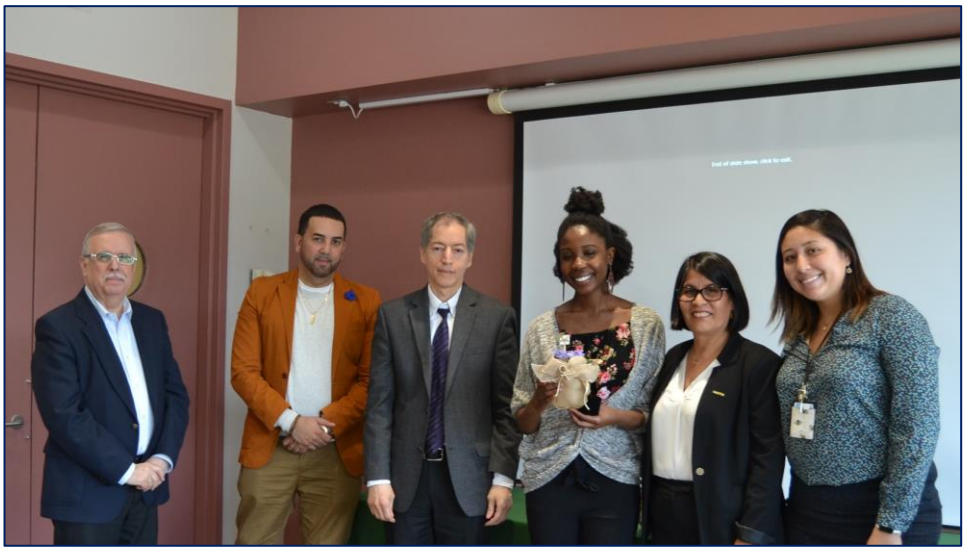
Food Studies News

Volume 5 - June 2019

Contents

A Big Leap Forward

The 2018-2019 academic year culminated in a remarkable celebration, the graduation of the first cohort of A.S. in Food Studies majors: Jessica Lopez, Joel Rivera, and Peace Yigan. The three graduates take with them a set of valuable skills that will help them continue growing as they make their ways along their chosen paths. Peace plans to pursue a career in nutrition education, Joel plans to continue his studies in Nutrition at Lehman College, and Jessica plans to pursue a career in social work.



Graduates Joel Rivera (2nd from L), Peace Yigan (3rd from R) celebrating the culmination of their studies with Dean Felix Cardona, Chairperson Francisco Fernandez and Professors Flor Henderson and Kathleen Delgado.

We now have fifty students who are Food Studies majors. All six required Food Studies courses are being offered. Expanding our program, Professor Kathleen Delgado joined us in the fall of 2018, and brings her expertise in the areas of Community Nutrition and Food Justice. She has quickly fostered relationships with local organizations and local leadership to support Hostos students.

Many of our courses use hands-on experiential learning techniques to engage our students. This year, we added additional space to facilitate classroom activities and lab experiments with our aeroponic vertical growing systems. This teaching tool has been

instrumental building collaborations within the Natural Sciences department between Biology classes and Food Studies classes. This past spring, this approach was presented by Professors Henderson and Delgado at the Universities Fighting World Hunger Summit. Their poster presentation brought home the first place recognition in its category. Their work was an example of how a collaborative approach could teach students in food studies and students in biology principles and theories that are needed for their respective fields.

The Food Studies Program continues to look for ways to expand the program and to provide students opportunities for professional growth on and outside of campus. Field trips to La Finca del Sur, a local urban farm, and to the Riverbank State Park Greenhouse exposed food studies students to lessons in community gardening and activism. This term, we began a pilot teaching collaboratory activities with La Finca del Sur. Several of our classes visited the farm to learn about traditional farming practices and to chat with urban farmers. Moving forward, we will continue to nurture these relationships and explore new opportunities for our students.

Although teaching and learning are the two most important elements of our program, we also made sure to include time for fun! In the fall, we invited students to hone their photographic talents and submit food-related photographs for a contest in which winners receive tablet devices.

