



EAST NEW YORK FARMS! YOUTH INTERNSHIP ALUMNI EVALUATION REPORT

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November 2013



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Executive Summary

Introduction: The East New York Farms! Project, a program of United Community Centers, runs an intensive 9-month internship program for local youth ages 13-18 in Brooklyn, NY. Interns grow food in community gardens using sustainable methods, collaborate with adult gardeners to run two farmers' markets, and participate in workshops to help them understand the context of their work. Youth who participate in the program must live or go to school in East New York, a historically marginalized community of color in Brooklyn. The goal of this alumni evaluation is to understand participant outcomes, attitudes, and behaviors after taking part in the ENYF internship. An online and print survey was administered by ENYF staff to alumni who had participated in the program for at least 3 months and who had been out of the program for at least one year. The resulting quantitative and qualitative data were analyzed by USDA Forest Service research staff.

Positive Participant Outcomes

- Half of the alumni are currently working part time or full time and 64% are engaged in some type of education or training program
- The rate of enrollment in college or graduate school is higher among the ENYF alumni surveyed than among Asian, Black and Latino East New York residents of the same age
- Alumni who spent 4 years or more at ENYF had significantly higher scores for attitudes and behaviors regarding Food, Health & Environment and for Community than those who spent 3 years or less

Important themes that emerged from the open-ended survey question: **What did you learn by working at ENY Farms? How do you think it's affected you?**

- Increased knowledge of gardening, food systems, and the importance of eating fresh produce
- Improved math, money management, communication and social skills
- A greater sense of responsibility and work ethic
- An increased ability to work with others of different ages and ethnicities
- A greater awareness of community and an increased desire to help others

Attitudes and Behaviors: Food, Health, and Environment

- A majority of ENYF alumni report cooking, eating fruits and vegetables, and being physically active very often and rarely eating fast food
- 94% of alumni reported caring about nature and the environment sometimes or very often

Attitudes and Behaviors: Self-Efficacy, Communication, and Decision-Making

- 80-100% of ENYF alumni reported experiencing all measures of self-efficacy and confidence very often and 52% of respondents reported never having low self-esteem
- 76% of alumni never or rarely let peer pressure influence their decisions

Attitudes and Behaviors: Community

- Over half of ENYF alumni said that they sometimes or very often take community leadership roles, participate in community activities, or feel connected to a larger community
- 90% reported sometimes or very often feeling capable of making change in their community and beyond, showing strong confidence and self-efficacy as well as community awareness

Conclusion: This evaluation is a validation of the work done by the East New York Farms! Project. The amount of time spent in the internship program seems to positively impact the attitudes and behaviors of alumni, so we would encourage ENYF to focus on student retention, bringing back as many interns as possible for multiple years of participation. We would also like to emphasize the value of conducting further research and evaluation over an even longer time horizon to determine the outcomes of this alumni cohort in terms of their health, attitudes, and career paths across the life course. In addition, pre- and post-test evaluation methods or comparison of participants to non-participants can enhance the robustness of these findings.

Introduction

Youth in East New York face significant challenges and risks in their environment. From poor schools and violent crime to lack of environmental amenities and larger negative societal cues, even the most motivated youth are at risk. Research indicates that youth in the community are disadvantaged: 39.5% of children in East New York live in poverty, with 78.5% eligible for free and reduced price lunch. Only a third of students in the local school system perform at or above grade level in English and math—the worst performance of any Brooklyn neighborhood. Youth felony arrests in Community District 5 (which includes East New York) are high compared to the rest of New York City, indicating that many youth are not engaged in constructive activities (Keeping Track of New York City's Children 2013).

Compounding the above situation, neighborhood access to fresh local food is inadequate in East New York, and neighborhood poverty rates of 33.5% further limit residents' ability to buy fresh, nutritious foods (Keeping Track of New York City's Children 2013). At the same time, nutrition-related illnesses like diabetes and high blood pressure are among the highest in New York City. Obesity and diabetes rates in East New York (30% and 16%, respectively) are the highest of any neighborhood in Brooklyn (Take Care New York 2006). Residents also suffer from a dismally low ratio of open space to inhabitants at 0.5 acres/1000 residents compared with a preferred minimum of 3 acres/1000 residents (New York City Department of City Planning 1994). Despite these neighborhood challenges, East New York has a number of important community assets, including local civic organizations focused on youth, seniors, the arts, and environment, as well as access to dozens of community gardens.

Since the year 2000, the East New York Farms! Project (ENYF), a program of the non-profit United Community Centers, has been running an internship program for youth ages 13-18 that integrates environmental stewardship and outdoor recreation by engaging youth in cultivating local community gardens. The organizing principle of the program is the stewardship of public lands to create positive outcomes for the community. Participants learn about the environment and natural resources through activities that benefit their community and their personal health. ENYF works to create a safe, positive, challenging, and empowering context for youth interns who are motivated to improve their own academic and work skills as well as their local environment. Their work in community gardens emphasizes responsible management of natural resources by composting, using cover crops, removing trash, and more.

Each year participants engage in 320-450 hours of training and hands-on activity in community gardens during an intensive, 9-month internship program. The program structure encourages long-term involvement: ENYF hires 21 new interns each year, and 12 'returning interns' who are in their second, third, or fourth year and help to lead the program. From March through early December the youth participate in an integrated curriculum through which they grow food in community gardens using sustainable methods, including: no use of chemical pesticides, herbicides, or fertilizers; composting; using companion planting to maximize production and minimize space; using cover crops to control weeds and boost soil fertility; and using crop rotation to maintain soil health and manage pests. Interns also collaborate with adult gardeners to run two farmers' markets, and participate in workshops and facilitated discussions to help them to understand the context of their work. Youth meet two to three times per week during the school year for 2.5 to 4 hours each session and work 20-25 hours per week during the summer.

