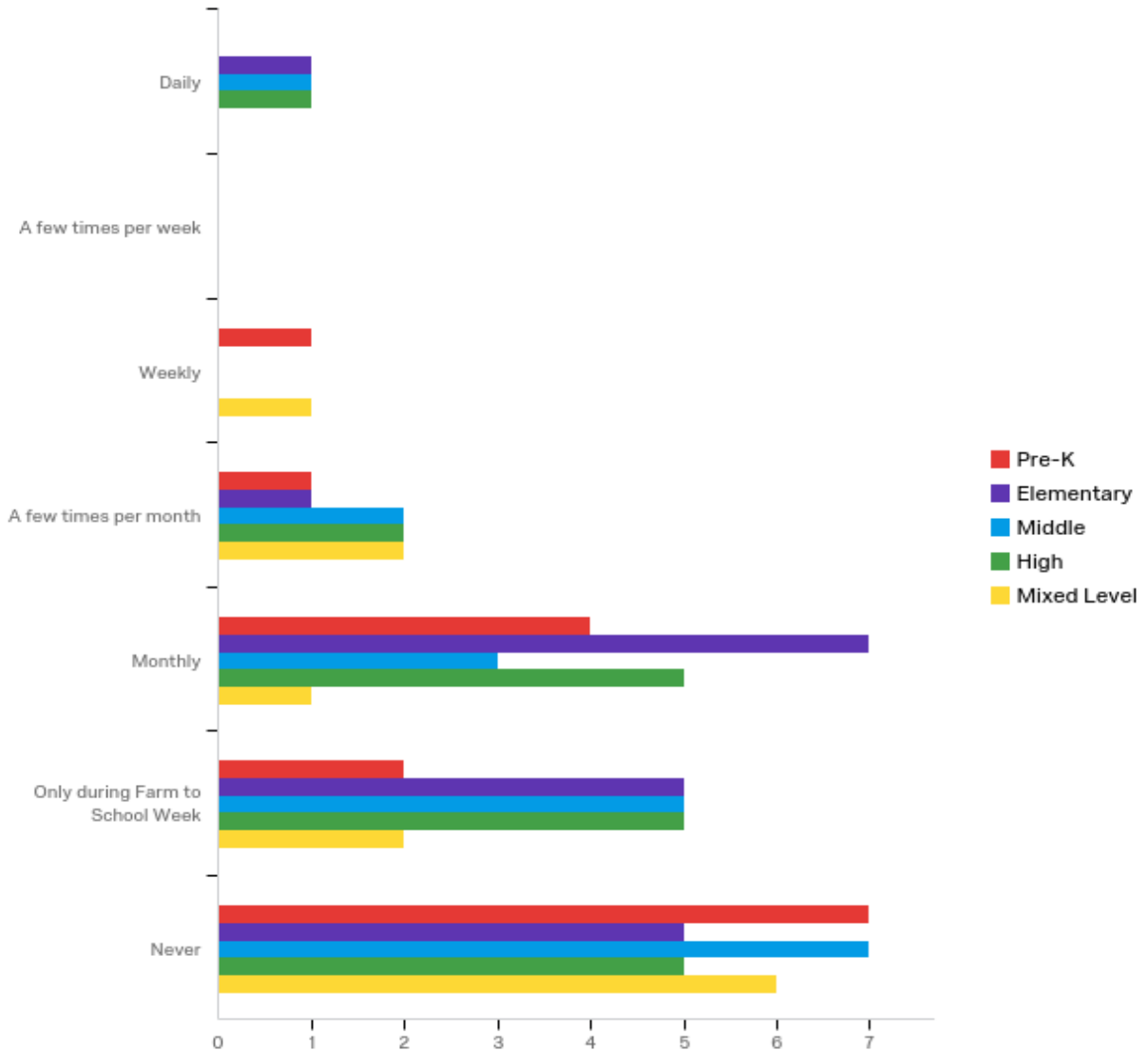


**DO YOU USE SCHOOL NUTRITION FUNDS TO PURCHASE  
GARDENING SUPPLIES?**

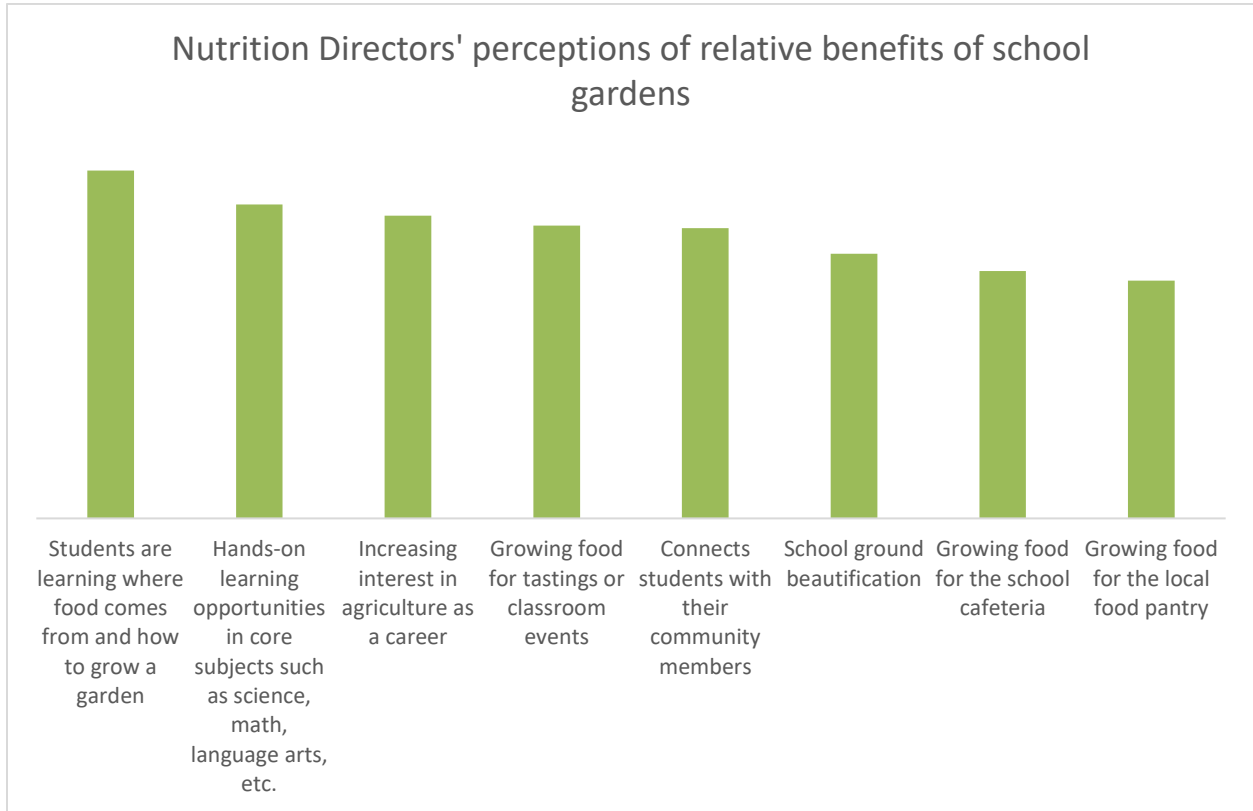


The survey asked how frequently each level provided school garden products in their school cafeterias. As the below figure shows, across all levels, it is common to offer garden products only once a month, during Farm to School Week only, or never.

**How frequently did the schools in your division offer student-grown, school garden products in the cafeteria?**

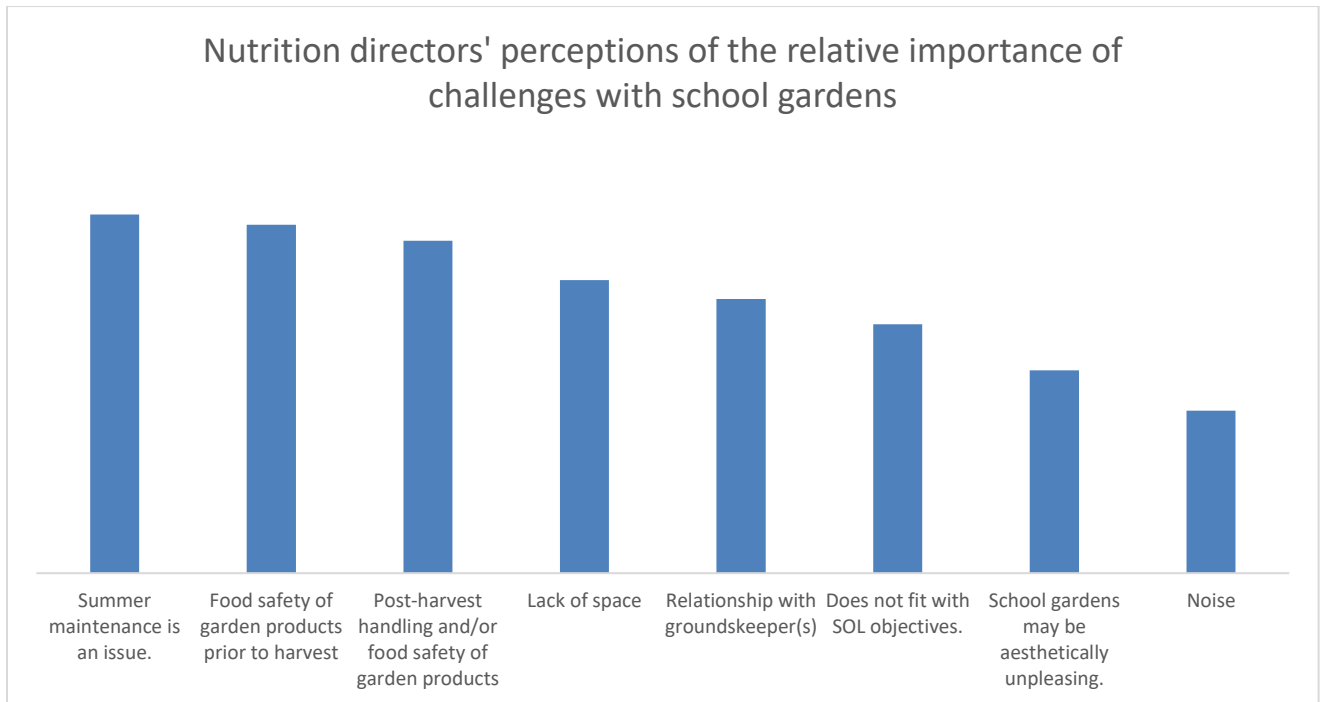


School nutrition directors reported their perceptions of the relative importance of benefits of school garden activities. While all scored highly in importance, the most important benefit was learning where food comes from as well as learning other core curricula, followed closely by their interest in pursuing agriculture as a career (see below figure).





School nutrition directors also reported their perceptions of the importance of the challenges of school gardening. As the below figure shows, the most important challenge is summer maintenance, while food safety and food handling concerns are also key challenges.



The school garden-related data, overall, showed a good deal of interest in increasing school garden-related activities, and an interest in trainings on how to overcome specific barriers in getting school garden products into school nutrition programs.

## Respondent Qualitative Feedback

Respondents had some constructive feedback to share pertaining to the Farm to School Program. The below are quotes directly from study participants. These quotes were selected for inclusion based on their representative nature and substantive suggestions.

Respondents offered constructive feedback on how to improve Farm to School.