The Food Studies Students' Club, under the leadership of Allie Pisano, also provided plenty of student engagement opportunities –a movie night and tabling activities to interact with the college community. Food Studies Club Vice President Jeraldine Santiago presented a recognition award to Mr. Rafael Toro of Goya Foods during the Hostos Community College 2019 Annual Scholarship Benefit Gala.

Overall, this semester was made special by the amount of progress made by the Food Studies program and its students. We are excited and ready for the next year and what it has to bring!

Class Activities

Building Bridges to Enhance Learning and Community Outreach

BY FLOR HENDERSON

Access to green areas in our institution is a limiting factor for introducing students to the foundations of the food system, which is food production. Throughout the years, I have tried to compensate for this absence in a myriad of ways. Initially, I introduced the basic concepts of germination using trays to propagate aromatic herbs and transfer these into small pots for students to take home. Although the practice was very engaging, it felt inconclusive because there was no way to follow up the fate of the plantlets.

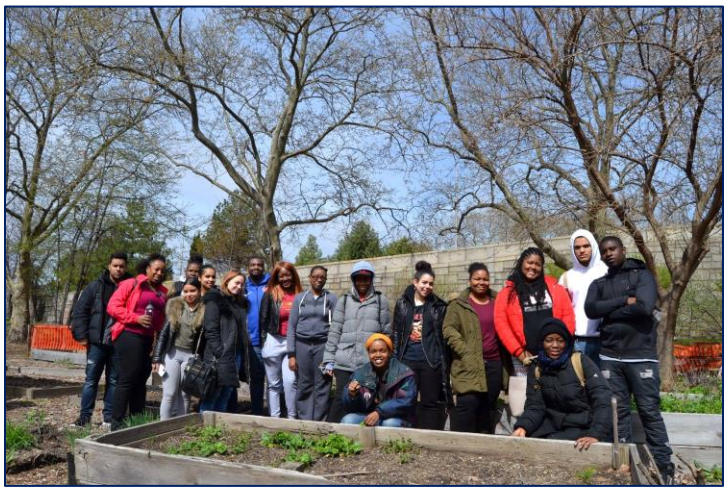
After years of search and through trial and error, I was introduced to the aeroponic tower. This modern way of propagating plants allowed observing additional stages of students' learning. We are now able to observe extended periods of development until harvest.

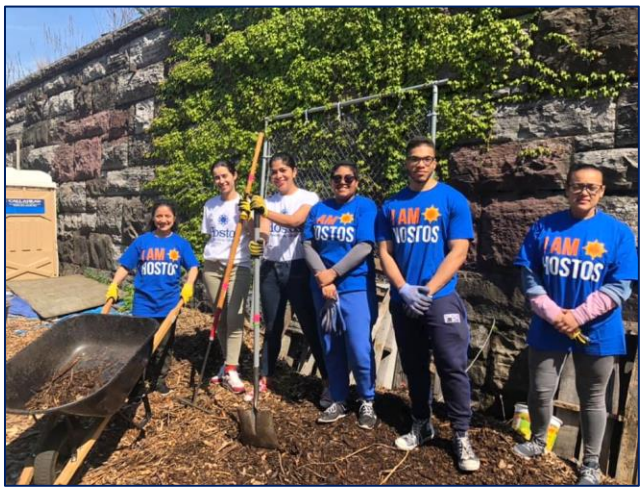
This new sense of accomplishment brought joy and satisfactions and a new challenge, which was the need to give students the opportunity to compare their new gained experience on indoor farming with traditional farming practices.

