

meat

local

Poughkeepsie City School District

HUDSON VALLEY

FARM TO SCHOOL PROJECT



PRESENTED BY Hudson Valley Pattern for Progress • Poughkeepsie City School District • the Poughkeepsie Farm Project • Upstream Advisors • Hudson Valley Agribusiness Development Corporation

ACKNOWLEDGEMENTS

Project Collaborators

Children's Media Project
Farm to Table Copackers
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Local Product Sources

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Poughkeepsie Farm Project

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A Whole Systems Approach to Local Food
Procurement & Community Engagement

Project Partners

Hudson Valley Pattern for Progress

Poughkeepsie City School District

the Poughkeepsie Farm Project

Upstream Advisors

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EXECUTIVE SUMMARY



The Poughkeepsie City School District Farm to School Project was designed as a whole systems approach to local food procurement and community engagement within our local food system. Hudson Valley Pattern for Progress (Pattern), a 501(c) 3 non-profit policy, planning, advocacy and research organization that focuses on the growth and vitality of the Hudson Valley, acted as the project administrator by collaborating with several other partners to successfully carry out the grant. Partners included the Poughkeepsie City School District (PCSD), the Poughkeepsie Farm Project (PFP), Upstream Advisors, and Hudson Valley Agribusiness Development Corporation (HVADC).

The project consisted of two major goals: to develop routine procurement of local foods and to create a culture of food systems learning and engagement. Project staff met these goals as well as the USDA's objectives by taking a whole systems approach and collaborating with Hudson Valley farmers, value-added producers, distributors, school administration staff and other community stakeholders at each phase of the project. The team pursued two strategies to increasing local procurement. First, they worked with PCSD to identify opportunities to procure local foods as replacements to the ingredients they already purchase regularly and partnered with HVADC to identify farmers who could supply some local products to be purchased by the school districts. Second, the team created recipes and identified new types of products that could be procured locally. Additionally, PFP served as an educational resource for students and faculty to experience growing food first hand, becoming an integral part of the farm to school curriculum through field trips and in-class workshops.

All four of the organizations partnering for the project had a record of success in previous farm to school initiatives. The staff of Upstream Advisors had extensive experience in shifting policy to allow for increased access to locally produced foods and PCSD had a history of purchasing limited products from local farmers and incorporating local food and school gardens into cafeteria activities. HVADC had readied many farmers

for the institutional market and PFP had created experiential learning opportunities for students based on their urban farm and in-school gardens, classrooms and cafeterias.

The project design incorporated several lessons learned by the identifying partners through past experiences in farm to school projects and similar initiatives. All four partners were able to approach the project with valuable insight gained from these lessons which included using a cross-sector and collaborative approach to change procurement policies and practices; consulting affected stakeholders early in the process; gaining support from key leaders within the school system and the broader community and recognizing that new products must be developed for institutional use as it can be difficult for food service staff to accept farm products in the form that farmers can deliver them. In other words, many food service staffers do not have the skills, training or time to wash, cut and prepare fresh produce. Additionally, it was recognized that students are important stakeholders and introducing local foods into the school menus alone may not achieve their promise if students do not choose to eat them. Experiential learning about fresh foods was identified as an effective tool in helping the students to choose local products over other, less healthy alternatives.

Several strategies were developed in order to achieve long-term success of these goals. For our first goal of developing routine procurement of local food, a detailed spend analysis was completed so food service staff and the project team could identify all of the products that the school already used in meal service that might be available locally. After creating a list of target products and their season of availability, the team conducted outreach to local distributors known to carry local products and farmers to create a database of potential local suppliers. Additionally, the team collaborated with a value-added processor, Farm to Table Co-Packers, which specializes in IQF (Instant Quick Freeze) local produce to identify value-added products that would extend the season of availability. The team also worked with professional chefs to create new recipes and meal plans featuring seasonal, local foods.



For our second goal of creating a culture of food systems learning and engagement, PFP and PCSD facilitated routine farm to school experiential learning for students and incorporated whole community support. This was done by encouraging student understanding of how food is produced through hands-on learning and assisting the students in developing more positive attitudes towards local healthy foods and the benefits of supporting local farmers. Additionally, we encouraged a community of practice by supporting students, teachers, and other school community members in understanding seasonality of local foods and fostering a school environment that clearly supports food and farming through outreach and events. As a complement to these procurement activities, the project, through the work of PFP and the school food service staff, sought to foster students' connection to their food through educational activities. The team administered taste tests timed with scheduled school programming to determine faculty, student and parent preference for new recipes. This helped engage the students and encouraged them to try new foods while exciting parents and community members about the project.

Several challenges faced the project initially. These were primarily logistical challenges including seasonality of available produce as well as the underlying budget parameters of the school food system such as reimbursement rates, lack of local financial support as well as the price differential for local vs. not local foods. Solutions were developed throughout the course of the grant period, such as bringing a seasonal focus to menu development and utilizing value added products such as frozen produce to address the problem of seasonal availability. As mentioned previously, PCSD is a high need school district with a limited budget. By completing a careful spend analysis, efficiently delegating grant funds, and focusing on the most cost effective products and willing suppliers, the project was able to address budget limitations and the parameters of the district's food system. Additionally, we faced several challenges in the development of the supply chain. For example, because most farmers are unable to deliver their products (due to geographic distance or volume and/or frequency of

orders), utilizing a local distributor that had a selection of local products was a natural solution. Another supply chain challenge was that PCSD staff did not have the time in their busy schedules to identify suppliers and learn which products would be available in the school district's price range. The farm to school project addressed this challenge by analyzing their food spending history, identifying locally available products, creating a product seasonality chart, and then matching them to potential suppliers. The project team was also faced with having to reorient the administrative organization of information in that we had to manually review all purchase orders because they were not sorted by type. We also recognized that the bid language for produce purchasing did not encourage local purchasing and rather discouraged it. To address this, we coordinated with another USDA grantee from New York State who assisted us in revising our bid language, which the school district has approved and is now using.

In the midst of our project, there was a change in the school district administration, with the arrival of a new superintendent from outside of our region who began to implement new policies. One of these policies directly affected our project in that field trips were not to be approved without a more detailed review for fit with curriculum. Given this new policy began as we were planning our field trips to a local farm, we encountered some difficulty and had some of the field trips cancelled. However, we continued to meet our numerical goals for the number of field trips and students who participated in them. Additionally, for those classes that cancelled their field trips, PFP provided in-class cooking workshops focused on vegetables.

The project met all of its goals and the project staff are confident that the changes implemented will have lasting effects on the school district's policies, activities, and the broader school community. Some achievements of the grant include the integration of value-added products into the school menu, food service staff training and empowerment, teacher and community enthusiasm and participation and positive, student engagement.



About Poughkeepsie City School District

PCSD is made up of one Early Learning Center (pre-K and kindergarten), four elementary schools, one middle school, one high school and an administration building and provides educational programs for nearly 5,000 students. There are roughly 660 professional and support staff employed by the district, of which more than 360 are teaching staff. The food service department employs 48 people (10 full-time and 38 part-time) and served approximately 916,000 meals during this past school year—an increase of 63,000 meals from the previous year. The program budget is over \$2.7 million and offers student meals 12 months out of the year. The school district is classified as Title I ¹ and 85% of students are eligible for free and reduced priced lunch due to their family income levels. The School District operates under the Community Eligibility Program, whereby all students receive free breakfast and lunch.

