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Educators tell us that healthier students are better learners. Fresh produce can be an especially important part of a well-balanced diet, and research indicates that children eat more fruits and vegetables when those items are regularly offered. So it makes sense that school districts across New York State are using farm-to-school programs to deliver fresh produce to students.

Farm-to-school programs can enhance students’ educational experience as well, providing appealing opportunities for hands-on math and science lessons. They represent a valuable contribution to New York’s important agricultural sector, expanding the local customer base for farmers across the State. These programs even benefit our environment by reducing the need for long-distance transportation of foods.

Schools may find it challenging to implement farm-to-school programs, however. Federal and State laws properly require procurement processes that, in most cases, emphasize low-cost purchasing. Large-scale, traditional suppliers are often able to offer price advantages relative to smaller, local producers. Yet despite pricing and other challenges, nearly 300 New York school districts participated in farm-to-school programs in 2015, according to the U.S. Department of Agriculture.

This report outlines federal and State initiatives that are intended to encourage farm-to-school programs. It details the hurdles school districts may face when creating such programs and offers ideas for overcoming those challenges, as well as suggestions for State and federal policy makers to consider. Summaries of programs in six communities around New York State provide examples of varied approaches.

A number of factors have contributed to the farm-to-school movement, including a growing interest in local foods, concerns about children’s health, and the desire to promote agriculture and preserve farmland in areas across the State. I hope that this report serves as a useful resource for school officials, parents, farmers and other stakeholders seeking innovative ways to secure these benefits for area schoolchildren and their communities.

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Introduction

Farm-to-school programs promote the use of fresh, locally sourced foods in school meals. Supported by a variety of federal and State initiatives, such programs can enhance nutritional and educational opportunities for children at the same time they benefit local farmers, New York State’s overall agricultural economy and the environment.

Nearly 300 New York school districts reported participation in farm-to-school initiatives, according to a 2015 survey by the U.S. Department of Agriculture (USDA). These districts spent more than $45.3 million on local food in New York State, with an average 11 percent of food budgets devoted to locally sourced products. Another 16 percent of districts responding to the survey planned to start farm-to-school activities.

New York State’s Farm-to-School Program, created by statute in 2001, falls under the joint jurisdiction of the State Department of Agriculture and Markets (Ag and Markets) and the State Education Department (NYSED). In 2015, Ag and Markets awarded close to $325,000 in grants to help build capacity for farm-to-school programs in six areas of the State. The State Fiscal Year 2016-17 Enacted Budget included $550,000 in funding for similar initiatives. The two State agencies engage in a variety of other efforts to promote farm-to-school programs. The federal government’s efforts to support such programs include up to $5 million in annual competitive grants from USDA, which were awarded to six New York-based institutions, among others, earlier this year.

While interest in farm-to-school programs is clearly widespread, school districts often find it challenging to establish and implement such initiatives. Federal and State funds are key sources of support for school lunches and breakfasts; this year’s State budget includes $1.1 billion in federal funding and $34.4 million in State funds for such programs. State and federal laws generally require school districts to use competitive procurement processes.

Traditional food distributors used by the majority of schools in New York generally offer advantages in cost and other factors, but tend to rely primarily on large-scale suppliers rather than local producers. Schools also face a variety of logistical barriers to the introduction of farm-to-school programs, including a limited growing season in New York State and constraints involving staffing and facilities. Even after such challenges are met, schools may still find it difficult to persuade students they can enjoy the fresh vegetables and fruits made available.
School districts and other organizations across New York State have used a variety of approaches to address and overcome such challenges and enrich student lives, as described below. Such creative efforts in a wide range of settings demonstrate that school districts can find ways to provide fresh, locally sourced food—and to reap educational benefits at the same time—despite the inherent difficulties.

Federal support for school food programs includes cash assistance and entitlement funding based on the number of students eligible for free or reduced-price meals. Entitlement funds often can be used most cost-effectively with conventional (non-local) purchases, while cash assistance may be more flexibly used for locally sourced goods. Communities that are interested in building farm-to-school programs may find it helpful to plan their use of the two federal funding streams carefully to maximize the benefits of each. Other steps that school districts may find useful include creating farm-to-school partnerships with community advisory groups and local institutions of higher education to ensure a range of useful perspectives and skills.
Background

Agriculture is a major contributor to New York State’s economy, with more than 35,000 farms statewide in 2012. Farm-to-school programs represent an innovative approach to encouraging purchases of locally produced foods in order to provide important nutritional benefits to students and reduce environmental impacts associated with long-distance transport.

Increasingly, federal and State agricultural agencies, farm advocacy groups, and child nutrition advocates have promoted efforts to provide locally grown foods in school meals. These “farm-to-school programs” provide opportunities to improve child nutrition, offer hands-on educational experiences, and benefit regional and local economies as well as the environment. This report examines challenges facing farm-to-school programs and the innovative practices adopted by New York State schools, and is intended to inform local communities and State and federal policy makers as they consider steps to make the advantages of such programs more widely available.

According to the U.S. Department of Agriculture (USDA), farm-to-school programs may be an important tool in addressing serious health threats facing children, such as obesity and diabetes. Nutritional guidance adopted by the USDA recommends that fruits and vegetables comprise at least half of what children and adults put on their plate at meal time. One of the primary purposes of farm-to-school programs is to encourage students to consume locally grown fresh fruits and vegetables.

School nutrition choices also have the potential to affect student performance. Student health and access to healthy foods, in particular, may be linked to academic achievement.

Through activities such as school gardens, class horticulture projects, discussion of local agricultural products, and field trips to farms and food processors, farm-to-school programs provide opportunities for hands-on instruction across a variety of subjects including science, social studies, health, and more.