## General opinions

Why not get the students to grow food? -Farmer

*My main misconception is that GAP certification was required to sell to any type of institution in the state of Virginia. If this is not true it should be made more clear. I think GAP certification is... a huge impediment to small farms. -Farmer*

I would love to make this program work, but I'm just not sure the network is set up to do it. I believe this concept needs to be expanded further to distributors that carry local products that have been processed as well. -Nutrition Personnel

If there could be a template for bids and contracts for farmers/schools so it be easier for them to buy and sell. A lot of farmers like the cash from one hand to another without waiting for a check. -Nutrition Personnel

## Learning from Experiences

*We have found that we would not produce enough produce to meet the school system needs. -Farmer*

*[Our county] received a big Farm to School grant several years ago that was great. We could not sustain it with staff we have and deliveries to all schools. -Nutrition Personnel*

*The Farm to School initiative is important to me and to our district. However, it is time consuming to fully implement: following all the guidelines, procurement, delivery, etc. -Nutrition Personnel*

*We have a hard time getting the local extension office into the school to teach nutrition. -Nutrition Personnel*

## How could Farm to School be improved?

Our primary distributors need to find value in providing local products. -Nutrition Personnel

*Incentives for counties and their school nutrition programs to utilize local farm food rather than large distributors, as it is always more work and will never happen unless required or incentivized. -Farmer*

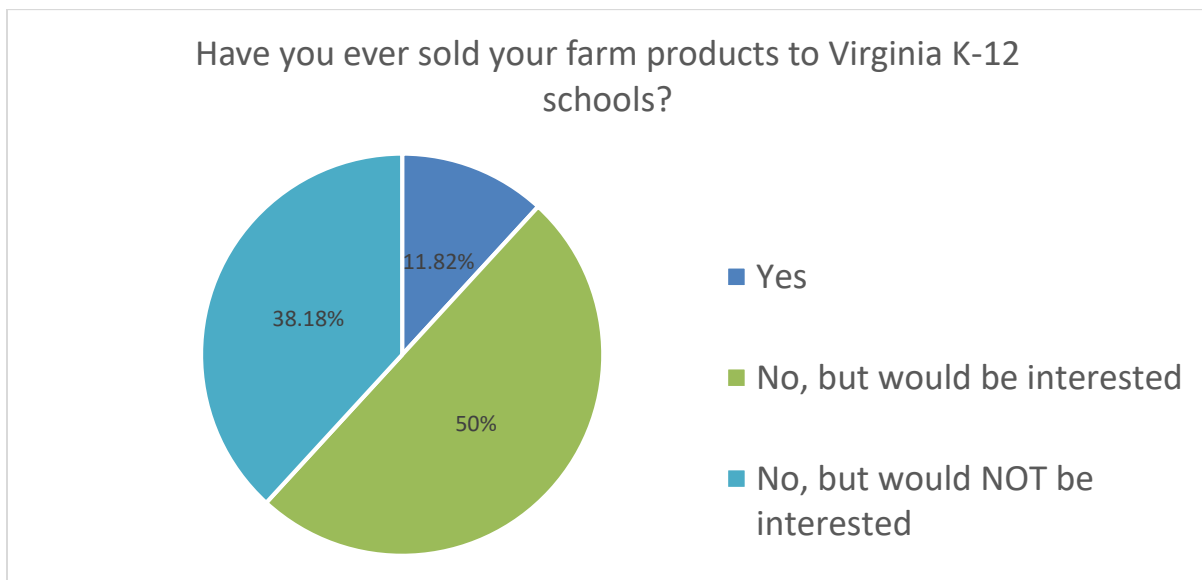
*If they set a price we could [more easily determine if we could] either grow the crop or not. -Farmer*

*More effort must be made to connect with local farmers! -Farmer*

*Wish you would work with the Beginning Farmers and Ranchers Programs and Virginia State University. -Farmer*

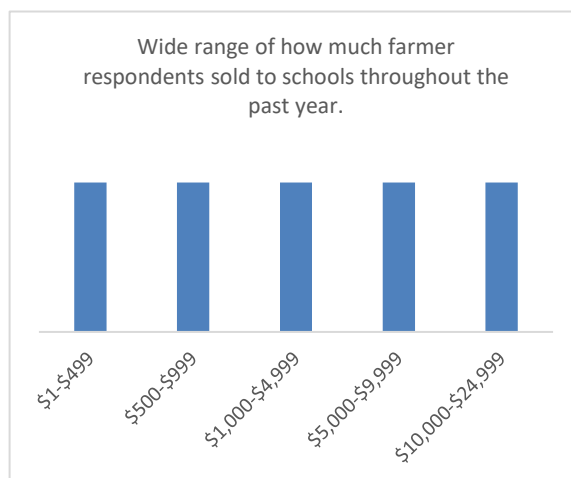
## How are Farmers/Producers Participating in Farm to School Programming?

As the below figure shows, while only 12 percent of farmers/producers have marketed to Virginia schools in the past, 50 percent would be interested in doing so in the future, which shows room for growth of the Virginia Farm to School Network. Of the below who answered yes, 92 percent said they would be interested in selling to Virginia schools again, and 38 percent said they had done so within the 2016-2017 school year. Of those who stopped selling to Virginia schools, the most common reason was that their products were perceived as too expensive by purchasers, or there were changes in the middle broker, such as the local food hub the farmer/producer was selling through. There is some ambivalence as to how interested farmers/producers were in working with school buyers to grow specific crops (see below).

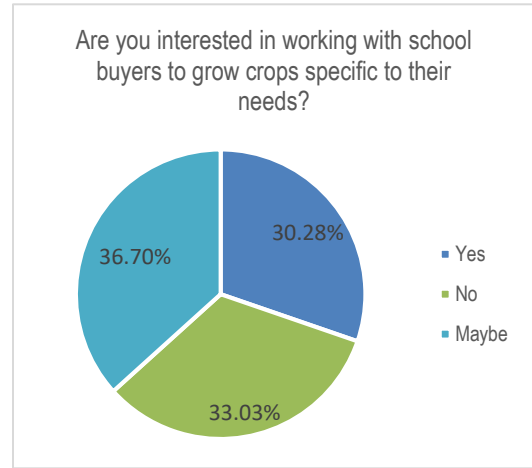
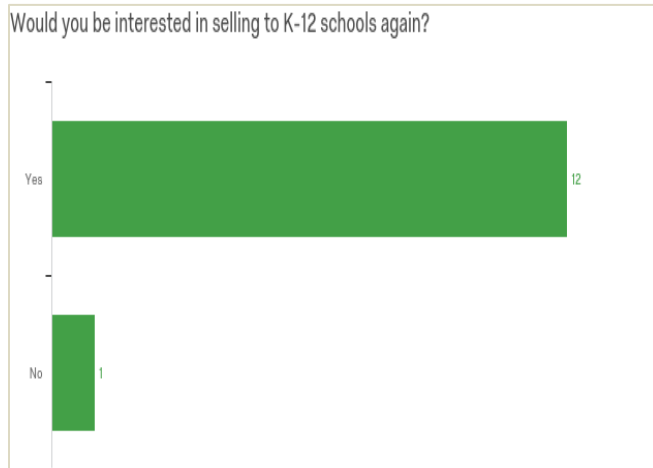


Farmer respondents were asked to report their approximate total sales to schools during the 2016-2017 school year. Of the five farmers who answered this question, there was an equal dispersion of the total sales to schools throughout the 2016-2017 season, as the figure (right) demonstrates.