Matching Supply and Demand

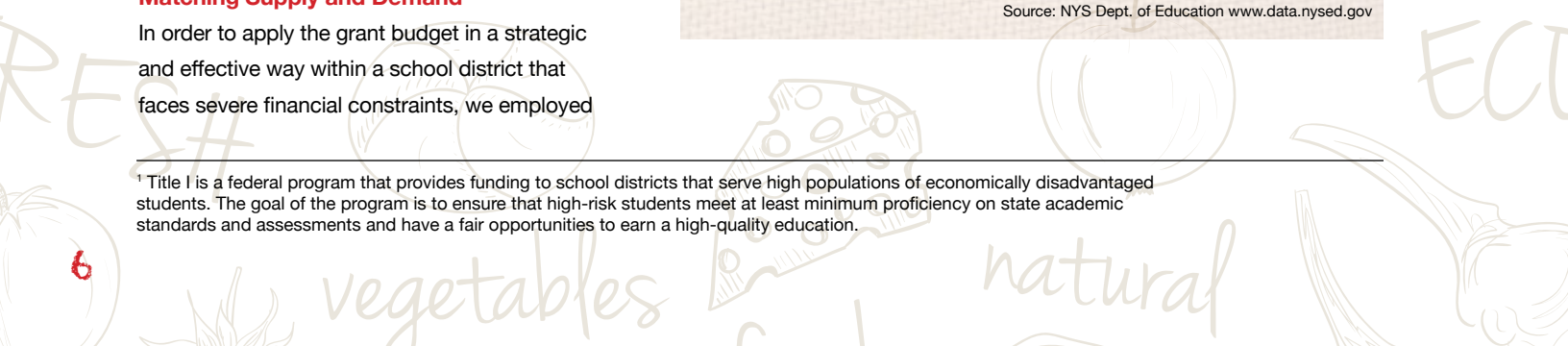
In order to apply the grant budget in a strategic and effective way within a school district that faces severe financial constraints, we employed

TABLE 1 PCSD Student Demographics

Student Groups	Number of Students	Percentage of Students
STUDENTS BY GENDER		
Male	2,221	52%
Female	2,057	48%
STUDENTS BY ETHNICITY		
American Indian or Alaska Native	6	0%
Black or African American	2,385	56%
Hispanic or Latino	1,197	28%
Asian or Native Hawaiian/ Other Pacific Islander	57	1%
White	519	12%
Multiracial	114	3%
OTHER GROUPS		
Limited English Proficient Students	441	10%
Students with Disabilities	631	15%
Economically Disadvantaged Students	3,645	85%
STUDENTS BY GRADE		
Pre-K- Kindergarten	507	
Grades 1-4	1,445	
Grades 5-8	1,316	
Grades 9-12	1,133	

Source: NYS Dept. of Education www.data.nysed.gov

¹ Title I is a federal program that provides funding to school districts that serve high populations of economically disadvantaged students. The goal of the program is to ensure that high-risk students meet at least minimum proficiency on state academic standards and assessments and have a fair opportunities to earn a high-quality education.



Upstream Advisors (a local consulting firm with experience in farm-to-institution programming and local procurement policy), to create a spend analysis that led to the identification of priority fresh and value-added products for local procurement. The spend analysis was completed by segregating the expenditures by type (i.e. produce, dairy, meat, etc.) and identifying the items that were already being purchased that can be sourced within the Hudson Valley. Following this, a product chart complete with seasonality was created and reviewed with farmers and distributors to determine which locally produced products fell within the school district's limited budget. (See Appendix) Promising products for local purchasing were identified by determining which value-added products could replace their fresh counterparts in the winter months as well as their potential for integration into the existing curriculum. This was followed by the creation of a database of potential suppliers who were already known to the consultant and HVADC. During this process, the project team noticed there were limitations both in practice and in policy that served as obstacles to the procurement of local products. For instance, the food service department did not fax or e-mail weekly bids to local farms or distributors that carry local produce, nor did they intentionally do outreach to encourage local purchasing from farms and distributors. The produce purchases were not oriented around the growing season and there was no review of produce requisition or the variety of products grown locally and seasonally. Additionally, the school district was not familiar with what the state and federal policies allowed in regards to local purchasing and needed better information about what they could do within the existing confines of these policies. As mentioned previously, the project team assisted the food service department with these challenges by identifying and collecting data from local suppliers. Additionally we changed the bid language to allow for the 10% price preference, and added several local

products to the existing bid list, practices we chose based on conversations we had with another USDA Farm to School Program grantee. The team also facilitated a conference call with farmers and distributors as well as a meeting at the school with a local distributor.

Recipe Development and Staff Training

The project team identified the Culinary Institute of America (CIA) as a technical service provider to assist with seasonal recipe development and two rounds of school food service staff training. The district's food preparation model is to prepare meals in the high school kitchen and then deliver to the other schools for the final stages of preparation cooking. Training was therefore tailored to work within this model to meet the specific needs of the school district and grant project. With the assistance of the CIA, 32 PCSD food service staff members completed training of basic kitchen and knife skills and handling and cooking knowledge for a variety of vegetables as well as recipe development and preparation for five new recipes. Recipes were developed featuring seasonal and local produce. The fall recipes included: Tuscan kale and white bean ragout, beet hummus, butternut squash and carrot puree, roasted root vegetables and broccoli gratin. The recipes developed and tested in the spring included: strawberry rhubarb soup, green bean sauté, bean and hominy chili, Dutch stamppot, mock "ratatouille" and chickpea blondies (See Appendix). Additionally, the food service manager for PCSD collaborated with a CIA chef to address the challenge of recipe preparation in a limited kitchen space and how to reduce fat, salt, and cheese in new and pre-existing recipes. Trainees were tested before and after training on their kitchen knowledge and skills. We found that the average test scores of participants went from 53 percent correct before CIA training, to 95 percent after training.





Incorporating Value-Added Products

Value-added products proved to be integral to the viability of our program. Prior to the grant, PCSD food service staff was not accustomed to working with many raw vegetables and did not possess the skills or training to process them efficiently within the short time available during the school day and lunch periods. Additionally, seasonality plays a large role in the availability of local foods in our region during the school year. We were able to address these issues through the use of value-added products such as frozen vegetable mixes that provided access to local produce throughout the entire year.

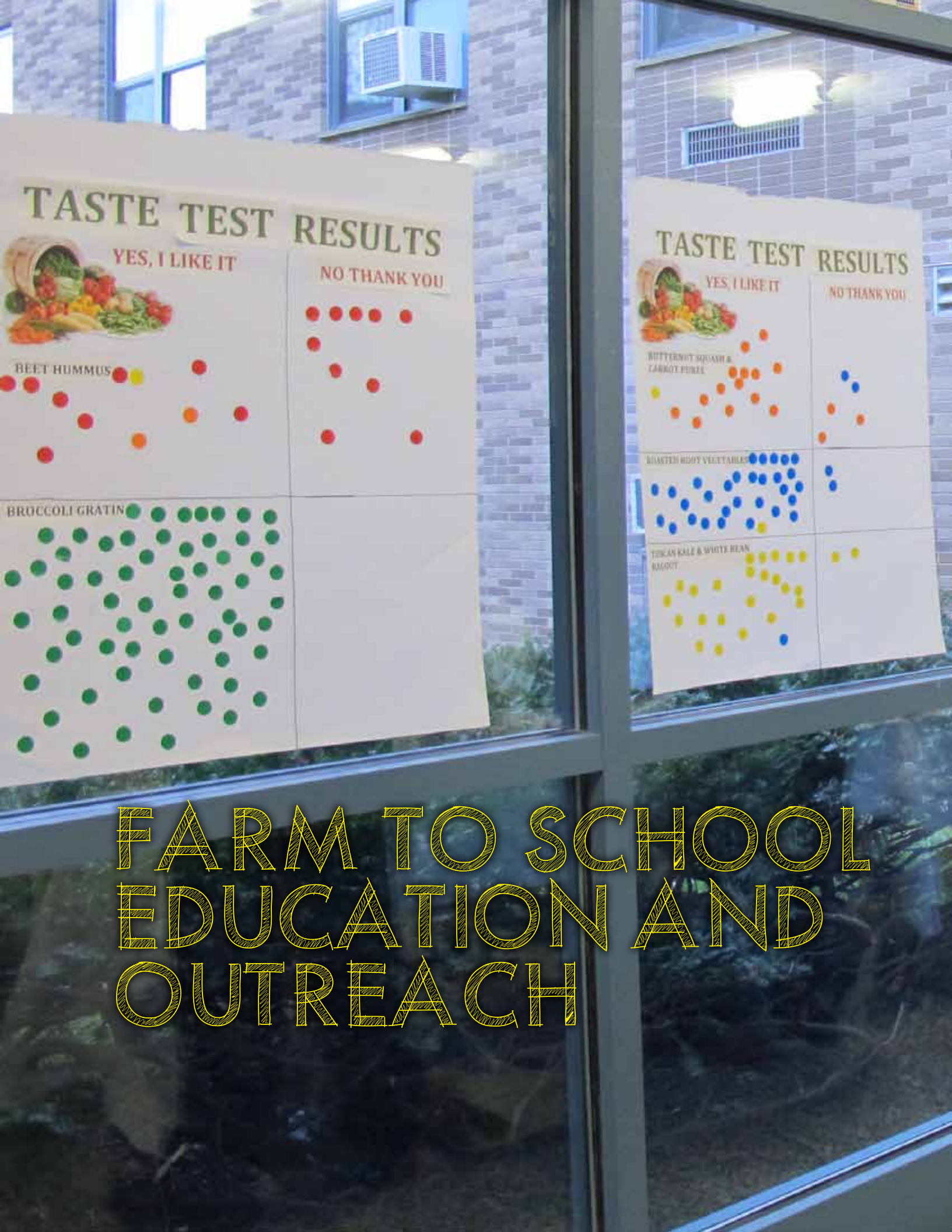
Project leaders identified a local value-added processor, Farm to Table Co-Packers (F2T), as a primary collaborator for sourcing local, value-added products. F2T is a full service contract packaging facility that produces everything from frozen vegetables and soups to jarred pickles and sauces. The company is a unique asset to our region and serves as a major advantage for current and future farm to institution initiatives. The collaboration with F2T proved to be an important aspect of the project as F2T provided an alternative to the short growing season by making local products available for purchase year round.