2 This report is intended to provide a general overview of farm-to-school programs in New York State and not a technical analysis of the statutes and regulations addressing this subject. Discussions relating to those statutes or regulations, as well as the examples of farm-to-school programs of specific school districts or BOCES, are for informational purposes only, and are not intended as comments on any entity’s farm-to-school program operations or the legality of any transactions.
3 USDA, Choose My Plate, Focus on Fruits at http://www.choosemyplate.gov/focus-on-fruits.
4 USDA, Choose My Plate at http://www.choosemyplate.gov/.
6 Lesson plans and other resources linking agriculture with health, math, science writing and other curriculum can be found at National Agriculture in the Classroom, Literacy Curriculum Matrix at http://www.agclassroom.org/
Programs that source foods locally support local growers and producers, and can increase economic output in a community. With some 35,500 farms, New York is a national leader in agricultural production, one of the country’s largest dairy producers, and a top-ten producer for a variety of fruits and vegetables, including apples, grapes, sweet corn, tomatoes, and others. Overall, agriculture contributed $37.6 billion to the State’s economy in the most recent national census of agriculture. Farm-to-school programs and other initiatives that encourage purchasing of locally produced agricultural commodities can further increase agriculture’s contribution to the State’s economy.

Moreover, when food is produced, distributed, and consumed locally, rather than being transported long distances, emissions of pollutants that contribute to climate change, smog, and particulate air pollution can be reduced, benefitting public health and the environment.

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7 Office of the New York State Comptroller, The Importance of Agriculture to the New York State Economy (March 2015, page 1) at http://www.osc.state.ny.us/reports/importance_agriculture_ny.pdf.
8 Office of the New York State Comptroller, The Importance of Agriculture, op. cit.
Farm-to-School Programs in New York State

The USDA conducted a national census of farm-to-school programs for the first time in 2013, and again in 2015. In this survey, the USDA defines farm-to-school activities as generally centering on procurement of local foods (meals, snacks, taste tests, etc.) and agriculture or nutrition-based educational activities (such as farmers in the classroom, culinary education, field trips, and creating or tending school gardens). Of New York school districts completing the 2015 Census, 298 (comprising 1,336 schools and 759,024 students), or 43 percent of the 693 school districts in New York State, reported that they participate in farm-to-school activities. Another 16 percent of responding districts planned to start such activities. At least 292 districts maintained school gardens. In total, the 298 school districts participating in the 2015 survey reported spending $45,324,500 on local food in New York State, with the average district spending 11 percent of its food budget on local products.

Overview of Farm-to-School Programs and Policies

Farm-to-school programs are authorized and promoted in both State and federal policies. New York State’s Farm-to-School Program was established pursuant to Chapter 2 of the laws of 2001 which generally provided for the Department of Agriculture and Markets (Ag and Markets) in cooperation with the State Education Department (NYSED) to facilitate and promote the purchase of New York farm products by schools, universities and other educational institutions. In September 2015, Ag and Markets issued a Request for Proposals (RFP) for a new Farm-to-School competitive grants program. A total of close to $325,000 was subsequently awarded to six programs across the State. Funds are being used to hire staff coordinators, educators, and consultants as well as provide training, purchase equipment, increase procurement of local foods, and help implement farm-to-school programming. New appropriations totaling $550,000 were included in the Ag and Markets budget for this fiscal year. In September 2016, an additional RFP was released announcing the availability of $500,000 in grants under the New York State Farm-to-School Program.

10 USDA, 2015 Farm to School Census Questionnaire, question #2, About the Census at https://farmtoschoolcensus.fns.usda.gov/about.
12 Ibid.
13 Ibid.
14 Article 2, Section 16, subdivision 5-b under Agriculture and Markets and Section 305, subdivision 31 under Education at http://www.agriculture.ny.gov/F2S/law.html
Ag and Markets and NYSED also support farm-to-school programming and activities. The departments organize an annual fall “Farm to You Fest” to celebrate New York State agriculture and promote awareness and consumption of local foods among students. Beginning in 2015, Ag and Markets also assisted New York City with its “NY Thursdays” program, which brings local foods directly to students every Thursday, a program which the State plans to replicate in schools across upstate New York.

Ag and Markets manages the State’s Farm-to-School Coordinating Committee, which strives to: connect schools with local farms and food producers; strengthen local agriculture; improve student health; and promote awareness of regional food systems. Several department programs provide indirect support to farm-to-school programs through other agricultural programs, such as reimbursing growers and handlers up to $750 for the cost of food safety certifications, for example.

At the federal level, the U.S. Healthy, Hunger-Free Kids Act of 2010 established the Farm-to-School program within the USDA to improve access to local foods in schools. In addition, the U.S. Department of Defense (DOD) administers a Fresh Fruit and Vegetable Program which allows schools to use USDA food entitlement dollars to buy fresh produce. The USDA also assists eligible entities through its Farm to School Grant program. On an annual basis, USDA awards up to $5 million in competitive grants to support different elements or phases of programs including support services, implementation, planning, and training grants. Six awards were made in New York State in 2016.