The goal of the ENYF Youth Internship program is for participants to develop:

- A connection to the natural environment and agricultural systems that will enable them to be better stewards of the land and natural resources
- Improved math and science skills through work experience that reinforces concepts learned in school
- Specific skills and experience in leadership and teamwork
- Greater self-confidence and belief in their abilities
- Improved knowledge of nutrition and its impacts on their health and abilities
- Stronger engagement in their own community
- A deeper understanding of social justice issues, how they have affected the community, and how they can be addressed
- A positive peer group to reinforce their efforts to improve their community

Yearly post-program surveys administered to all youth upon completion of the internship year provide quantitative and qualitative information about the program's impact. The surveys are based on 11 areas of learning: academic achievement, agriculture and food knowledge, community engagement, environmental awareness, personal health, leadership, positive peer group, self-esteem, knowledge of social justice issues, teamwork, and work habits. However, these surveys have a limited ability to address the long-term impacts of the ENYF internship program as participants graduate from high school and transition into adulthood.

During the winter of 2012-2013, ENYF staff partnered with US Forest Service scientists to administer their first alumni survey in order to evaluate these long-term effects on program participants. The goal of this evaluation is to understand participant outcomes as a result of taking part in the East New York Farms! Youth Internship Program, as well as to set up a baseline for future alumni surveys. The evaluation focuses on the following areas:

- Current education and employment status
- Involvement in recreational and civic activities
- Experience during and perceived benefits of going through the ENYF Youth Internship Program
- Awareness, attitudes and behaviors regarding food, health and environment
 - To what extent do respondents care about the environment or try to reduce waste?
 - Do they feel that they have an understanding of where their food comes from?
 - What behaviors do they engage in related to food and physical activity?
- Attitudes regarding self and learning
 - Are respondents confident in themselves, their beliefs and their abilities?
 - Do they enjoy learning new skills and information and are they motivated at work?
- Attitudes and behaviors regarding community
 - Do respondents feel connected to their community?
 - Are they active participants in the community and do they take on leadership roles?
- Attitudes and behaviors regarding communication and decision-making
 - Are respondents comfortable talking with others and considering multiple viewpoints when they are upset or faced with a difficult decision?
 - Do they speak up when they see a problem? Are they influenced by peer pressure?

Methods

Evaluation consisted of an online and mailed questionnaire developed by ENYF staff in consultation with US Forest Service scientists. The online questionnaire was created using Google Forms and a link was sent out to 97 former interns for whom ENYF staff had valid contact information and who were at least 18 years old, had participated in the program for at least three months, and who had been out of the program for at least one year. Thirteen interns completed a mailed survey instead of the online form. Respondents were given either a free movie pass or a \$15 Metrocard for participating in the survey. ENYF staff closed the survey after approximately two months with an overall response rate of 52% (N=50).

The survey included questions about alumni's current and previous school and work experience, their leisure activities and civic engagement during the past year, and open-ended questions about their experiences at ENYF. The survey concluded with four sections of Likert-type questions about (1) Food, Health, and Environment, (2) Community, (3) Self, and (4) Communication and Decision-Making. The available responses for these questions included: never, rarely, every once in a while, sometimes, and often. See appendix for a full copy of the evaluation instrument.

Responses to the Likert-type questions were treated as continuous variables and Student's *t*-test was used to compare means for different respondent groups. Composite scores were also created for Food, Health and Environment; Community; Self; and Communication and Decision-Making by summing the responses for each question within the category. Pearson's χ^2 tests were used to analyze responses to the categorical questions about work, school, and activities. Responses were compared among different groups of alumni or between ENYF alumni and a more general population (depending on data availability, either young adults in East New York or the general American population). For each analysis, significance was determined at the level of $p < 0.05$.

Participant Demographics

The East New York Farms! Project is developing leadership and environmental knowledge within a historically marginalized community of color in East New York. The neighborhood is 49% ethnically diverse Black and 38% non-black Hispanic, with approximately 35% immigrant households. Youth who participate in the program must live or go to school within East New York zip codes. Reflective of the population of East New York, they are Black-American, Caribbean, Latino, and African youth.

When selecting youth for the program, staff deliberately select youth with different strengths and abilities – with the model of accepting one-third youth who are already high-performing in school or extracurricular activities; one-third youth who may be struggling in school or extracurricular areas; and one-third youth who seem to be middle-achievers. Beyond that, the focus is on admitting youth from different schools and different areas of East New York (i.e. Cypress Hills, Starrett City, and central New Lots) who reflect the racial and ethnic diversity of the community.

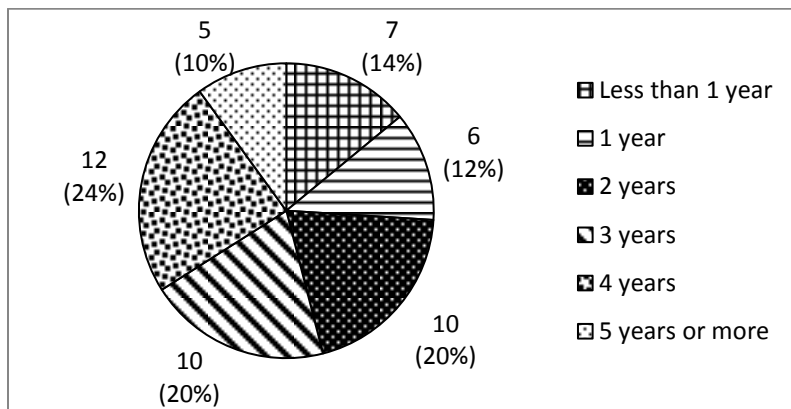
Many of the youth in the ENYF Youth Internship program receive public assistance, live in single-parent households, and attend schools with below performance ratings. Some youth are foster children, some are informally living under the care of relatives, and some have parents who are incarcerated.