It is important to note that the school calendar operates during the most difficult times of year to obtain local produce. Value-added items extended the season of available farm produce into the winter months and enabled the food service department to economize on labor costs and time. Value-added products enriched the menu opportunities

with vegetables that the students had been learning about and enjoying. Ceasing to serve these items during the winter months would likely have encouraged inconsistencies with the farm to school curriculum as well as lower acceptance from the students and left them with little understanding of the benefits of eating these vegetables.

PCSD worked with F2T to evaluate and identify products that could be better incorporated through value-added processing. F2T completed test runs for several value added products of interest by the school district and the food service department ran cooking tests and then incorporated them into their menus. The value-added products offered by F2T for use by PCSD included an assortment of frozen, nutritious vegetables. The products selected for use by PCSD included a diced pepper mix, root vegetables, kale, collards, squash, squash puree and diced beets (served roasted and as a “hummus”) out of which the root vegetables, kale and collards proved to be the most popular. Pickled beets were also identified as a potential product for use in the program, however the majority of students gave negative feedback during a product-specific taste test at the middle school. During the 2013-2014 school year, the Food Service Department integrated farm items into the menus at least once a week for three weeks out of every month, which was made possible by the collaboration with F2T. Distributors and local processors received the project extremely well and PCSD looks forward to continuing to explore partnerships with F2T long after the grant period.





FARM TO SCHOOL EDUCATION AND OUTREACH

The project was a great success with regard to the education and engagement aspect of the grant due to PFP's programming. The educational program operated by PFP was comprised of several key components, including: class trips to the farm, cooking demonstrations and workshops and informational handouts and classroom curricula focused on vegetable consumption. These program elements were timed and coordinated to complement the work done by the school food service staff in terms of new recipe rollout and incorporating produce into the school menus.

PFP effectively coordinated their efforts with PCSD to facilitate farm visits and experiential education. The project team conducted outreach to teachers and principals to identify and coordinate classes for farm visits and assisted in creating tailored lessons and cooking classes for the students. Student participation consisted of 301 elementary students, 235 secondary students and 65 adults (teachers, parent volunteers, community educators). A cooking demonstration was also carried out in the middle school cafeteria involving over 350 students in tasting dark leafy greens. This corresponded to the field trips where the students were able to see how the greens were growing and learned about the nutritional benefits of these foods as well as how to prepare them.



cook them. Representatives from both PCSD and PFP received overwhelmingly positive feedback from students and faculty and the importance of hands-on learning to increasing student vegetable consumption was made very clear. Another student had remembered a previous farm visit and had told one of his classmates about eating salad at the farm. The two of them asked several times throughout the visit, "Will we get to eat salad today?!" There were many reported instances of students putting pressure on their families to shift their shopping and eating patterns towards more healthful and conscious foods. The food service director noted that he was approached by a parent who said "You and your kale! Now I have to cook it all the time!"

Organizing Field Trips

During farm visits to PFP, students harvested kale and prepared kale chips; toured the farm and tasted carrots, spinach, chard and herbs; learned about plant life cycles and seed survival and played local foods BINGO. Many students said that they had never tasted those types of vegetables before and really enjoyed preparing and eating them with PFP. One boy said he learned that "if you think you don't like something, you should try it anyway." Students received handouts to take home about the different types of dark leafy greens, their vitamin content, and how to plant and

In-School Education

PFP educators developed a curriculum focusing on dark leafy greens and winter squash and facilitated cooking workshops in the classroom where students learned how to prepare kale, roasted butternut squash and kale squash soup. During a 5th grade cooking workshop, a large pot of soup was made and every single student came back for seconds. After reviewing the ingredients with them, PFP staff asked, "How many of you want to eat kale again?" How many of you think you can/want to make this recipe at home? How many of you, if served at school for lunch, would eat kale?" To each question, almost every student raised



their hand. PFP collaborated with PCSD food service staff to create and publicize meals utilizing ingredients that coincide with lessons. PFP educators also made themselves available on several scheduled occasions during lunch hours in the cafeterias to promote local and healthy food choices and engage students in conversation about their meals.

New Recipe Taste Tests

Taste tests were conducted at every school in order to determine student, parent and faculty preferences for the newly developed spring and fall recipes. This was an extremely effective method in promoting local foods and fostering community engagement. Taste tests were timed with pre-scheduled events such as school open houses and parent teacher conference days. In this way, a greater number of people were given the opportunity to voice their preferences and therefore improve the success of new recipes. The events were a means to engaging parents and faculty in a conversation as well and elicited very positive results. At one event, a parent told the team that if the schools were providing food like what was in the samples, he wanted to come back to school. Responses to the recipes were almost entirely favorable and both students and teachers demonstrated an eagerness to participate in the program. Additionally, the local newspaper covered the taste test event and published two articles—one with information about the recipe development and staff training and another about the taste tests themselves.

Faculty Engagement

This holistic approach to food education yielded excitement from students, faculty and parents where the school community is excited to eat for lunch some of the foods and dishes they have learned to prepare and enjoy. Teachers and administrators at participating schools welcomed the PFP educators into their classrooms and cafeterias. Additionally, teachers also facilitated the farm visits on their end by getting district approval and obtaining permission slips from students. The participation of teachers and administrators was critical for the success of the program. Due to the success of the grant and to the positive experiences of the students and teachers, three participating teachers applied for and received small grants from the Poughkeepsie Public Schools Foundation to enable their classes to visit PFP again and to obtain supplies to install a school garden. Teachers have started school gardens in at least two schools and the Food Service Department and PFP have partnered for another grant program through United Way to improve fruit and vegetable access in the school breakfast programs.

Promotional Materials

The project team promoted the farm to school program to students, teachers, staff, faculty, parents and community members through a variety of channels including informational handouts about the program, in-school events, a student art contest, posters and signage advocating local and healthful food,

and local media coverage. Promotional material was developed for the program, which included a two-page handout and scaled down versions of the newly developed recipes. These were distributed to parents and faculty at open houses and other school events. The project team attended open houses at six schools as well as a parent-teacher conference day to disseminate the materials. At each taste test event, there was a booth with literature about the farm to school program, student created art work about eating locally, cooked samples of each new recipe and printed copies of the recipes used that parents and faculty could take home with them. At the final taste test, PFP educators distributed recipes, vegetable and fruit buying guides aimed at parents, and trading cards from NYS Agriculture and Markets for the students. Information about a free PFP workshop on gardening and seed saving was also available.

Additionally, the district held a Million Family Day at the beginning of the 2013-14 school year at which the school food service staff were able to disseminate promotional materials about the program. This push to market the program was the first large-scale outreach effort and enabled us to teach more parents, faculty and students about the changes underway as a result of the grant. The success of these outreach efforts was due to partnering with principals in each school to let them know about the program and time the promotional efforts to pre-existing and well attended events. Also, we had an attractive display at each event with abundant food samples, colorful posters painted by children, and other materials, which were a major draw for attendees.



Poster Contest

The project team coordinated with the high school art teacher to develop a student poster contest to help promote the farm to school program and engage more students in the themes of the program. A member of the project team visited several art classes to present information about the program and kick off the poster contest. Students responded by creating posters that highlighted themes related to local and seasonal eating. (See Appendix) The project team selected finalists and the school community voted on their favorites. Winners of the contest had their posters featured throughout the district cafeterias and used as promotional materials. Another piece of student art related to the farm to school grant, but not part of the poster contest, was also produced, taken to a print shop and manufactured into posters for all the schools to display. The local Chamber of Commerce used this student art to promote its Buy Local campaign by creating a poster from a student painting and having local restaurants post it in their windows.