In addition, the USDA provides other programs which can support farm-to-school activities. New York State was awarded $1.2 million through the USDA Specialty Crop Block Program in 2015 to fund 11 projects, including one that increases the capacity of schools to serve locally produced specialty crops in the cafeteria. The USDA also allocated $1.7 million to New York State in fiscal year 2016 through the National School Lunch Program Equipment Assistance Fund, which

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16 Ag and Markets website, Farm to School Program, Resources at http://www.agriculture.ny.gov/f2s/resources.html.
19 USDA, Farm to School Census, About at https://farmtoschoolcensus.fns.usda.gov/about.
21 USDA Food and Nutrition Services, Community Food Systems, Farm to School Grant Program at http://www.fns.usda.gov/farmtoschool/farm-school-grant-program.
22 USDA, 2016 Farm to School Grant Award Summaries at http://www.fns.usda.gov/sites/default/files/f2s/FY_2016_Grant_Award_Summaries.pdf.
can be used to purchase equipment needed to prepare fresh foods and other materials needed in farm-to-school programs.\textsuperscript{24}

**Procurement for School Nutrition Programs.** School food purchases are heavily federally subsidized. The USDA provides funding and food products to states as part of the National School Lunch Program (NSLP) and the Child Nutrition program with the goal of providing nutritious foods to school children for free or at a low cost.\textsuperscript{25}

The USDA generally provides states with cash reimbursements for each school lunch served. For the 2016-17 school year, qualifying New York school districts will receive around $3.22 per lunch served, with 98.1 percent of this funding coming from the federal government.\textsuperscript{26} Approximately 80 to 85 percent of school lunch food is purchased through the commercial market using USDA cash assistance, State and local funding sources, children’s payments for reduced price and paid lunches, proceeds from vending machines, and other funds earned by or provided to the school.\textsuperscript{27} According to the USDA, the remaining 15 to 20 percent of food served consists of USDA foods, products purchased by the USDA from American farmers and provided to school districts.\textsuperscript{28} The dollar values of these foods are also known as “entitlement funds.”\textsuperscript{29}

Schools have flexibility in purchasing school food using cash assistance and in selecting products through USDA foods. Schools can maximize their federal resources by paying for conventional products with entitlement funds and reserving cash assistance for purchasing local items.\textsuperscript{30}

The State Budget for the 2016-17 fiscal year appropriated $1.1 billion in federal funding and $34.4 million in State funds to subsidize school lunch and breakfast programs.

Schools in New York may procure food through three centralized contracts with the Office of General Services. The agency uses its Long Island warehouse as part of a farm-to-school initiative: since 2011, it has partnered with local farmers and distributed over 225,000 pounds of local foods to 36 school districts.\textsuperscript{31}

\textsuperscript{25} USDA Child Nutrition Programs at http://www.fns.usda.gov/school-meals/child-nutrition-programs.
\textsuperscript{29} USDA, White Paper: USDA Foods in the National School Lunch Program, op. cit., p. 16.
\textsuperscript{30} Ibid. slide 17.
In addition to procurement from State contracts, schools may purchase food through traditional distributors and wholesalers or directly from local farmers, growers, and other vendors/suppliers, as long as competitive procurement practices are followed. Generally, purchases from local producers may be made directly from a farmer, at farmers’ markets, or through cooperatives, food hubs, or other joint purchasing arrangements. As a general rule, schools may also accept donations from farmers.

**Procurement of Local Foods.** According to a 2012 Ag and Markets survey, schools in New York State mostly rely on procuring food through distributors. These vendors may be more cost effective, and may also offer other advantages for schools. Traditional distributors often have relationships with local farms, are familiar with regulations governing school food purchasing, have distribution systems in place to address the logistics and expenses of transporting food to multiple school sites, and offer the advantage of centralized billing which can be labor-intensive when purchasing from multiple farms.

Schools in different parts of the State may have different levels of access to local produce through their traditional suppliers and may need to identify appropriate new sources outside of traditional purchasing arrangements from which to procure these items. In some cases, local farms may donate products to nearby schools, and many New York State school districts have school gardens that may produce small amounts of food used in the school lunch program.

**Overview of Procurement Rules.** In general, federal regulations provide certain procurement standards for school food purchases when federal funds are used. However, according to the USDA, states may have more restrictive rules relating to the procurement of such goods. In New York, school districts are subject to Article 5-A of the General Municipal Law (GML) which requires that purchase contracts in excess of $20,000 be awarded to the lowest responsible bidder or on the basis of “best value,” after advertisement for sealed bids or offers.

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32 Gretchen Swanson Center for Nutrition, Farm to School Toolkit, School Food Service Professionals at http://toolkit.centerfornutrition.org/category/school-food-service-professionals/.  
34 Gretchen Swanson Center for Nutrition, op. cit.  
37 Ibid. page 30.  
38 A school district may elect to award purchase contracts which exceed the statutory threshold (i.e., $20,000) to a responsive and responsible bidder on the basis of best value as an alternative to an award to the lowest responsible bidder. The school district must first authorize the use of best value by rule, regulation or resolution adopted at a public meeting.  
39 GML Section 103(1).
The GML includes an exception for school districts to purchase certain food products directly from New York State producers or growers, or associations of producers and growers, provided certain requirements are met. The purchases are also subject to NYSED regulations.

While schools are generally restricted from specifying that foods must be locally sourced when competitively bidding, the federal 2008 Farm Bill provides that schools which receive federal funds for child nutrition programs may apply a geographical preference to purchase unprocessed, locally raised and locally grown agricultural products.

**USDA Pilot Project for Unprocessed Fruits and Vegetables.** New York State has been selected as one of eight states to participate in a USDA pilot project to develop additional opportunities for schools to purchase fresh fruits and vegetables using USDA funds. The program, which began during the 2014-15 school year, allows New York State schools to purchase locally grown fresh items with the USDA funds annually allocated to schools. Vendors must be approved by USDA to participate in the program and meet food safety requirements including Good Agricultural Practices (GAP) certification. The program is administered by OGS and uses USDA entitlement dollars; 134 school districts and 18 vendors will participate in the 2016-2017 school year.