The respondents in our alumni survey are representative of the general population of ENYF Youth Internship participants:

- Out of the 50 respondents, there were 29 females and 21 males.
- Respondent ages ranged from 18-25 with an average age of 20.
- Self-reported race and ethnicity were as follows:

Race/Ethnicity	Number of Respondents
Black	28
Latino/a	8
Mixed Race (Black and White)	7
Asian	4
Mixed Race (Black and Latino/a)	3

- Number of years spent in the ENYF youth internship program:



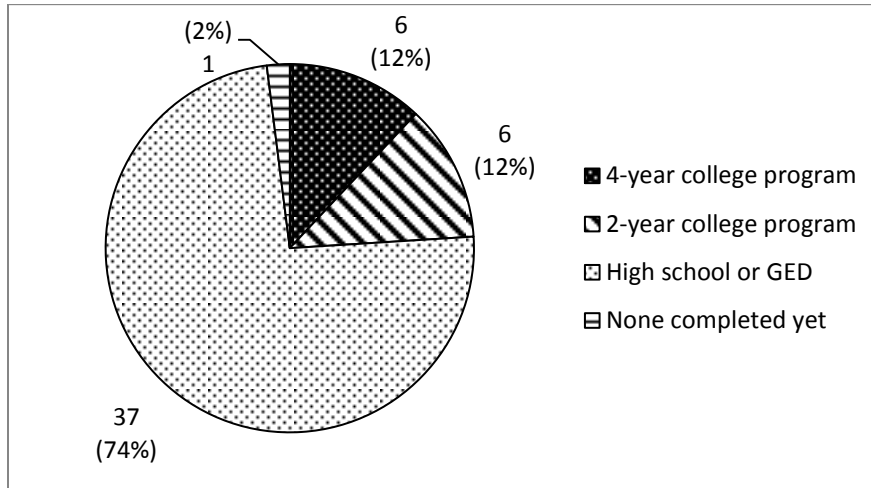
Our response rate of 52% is relatively high considering the evaluation reached alumni who were no longer affiliated with the ENYF program. Age range and average age of respondents and non-respondents was comparable, although our survey response rate was higher for women than for men (59% compared to 43%). Only 20% of the survey population spent four years or more at ENYF, and all except two of those alumni responded. A majority of the non-respondents were in the ENYF internship program for one year or less. It is important to consider that the 50 individuals who responded may have been more successful in work or school, or may have had a more positive experience at ENYF than the 47 who did not respond.

Findings

Education and Civic Engagement

Aside from one alumnus who was still in high school, all respondents had earned at least a high school diploma or GED, with many finishing college degrees as well. In addition, 9 respondents had completed a job training or career program.

Highest Level of Education Completed



When asked what they are doing now, half of the respondents reported working either part time or full time and 64% were engaged in some type of education or training program (the survey allowed for more than one response). Forty-eight per cent of men and 76% of women in the ENYF alumni sample were enrolled in high school, college or graduate school, which is a higher rate than the 39% of Asian, Black and Latino young adults living in East New York who are currently enrolled in school (US Census

2013). Men were more likely than women to be currently working full time and to have completed a job training program (χ^2 , $p < 0.05$ for both outcomes), while many women were in school full time. Although 16% of ENYF alumni described themselves as unemployed, most of those respondents were also enrolled in college full time. Because we did not provide the Bureau of Labor Statistics definition of unemployment on our survey (looking for jobs and available for work), we may have received positive responses from alumni who were not actively seeking employment. Only 4% of our respondents were unemployed and not in school. In comparison, the unemployment rate for Asian, Black and Latino young adults living in East New York is 13% (US Census 2013), and 25% of East New York youth between the ages of 16 and 24 are neither working nor going to school (commonly defined as "disconnected youth") (Measure of America 2012).

ENYF alumni were also asked: If you are in school, what is your major? If you haven't picked a major yet, what do you think you'd like to study? If you completed a college degree or career training program, what did you study? The most common answers were health-related fields like nursing or public health followed by business and criminal justice. The survey also asked: If you are working, what is your job? ENYF alumni were most likely to be working in retail, education, or health-related jobs like nursing or home health aide.

ENYF alumni were asked about their leisure activities in the past twelve months, modeled on questions from the General Social Survey, a research program that studies the structure and development of American society nationwide. ENYF respondents were significantly more likely to have looked for a new job or explored career

What are you doing now?	Responses
In 4-year college program full time	18 (36%)
Working full time	16 (32%)
Working part time	9 (18%)
Seeking work or unemployed	8 (16%)
In 2-year college program full time	6 (12%)
In 2-year college program part time	4 (8%)
In 4-year college program part time	2 (4%)
In a job training or career program	1 (2%)
In high school	1 (2%)

opportunities than the general population, which is important given that the ENYF internship program emphasizes job readiness and career building skills (χ^2 , $p < 0.001$). Although not statistically significant, they were also more likely to do so than American young adults of minority background. Respondents were more likely to have tried to meet new people for social purposes (χ^2 , $p < 0.001$), which is not surprising given that many alumni described improvement in their communication and social skills as a result of their internship. ENYF alumni were significantly more likely to have volunteered at an arts or cultural organization than minority young adults or Americans in general (χ^2 , $p < 0.001$), which may be a result of their residence in New York City where they have many opportunities to engage in arts and culture. Finally, although ENYF alumni were less likely to have gone camping, hiking, or canoeing in the past year than the general American population (χ^2 , $p < 0.001$), they responded similarly to minority young adults. This result may reflect the location of many minority young adults in urban areas where camping, hiking and canoeing opportunities are more difficult to get to and car ownership is less common.