Above, Enrique Sanchez-Celaya 9 grade - Flying Carrots
At left, D'Andre' Dixon 12 grade - School of Health





EVALUATION AND FINDINGS

Several methods were employed in order to properly evaluate the effectiveness of our grant project. Areas evaluated included new recipes, staff training, student learning and enthusiasm as well as teacher and community participation and support. Taste tests were a major component of our evaluation as they indicated the preferences of students, faculty, staff and parents. These data were helpful to determine which recipes would become part of the long-term recipe cycle and which recipes needed to be discarded or modified in order to increase student vegetable consumption and reduce waste. School food service staff were given pre and post-tests before and after their training sessions with the CIA. In this way, the food service director and CIA staff could evaluate areas of focus as well as knowledge retained. PFP also evaluated the effectiveness of their intervention with students and unofficial evaluations were done throughout the grant period as participants voluntarily offered feedback.

Taste Test Results

At the fall taste tests, five recipe samples were offered: Tuscan kale and white bean ragout, broccoli gratin, roasted root vegetable mix, butternut squash and carrot puree, and beet hummus. We assigned each recipe a unique color identifier and then asked parents, students, faculty and other attendees to “vote” yes or no on each recipe to share whether they enjoyed it. Votes were tallied and percentages were calculated. For example, for a fall recipe of Tuscan kale and white bean ragout, there were 204 votes received. 91% were in favor and 9% disliked the recipe (See Table 2). In addition to the vote counts, we received some qualitative feedback on the recipes from attendees, such as the level of spice in some of the recipes. The school food service staff made adjustments accordingly as the recipes were

TABLE 2 Taste Test Results

FALL 2013 TASTE TEST RESULTS

Recipe	Votes Received	In Favor	Disliked
Tuscan Kale & White Bean Ragout	204	91%	9%
Beet Hummus	164	73%	27%
Butternut Squash & Carrot Puree	127	65%	35%
Roasted Root Vegetable Mix	267	82%	18%
Broccoli Gratin	341	95%	5%

SPRING 2014 TASTE TEST RESULTS

Recipe	Votes Received	In Favor	Disliked
Bean and Hominy Chili	353	88%	12%
Green Bean Sauté	314	72%	28%
Ratatouille	158	85%	15%
Strawberry Rhubarb Soup	219	33%	67%
Chickpea Blondie	362	97%	3%
Dutch Stampot	295	93%	7%



incorporated into the regular menu plan. Parents were enthusiastic about the fact that these dishes were being served to their kids and also noted which dishes their children liked and took recipe instructions to prepare them at home. Many of the students were surprised that they liked the dishes that may have been unfamiliar to them.

Through discussions with Farm to Table Co-Packers, the school district decided to try a taste test of locally grown and pickled beets, a product that was available at that time. The beets were served to about 250 middle-schoolers. While not a huge success, it did raise awareness among the food service department about local products they were not aware of and provided a means for trying them out on a portion of students.

Student Engagement

In order to properly evaluate the success of the experiential learning component of the project, PFP collected data on student consumption of dark leafy greens as part of school lunch. The cafeteria staff prepared locally grown kale and portioned it into small plastic cups so they could be weighed and so students could return them. We collected data on three groups of students: the intervention group (at Warring School), a control group also from Warring School, and a second control group at Morse School. We made four predictions based on our experiences with the students: 1) children in the intervention program would eat more kale than those in the control group, 2) the intervention group would be more likely to finish their serving of kale than the control group, 3) children in the Warring control group would be likely to eat more kale than kids in the Morse control group, 4) children in the Warring control groups would be more likely to finish their serving of kale than the children in the Morse control group. Predictions 3 and 4 tested the presence of a potential spill-over effect at the Warring school based on the fact that the timing of the data collection for both coincided so children from both groups could see each other, with potential for influence on eating behavior. Additionally, students in the intervention group had participated in advertising campaigns for eating greens and had hung posters promoting vegetables in the hallways and cafeteria of Warring School. Several students from the control group had participated in farm visits in previous years and there may also have

been a buzz in the school concerning all the activities in which the intervention kids had participated.

We calculated the amount of kale consumed by comparing the weight of the kale that was served with the weight of the kale that was returned. The results showed that prediction 1 was supported, with the children in the intervention group eating five times as much kale by weight as the children in the control group. We also calculated the percentage of cups that were empty for each group to determine the outcome of predictions 2 and 4. Prediction 2 was also supported, as was Prediction 4: 63% of students in the intervention group finished their serving of kale compared to 8% of students who did not participate in Farm to School programming, and 1% of students who attended another school. Prediction 3 was not tested in the end as we were not able to collect pretest information on the Morse control group. In summary, these results show that our intervention was effective as predicted.

TABLE 3 Pre and Post-Test Results

APRIL 2014		
	Pre-Test	Post-Test
Number of Participants	16	13
Average Score	53.4%	95.07%
High Score	75%	100%
Low Score	10%	56%
JUNE 2013		
	Pre-Test	Post-Test
Number of Participants	15	13
Average Score	51.5%	85.38%
High Score	65%	100%
Low Score	40%	45%

Staff Training Evaluation

The CIA training of 16 food service staff was evaluated through pre and post-testing. The questions dealt with basic kitchen skills and food safety as well as food knowledge and recipe preparation. Pre/post training skill evaluations jumped from 53% to 95% and showed an increase in knowledge for all participating staff members (See Table 3). Food service staff reported feeling empowered by the training and were excited about learning new skills. They also expressed great interest in incorporating the new recipes into the lunch service and will continue to work on menu development throughout the summer months in order to incorporate the new recipes into the program.

Additional Data Collection

Although not originally intended as part of the grant project, PFP decided to pilot two different data collection methods in order to further evaluate the effectiveness of the program. One of the methods involved administered surveys with the assistance of the participating teachers. However, PFP encountered a challenge with this approach. PFP provided surveys to the teachers and asked that they administer the pretest surveys before the first farm visit as well as post-test after the final activity. The teacher follow-through on this part was not what PFP had hoped it would be. PFP received pre-tests from some teachers, but not all. Some of the pre-tests were after the intervention activities had begun and only some of the post-tests were returned by the teachers. It was decided by PFP not to tabulate the results of the surveys because of the inconsistent participation. In future activities between PCSD and PFP, PFP plans to give much clearer instructions and specific dates when the surveys should be completed so that there is no question about when to complete each.

Farm to Institution New York State (FINYS)

Many collaborations were born out of the farm to school grant program, including several long-lasting partnerships. Two of the project team members sit on a statewide coalition, called Farm to Institution New York State (FINYS), organized by the American Farmland Trust. In the meetings for this coalition, we have met another USDA Farm to School grantee and have been able to share challenges and lessons learned of our project and solicit advice from others working in the field throughout our state. For example, we were able to contact another USDA grantee to discuss ways to revise the PCSD produce bids to incent local purchasing. This colleague provided sample language and advice, which we incorporated

into our project and bid documents.

Additionally, throughout our work on this grant, we have been able to share on a much broader basis the success of the value added test runs and garner interest from other institutional buyers. It is our hope that this type of sharing will increase demand for the products and create efficiencies in processing that will ultimately result in a

decrease in price for the product. Through these channels of information sharing, we hope that other high need school districts will find local products to be more affordable and more efficient to procure.

Partly as a result of this grant project and the recognition of a need for regional networking, planning is underway for a Farm to Institution Summit in October 2014 in the Hudson Valley. All of the members of the USDA grant project team are participating on the steering committee and our project will be featured at the summit. This is a major opportunity for the project to disseminate information and network with others in our region who are also interested in farm to school work.

Community Nonprofits

PFP partnered with two nonprofits that run after school programs in our community to pilot some of their newly developed activities related to dark leafy greens. The project team also identified a local nonprofit after-school program, Children's Media Project, which works with students to create different forms of media. We partnered with them to create a short video about the grant program and the associated themes of healthful, local and seasonal eating.

Working with Farmers, Distributors and Co-Packers

The PCSD food service department has been able to foster lasting relationships with local farmers and distributors who carry local products. The collaboration with F2T was a driving force for the viability of our project and PCSD plans to continue purchasing F2T products long after the close of the grant period. PCSD also utilized a local distribution company, Red Barn Produce, to more effectively streamline the local purchasing process. This partnership also proved to be an important component as PCSD was able to purchase items from local farms in cost-effective and efficient way. Additionally, Red Barn Produce has begun serving other school districts for their local purchasing.

Project partners participated in a number of conference calls and meetings, which have led to new and stronger relationships between the district and other businesses and organizations. As mentioned previously, PFP and PCSD are collaborating on a United Way grant to increase the amount of fresh fruit and vegetables being served in breakfast program. The goal is to increase the number of times fresh fruits and vegetables are offered and educate the children about the importance of eating these foods.