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40 GML Section 103(9); see also, GML Sections 103(8-a) and (10).
41 See, 8 New York State Codes, Rules and Regulations Section 114.3.
42 Cornell, Christine; Gosselin, Maggie; and Kane, Deborah, Procuring Local Foods for Child Nutrition Programs, USDA August 2015, pages at http://www.fns.usda.gov/sites/default/files/f2s/F2S_Procuring_Local_Foods_Child_Nutrition_Prog_Guide.pdf
43 Foods may actually be significantly processed and still meet the USDA requirements. Foods may be sliced, diced, ground, frozen, packaged, dried, vacuum-packed, or treated with preservatives. Animals may be butchered and milk can be pasteurized and still qualify as unprocessed. Cornell, Christine; Gosselin, Maggie; and Kane, Deborah, Procuring Local Foods for Child Nutrition Programs, USDA August 2015, at http://www.fns.usda.gov/sites/default/files/f2s/F2S_Procuring_Local_Foods_Child_Nutrition_Prog_Guide_BW.pdf.
44 Ibid. page 63. Guidance on the use of geographic preference is available from USDA.
Other Related Policies

**Regional Food Hubs.** Regional food hubs—central facilities that facilitate storage, processing and distribution of locally produced foods—are playing a growing role in New York State agricultural policy.

In February 2013, Governor Cuomo announced that $3.6 million in State funding would be used to create four new food distribution hubs in Central New York, the Finger Lakes, the Hudson Valley, and the North Country, in addition to a previously planned food hub on Long Island. The Governor’s Regional Food Hub Task Force found that the lack of connections between mid-sized farmers and large-scale distributors restricts access to local food for downstate communities and limits upstate farming sector growth. The Task Force recommended investing in regional farm aggregation and distribution infrastructure and creating food hubs in New York City.

The State’s food hubs currently provide local foods to colleges and private institutions, but this model has the potential to assist farm-to-school programs in the purchase of locally produced foods.

**Food Safety Rules.** In order to sell their products to schools, farmers may have to meet local, State, and federal requirements including the Good Agricultural Practices (GAP) and Good Handling Practices (GHP) established by the USDA to cover production and post-harvest handling of produce.

**School Wellness Policy.** The federal Healthy, Hunger Free Kids Act of 2010 requires each local educational agency that participates in the NSLP to establish a School Wellness Policy for all schools under its jurisdiction. This policy must include nutrition guidelines and goals for the promotion and education of nutrition and school-based activities that promote student wellness and be periodically reviewed by school and public stakeholders. The School Wellness Policy can be an important tool to support farm-to-school programs, and NYSED’s Administrative Review includes an evaluation of the policy.

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48  Ibid.
Procurement Policies and Practices

Farm-to-school programs may face hurdles determining where to purchase local foods and how to make purchases consistent with procurement rules and processes. The procurement systems and food system operations used in school nutrition programs are not standardized. Some school districts have also found that farmers in their region are not producing fruits or vegetables that are suitable for serving in school lunches. In addition, food distribution markets have become increasingly global and often do not identify where foods are grown.

Program managers must often learn how to use geographic preference in procurement, develop new supplier networks, establish new distribution routes, and/or encourage traditional suppliers to provide locally grown foods to meet farm-to-school program needs. Only 37 percent of New York State school districts with farm-to-school programs surveyed by the USDA in 2015 were aware of the “geographic preference” option within USDA procurement rules.53 Moreover, only 16 percent of participating districts reported actually using this tool.54

School districts may also face price barriers procuring local foods. Even though foods may be transported over long distances, the volume and scale of conventional distribution networks may create a competitive advantage over local farms. Even with procurement tools such as the geographic preference, price matters in an environment where schools are charged with providing nutritious meals at low cost. Some schools partner with local farmers who donate products, or by sourcing foods from school gardens. Donations, however, may not be sustainable in the long-term, and schools typically use gardens for educational purposes as they generally do not produce enough food to serve the student population as a whole.

Some school districts attempt to track the source of the food products they purchase in order to identify foods suitable for local procurement, set local sourcing goals, and monitor progress. Tracking procurement can be daunting, as there is no uniform system to capture this information and schools may depend on distributors to report the origin of food products. The administrative resources required to conduct a spending analysis can be prohibitive, as purchasing data must often be manually compiled. As a result, schools may prioritize other aspects of a farm-to-school program such as student learning and community engagement.

54 Ibid.
Farmers also face challenges entering a farm-to-school market. Farmers may not review the publications in which schools post their request for bids, or may not be familiar with other aspects of the procurement process such as submitting an invoice for payment. The expense of complying with food safety processes such as GAP/GHP, a requirement for certain USDA programs, can also be a barrier for small farmers particularly.55

**Operational and Personnel Challenges**

New York State has a limited growing season and many fruits and vegetables are in season for a short period of time, often when school is out of session.56 Schools may not have the capacity to pick up food products from farms, and farmers may not have the resources to transport products to schools or process foods to meet school specifications.

Facility limitations, staffing costs, and storage constraints are additional challenges facing farm-to-school programs. In some cases, meals are prepared in a central facility and then transported to be served in individual school facilities. Meal preparation may be limited to microwaving prepared trays. In these circumstances, school kitchens may lack adequate facilities or basic equipment, such as knives and cutting boards.

Adding fresh, local foods may require new expenditures for tools, training, and additional staff time. Preparing unprocessed foods or “scratch cooking” may require capital expenditures for the purchase of equipment and the construction of facilities.

Some programs meet important staffing needs with volunteers from the school or broader community. However, volunteer staffing may be hard to sustain over time.

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Student Engagement & Consumption

The biggest challenge facing farm-to-school programs may be persuading students to eat locally sourced foods that are unfamiliar to them. Federal standards requiring that school lunches contain more fruits and vegetables gained notoriety when students discarded the program’s food items in high volumes.57

Program Sustainability

New York State and the federal government encourage school districts to establish farm-to-school programs by providing grants to support activities. However, these grants are limited in number, value, and timeframe. Of the 294 USDA grants awarded between 2013 and 2016, New York State has received 15.58 The limited nature of these grants requires schools to expend resources searching for ongoing sources of funding to sustain their programs after a grant expires.