In the past year, have you:	Percent of ENYF Alumni	Percent of 18-25 Non-White Americans	Percent of American Population
Looked for a new job or explored career opportunities?	80%	74%	37%***
Tried to meet new people for social purposes?	72%	44%**	39%***
Read novels, short stories, poems, or plays, other than those required by work or school?	60%	64%	30%
Participated in any sports such as running, biking, swimming, football, soccer, basketball, or bowling?	54%	68%	59%
Discussed your views about political or social policy issues, current affairs, or political campaigns with other people?	46%	38%	61%*
Written novels, short stories, poems, or plays, other than those required by work or school?	38%	N/A	N/A
Looked for information about political or social policy issues, current affairs, or political campaigns with other people?	34%	25%	41%
Volunteered at an arts or cultural organization?	32%	9%**	7%***
Gone camping, hiking, or canoeing?	20%	22%	44%***

National sample data from the General Social Survey, cumulative file 1972-2006, see www.norc.umd.edu/GSS+Website/ (Accessed 17 May 2013).

* χ^2 is significant at the 0.05 level compared to ENYF alumni. ** χ^2 is significant at the 0.01 level compared to ENYF alumni. *** χ^2 is significant at the 0.001 level compared to ENYF alumni.

The alumni survey also included questions about civic engagement drawn from several national surveys, following Fisher et al. (2011). ENYF respondents were significantly less likely than the general American population to have attended a public or school meeting in the past year (χ^2 , $p < 0.05$), possibly because they are relatively young and are unlikely to have school age children yet. However, the alumni were much more likely to have given a speech during the past year (χ^2 , $p < 0.001$). Otherwise, their level of civic engagement was found to be comparable to the American population at large.

In the past year, have you:	Percent of ENYF Alumni	Percent of American Population
Voted in an election? ^a	52%	41%
Signed a petition? ^b	40%	35%
Attended a public, town, community board, or school meeting? ^c	28%*	44%
Worn a button, or distributed or put up a flyer/sticker/poster of	26%	23%

a political campaign? ^d		
Given a speech? ^c	24%***	4%
Contacted an elected government representative? ^b	18%	22%
Collected money or signatures for a cause?	10%	N/A
Participated in a protest? ^b	8%	6%
Contacted the national or local media? ^a	4%	6%

* χ^2 is significant at the 0.05 level. *** χ^2 is significant at the 0.001 level.

^a2012 voter turnout for people ages 18-24 from *The Youth Vote in 2012* CIRCLE Fact Sheet, see http://www.civicyouth.org/wp-content/uploads/2013/05/CIRCLE_2013Factsheet_FinalYouthVoting2012.pdf (accessed 17 May 2013).

^bNational sample data from the General Social Survey, cumulative file 1972-2006, see www.norc.umd.edu/GSS+Website/ (Accessed 17 May 2013).

^cNational sample data from the Roper Social and Political Trends Data, 1973-1994, see http://www.ropercenter.uconn.edu/data_access/data/datasets/roper_trends.html (accessed 24 June 2010).

^dNational sample data from the CIRCLE Civic and Political Health of the Nation Survey, Ages 15-25, 2006, see <http://www.civicyouth.org/the-2006-civic-and-political-health-of-the-nation/> (accessed 17 May 2013).

Open-Ended Responses

As part of the survey, alumni were asked: **What did you learn by working at ENY Farms? How do you think it's affected you?** This open-ended question allowed respondents to give a thoughtful description of their experiences and perceived benefits of working at ENYF. Responses were corrected for proper spelling and coded for major themes as described below.

The most common answer, given by 56% of alumni, was an *increased knowledge of gardening, food systems, agriculture, or the importance of eating fresh produce and healthy food* in general:

"I learned about the importance of fruits and vegetables. It affected me in a good way, I now know what I'm looking for when buying produce at a market, I know want to eat healthier and eat organic fruits and vegetables."

"I've been exposed to different ways of harvesting, building up a farm, taking care of bees and chickens, different methods of sustainability and agriculture by attending conferences in and out of New York City."

"I learned about the food system in my community and how it runs. I also learned about how to eat healthy."

"I learned how to prepare the soil to grow fruits and vegetables. I learned about many new types of produce and how they grow."

"I learned a lot about pesticides and how eating organic foods are really healthy for you. It opened my eyes to vegetables I have never heard of, and to this day I continue to shop at Farmer's Markets and buy organic foods."

Half of the respondents described improvement in their *communication and social skills*, including overcoming shyness, public speaking, customer service, and public education skills:

"I learned how to interact with teens from other schools and backgrounds...Also I learned how to speak in front of my co-workers and at conference meetings. I believe after we share our opinions in front of a small group it becomes easier to express yourself in front of many more people."

“ENY Farms really helped my social skills. I used to be extremely shy and never liked to take the initiative to do something even though I had really good ideas. Now after being a part of this program I am more social than ever!”

“I was more comfortable with presentations in college and at work, as well as expressing personal views in class discussions and lectures... Networking became easier for example at career fairs and for the purpose of making connections in the work place and on college campus.”

40% of alumni also described a greater *sense of responsibility or work ethic* as a result of participation in the ENYF program. Specific skills cited included time management and leadership:

“Ever since I started working there I learned how to be punctual and responsible for work.”

“I learned responsibility and hard labor. It's shown me the true meaning of hard work because what you do at ENY Farms isn't easy.”

“I also learned how to manage execution. We had deadlines to meet, orders to fulfill, customers to take care of.”

30% of respondents reported *greater awareness of their community*, including social, environmental, and food justice issues, as well as an *increased desire to help others and give back to the community*:

“I also learned how to engage and inspire others. As a group of youth we have the ability to make a huge impact in our communities.”

“I think ENY Farms has impacted my life by reminding me that there's so much that needs to be done in our communities.”

“I learned how to be more of a responsible individual throughout my years at ENY farms. The program opened my eyes to local community activism...”