Accomplishments

The project has been an enormous success over the grant period and we expect it to have long lasting outcomes. Some of these include the integration of frozen value-added products into the school menu which can extend the season for local purchasing—an exciting opportunity for the school food service staff and potentially a new opportunity for other local districts. The kitchen staff has worked very hard to change their methods, timing and procedures to find the time in their busy schedules to keep preparing fresh local vegetables. The staff training with the CIA went very well and they seemed to learn quite a bit and enjoy the training and have incorporated the CIA developed recipes as new menu items. Students have been enjoying the new menu items and adults have been purchasing them from the cafeteria as well.

We have experienced significant teacher participation in the Farm to School education programming. In the past, it has been a challenge to get teachers to sign up for additional projects because of their overwhelming schedules and time commitments. However, many teachers wish to continue the initiative, which has pushed PFP to pursue funding opportunities to maintain and support the expansion of the program. The active participation of teachers and faculty members was due in part to a clear channel of communication between the project staff and school administrators. We met first with

principals and administrators to obtain support for teacher participation in the program and gave presentations at faculty meetings where we presented project goals and the responsibilities of teachers, should they choose to participate. Teacher response was extremely positive and many of them immediately signed up to participate.

PFP obtained compelling feedback confirming the effectiveness of our farm to school interventions (i.e. farm visits and cooking workshops) on student vegetable consumption. After an in-class cooking workshop with staff from PFP, one student said after sampling the finished kale chips, “If that group doesn’t want theirs, I will eat the whole plate! This is sooooo good!” Teachers observed a shift towards healthier snacks being brought in by students and several parents indicated that their children asked them to cook kale for them. While learning how to weed at PFP, some students said they wanted to be gardeners, “this is so much fun! I want to be a gardener when I grow up!” and “I never want to leave the farm.” The response from district staff, parents and teachers was overwhelmingly positive. They appreciated the focus on local farms and many were surprised to hear about the emphasis on fresh produce in the new recipes. The enthusiastic participation and positive feedback from hundreds of parents at the seasonal taste tests were great achievements of the project.



Addressing Challenges

Many challenges that came about over the course of the grant period yielded a lot of lessons and forced us to modify and shift our activities accordingly. As mentioned previously, the limitations of the Northeast growing season affected the availability of local produce, as well as the price. We found that some items such as frozen broccoli and cauliflower florets cost too much to procure locally. Other items that are difficult to procure in larger volumes include lettuces (short growing season) and meats/poultry (price currently paid by school district through commodity system is much lower than local, whole protein products). Our project team and food service staff were encouraged to discover other ways to overcome these challenges. Some solutions included products like squash purees, vegetable medleys, soup mixes, and other frozen items, which were found to be more cost effective because they limited labor costs and extended the season of availability. A number of fresh vegetables were identified as a viable options given their seasonal availability and price point such as beets, sweet potatoes, winter squash, cabbage, kale, and root vegetables.

Another challenge facing the project was a lack of knowledge by the school district around bid specifications for geographic preference in produce purchasing and the limitations and allowances of local, state, and federal policies. Our project team helped to inform the staff by reviewing past USDA and NYS Dept. of Education memoranda. Unfortunately, these guides are still not clear as to the specific language that can be used and if the products can be required to be from New York State. As another means for developing procurement language, we consulted with another USDA Farm to School grantee from NYS and obtained the documents and language they planned to use, which they received approval for from the USDA as well as their own district. This initiative came out of Broome County and approved local farm and food distributors to receive a 10 percent price preference for local products. In this way, the district was not restricted to the vendor with the lowest price, but was able to integrate the price of local products into the budget and create a new format for local product purchasing. We adapted this policy for our own use where it was approved by the Poughkeepsie City School Board (See Appendix). The food service director revised the procurement language, product types and bid solicitations for fresh and minimally processed produce and the project team invited farm and food distributors to a bidders call to review a change in the policy which gave up to a 10 percent price preference for local products in the bid process.

Additionally, we learned the benefit of working with a collaborative distribution partner. For any individual

district, the volumes are often not large enough to justify a farm to deliver unless it is already on a scheduled route. The opportunity to use farm fresh vegetables from the local area is expanded when a distributor carries local farm vegetables. We identified only one distribution company out of several, that were was able and willing to provide locally sourced produce. Farmers also did not participate in the new bidding process for produce and did not fill out the new bid forms, likely given the time it would have taken and their distribution issues. Only one larger farm responded to the new bid and the other farms who were responsive preferred to work through our distributor. In the end, it was easier for both parties to make use of a local distributor.

Additional challenges that arose included the arrival of a new superintendent from outside the region who implemented new policies regarding field trips that were not to be approved without a more detailed review for fit with curriculum. The new policy began as farm visits were being scheduled and we encountered some difficulty with the cancellation of several trips. However, we were able to compensate for the missed field trips by providing in-class cooking workshops focused on vegetables and were still able to meet our numerical goals for the number of field trips as well as for the number of students who participate in them. Also, a later than expected harvest for some of our target products was also a challenge for the value-added test runs which had to be delayed until the following quarter. However, they were completed within the grant period and resulted in several new products being available to the school district.

Lessons Learned

An abundance of lessons was learned from the experience of creating a new farm to school program. Many of these came from challenges that the project staff were made to address and would be beneficial to other districts looking to create a similar initiative.

One of the most important lessons learned was utilizing a local co-packer in order to extend the local growing season and save on staff time and labor costs. We recognize that this is a unique feature to our region that has changed our local food system infrastructure significantly.



We also learned the benefit of working with a collaborative distribution partner to expand opportunities for purchasing farm fresh produce. We found that partnering with a local distributor was incredibly important as they are able to work across different institutional food service operations that one farmer may not be able to service. It is also worth exploring the potential of partnering among other districts to get the necessary volume.

The staff reaction to working with CIA chefs was very positive and they appreciated and respected the caliber of chefs that they were working with. Not only did the staff training days yield more thorough knowledge of food and kitchen skills, but it also helped build morale and empower the workers. This experience was invaluable to our project and a great resource for other interested institutional food service departments.

We learned that it would have been beneficial to the project structure to have included PFP throughout the entire duration of the grant. The initial project design developed by the project partners included funding for PFP for only the first year of the grant period. It was soon recognized that PFP would need additional sources of funding to continue through the second year and was less involved during the final months for this reason. We also recognized that the cost to the teachers became more evident after PFP was no longer funded. It can cost approximately \$500 for one class to visit the farm due to the expenses associated with the trip. Two groups of teachers wrote small grants to cover the costs of the field trips for the spring of 2014.

We also learned which kinds of programming draw high numbers of families. This is useful information when conducting outreach to our community stakeholders. For instance, open houses in the fall had a huge turnout and we had a large number of participants offering their feedback and preferences. However, the spring taste tests that were timed with the school budget vote were incredibly unsuccessful as only 600 voters turned up (out of over 5,000) across the whole district. The project team plans to schedule these tests timed to future programming that we know is successful.

Developing relationships with school staff is an important part of the farm to school process and crucial to the success of the program. We learned that building confidence amongst administrators and teachers led to much better outcomes. By being transparent and communicative with the faculty and staff, we were able to engage a huge number of students in the program and provide them with long lasting, positive,



educational experiences. We also learned that tying our lessons into the academic curriculum is essential to garnering teacher support and participation. The teachers are already overwhelmed with the stress of meeting academic evaluation standards. By providing tools to complement what they were already teaching, teachers became much more enthusiastic and willing participants.

Overall, we learned the importance of hands-on, experiential learning to increasing student consumption of fresh vegetables and raising their awareness of our local food system. The students were more than receptive to our program and helped us to hone our skills to encourage long-term sustainability of our project as well as future farm to school initiatives.

Based on our experience with this farm to school project, we believe the ingredients for a successful program are:

- Partnership among the school administration, teachers, food service director, food service staff, suppliers, and stakeholders knowledgeable in farm to school programming;
- Clearly articulated program goals and activities to maintain program focus and integration of procurement and educational components;
- In-depth understanding of school district spending patterns, budget opportunities, and procurement policies to enable local purchasing;
- Strategic reorientation of menus and purchasing to incorporate whole, seasonal and minimally processed foods within budget constraints as well as staff training and skill development;
- Quality, experiential student education that complements school curricula and cafeteria changes to encourage food literacy and consumption changes;
- Ongoing and whole community outreach to build partnership and support for programming.