58 USDA Grant Opportunities at the Food and Nutrition Consumer Services – Farm to School at http://www.fns.usda.gov/grant-opportunities/farm-to-school.
The following farm-to-school programs have developed solutions to overcoming challenges facing their programs. The examples below are based on conversations with school food service staff and program partners, program reports, and other sources.

**Broome-Tioga BOCES**

The Broome-Tioga Board of Cooperative Educational Services (Broome-Tioga) serves 15 school districts and approximately 35,000 students in Broome and Tioga counties in the Southern Tier. Its Food Service Management program supports farm-to-school programs by directly purchasing locally sourced foods. In conjunction with initiatives to promote student participation in school nutrition programs and implement federal nutritional guidelines, Broome-Tioga’s farm-to-school program is part of a comprehensive regional initiative to reduce hunger and improve student nutrition. A Special Project Coordinator serves as the program coordinator.

The program received support to conduct a pilot in food safety education and staff training in fresh produce preparation, conducted with the Binghamton City School District, from a USDA implementation grant awarded to Ag and Markets in 2013.

**Nutrition Education.** Broome-Tioga educates students and families on healthy eating habits through the Rock on Café program, a consortium of 15 school districts, to serve student-approved, healthier versions of traditional recipes and provide information on menus and healthy eating habits through local news outlets. Rock on Café schools participate in the New York Harvest for New York Kids program by including local foods such as apples, romaine lettuce, and tomatoes on their menus and advertising the benefits of local products. Broome-Tioga also provides nutritional information to families and schools through the services of a student intern from Cornell University Nutritional Sciences and sends menus and other materials directly to students’ homes.

**Student Engagement.** Broome-Tioga has done taste tests with apples, experimented with seedless grapes, and is considering testing other fruits such as blueberries which are harvested in the summer but can be frozen to conduct taste tests during the school year.

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59 As previously mentioned, the examples of farm-to-school programs of specific school districts or BOCES are for informational purposes only, and are not intended as comments on any entity’s farm-to-school program operations or the legality of any transactions.
Procurement. The program has used the geographic preference tool to procure local apples, romaine lettuce, and tomatoes, and is exploring the feasibility of adding locally sourced carrot coins processed by the Finger Lakes Fresh Food Hub as well as beef sourced from local farms.

Transportation Costs and Logistics. Broome-Tioga has arranged with the Food Bank of the Southern Tier to pick up and deliver local apples procured by Broome-Tioga. The Food Bank made regular deliveries to food banks in the vicinity of the apple farm and was able to pick up the apples and deliver them to the Binghamton City School District, taking its payment in apples. To address federal packaging requirements, Broome-Tioga also transported the apples in reusable plastic totes, which could be cleaned and sterilized and then reused. Broome-Tioga is expanding the arrangement to include two smaller rural schools.

Buffalo City School District

The Buffalo City School District (Buffalo) serves 34,000 students across nearly 60 facilities in western New York and launched its farm-to-school program in 2015. The program is managed by the District’s Food Service Director while key program partners Cornell Cooperative Extension of Erie County (CCE), the Massachusetts Avenue Project (MAP), and the Buffalo Niagara Medical Center (BNMC) provide outreach and engagement services.

Buffalo was awarded a $45,000 USDA planning grant in 2015 to identify systems and procedures for procuring locally grown farm goods and encouraging student consumption. Youth leaders, students, parents, teachers, food service staff, farmers, and distributors helped develop the farm-to-school plan. Buffalo also received a $43,260 New York State Farm-to-School Grant in 2016.

Student Engagement and Education. Buffalo’s program is unique for its emphasis on youth engagement. The District worked with a local youth development organization to establish the Buffalo Youth Advisors Council, which has helped set program goals and implement grants. Buffalo chose 11 schools for a pilot program, in which a “Harvest of the Month” locally sourced food item was served once a week. Students selecting the food item in the cafeteria line received a sticker. One school served as a control for evaluation purposes. In the remaining 10 schools, activities included:

- Teaching students the entire life cycle of local foods as products move from the fields to the table to disposal of wastes. In this exercise, students grow kale plants in their classroom.
- Helping teachers integrate farm-to-school components into the curriculum by creating a website portal making lesson plans and other materials readily available.
● The program also mails Harvest of the Month menus directly to students’ homes.

● Students in eight classrooms went on field trips to visit a dairy farm and pick strawberries.

● A contestant from the Hell’s Kitchen television show who lives in the Buffalo area works with students on a volunteer basis, teaching cooking and life skills.

**Kitchen Facilities and Equipment.** Buffalo is renovating its central commissaries to accommodate scratch cooking in support of its farm-to-school program. Grant funds supported a visit to Minneapolis schools to view commissary modifications made there. The District also partnered with an area food processing business to process local products.

**Procurement Monitoring and Oversight.** The District established a baseline of initial spending for locally sourced products in the early stage of its farm-to-school program, and plans to set local purchasing goals in subsequent phases. Buffalo relies on data provided by its distributor to determine how much money it is spending on local foods and whether it is meeting its spending goals, but also spot-checks distributor data to monitor its accuracy.

**Program Evaluation.** With help from students in the D’Youville College Nutrition Program, the District is using before and after surveys of its Harvest of the Month pilot to gauge changes in students’ eating habits. The evaluation found that cafeteria student engagement and classroom activities were important for retention of information about food items and nutrition; students were largely unaware of the program in the control school where these activities were not employed.