“And learning about a community garden also opened my mind into helping my community and desire to help others.”

20% of alumni listed *improved math or money management skills* due to their time in the ENYF program:

“ENY Farms was my very first job so I learned about money management.”

“I learned to see the value of money. Before this incident, I spent my money on anything I wanted to have or felt that I should have. But, when I went through this experience, I learned to manage my money and my time.”

20% of respondents also described *learning to work with people of all ages and ethnicities* as a valuable skill gained during the ENYF internship:

“...I've learned how to act around people of different cultures and it's made me mature and a better person.”

“It allowed me to be open to diversity.”

“Working at ENY Farms I learned...how to work well in a group with others than my ethnicity, in any age.”

“Based on the exposure to different cultures, the music and of course foods it really contributed to allowing me to become a well-rounded individual. “

One thread that emerged from these collective responses was that ENYF interns learned valuable hard and soft job skills. This is apparent in the responses about agricultural and business skills, but also in the discussions of responsibility, maturity, work ethic, time management and communication skills. Several respondents (16%) *directly connected their experience at ENYF with future career opportunities*. For example:

“East New York Farms gave me opportunity. That's the one thing I appreciate about the program. I didn't know of any other program that explicitly did food justice work and taught many soft and hard job skills. The experience is something that gave me an advantage to participate in other professions.”

“I learned how to work with such a diverse group of people and I think that helped a lot in terms of my current occupation.”

Another important theme, reported by 22% of respondents, is that time at ENYF farms *increased respondents self-confidence or self-efficacy* (belief in their capability to accomplish something). This was sometimes due to greater communication skills, leadership abilities, or increased community awareness and the feeling that they could make an impact:

“I learned what it was like to be independent and successful at a young age and that if you work hard you achieve great things.”

“I also took in great pride in providing a service for my community.”

“I think the ENY Farms helped me by giving me the confidence I need to move on to bigger and better things in life.”

Finally, it was apparent that many alumni (18%) felt that their *core values or identity were influenced by their experiences at ENYF*:

“This made me who I am today and past my experience to other as well. I become more responsible and caring about the community around me. ENY Farms was a great experience.”

“One of the greatest experiences of my life...This is one job that I honestly never take off of my resume because it has helped mold me into who I am today.”

“I would really have to say what I learned from East New York Farms can't be written in words to be explained...It has fostered my interest in agronomy and how I go about perceiving life.”

In another open-ended question, alumni were asked: **Do you notice any differences between yourself and other people your age as a result of your experience at ENY Farms? If so, what differences?** 90% of alumni reported observing differences between themselves and their peers who did not work at ENYF. Responses were very similar to those from the previous question, falling into many of the same general categories of food knowledge, work ethic, communication skills, confidence, and community awareness, with many respondents

noting the *maturity that comes from working at ENYF*. Some illustrative quotes are provided below:

“I felt more prepared to enter the work force and enabled to handle and lead people and projects. Compared to other individuals my age, I was able to explain and execute tasks with clarity. I feel the areas of extreme difference were in communication and team work...In terms of team work I could step up and step back, as well as respect the opinion of others and utilize the strengths and weaknesses of my team effectively.”

“Working with ENY Farms prepares you to be mature and to make decisions for yourself at an early age. No one in JHS [junior high school] had the responsibilities I had at such a young age. It was fun and encouraging to have that trust and sense of independency.”

“I notice that I learn to speak up and take initiative more than my peers. They are also less likely to substitute a bag of chips for bananas or apples.”

“I noticed after working at ENYF, it gave me the quality of being mature. So amongst my peers, I act more responsibly than them most of the time. I'm able to manage my money properly, and my communication skills have gradually improved as well. Especially now that I'm in college, workshops that I led while working at ENYF allowed me to speak out and become a leader. As a result, I've become a better writer as well as a speaker.”

“I see that I tend to be more goal oriented than others my age. When I start something I always finish it.”

“I noticed my level of confidence and public speaking is outstanding compared to other people my age.”

Attitudes and Behaviors: Food, Health, and Environment

Despite knowledge of healthy foods, adolescents typically find it difficult to follow healthy eating recommendations, and they still consume foods they perceive as unhealthy due to the limited availability of healthy foods, lack of concern for following healthy eating recommendations, and taste preferences against fruits and vegetables (Croll et al. 2001, Neumark-Sztainer et al. 2003). Adolescents (and teenage girls in particular) generally fail to meet the recommended daily allowances for the major food groups, leading to diets low in fruits and vegetables and high in fat (Muñoz et al. 1997, Story et al. 2002a).

The majority of ENYF alumni reported engaging in healthy behaviors very often, with the exception of growing food or gardening, which more than half said they never or rarely do. However, it is unclear whether a lack of interest or lack of opportunity and space prevents the alumni from continuing to garden. Although ENYF alumni may not continue the practice of growing their own food once they leave the program, they still practice healthy behaviors and report a good understanding of where their food comes from. In addition, close to half of those surveyed said they rarely eat fast food. Drawing from the open-ended responses and the high scores for eating fruits and vegetables, it appears that the ENYF program is contributing to an increased knowledge of fresh produce which may result in increased taste preference. The high availability of fruits and vegetables to the ENYF interns during the program may be something they try to continue once they have left.

Food, Health, and Environment variables were combined to create a composite score for each respondent. Number of years in the program was found to have a significant effect on this composite score, with those in the program for 4 years or more having a significantly higher score than those who were in the program 3 years or less (Student's *t*-test, $p < 0.01$). Interns who started the program more recently (2004-2010) had a significantly higher Food/Environment score than those who started the program earlier (2002-2003) (Student's *t*-test, $p < 0.05$). In 2004, a new program structure was implemented, giving returning interns more formal leadership positions with greater responsibility (leading crews of first year interns) and higher salaries. This relationship between peers may have provided more effective education than the original program structure. Research has found peer-led nutrition education to be positively received by teachers, peer leaders, and other students (Story et al. 2002b), which may explain the high scores of alumni on questions about food and health knowledge and behaviors.