Farmer respondents who indicated that they had sold to k-12 schools in the past were asked if they would do it again. All but one farmer answered yes. Additionally, 30.28 percent of



farmer respondents also indicated that they may be interested in growing crops specifically for the needs of school buyers.



Farmer respondents were asked to report why they discontinued sales to schools, if they had done so. While several indicated a few physical logistical barriers, most answered “other,” and typed in their own unique reason. Reasons included a change in nutrition director, that the size of the orders were too small for the effort, and that the school said it would be less expensive through their usual wholesaler. While their reasons were varied, most

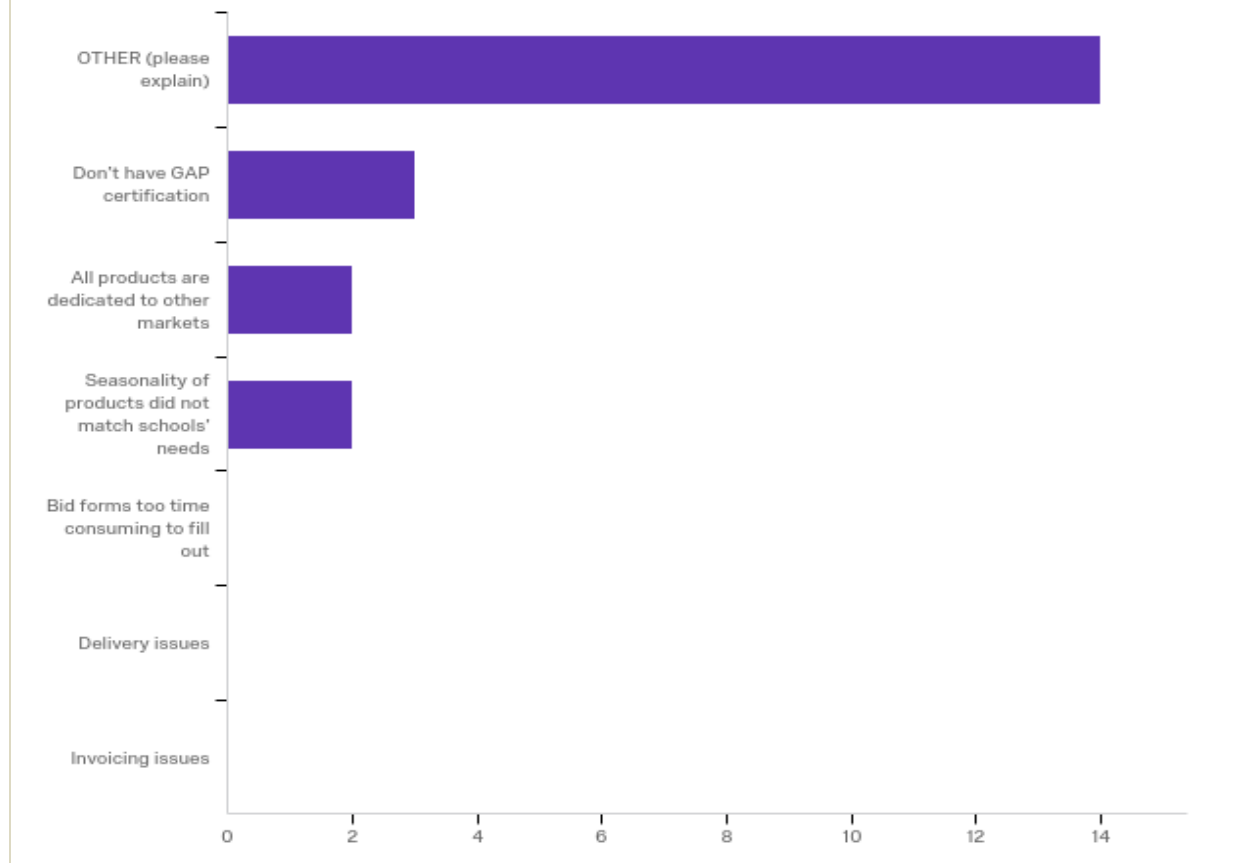
*“Food service director changed.”*  
–Farmer

*“The school said items were less expensive buying from a food wholesale company.”*  
–Farmer