APPENDIX

PRODUCT AVAILABILITY

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Asparagus												
Beets												
Bok Choy-Baby												
Broccoli												
Broccoli Raab												
Butternut Squash												
Cabbage-Green												
Cabbage-Red												
Cabbage-Savoy												
Carrots												
Celery Root												
Collard Greens												
Escarole												
Kale												
Lettuce- Red Leaf												
Lettuce-Green Leaf												
Lettuce-Romaine												
Mushrooms												
Onions												
Parsnips												
Rutabaga/Yellow Turnips												
Spinach												
Sweet Potato												
Swiss Chard												
Turnips-White												
Carrot Sticks												
Green peppers												
Grape tomatoes												

FALL RECIPES

BEET HUMMUS Yields 25 servings, Serving size = ¼ cup

Ingredients

5 fresh beets
3 garlic cloves, peeled and coarsely chopped
22oz chickpeas, rinsed and drained before measuring
2 tbsp + 1 tsp lemon juice
4 tsp horseradish
1 tsp salt
1/3 cup olive or canola oil

Directions Scrub the beets thoroughly under cold water. Trim the roots and stem ends, leaving about 1 inch of the stems. Place in a 2-inch deep hotel pan while still wet, cover tightly with foil, and roast in a 400F convection oven until very tender, about 1 hour. Let the beets cool until they can be handles. Wearing food handling gloves, peel the beets. Chop into large pieces, about 1 inch. Place the garlic in a food processor and process until minced. Add the beets (from step 1), chickpeas, lemon juice, horseradish, and salt. Puree until finely ground. With the food processor still running, stream the oil through the feed tube until the hummus is creamy.

NUTRIENTS PER SERVING Calories 62, Saturated Fat 0.42 g, Iron 0.48 mg, Protein 1.5 g, Cholesterol 0 mg, Calcium 11.64 mg, Carbohydrate 7.38 g, Vitamin A-RE 1.16 mcg, Sodium 133.65 mg, Total Fat 3.12 g, Vitamin C 2.68 mg, Dietary Fiber, 1.56 g

BROCCOLI GRATIN Yields 25 Servings, Serving size = ½ cup

Ingredients

10 cups broccoli florets
3 tbsp butter
¼ all-purpose flour
1 ½ cups skim milk
1 ½ cups low-fat shredded sharp cheddar cheese
1 tsp garlic powder
¾ tsp salt
1/5 tsp ground black pepper
3.5oz bread crumbs (Japanese style panko)

Directions Steam the broccoli and shock it in ice water. Drain and set aside in a large bowl. Preheat the convection oven to 400 F. Place 1 1/2 oz (3 tbsp) of butter in each 2-inch deep half hotel pan. Cover, place in the oven until the butter melts. Stir the flour into the butter, cover the pan, and return to the oven to make a roux (about 10 minutes). Remove the pan(s) from the oven and stir in the milk. Add the cheese and keep stirring until the cheese melts. Pour the cheese mixture over the broccoli, toss gently to coat evenly, and then return the half hotel pan. Sprinkle the breadcrumbs over the top of the dish. Bake the gratin, uncovered, until the crust is golden and the sauce is bubbly, about 30 minutes.

NUTRIENTS PER SERVING Calories 58.2, Saturated Fat 1.19 g, Iron 0.38 mg, Protein 3.57 g, Cholesterol 5.29 mg, Calcium 63.56 mg, Carbohydrate 6.9 g, Vitamin A-RE 42.1 mcg, Sodium 140.23 mg, Total Fat 2.02 g, Vitamin C 25.33 mg, Dietary Fiber 0.93 g

ROASTED ROOT VEGETABLES Yields 25 Servings, Serving size = ½ cup

Ingredients

8 cups sweet potatoes, peeled and cubed
4 cups rutabaga, peeled and cubed
Parsnips, peeled and cubed
6 yellow onions, peeled and cut into quarters or eights
1 tbsp fresh thyme
1 tbsp fresh oregano
1 tbsp fresh rosemary
2 tsp ground black peppers
½ tsp salt
¼ cup olive or canola oil

Directions Preheat a convection oven to 400 F. Place baking sheets in the oven as it preheats. Peel and cut the sweet potatoes, rutabaga, parsnips and onions. Combine the vegetables in a large bowl with the thyme, oregano, rosemary, pepper, and salt. Drizzle the oil over the vegetables and toss to coat evenly. Remove the baking sheets from the oven, add the vegetables in an even layer (do not pile them too high). Place the vegetables in the oven, uncovered, and cook until tender to the bite, 10 to 12 minutes.

NUTRIENTS PER SERVING Calories 80, Saturated Fat >1 g, Iron 0.55 mg, Protein 1 g, Cholesterol 0 mg, Calcium 34.98 mg, Carbohydrate 15 g, Vitamin A-RE 604 mcg, Sodium 75 mg, Total Fat 2.5 g, Vitamin C 10.86 mg, Dietary Fiber 3 g

SPRING RECIPES

GREEN BEAN SAUTÉ Yields 12 Servings, Serving size = ½ cup

Ingredients

6 1/3 cups green beans, washed, ends trimmed
1 ½ cups red pepper, large julienne
1 cup yellow onion, medium dice
½ cup + 2 tbsp slivered almonds, toasted
Vegetable oil spray as needed
2 tbsp olive oil
2 tbsp butter
½ tsp crushed red chili flakes
½ tsp garlic powder
1 ¼ tsp kosher salt
¼ tsp ground black pepper

For blanching beans: 1 gallon water, 2 tbsp kosher salt

Directions Heat oven to 400°F (if using convection, 375°F). Place almonds on parchment covered sheet pan. Toast almonds until golden brown, about 8 minutes. Reserve almonds. In medium stockpot, bring 4 quarts water to boil. Add 2 tbsp kosher salt and green beans, reduce heat to rolling simmer, and blanch for 5 to 6 minutes. While blanching, prepare ice bath. Drain blanched green beans, and immediately submerge in ice bath to stop cooking and retain bright color. When beans are cold, drain, slice into 1 ½ – 2 inch pieces, and hold aside refrigerated. Heat a large sauté pan over medium heat. Add olive oil and butter, and once butter melts add diced onions. Cook for 5 minutes, stirring frequently, until onions are translucent. Add garlic powder and red pepper flakes and continue stirring for 1 minute more. Increase heat to medium-high and add green beans and red bell pepper strips. Sauté in pan until beans are fully heated through, about 3 minutes. Add in toasted almonds, toss, and continue cooking for 1 minute longer.

NUTRIENTS PER SERVING Calories 99.82, Saturated Fat 1.8 g, Iron 0.91 mg, Protein 2.6 g, Cholesterol 5.02 mg, Calcium 39.08 mg, Carbohydrate 7.02 g, Vitamin A-RE 56.52mcg, Sodium 101.33mg, Total Fat 7.65 g, Vitamin C 26.94 mg, Dietary Fiber 2.96 g

DUTCH STAMPPOT Yields 15 Servings, Serving size = ½ cup

Ingredients

2 lb russet potatoes, peeled and cut to 1" cubes
1 ½ quarts (8oz) kale leaves, coarsely chopped
1 ½ cups carrots, grated
1 ¼ cups yellow onion, small dice
2 tbsp butter
¾ cup whole milk
1 tsp kosher salt
¼ tsp ground white pepper
7oz (about 10 strips) turkey bacon or sausage, cooked, crumbled

Directions Place cut potatoes in a large pot and cover potatoes by 2 inches with lightly salted water. Add in trimmed Kale leaves. Bring mixture to a boil, then lower heat to a rolling simmer and cook for 20 -25 minutes, until potatoes are tender. Drain, and reserve cooking liquid. While potatoes are cooking, cook bacon in a large sauté pan over medium heat, or in the oven at 350F until crisp. Cool, crumble and reserve. In a medium sauté pan, melt butter over medium heat, add onions and carrot, and cook until onions are translucent and carrots are soft, about 8 minutes. Remove pan from heat. Heat milk in a small saucepot, and remove from heat once it starts to boil. Roughly mash the potatoes and kale using a handheld masher. Do not use a ricer, whip or otherwise 'beat' these potatoes, as they are easily overworked into a starchy paste. Fold in the warm onion and carrot (and any butter in the pan), and moisten with hot milk. If still more dry than desired, add some of the reserved cooking liquid until desired consistency is reached. Season with salt and white pepper. Fold in crumbled turkey bacon, or reserve to sprinkle on top so that this can be served as a vegetarian dish.

NUTRIENTS PER SERVING Calories 117.19, Saturated Fat 1.51 g, Iron 0.73 mg, Protein 5.44 g, Cholesterol 17.29 mg, Calcium 47.56 mg, Carbohydrate 16.77 g, Vitamin A-RE 261.42 mcg, Sodium 202.81 mg, Total Fat 3.48 g, Vitamin C 27.87 mg, Dietary Fiber 2.03 g

Poughkeepsie Journal

Grant helps city schools get food right from farms

Emily Stewart, Poughkeepsie Journal

With help from a federal grant, the Poughkeepsie City School District added several new items to its menu, after taste-testing by students and help with recipe development from the Culinary Institute of America.