Nationally, adolescents' environmental concerns have declined since the 1970s, including conservation behaviors, belief in resource scarcity, and personal environmental responsibility (Wray-Lake et al. 2010). However, most ENYF alumni reported caring about the environment and trying to find ways to reduce waste.

	FOOD, HEALTH, and ENVIRONMENT				
	Never	Rarely	Every once in a while	Sometimes	Very often
I grow food or garden	28%	26%	10%	22%	14%
I have a good understanding of where my food comes from	0%	2%	8%	14%	76%
I cook	2%	6%	8%	26%	58%
I eat fruits and vegetables	0%	0%	4%	14%	82%
I am physically active	2%	2%	4%	26%	66%
I eat fast food	0%	42%	26%	20%	12%
I care about nature and the environment	0%	0%	6%	20%	74%
I try to find way to reduce waste (compost, reduce, reuse)	0%	2%	16%	28%	54%

Most common response for each question is highlighted in **bold and red**.

Attitudes and Behaviors: Self-Efficacy, Communication, and Decision-Making

Physical activity in the presence of nature, including walking, farming, and gardening, has been found to improve both self-esteem and mood in adults (Barton and Pretty, 2010). Documented benefits of gardening include a sense of involvement and accomplishment and the tangible benefits of producing one's own food (Kaplan 1973; Kingsley et al. 2009). Underachieving students participating in a garden-based curriculum were found to experience improvements in self-esteem and academic achievement (Sheffield 1992). Similarly, youth participation in local environmental action can lead to individual physical, intellectual, psychological, emotional and social development as well as positive environmental and social change in communities (Schusler et al., 2009; Schusler and Krasny, 2010). Furthermore, young adult participants in a New York City green jobs training program reported positive environmental attitudes and behaviors as well as a strong sense of self-efficacy as a result of their urban greening job training and employment (Falxa-Raymond et al. 2013).

ENYF alumni scored very high on questions about self-esteem and self-efficacy (belief in one's capability to perform a task). Notably, half of respondents reported never having low self-esteem. Women reported more frequently planning for their future than men (Student's *t*-test, $p < 0.05$). Respondents also generally reported

strong communication and decision-making skills, and almost half said they never let peer pressure influence their decisions. Our findings support the themes found by Feenstra (2002) in her work on sustainable community agriculture:

“Community food systems projects offer [disenfranchised groups] real opportunities to develop leadership from among their ranks. We have seen that, in particular, with some of the youth-oriented projects. Young people are learning to grow, harvest, and process food for their communities at the same time as they learn business and marketing skills, community outreach, and nutrition/health education skills, and they learn about the strength inherent in their own and their community’s unique assets. The fundamental resource in all of these projects is the people. They are the best storytellers. They are the local heroes. It is they who have found their own unique ways to create the social, economic, intellectual, and political spaces for these projects to thrive.” (105)

SELF	Never	Rarely	Every once in a while	Sometimes	Very often
I am a good leader	0%	0%	4%	16%	80%
I feel good about myself	0%	0%	0%	8%	92%
I have a lot to be proud of	0%	0%	0%	10%	90%
I have low self-esteem	52%	26%	14%	8%	0%
I am motivated at work	0%	2%	0%	8%	90%
I enjoy learning new information	0%	0%	2%	4%	94%
I am comfortable applying math and science concepts when I need them	0%	4%	2%	36%	58%
I enjoy learning new skills	0%	0%	0%	2%	98%
I plan for my future	0%	0%	4%	8%	88%
I enjoy trying new things	0%	0%	2%	6%	92%
I feel like I have a sense of purpose in life	0%	0%	2%	8%	90%
I have confidence in my beliefs even when they are different from how other people think	0%	0%	0%	4%	96%

Most common response for each question is highlighted in **bold and red**.

COMMUNICATION AND DECISION-MAKING	Never	Rarely	Every once in a while	Sometimes	Very often
I communicate well with others	0%	0%	4%	20%	76%
Peer pressure influences my decisions	48%	28%	12%	4%	8%
I consider multiple viewpoints before making a decision	2%	2%	4%	20%	72%
I feel comfortable talking with a friend or an adult about difficult decisions	2%	0%	4%	16%	78%
When I get upset, I feel comfortable talking it out with others	8%	10%	8%	24%	50%
I speak up or take action when I see a problem	0%	0%	6%	30%	64%

Most common response for each question is highlighted in **bold and red**.

Attitudes and Behaviors: Community

Community-based organizations in Black communities help Black youth build the social capital needed to transform community conditions (Ginwright 2007). At the same time, community gardens have been found to cultivate democracy (Baker 2004, Glover et al. 2005); and garden involvement increases individual and neighborhood-wide perceptions of social capital and engenders the feeling that one is part of the community (Schmelzkopf 1996, Alaimo et al. 2010). Over half of ENYF alumni said that they sometimes or very often take community leadership roles, participate in community activities, or feel connected to a larger community. 90% reported sometimes or very often feeling capable of making change in their community and beyond, showing strong confidence and self-efficacy as well as community awareness. In addition, 90% reported that they very often surround themselves with people who are a positive influence. Those who were in the program 4 years or more had a significantly higher composite Community score than those who were in the program 3 years or less (Student's *t*-test, $p < 0.05$).