*“Changes in regulation, I believe.”*  
–Farmer

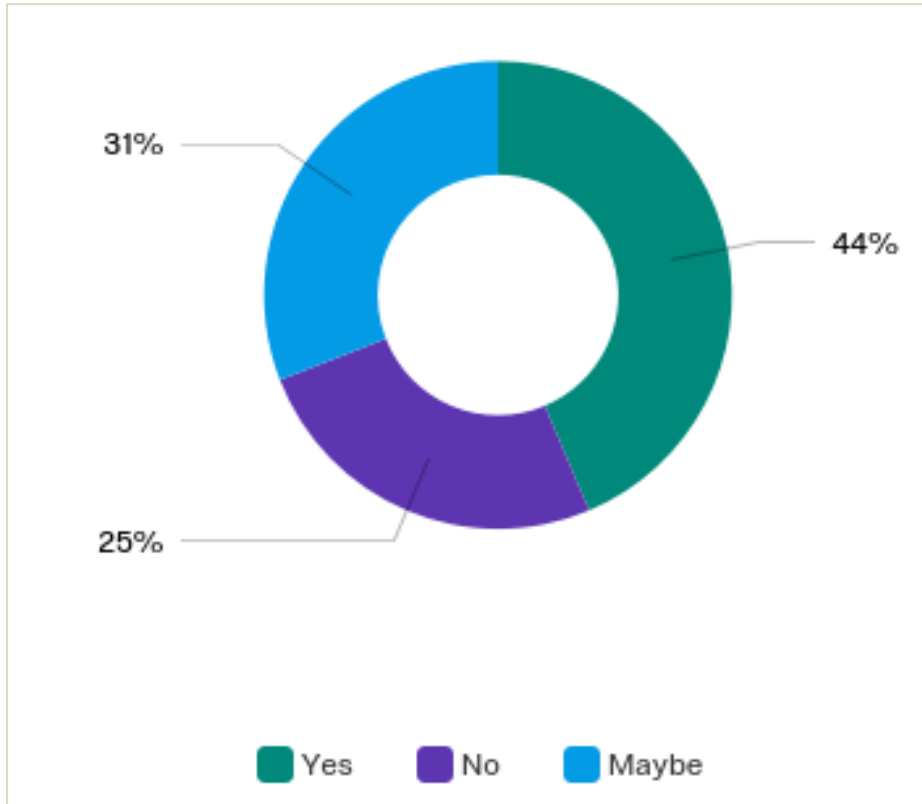
had to do with establishing relationships and connections to school nutrition professionals, price, and other procurement protocol issues. Here, we present a few samples of their reported reasons they had to stop selling to schools. Please see the chart below for a representation of the responses to this question.

### If you have sold to schools in the past and no longer do, why did you stop?



Farmers also indicated that many (44 percent) would be more interested in marketing farm products to schools if there was a contractual obligation to buy their product. In addition, a large number (68 percent) of respondents indicated that they would like more information on the Farm to School Network.

**Figure 7: Farmers were asked if they would be more interested in working with school buyers to grow crops specific to their needs, if there was a contractual commitment for the school to purchase their product. Many (44percent) said yes.**

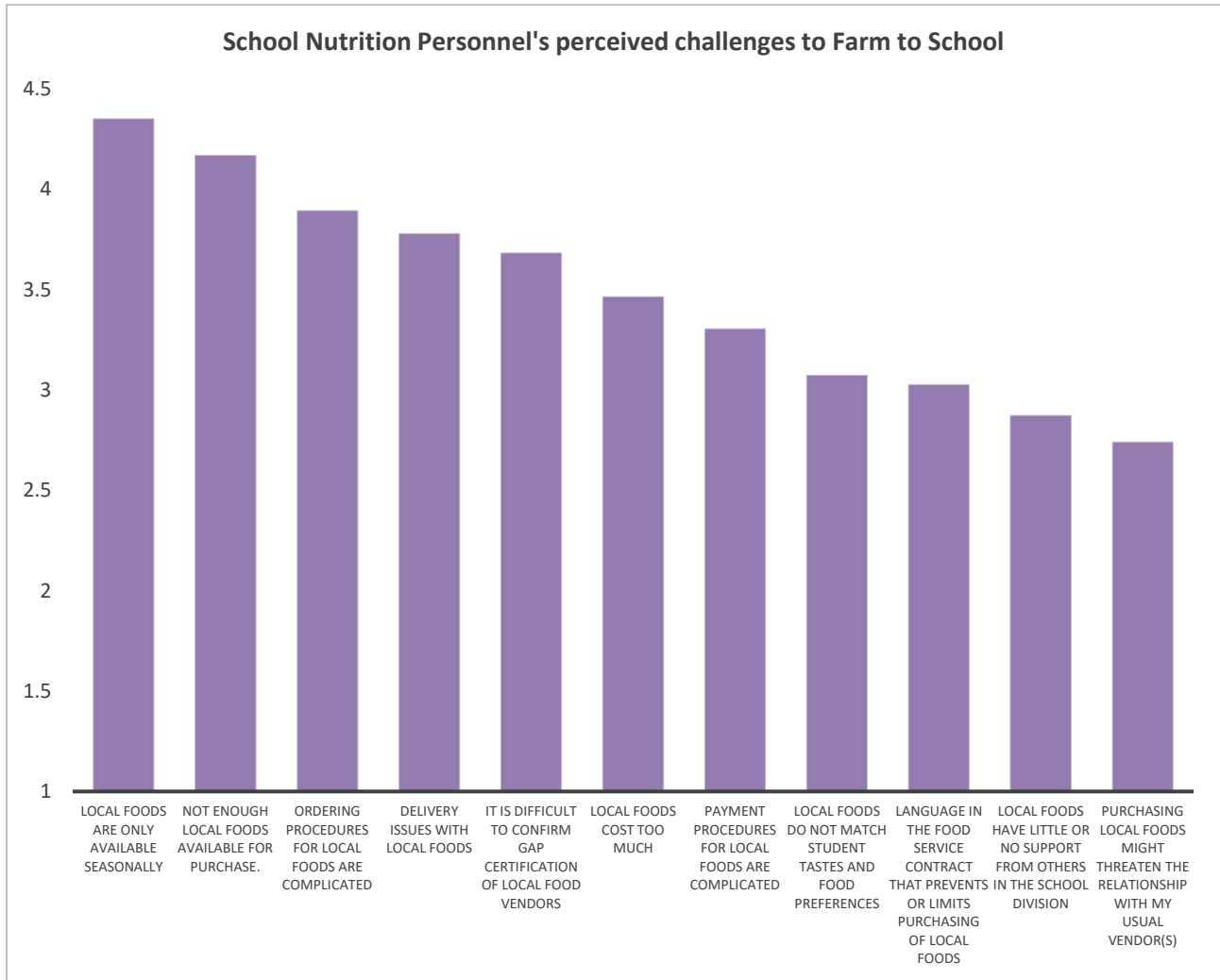


As the above shows, there is significant interest in forward contracting with school nutrition on specific crops. Farmer respondents were also asked about which Farm to School educational activities they had participated in. They were likely to have been a guest speaker at a school event (41 percent), hosted a school group on their farm (30 percent), or attended a school meal as a guest (23 percent).