**The Adirondack Farm to School Initiative**

The Adirondack Farm-to-School Initiative (ADK Initiative) is a partnership of Saranac Lake Central School District (640 students in three facilities), Lake Placid Central School District (700 students in two facilities) and Tupper Lake School District (800 students in one facility) in New York’s North Country. The ADK Initiative has set a goal of sourcing 15 percent of cafeteria produce from local sources and has a dedicated farm-to-school coordinator, the Saranac Lake District Food Service Director. In addition, each participating school district has designated a local coordinator.
In 2015, the Saranac and Lake Placid school districts received a $44,754 USDA grant to support planning, equipment purchases, and curriculum development. The program’s coordinator is supported with a New York State Farm-to-School Grant. In addition, the Saranac Lake District received a grant to purchase a produce dicer from the Northern New York Healthy Heart, Eat Well Play Hard grant program.

**Partnerships and Stakeholder Engagement.** The ADK Initiative stands out for its diverse network of program partners, each of which brings unique skills to the program:

- Paul Smith’s College, a nearby college with a culinary arts program, helped coordinate school gardens as well as create recipes and local menu items.
- Cornell Cooperative Extension helped identify local producers and information.
- The nonprofit Adirondack North Country Association helped draft bidding documents.
- The boards of education in the three school districts approved a commitment agreement that supported the USDA grant application.
- Other key partners include: North Country Healthy Heart Network, the Adirondack Wild Center, North Country Food Day Youth Summit, Adirondack Harvest, the school district garden club, and food service representatives from area schools.

**Program Planning and Administration.** The ADK Initiative has developed materials including a farm-to-school plan and a series of program assessment surveys for school administrators, cafeteria staff, food service directors, garden coordinators, teachers, students, and parents. These are on the Internet to foster collaboration among other schools in the area.

**Procurement.** Before procuring local foods, the ADK Initiative first surveyed local farmers to determine their interest and capacity and to obtain price information. Participating farmers deliver the produce directly to the District’s central kitchen. Examples of local foods include: potatoes, beets, rhubarb, carrots, apples, onions, lettuce, cabbage, brussels sprouts, eggs and small amounts of beef and pork. Franklin-Hamilton-Essex BOCES will assist with the processing of local foods.

**Student Engagement and Education.** The ADK Initiative holds a Fall Harvest event featuring: garden tours; taste tests; recipe demonstrations; student votes on items for potential inclusion in future lunch menus; vegetable art; food-themed storytelling performances; and more. At this event, students and staff provide a full farm-to-school meal for attendees. Science and technology curriculum standards were also developed for teachers at the elementary, middle, and high school levels to support the integration of farm-to-school curriculum into the classroom.
Poughkeepsie City School District

The Poughkeepsie City School District in the Hudson Valley serves 5,000 students from pre-kindergarten through 12th grade in six different school buildings. The Poughkeepsie farm-to-school program’s goals are to incorporate local foods into the menu on a regular basis and to help students learn about and participate in food production through farm visits and gardening projects. The District established a point system to prioritize key program components including partnership and education. The Food Services Director serves as farm-to-school coordinator.

The Poughkeepsie farm-to-school program was initially funded through a 2013 USDA farm-to-school implementation grant awarded to Hudson Valley Pattern for Progress (Pattern for Progress), a regional nonprofit group. After the grant ended, the District worked with local partners to seek additional funds and continue the program, and received a $99,500 USDA Supportive Service grant in 2016.

Procurement Tracking and Tools. The District works with the Dutchess County BOCES to bid on local items so schools can jointly purchase local foods in bulk to reduce costs. District staff worked with project partners to review purchasing data and segregate expenditures by food type (produce, dairy, meat, etc.) to make it easier to identify local items. The District also partnered with organizations knowledgeable about local distributors and farmers to develop a database of suppliers able to source local products, and to help shape bid language to support local foods. The District also created a seasonal chart identifying local products available throughout the year.

Kitchen Facilities and Equipment. Grant-funded equipment is used to process local foods in-house and the District uses a local processor to precut and freeze larger items like squash. Staff received basic kitchen skills training and assistance in recipe development from the nearby Culinary Institute of America.

Student Consumption. To change students’ eating habits, Poughkeepsie developed new recipes, taste tests, and surveys. Local foods such as root vegetables, kale, and squash are served to students every Tuesday and Poughkeepsie Farm Project produce was served in the District’s summer feeding program. Taste tests purposely coincided with school open houses and parent teacher-conferences to encourage families as well as students to try these new foods. Students also passed out samples of new dishes in the cafeteria line during lunch.

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Student Engagement and Education. Poughkeepsie developed hands-on learning activities to increase students’ interest in farm-to-school activities, including:

- Conducting student field trips to the Poughkeepsie Farm Project.
- Developing teaching gardens at each school. Students and faculty work with project representatives to learn about life cycles of plants and other aspects of horticulture.
- Holding miniature farmers’ markets at summer feeding program sites. Surplus production from an area farm was distributed free to the families of children participating in the summer program, making fresh produce available in communities that were underserved by traditional farmers’ markets and grocery stores.

Rondout Valley Central School District

Located in the Hudson Valley, Rondout Valley Central School District (Rondout Valley) consists of a high school, junior high school, intermediate school, and two elementary schools. The District enrolls approximately 2,000 students. Rondout Valley participated in the 2015-16 Vermont Food Education Every Day (VT FEED) Farm-to-School Institute (Institute). Rondout Valley’s farm-to-school program goals include providing career development opportunities for students interested in pursuing careers in agriculture. The District’s Director of Food Services manages the program. Rondout Valley is working with the Ulster BOCES to apply for a grant to hire a coordinator to support farm-to-school programs at schools served by the BOCES.

The Local Economies Project, operating under the fiscal sponsorship of the New World Foundation, awarded the District a $726,000 three-year grant to fund an Agriculture and Food Science Initiative.