ENYF alumni reported frequently feeling comfortable interacting with people of different races and ethnicities, supporting previous findings that community gardens have been viewed as sites of interracial interaction that may improve racial attitudes and tolerance (Shinew et al. 2004). This finding is also reflected in the open-ended responses, where alumni reported greater community awareness and greater comfort interacting with people of other ages and ethnicities. Many also reported very often feeling close to friends, peers and adults, with men being more likely to frequently feel close to their friends and peers (Student's *t*-test, $p < 0.05$). Adolescent friendships provide important intimacy and companionship with less conflict than family relationships at that age (Lempers and Clark-Lempers 1992). More than half of respondents did report feeling lonely or disconnected from the people around them; of that group, however, many reported rarely feeling that way. Teig et al. (2009) found that community gardening supports collective efficacy through multiple mechanisms, including the encouragement of social connections, mutual trust, collective decision-making, social norms, civic engagement, and community-building. The youth at ENYF appear to experience all of these social processes throughout their internship.

	COMMUNITY					
	Never	Rarely	Every once in a while	Sometimes	Very often	
I take leadership roles in my community	12%	16%	18%	28%	26%	
I participate in community activities (volunteering, clubs, community gardens, church groups, etc)	8%	14%	18%	30%	30%	
I feel close to my friends and peers	0%	2%	4%	26%	68%	
I feel lonely or disconnected from the people around me	40%	34%	6%	18%	2%	
I feel close to the adults in my life	0%	0%	10%	30%	60%	
I feel connected to a larger community (school, church, neighborhood, community groups)	6%	6%	14%	34%	40%	
I feel comfortable interacting with people of different races, genders, and abilities	0%	0%	2%	4%	94%	
I surround myself with people who are a positive influence on me	0%	0%	2%	8%	90%	
I feel capable of making change in my community and beyond	2%	4%	4%	20%	70%	

Most common response for each question is highlighted in **bold and red**.

Conclusion

Our alumni evaluation reveals that the ENYF internship program is meeting its goals for the underserved minority youth who participate. Alumni are enrolled in college or graduate school at a higher rate than their peers living in Brooklyn and report a connection to the environment; an understanding of agricultural systems; and a commitment to healthy eating practices. Respondents cite hard and soft job skills learned during their time at ENYF, including improved math and money management, gardening and farming practices, leadership, teamwork, discipline, and improved communication skills. Participants also reported very high levels of confidence and self-efficacy, one of the primary goals of the internship program. Most participants reported that they feel connected with friends, peers, and adults and surround themselves with a positive peer group. Finally, many alumni report that they are actively engaged in their own community and that they have a deeper understanding of social justice issues and heightened community awareness. The number of years spent in the program was found to have a significant effect on composite Food, Health & Environment scores and on composite Community scores, supporting the ENYF program model of including new and returning interns in each year's class. It is also possible that the interns who chose to return to ENYF were already more aware of food, environment, and community issues and would have scored highly to begin with. Pre/post evaluations would provide stronger validation of the effect of multiple years of the ENYF program on participants.

The strong alumni response regarding personal development and community involvement as a result of the ENYF internship suggests that the organization may want to consider expanding their overall program mission to incorporate these goals. Currently, the ENYF mission focuses more narrowly on food justice:

The mission of the East New York Farms Project is to organize youth and adults to address food justice in our community by promoting local sustainable agriculture and community-led economic development.

East New York Farms! is a project of the United Community Centers in partnership with local residents.

This alumni evaluation clearly shows that the internship program meets the goals of ENYF that go far beyond food justice and community-led economic development.

The 52% response rate for this evaluation is relatively high given the challenges of reaching out to alumni who are no longer active program participants, and the open-ended responses revealed that many were eager to be back in touch with the ENYF program. ENYF may want to consider implementing a more regular and comprehensive alumni communications network, particularly for those who are struggling to find school or employment opportunities. Greater effort could be taken to engage with those who are not immediately responsive but who could benefit from this type of contact and support.

Previous research by Hung (2004) addresses the experiences of 18 youth who completed an ENYF internship in 2001. Semi-structured interviews revealed themes similar to those found in this evaluation. Interns reported feeling useful and responsible in their internship, as well as having gained job and interpersonal skills. They also spoke about the importance of their role in helping the community and improving the neighborhood.

In conclusion, this evaluation is a validation of the work done by the East New York Farms! Project. The amount of time spent in the internship program seems to positively impact the attitudes and behaviors of alumni, so we would encourage ENYF to focus on student retention, bringing back as many interns as possible for multiple years of participation. We would also like to emphasize the value of conducting further research and evaluation over an even longer time horizon to determine the outcomes of this alumni cohort in terms of their health, attitudes, and career paths across the life course.

Acknowledgements

We would like to thank Sarita Daftary of ENYF for her valuable insight and assistance, the USDA Forest Service Northern Research Station Civil Rights & Diversity Committee Special Project Fund for Civil Rights for supporting the ENYF Youth Internship, Lorna Mason and Gretchen Maneval of ThinkBrooklyn for assistance with Brooklyn demographic data, Gillian Baine and Philip Silva for thoughtful feedback, and John Stanovick for statistical review.

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APPENDIX: EVALUATION INSTRUMENT



East New York Farms! Alumni Survey



Thank you for taking the time to complete this survey! We estimate it will take you about 45 minutes.