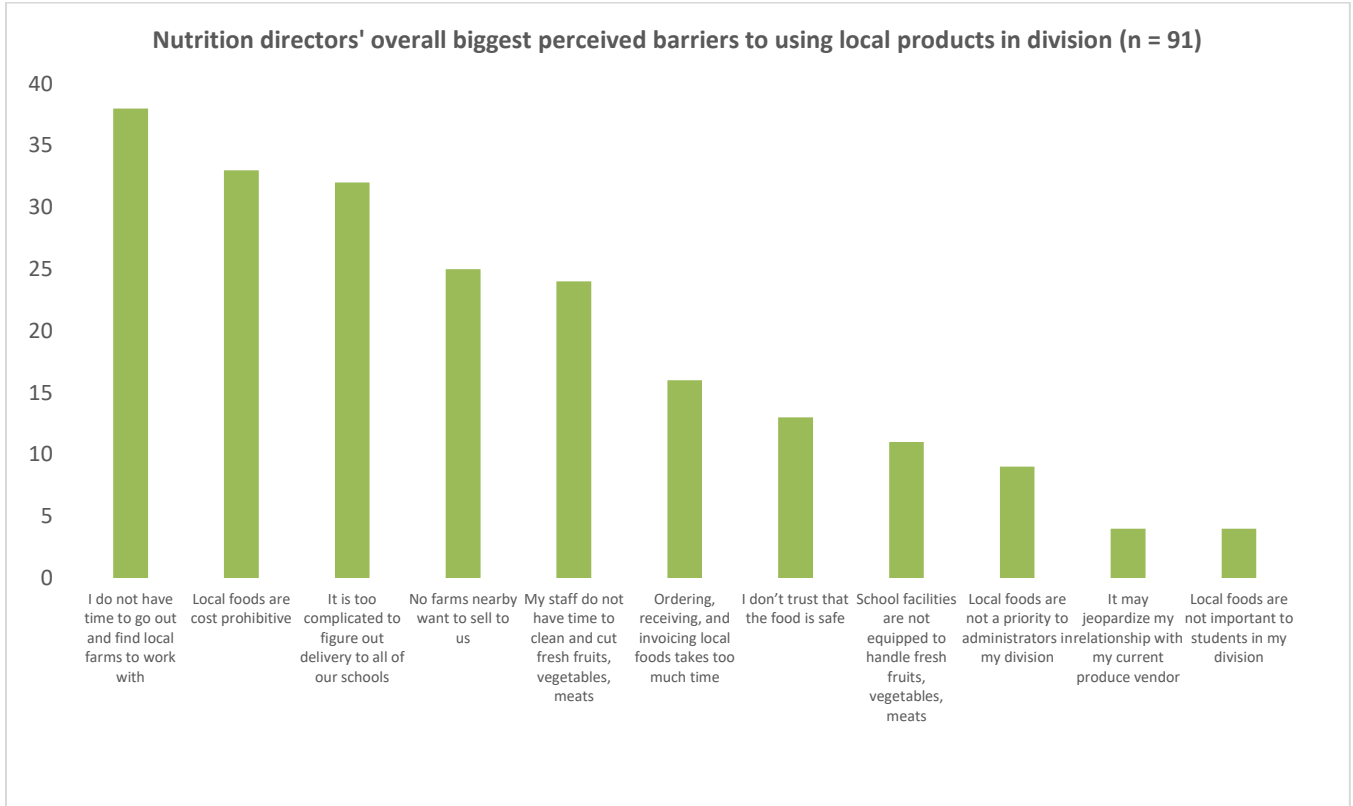
Overall, the survey shows that there is significant farmer interest in selling farm products, but hurdles exist. Our survey will inform Farm to School Network initiatives to establish connections with farmers and better meet their needs throughout the procurement process.

## School Nutrition Professionals' Perceived Barriers to Participation

School nutrition personnel were asked to rate their perceptions of challenges to the Farm to School program. Top reasons have to do with access and delivery of local foods, while difficulty in ordering procedures and food safety concerns also rank high among the barriers.