Program Planning. The District created a Farm-to-School Committee comprising the District superintendent, principals, assistant principals, food service staff, teachers, administrators, local businesses, and key community partners. Rondout Valley developed a farm-to-school action plan through its participation in the VT FEED Farm-to-School Institute.
**Procurement and Partnership.** Rondout Valley purchases local foods through a regional distributor after finding that local farmers were unable to make deliveries to school facilities. However, some local farmers donated local crops by inviting Rondout Valley to glean remaining produce in their fields after harvest. In fall 2015, the District food service manager and school and community volunteers brought in approximately 1,800 pounds of apples, 300 to 400 pounds of broccoli, and 20 cases of blueberries. Some of these foods were processed and frozen by volunteers in Rondout Valley kitchen facilities. One day of gleaning produced enough broccoli to last the District two to three months. In an effort to purchase foods locally, the Board of Education has set aside $5,000 for a pilot project in the 2016-17 school year to purchase “very” local products specifically from the Rondout Valley.

The District also partnered with the Rondout Valley Growers Association (RVGA) Farm-to-Pantry Program on the gleaning initiative by opening its central kitchen to the pantry to use for processing during non-meal-time hours. In summer 2016, RVGA processed fresh tomatoes, eggplant, and summer squash for distribution to local food banks.

**Kitchen Equipment and Staff Skills.** To extend the seasonal availability of local produce, Rondout Valley invested in freezers and processing equipment. The District also partnered with a local restaurant to train food service staff and develop new recipes.

**Student Engagement and Education.** The District developed local, seasonal menus and conducts taste tests to gauge students’ preferences. Local foods served include broccoli, tomatoes, potatoes, and cabbages. The District is also developing an agricultural science curriculum, a greenhouse, and a Food Science facility to help students pursue careers in food and agriculture. In fall 2016, students are participating in a volunteer day to make applesauce from local apples to be served in Rondout Valley schools.

**Waterville Central School District**

Waterville Central School District (Waterville) is a rural district located in the Mohawk Valley. Waterville has approximately 800 students in an elementary and a junior/senior high school. Waterville’s farm-to-school program began in 2015 with support from the Waterville Board of Education. Waterville also participated in the 2015-16 VT FEED Institute. Initially, Waterville designated a Cornell Cooperative Extension employee as its farm-to-school coordinator, but has recently arranged to share coordinator services with neighboring districts.
Waterville’s farm-to-school program set goals to: increase student food awareness, recognition and acceptance; increase staff awareness and involvement; provide each elementary grade level with a raised bed garden integrated into regularly scheduled student activity; and offer a locally sourced salad bar in the junior/senior high school. The Board of Education created a Steering Committee comprising: Cornell Cooperative Extension; Oneida-Herkimer-Madison BOCES Food Service Program; local farmers; the Farm Bureau; local businesses; an Oneida County legislator; the Waterville Board of Education; the District superintendent; and a District business official.

**Student Engagement and Nutrition Education.** Waterville combines hands-on horticultural experience with in-class instruction and field trips to local farmers’ markets. Students helped to construct an outdoor learning space, including an 800-square foot, raised bed garden, and participated in field trips to visit local farmers’ markets. At the markets, students sampled local products, and received recipe ideas. In addition, students participated in a scavenger hunt that required them to talk with local farmers to learn about locally grown foods, seasonal availability, and local food costs. Other programming activities included: field trips to farms; an “iron chef” competition; an annual local food day; and a school competition to design the program logo.

**Program Planning and Policy.** Waterville developed a farm-to-school action plan through the VT FEED Institute. The plan identifies agreed upon activities focused on the cafeteria, classroom, outdoor learning, and community. Progress is reviewed quarterly. Having completed its VT FEED training, Waterville will participate in additional professional development sessions.

**Local Procurement Goals and Plans.** Waterville has conducted a menu analysis to identify food items that can be sourced locally, and has set a procurement goal of sourcing 20 percent of its food purchases locally. Including dairy products, the District currently sources approximately 18 percent of its food locally. The District currently sources dairy products and apples from local producers in addition to Harvest of the Month meals highlighting a variety of local foods. Waterville is working with a consortium of school districts that receive food service support from BOCES to develop bids for fruits and vegetables that include a geographic preference.

**Program Advocacy and Sustainability.** The Waterville steering committee is advocating for an increase in the State reimbursement rate for the school lunch program. Locally, the District is controlling costs by sharing a farm to school coordinator with a nearby school district to oversee in-class education, outreach, menu analysis, staff training, student sampling activities, and local food procurement. In 2017-18, BOCES will contract to purchase 40,000 pounds of beans and carrots from local farms through an upstate packers’ and growers’ consortium for schools including Waterville.
Conclusion and Program Suggestions

A significant number of New York State schools have adopted farm-to-school programs, which have helped create interest in local foods among school communities and created new opportunities to educate program participants and stakeholders on the important topics of nutrition and agriculture.

Farm-to-school programs face significant challenges. To prepare student meals from fresh, locally sourced foods, school districts are working against countervailing trends in institutional food service. Procuring and cooking local foods may require school food service managers to use new procurement tools such as geographic preference, teach their staff new cooking skills, provide new kitchen appliances and equipment, and develop new vendor networks.

It is hard to develop one-size-fits-all solutions to these challenges because school district nutrition programs and regional agricultural production can vary in crucial ways. The farm-to-school programs described in this report work through challenges by drawing on resources in the school community—food service staff, students, parents, teachers, administrators, groundskeepers, school board members—as well as organizations and businesses in the larger community, to build and grow their programs.