You will also receive a thank you gift from us – your choice of a \$15 MetroCard or movie tickets – after you’ve completed the entire survey and returned it to us

**If we have your email address, you’ll also receive an email version of this survey. You can fill out either the paper or email version.*

ABOUT YOU

1. **How old are you?** _____
2. **What is your gender?** _____
3. **What are you doing *now*?** *(Check all that apply)*
 - In 4-year college program full time
 - In 4-year college program part time
 - In 2-year college program full time
 - In 2-year college program part time
 - In a job training or career program
 - Working full time
 - Working part time
 - Seeking work or unemployed
4. **What education or training have *already completed*?** *(Check all that apply)*
 - Completed a job training or career program
 - Completed a 4 year college program
 - Completed a 2 year college program
 - Completed high school or GED
 - None completed yet
5. **If you are in school, what is your major? Or if you haven’t picked a major yet, what do you think you’d like to study?**
6. **If you completed a college degree or career training program, what did you study?**
7. **If you are working, what is your job?**

YOUR ACTIVITIES

8. In the past year, have you: *(Check all that apply)*

- Gone camping, hiking, or canoeing?
- Looked for a new job or explored career opportunities?
- Participated in any sports such as running, biking, swimming, football, soccer, basketball or bowling?
- Read novels, short stories, poems, or plays, other than those required by work or school?
- Written novels, short stories, poems, or plays, other than those required by work or school?
- Tried to meet new people for social purposes?
- Volunteered at an arts or cultural organization?
- Looked for information about political or social policy issues, current affairs, or political campaigns?
- Discussed your views about political or social policy issues, current affairs, or political campaigns with other people?
- None of the above

9. In the past year, have you: *(Check all that apply)*

- Contacted an elected government representative?
- Contacted the national or local media?
- Signed a petition?
- Attended a public, town, community board, or school meeting?
- Given a speech?
- Voted in an election?
- Collected money or signatures for a cause?
- Worn a button, or distributed or put up a flyer/sticker/poster of a political campaign?
- Participated in a protest?
- None of the above

YOUR EXPERIENCE AT ENY FARMS!

10. How old were you when you started working at ENY Farms? _____

11. How many years did you work at ENY Farms? *(Check one)*

- less than one year
- 1 year
- 2 year
- 3 years
- 4 years
- 5 years

12. What did you learn by working at ENY Farms? How do you think it's affected you? **Please share as many examples and stories as you want! Your detailed response here will REALLY help us**

13. Do you notice any differences between yourself and other people your age as a result of your experience at ENY Farms? If so, what differences?

14. We are interested in learning if things you learned at East New York Farms! stuck with you and affect your life today.					
<i>Circle one in each row</i>					
FOOD, HEALTH, AND ENVIRONMENT					
I grow food or garden.	Never	Rarely	Every once in a while	Sometimes	Often
I have a good understanding of where my food comes from.	Never	Rarely	Every once in a while	Sometimes	Often
I cook.	Never	Rarely	Every once in a while	Sometimes	Often
I eat fruits and vegetables.	Never	Rarely	Every once in a while	Sometimes	Often
I am physically active.	Never	Rarely	Every once in a while	Sometimes	Often
I eat fast food.	Never	Rarely	Every once in a while	Sometimes	Often
I care about nature and the environment.	Never	Rarely	Every once in a while	Sometimes	Often
I try to find ways to reduce waste (compost, recycle, reuse).	Never	Rarely	Every once in a while	Sometimes	Often
COMMUNITY					
I take leadership roles in my community.	Never	Rarely	Every once in a while	Sometimes	Often
I participate in community activities (volunteering, clubs, community gardens, church groups, etc.).	Never	Rarely	Every once in a while	Sometimes	Often
I feel close to my friends and peers.	Never	Rarely	Every once in a while	Sometimes	Often
I feel lonely or disconnected from the people around me.	Never	Rarely	Every once in a while	Sometimes	Often
I feel close to the adults in my life.	Never	Rarely	Every once in a while	Sometimes	Often
I feel connected to a larger community (school, church, neighborhood, etc).	Never	Rarely	Every once in a while	Sometimes	Often
I feel comfortable interacting with people of different races, genders, and abilities.	Never	Rarely	Every once in a while	Sometimes	Often
I surround myself with people who are a positive influence.	Never	Rarely	Every once in a while	Sometimes	Often
I feel capable of making change in my community and beyond.	Never	Rarely	Every once in a while	Sometimes	Often
SELF					
I am a good leader.	Never	Rarely	Every once in a while	Sometimes	Often
I feel good about myself.	Never	Rarely	Every once in a while	Sometimes	Often
I have a lot to be proud of.	Never	Rarely	Every once in a while	Sometimes	Often
I have low self-esteem.	Never	Rarely	Every once in a while	Sometimes	Often
I am motivated at work.	Never	Rarely	Every once in a while	Sometimes	Often
I enjoy learning new information.	Never	Rarely	Every once in a while	Sometimes	Often
I am comfortable applying math and science concepts when I need them.	Never	Rarely	Every once in a while	Sometimes	Often
I enjoy learning new skills.	Never	Rarely	Every once in a while	Sometimes	Often
I plan for my future.	Never	Rarely	Every once in a while	Sometimes	Often
I enjoy trying new things.	Never	Rarely	Every once in a while	Sometimes	Often
I feel like I have a sense of purpose in life.	Never	Rarely	Every once in a while	Sometimes	Often
I have confidence in my beliefs even when they are different from how other people think.	Never	Rarely	Every once in a while	Sometimes	Often
COMMUNICATION AND DECISION-MAKING					
I communicate well with others.	Never	Rarely	Every once in a while	Sometimes	Often
Peer pressure influences my decisions.	Never	Rarely	Every once in a while	Sometimes	Often
I consider multiple viewpoints or perspectives before making a decision.	Never	Rarely	Every once in a while	Sometimes	Often
I feel comfortable talking with a friend or an adult about difficult decisions.	Never	Rarely	Every once in a while	Sometimes	Often
When I get upset, I feel comfortable talking it out with others.	Never	Rarely	Every once in a while	Sometimes	Often
I speak up or take action when I see a problem.	Never	Rarely	Every once in a while	Sometimes	Often

Anything else you want to add? Any comments, questions, shout outs, ideas...

Which thank you gift would you like?

Make sure you've completed all of the questions on this survey to receive a gift

- A \$15 Metrocard
- Two passes to see a free movie at an AMC theater

Please list your name and address so we can mail you your gift!

You can also add your email so that we can keep in touch with you!

And remember to like our Facebook page for more updates!

THANK YOU!!!