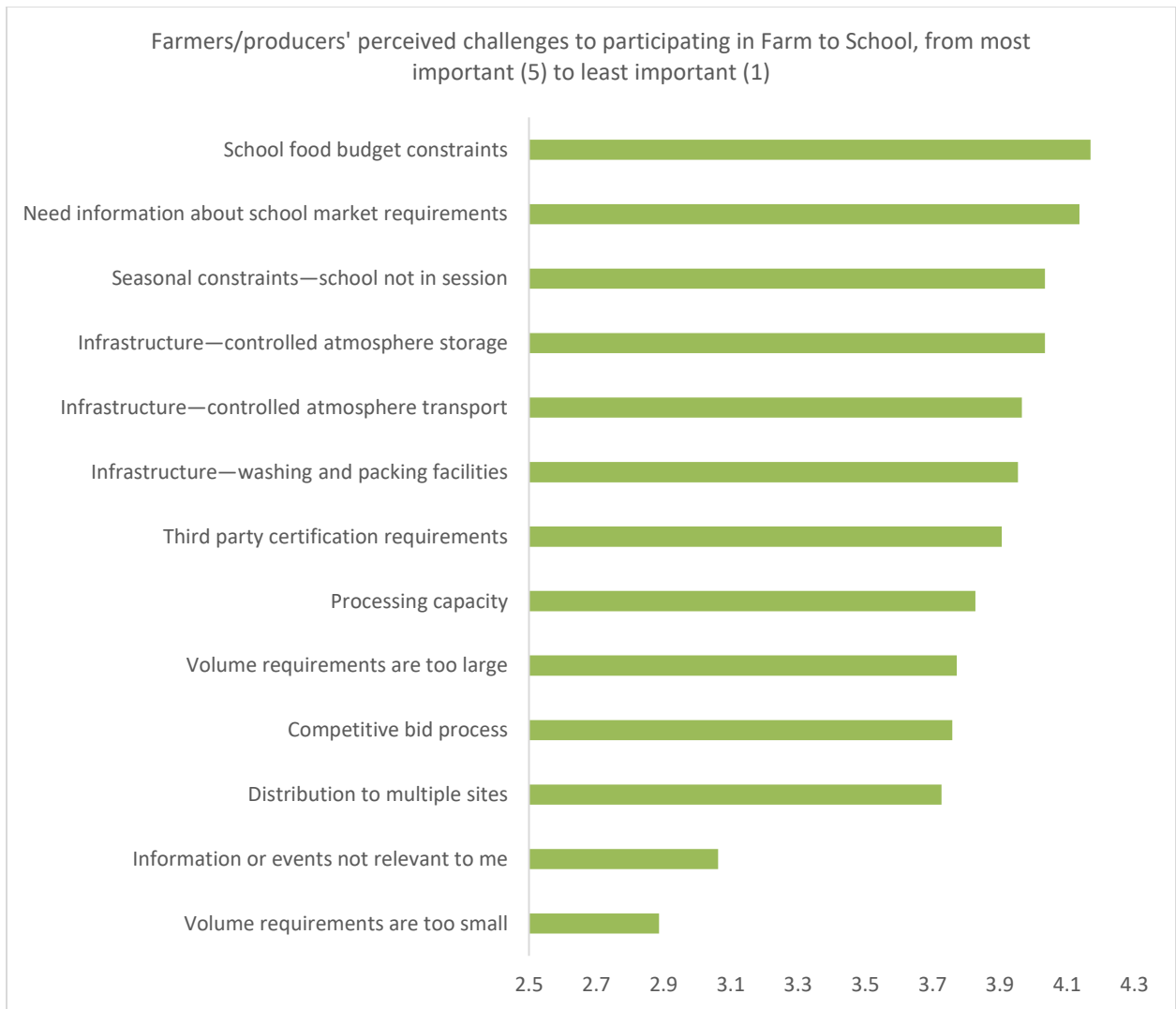
Participants reported their top three biggest barriers to using local products in their division. Most common perceived barriers relate to the time and complication of purchasing and delivering local foods. There is also a perception that local food is costly and that local farmers/producers do not want to sell to schools. Significantly, far less of a perceived barrier is the support of administrators and students. In other words, schools and students want the local products, but procedural barriers are present.





## Farmers/Producers' Perceived Barriers to Participation

Farmers/producers were asked to rate how much they agreed with the following challenges of participating in Farm to School. The main perceived challenges were about the capacity of the school food budget to purchase local, seasonality, and infrastructure. A top concern was the need for information on the specifics of selling to schools (see below figure).



## Recommendations

These findings have led the evaluation team to arrive at key recommendations to improve opportunities for participation in Farm to School. These recommendations are grouped within key areas, below:

1. *Develop trainings and resources for school nutrition professionals on:*
  - 1.1 How to track local food purchases.
  - 1.2 The social, economic, and environmental importance of Virginia's agrifood system.
  - 1.3 Streamlining local purchase procedures and integrating local procurement into common purchasing habits.
  - 1.4 How to support nutrition education through school gardens classroom and curricular connections, and other community partnerships such as SNAP-ed and Master Gardeners.
  - 1.5 The marketing and promotional advantages to Farm to School to improve external perceptions of school nutrition programs.
  - 1.6 Effective methods for finding local foods for school use.
  - 1.7 Efficiency as it relates to kitchen preparation, financial management, USDA foods, and inventory management to make time and funds available for increased local food use.
  - 1.8 Developing a definition of "local" for each school division.
2. *Develop interagency collaboration to connect local products with school nutrition purchasers and track local sales to schools.*
  - 2.1 Develop technical infrastructure and training to establish networks and connect buyers and vendors through programs such as Virginia MarketMaker. [Aligns with objective 2.7 of the Virginia Farm to Table Plan.]
  - 2.2 State agency collaboration and support is needed to help develop better aggregation, delivery, ordering, and invoicing systems.
3. *Work with Virginia Cooperative Extension, Virginia State University's Small Farm Outreach Program, and Virginia Department of Agriculture and Consumer Sciences (VDACS) to plan and implement trainings for farmers on:*
  - 3.1 Developing meaningful market relationships with community schools.
  - 3.2 The social, economic, and environmental benefits of selling to schools.
  - 3.3 Developing transparent food safety plans, Good Agricultural Practices (GAP) plans, or other similar plans.
  - 3.4 Procurement procedures for working with schools, including how to develop a forward contract (contracting in advance for food delivered seasonally).
  - 3.5 Maximizing sales opportunities with child nutrition programs, including season extension possibilities, summer feeding programs, and preschool sales.

- 3.6 Selecting desirable crops to grow for schools.
- 3.7 Grants available to support Farm to School activities.

- 4. *Develop evaluation methods to determine whether increasing access to healthy, local foods and education opportunities surrounding Farm to School activities can result in healthier communities and individuals through rural economic development and obesity prevention.*

## Conclusion

This evaluation illuminates several points about the Farm to School activities in Virginia and provides a basis for future planning and programming for the Virginia Farm to School Network. Our findings, especially taken in the context of national-level Farm to School studies, provide several insights. In general, our study aligns with findings from national studies.

This evaluation has generated recommendations for specific training initiatives for all stakeholders in the farm-to-school continuum. Analysis of national agricultural census data suggests that proximity of a school division to farms that conduct direct sales (farmers markets, community supported agriculture, direct-to-restaurant, direct-to-retail, etc.) correlates to increased Farm to School activity (Botkins & Roe, 2018). Another state-level study shows that higher affluence correlates to higher likelihood of participation in Farm to School activities (Lyson, 2016). Therefore, attention to the spatial distribution around “hot spots” of direct-marketing farming communities may help in planning networking efforts to connect farmers to school purchasers.