The district received a \$100,000 farm-to-school grant from the U.S. Department of Agriculture, said Al Muhlnickel, food service director for the district.

"Two weeks ago, we went through the whole second-training process of the grant. We developed six new recipes, we've got some with chickpeas, we have some with fresh green beans," he said.

The foods come from local farms and appear on the menu two to three times a week, he said.

"There's still more work to be done," he said.

Funding to create specialty crop insurance and additional grants for farm-to-school programs are two parts of the new farm bill, passed earlier this year, that should help local farmers and residents, said Rep. Sean Patrick Maloney, D-Cold Spring.

The farm bill sets funding to develop crop insurance that would better suit the needs of farmers in New York and the Northeast, who have smaller, more diversified farms; most crop insurance today is tailored to large-scale pro-

ducers of one crop, so when natural disasters like Tropical Storm Irene strike, they have no recourse, said Maloney.

"We have a specific provision in the farm bill to require the secretary of agriculture to focus on flooding in our area," he said. "More broadly, we have dozens of requests in under the Sandy disaster relief bill for specific flood mitigation projects in our area — everything from improving drainage to addressing the flooding problems of the Wallkill River and the Rondout Creek on the other side of the (Hudson) River."

The farm bill, also called the Agricultural Act of 2014, is a five-year bill that sets agricultural policy and was signed into law in January.

The farm-to-school grants, which must be applied for, help schools that win the grants set up the infrastructure needed to source some of their cafeteria food from local farms, Maloney said.

"The folks at the school need to know where to access this stuff, they need to have the right equipment to wash and clean and prepare, they need to change their menus," he said. "For decades we've been waiting for the truck to pull up with a bunch of frozen stuff ... and drop it in a fryer."

Maloney toured the Poughkeepsie Farm Project on the Vassar Farm and Ecological

Preserve in the City of Poughkeepsie with a representative from the New York Farm Bureau, a representative from the Poughkeepsie City School District, employees at the nonprofit farm and others to discuss the needs of local farmers and schools.

The Poughkeepsie farm was one of several in the Hudson Valley that Maloney visited Tuesday, according to his office.

M. Kelly Young, senior associate director of national affairs for the New York Farm Bureau, a nonprofit organization that advocates for the needs of farmers, said the farm bill is "tailored to the needs the Hudson Valley and New York state in general, more than any other farm bill we've seen" because it addresses the kinds of crops and products made in the area.

Better crop insurance for specialty crops is an example of that, she said.

"Our farmers suffer from really horrible crop insurance, a terrible safety net. So when they have disaster, like the hurricanes that came through, farmers have floods, droughts, hail, they don't really have a good safety net to protect them from the losses," she said. "This new farm bill has gone a long way to give them a stronger safety net, more protection."

More information on the farm bill can be found on the USDA website at www.usda.gov/farmbill.

Poughkeepsie Journal August 4, 2013

Chef trains district's food workers

CIA grad helps develop menus with local produce

By Journal staff

Chef Rico Griffone, a graduate of the Culinary Institute of America and a consultant for CIA Healthy Kids, spent five days at Poughkeepsie High School with district food service workers to help them improve their skills and develop new recipes.

Griffone and the 15 food service workers focused on using whole, fresh, local vegetables in new recipes for the district to use in the lunch menu next year.

Culinary skills, such as the proper way to wash fresh kale, were also a part of the training.

"This five-day training course has helped to greatly improve the culi-

nary skills of our food service staff," Director of Food Services Alan Muhlnickel said in a press release. "This training will assist the school district in increasing our use of whole, local produce in our meal service."

The training is part of an 18-month farm-to-school program. The district is part of a project team that also includes local food systems consultant Sarah Brannen, the Hudson Valley Agribusiness Development Corporation and the Poughkeepsie Farm Project.

This team was one of three New York state recipients of a highly competitive USDA farm-to-school grant supported by the Local Economies Project of the New World Foundation.



Chef Rico Griffone, center, works with food service staff at Poughkeepsie High School.
SUBMITTED PHOTO

FRESH VEGETABLE PRE TEST

- 1) Why might you want to cook root vegetables with the skins on?
 - a) to cut down on the time you spend cleaning and peeling vegetables
 - b) to keep more nutrients in the vegetables
 - c) to shorten cooking time
- 2) In order to prepare fresh beets for roasting, you should:
 - a) trim leaves
 - b) cut the beets in half
 - c) soak them to remove dirt
- 3) At what time of year are fresh beets the most widely available and at their lowest cost?
 - a) winter
 - b) spring
 - c) summer
- 4) Canned pickled beets are usually high in what nutrient?
 - a) iron
 - b) calcium
 - c) sodium (salt)
- 5) Green vegetables added to rapidly boiling water tend to have better
 - a) colors
 - b) texture
 - c) both
- 6) Roux is a thickener made by
 - a) cooking butter and flour together
 - b) creaming butter and flour together
 - c) dissolving flour in cold water
- 7) Rinsing canned beans and chickpeas is important because
 - a) rinsing removes some sodium
 - b) rinsing removes the goo that processors use to package cooked beans
 - c) rinsing removes tough skins
- 8) Shocking green vegetables means cooking them very briefly with steam or boiling water, then:
 - a) a. putting them in the freezer
 - b) putting them in the refrigerator
 - c) cooling them quickly in an ice water bath
- 9) If vegetables are cut to the same size before cooking, the advantage is that
 - a) it looks like a chef made it
 - b) all the pieces look the same
 - c) all the pieces cook the same
- 10) The techniques used to prepare and cook kale can be used with which of the following green vegetables?
 - a) romaine lettuce
 - b) collards
 - c) endive
- 11) When green vegetables turn dull it is a sign that they
 - a) were not properly cooked
 - b) were too old for consumption
 - c) are ready to eat
- 12) A creamy sauce can be used in a small amount as a "seasoning" for a baked vegetable dish without ruining its nutritional value.
 - a) False
 - b) True
- 13) Fresh herbs are virtually the same as dried herbs when you cook them in a dish.
 - a) True
 - b) False
- 14) To get a good color on vegetables when you are roasting them in pieces, you can pre-heat the pan in the oven as it preheats.
 - a) True
 - b) False
- 15) Braising means that you cook foods in enough liquid to just cover 1/3 of the food.
 - a) True
 - b) False
- 16) Butternut and other hard-skinned squashes are similar to carrots because they both contain Vitamin A.
 - a) True
 - b) False
- 17) Summer is the best for finding locally-grown broccoli, hard-skinned squashes, and cooking greens.
 - a) True
 - b) False
- 18) Which of the following vegetables do you serve at home on a fairly regular basis?

a. beets	b. broccoli	c. kale
d. carrots	e. butternut squash	f. zucchini
g. spinach	h. peas	i. corn
j. tomatoes	k. okra	l. green beans
m. parsnips	n. sweet potatoes	o. eggplant