The initiative for these programs has come from all corners of the school community, from parents and community-based organizations to farmers and agricultural advocacy groups. Advocates from inside and outside of the school community have built institutional support for the programs through school board adoption of supportive language in district wellness policies as well as policies directing that school nutrition programs take steps to serve local foods. Parent groups and grassroots organizations have provided significant services on a volunteer basis by planting school gardens, connecting schools with local farms, providing training and other assistance. Some programs have received assistance in planning and organizing effective farm-to-school programs from the Vermont FEED Institute.

New York State and the federal government have adopted policies to support farm-to-school programs. Both Ag and Markets and the USDA provide grants to school districts and certain other eligible parties to assist in farm-to-school planning and implementation. In addition, both Ag and Markets and the USDA have adopted programs to assist schools in procuring and serving locally sourced fruits and vegetables. School districts, program partners, and farmers have dedicated significant staff and volunteer time and other resources to farm to school programs.
As a result of these commitments, New York State’s farm-to-school experience offers a wealth of information that can serve as a resource for programs and policy makers. The following suggestions are offered for consideration by school districts and community stakeholders as well as State and federal agencies.\(^\text{61}\)

**Suggestions for School Districts**

*Promote Planning, Goal Setting, and Accountability.* Written farm-to-school plans are useful for keeping a school district’s efforts on track and ensuring a clear and unified mission. A written plan may also be useful in recruiting support from outside the school community. Such plans set goals for critical components of the program, identify the tasks necessary to accomplish goals, establish timeframes for taking required steps, and articulate clear roles and responsibilities for participants. School districts may consider setting goals in the following areas: procuring and serving local foods; gaining student support and acceptance; increasing student consumption and reducing food waste; curriculum; building institutional support; and building support in the agricultural community and the community at large. Farm-to-school plans also form a basis for assessing and improving the initiative.

*Recruit Support and Resources through Collaboration.* Successful farm-to-school programs develop partnerships within the school and broader communities to accomplish shared goals. Programs strategically recruit members and partners who have the authority to make needed decisions and the skills needed to follow procurement rules, train workers, and find suitable products in the local agricultural commodity market.

*Institutionalize Support.* Support from school boards, administrators, parents associations, and the community at large can bring additional resources and help make these programs more sustainable. Institutional support can ensure that school districts planning capital improvement projects consider farm-to-school program needs, such as kitchen/cafeteria upgrades. Some school districts have incorporated responsibility for key programmatic roles in the job descriptions of school staff. In addition, institutional support can shape key school policies like the federally mandated school wellness policy, a tool that can be leveraged to further strengthen programming.

*Increase Participation to Increase Revenues.* Schools can also make strategic use of federal funds to support farm to school programs. Increasing participation in school meals by students, faculty and staff maximizes USDA school lunch fund reimbursements, an important revenue stream; serving good, quality meals can increase participation.

\(^{61}\) Some of the suggestions may require changes in state or federal law or regulation to implement.
Use Geographic Preference and USDA Entitlement Funds. Use of the geographic preference option has enabled schools to identify locally sourced foods and to procure these foods. In addition, procuring conventional (non-local) food products with USDA Food frees up USDA cash assistance for local food purchases, helping schools hold down program costs.

Suggestions for State and Federal Policy Makers

BOCES Support. Boards of Cooperative Educational Services may be well positioned to provide support for local food procurement, menu planning, staff training, printing and other management services associated with farm to school programs. BOCES can provide expert advice, procure local foods centrally, purchase institutional kitchen equipment on behalf of schools, and provide staff training. In addition, BOCES staff can perform student engagement activities and assist with school gardens, as well as providing curricular support.

Statewide or Regional Purchasing of Local Foods. USDA’s fresh fruits and vegetables pilot program may provide a model for State assistance in the procurement of local foods. In addition, the State Farm-to-School Grant program could support joint purchasing agreements among districts to achieve economies of scale. Similarly, as the State works to develop a network of regional food hubs, the needs of farm-to-school programs and barriers to farmer participation should be addressed. Food hubs have the potential to assist schools in overcoming the processing, storage, and transportation challenges involved in serving local foods.

Training Programs. School districts may benefit from training on crucial topics including State and federal procurement rules and maximizing the use of USDA Entitlement Funds. Training provided by Vermont FEED helps districts develop program plans, set program goals, organize farm-to-school advisory committees and implementation task forces, and evaluate their programs. In addition, ongoing support from experts as questions arise would be beneficial. Farm-to-school coordinators can play a critical role by ensuring that key players are included in training and by building farm-to-school practices into the routine operations, policies, and procedures of schools and their partners.

Farm-to-school programs have been incorporated into science, math and other curricula, providing real-world examples of the importance and applicability of these subjects. State programs promoting the teaching of science, technology, engineering and math, such as the Master Teacher program, could help train teachers to incorporate farm-to-school activities in their classroom teaching.
Program Monitoring. As the State and federal governments commit resources to farm-to-school programs, collecting data to support program evaluation should be a priority. School food expenditure data can assist in evaluating the economic benefits of the program, and data on student acceptance and consumption of local foods can assist in evaluating the nutritional benefits. NYSED could assist school districts in collecting this data by developing methods and tools to incorporate information on the source of foods into district recordkeeping systems, and by including it in the three-year reviews of school food authorities.

Model Policies. State and federal agencies may be able to support farm-to-school programs by providing model policies, bids, and requests for proposals (RFPs). Model school wellness policies may facilitate action by school boards and ensure compliance with State and federal law. Model bids and RFPs could assist in educating farm-to-school programs on the appropriate use of local procurement tools.

Conclusion

Agriculture is a major contributor to New York State’s economy, with more than 35,000 farms statewide in 2012. Farm-to-school programs represent an innovative approach to encouraging purchases of locally produced foods while providing important nutritional benefits to students and reducing environmental impacts associated with long-distance transport. This report is intended to inform both local communities, and state and federal policymakers, as they consider steps to make the advantages of farm to school programs more widely available.