This evaluation has also highlighted several ways to build a network that connects farmers and local food suppliers with school division purchasers. A national study found a “spillover effect” (Botkins & Roe, 2018, p. 126), in which localities where one school or division has adopted Farm to School activities may correlate to easier adoption of Farm to School activities at nearby schools/divisions, as suppliers become familiar with the procurement process. This is good news for nutrition directors, in that one school division with a more favorable direct-marketing farming community may contribute to easier local food procurement for their neighboring school divisions. Our data strongly suggests that the main perceived benefits for farmers to participate in Farm to School revolve around social values placed on health education, access to healthy foods, raising public awareness, and strengthening community. These factors are in contrast to other factors involving increased profitability and other market-based benefits. Thus, this insight informs outreach efforts to farmers, who see the social value of Farm to School as central. This finding aligns with other national-level analyses of Farm to School programs (Allen & Guthman, 2006).

The findings from this evaluation will be used to better communicate programming goals and achievements to stakeholders. Thus, it aids in following the recommendation to develop partnerships with all stakeholders in the Virginia Farm to School program.

This evaluation has highlighted that there is significant interest and opportunity for both suppliers and purchasers in the Farm to School program. Developing trainings in conjunction with Virginia Department of Agriculture and Consumer Sciences, Virginia Cooperative Extension, and Virginia Department of Education targeted to multiple stakeholder groups (e.g., farmers, distributors, school garden professionals, and school nutrition personnel) could help overcome perceived barriers to participation. Infrastructure development such as streamlined vendor/buyer search capacity and simplified internal ordering and invoicing procedures could build capacity for utilizing local foods. Farmers and school nutrition professionals alike value the local community development aspects of F2S, but farmers perceived greater benefit for children who had increased access to local food in their school nutrition programs. By focusing on the social good as well as the economic benefits, there is a lot of room for growth.

## Survey Limitations

It is important to recognize the limitations of this evaluation. While every attempt has been made to reduce these limitations and ensure quality of the data, there is always the risk of small data errors. All quantitative survey research runs the risk of reporting errors in the figures provided by survey participants. Additionally, self-selection of respondents during the recruitment phase remains a possibility, since those more familiar with the Farm to School program may be more likely to invest the time to complete the survey.

## Acknowledgements

Virginia Department of Education acknowledges Virginia Polytechnic Institute, Virginia Cooperative Extension, United States Department of Agriculture, and the National Farm to School Network for providing support, funding, and expertise that made this survey possible. We would like to extend our gratitude to all who assisted with dissemination of the survey to farmers/producers, including the Virginia Cooperative Extension, Virginia Beginning Farmer and Rancher Coalition, Virginia Department of Agriculture and Consumer Sciences, Virginia State University's Small Farm Outreach Program, Virginia Agricultural Experiment Station Network, Virginia Association for Biological Farming, Young Farmers of Virginia, Virginia Farm Bureau Young Farmers, Virginia Chapter of Farmer Veteran Coalition, and the Arcadia Center for Sustainable Agriculture.

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## APPENDIX A

TABLE OF NUMBER OF RESPONSES FROM EACH VIRGINIA SCHOOL DIVISION

School Division	Number of Responses		
Accomack County	1	Danville City	1
Albemarle County	0	Dickenson County	1
Alexandria City	0	Dinwiddie County	1
Alleghany County	1	Essex County	0
Amelia County	1	Fairfax City	0
Amherst County	1	Fairfax County	2
Appomattox County	2	Falls Church City	0
Arlington County	1	Fauquier County	0
Augusta County	1	Floyd County	1
Bath County	1	Fluvanna County	1
Bedford County	1	Franklin City	1
Bland County	1	Franklin County	1
Botetourt County	0	Frederick County	0
Bristol City	1	Fredericksburg City	1
Brunswick County	1	Galax City	1
Buchanan County	1	Giles County	1
Buckingham County	0	Gloucester County	0
Buena Vista City	1	Goochland County	1
Campbell County	1	Grayson County	1
Caroline County	1	Greene County	1
Carroll County	2	Greensville/Emporia County	1
Charles City County	1	Halifax County	1
Charlotte County	1	Hampton City	1
Charlottesville City	1	Hanover County	0
Chesapeake City	1	Harrisonburg City	2
Chesterfield County	1	Henrico County	1
Clarke County	0	Henry County	1
Colonial Beach Town	1	Highland County	1
Colonial Heights City	1	Hopewell City	1
Covington City	1	Isle of Wight County	1
Craig County	1	King & Queen Co.	1
Culpeper County	0	King George County	1
Cumberland County	1	King William Co.	1
		Lancaster County	2
		Lee County	1
		Lexington City	1
		Loudoun County	1
		Louisa County	0
		Lunenburg County	1
		Lynchburg City	0
		Madison County	0
		Manassas City	1
		Manassas Park City	0
		Martinsville City	0
		Mathews County	0
		Mecklenburg County	0
		Middlesex County	0
		Montgomery County	1
		Nelson County	1
		New Kent County	1
		Newport News City	1
		Norfolk City	1
		Northampton County	0
		Northumberland Co.	1
		Norton City	1
		Nottoway County	1
		Orange County	1
		Page County	1
		Patrick County	1
		Petersburg City	0
		Pittsylvania County	1
		Poquoson City	1
		Portsmouth City	1
		Powhatan County	1
		Prince Edward County	1
		Prince George County	1
		Prince William County	1
		Pulaski County	1
		Radford City	1
		Rappahannock County	1
		Richmond City	2

Richmond County	1
Roanoke City	1
Roanoke County	1
Rockbridge County	0
Rockingham County	1
Russell County	0
Salem City	0
Scott County	1
Shenandoah County	1
Smyth County	0
Southampton County	0
Spotsylvania County	0
Stafford County	0

Staunton City	0
Suffolk City	1
Surry County	1
Sussex County	0
Tazewell County	1
Virginia Beach City	1
Warren County	1
Washington County	1
Waynesboro City	1
West Point Town	1
Westmoreland County	1
Williamsburg/Jam es City County	1
Winchester City	1
Wise County	1

Wythe County	1
York County	1
Correctional Education Board	0
Dahlgren Dependents	0
Quantico Dependents	0
Gwaltney School	1
Saint Andrew's School	1
Virginia School for the Deaf and Blind	1
Virginia Commonwealth Challenge	1
<b>TOTAL</b>	<b>111</b>