p. other (please list) _____

FRESH VEGETABLE POST TEST

- 1) To prepare beets for roasting, you need to
 - a) lightly wash and remove greens
 - b) peel and cut into uniform pieces
 - c) slice in half and put cut side down in pan
- 2) When roasting, ovens should be
 - a) not preheated and set to 375 degrees or lower
 - b) preheated and set to 375 degrees or lower
 - c) not preheated and set to 400 degrees or higher
 - d) preheated and set to 400 degrees or higher
- 3) Are beets considered a summer or winter vegetable?
 - a) Summer
 - b) Winter
- 4) Why did we leave the skins on our beets when roasting?
 - a) Because they are edible and full of flavor
 - b) To capture more nutrients into the vegetable.
 - c) To save prep time.
- 5) Pickled beets contain high amounts of
 - a) sodium
 - b) potassium
 - c) vitamin E
- 6) What does it mean to shock green vegetables?
 - a) Cook till tender crisp and then place in the walk-in
 - b) Cook till tender crisp and allow to cool naturally
 - c) Cook till tender crisp and then submerge in ice water
- 7) How do you make a roux?
 - a) Cook butter and flour together
 - b) Whisk cornstarch and water together
 - c) Knead together cornstarch and butter and allow to melt into a sauce
- 8) What is the primary job of a roux?
 - a) To add texture to a sauce
 - b) To color a sauce
 - c) To thicken a sauce
- 9) By cooking quickly and shocking green vegetables, what qualities are improved?
 - a) Color
 - b) Texture
 - c) Both
- 10) When cooked green vegetable turn dull and limp, it is a sign that they
 - a) were old
 - b) were not prepared properly
 - c) were not stored properly prior to cooking
- 11) Why do we cut vegetables for roasting into even sizes?
 - a) To ensure all pieces cook evenly
 - b) To alter the texture in the vegetables
 - c) So they will look pretty
- 12) Fresh herbs are added to a dish in the beginning of the cooking process
 - a) True
 - b) False
- 13) Why do we place a roasting pan in the oven while it is preheating?
 - a) To test when the oven has reached the desired temperature
 - b) To create a hot surface that will cook vegetables from the bottom
 - c) So we won't forget where it is when it comes time to use it
- 14) What is the term for cooking items in a small amount of liquid, covering about 1/3 of our food?
 - a) Braise
 - b) Poach
 - c) Saute
- 15) All stems from every green need to be removed before cooking.
 - a) True
 - b) False
- 16) Which method of cooking is more effective at concentrating the sugars in the vegetables?
 - a) Steaming
 - b) Boiling
 - c) Roasting
 - d) Braising
- 17) Butternut squash is a
 - a) hard skinned, winter squash
 - b) soft skinned, winter squash
 - c) hard skinned, summer squash
 - d) soft skinned, hard squash
- 18) Why do we rinse canned beans and chickpeas before using?
 - a) To help hydrate them and make them juicier
 - b) To assure the beans are clean and free of dirt
 - c) to remove added sodium in the packing process
- 19) What helps to emulsify a vinaigrette? (helps the vinegar and oil stay together)
 - a) Mustard
 - b) Fresh herbs
 - c) Garlic powder
- 20) Fresh vegetables are better than canned because
 - a) they have better texture
 - b) they contain more of their nutrients
 - c) you have more control over how they are cooked
 - d) All of the above

GEOGRAPHIC PREFERENCE SECTION

POUGHKEEPSIE CITY SCHOOL DISTRICT QUOTE

Geographic Preference applies to minimally processed locally grown, raised agriculture products only

NOTE: Preference area shall consist of all of New York State. Bidder should be able to verify sources meeting Geographic Preference. Blank lines are for alternate local varieties of the individual produce.

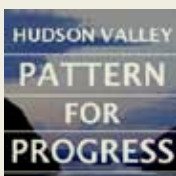
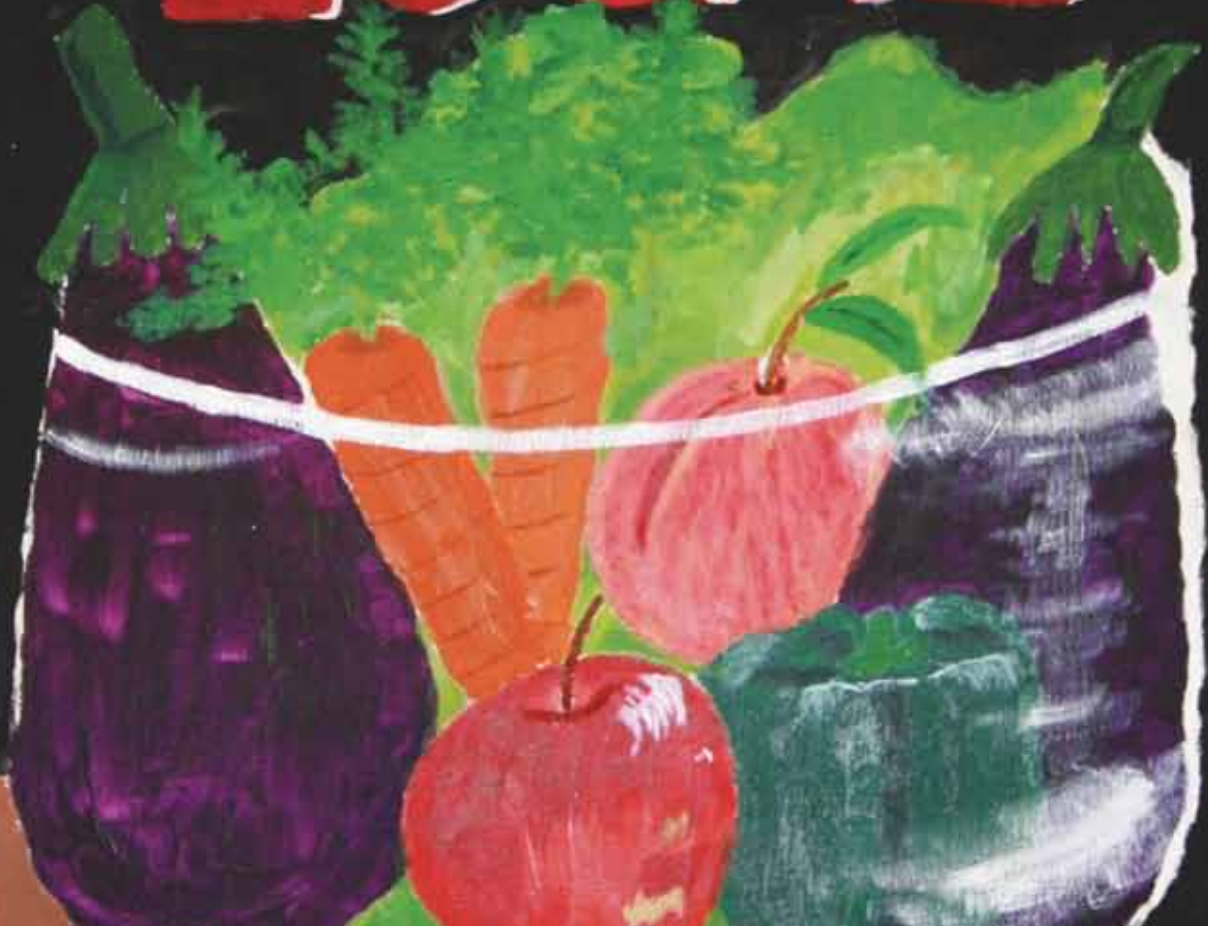
Price Variance shall be limited to 10% of same base cost meeting Geographical Preference requirements.

EXAMPLE:	Bidder 1	Bidder 2	Bidder 3
Empire Apple, 125 ct	12.00	13.00	13.50
Meets Geo Pref:	no	yes	yes
Price Point:	12.00	<u>11.70</u>	12.15

NOTE: Full price of \$13.00 would be paid to Bidder 2 who could be awarded the item.

WEEK OF	Company 1	Meets GEO	Company 2	Meets GEO
Apple, 125 ct empire or _____				
Apple, Slices 100 ct				
Apple Slices, 2-5# Bags				
Grapes, Red Seedless 18#				
Grapes, White Seedless, 18#				
Cantaloupe, 9ct, suoperstar or _____				
Watermelon, Seedless				
Peaches-2.25" Haven variety or _____				
Pears, 120ct, Bartlett, Bosc, Anjou or _____				
Plums, 45-50 ct				
Broccoli, Liberty or _____ 18 ct				
Broccoli, Florets 4/3#				
Beets, _____ by the #				
Cabbage Red (head) By #				
Cabbage, Red Shredded 5#				
Cabbage-Cole Slaw Mix 4/5#				
Carrots, Baby, 200ct				
Carrots, Jumbo, 25#				
Carrots, Diced, (5#)				
Carrot Sticks, (5#)				
Cauliflower, _____ (24 ct)				
Cucumbers				
Lettuce, summertime, or _____ (24 ct)				
Lettuce, Green Towers or _____				
Lettuce, Romaine (24Ct)				
Lettuce Green Leaf (24)				
Onions, Red (25#) Northern Red				
Mushroom Buttons 10#				
Onions, Yellow (25#)				
Peppers, Each-by # _____				
Potatoes, Russet, Baking 120 ct				
Potatoes, Russet, Baking, 100ct				
Potatoes, Small Red, 50#				
Squash Butternut by the #				
Spinach, Fresh by #				
Tomatoes, Cherry (12 pt) case				
Tomatoes, Fresh, 5x6				
Value Added items:				
Frozen Beet Slices 20 # cs				
Frozen Root Vegetables 20 # cs				
Frozen Broccoli / Cauliflower Stems 20# cs				
Frozen Cubed Squash 20# cs _____				
Frozen Pepper Mix 20 # cs				
Frozen Roasted Squash Puree 20# cs _____				
Frozen Chopped Kale or Collard or other dark green _____				

EAT LOCAL



UPSTREAM
ADVISORS