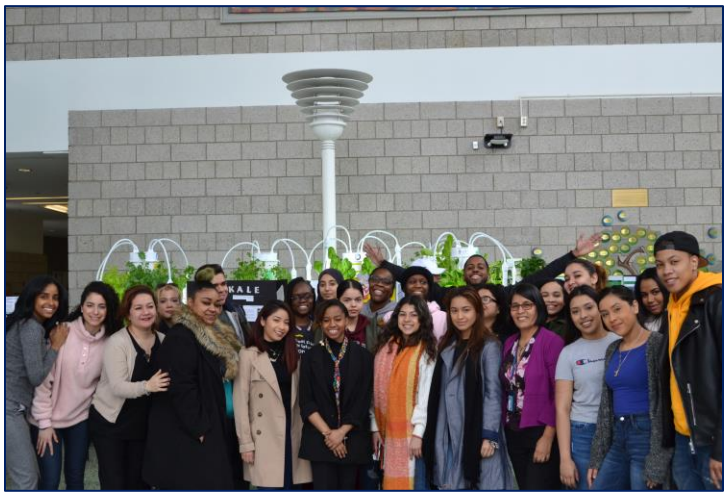
That opportunity presented itself to us through La Finca del Sur Community Farm, which is a neighboring farm with a long history of collaboration with our institution. However, this time, we included a student body which would benefit professionally from the exposure and direct interaction with traditional farming traditions and food advocacy organizations.

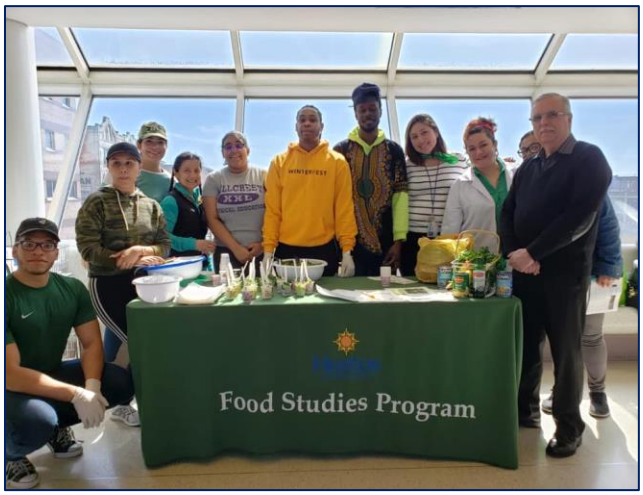
In the fall of 2018, we met Nancy Ortiz-Surun, an urban farmer and educator, who along with a group of Latina and African American women, established La Finca del Sur on the Southern end of the Grand Concourse. The farm is an important resource for the local community. It provides space for farming, community activism, and socialization. Its location and its mission resonate well with our Food Studies program. After a few planning meetings in the fall, a group of instructors piloted a Teaching Collaboratory in the spring of 2019. Five classes visited the farm for a tour, a brief lesson in urban farming, and some hands-on experience. Although the practice was of short duration due to the extended winter season, the experience proved satisfactory.

We extended the collaboration to the summer to allow interested Food Studies majors to intern in the farm to gain more practical experience while being exposed to the high production season. We are looking forward to the results of this collaboration and to initiate new ones.









Students visiting field sites and participating in outreach activities in and around campus.

Capstone Projects

The Hostos Towers: A Project in Outreach and Awareness

BY JESSICA LOPEZ, FOOD STUDIES MAJOR

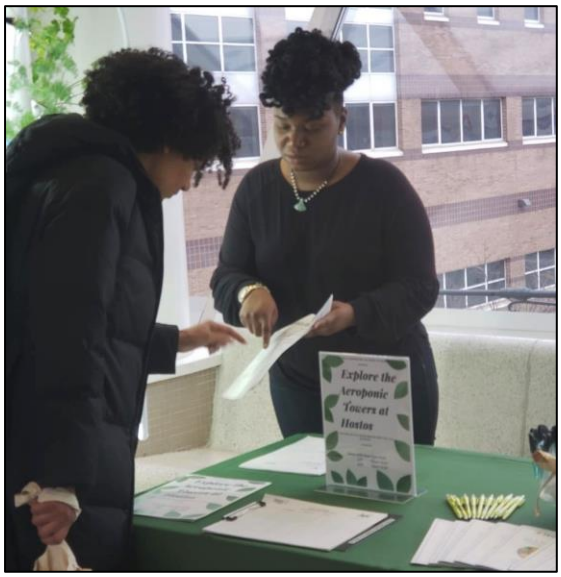
At Hostos Community College, we have vertical aeroponic gardening towers. This model of aeroponic farming is efficient and an effective system for growing plants without using soil as a medium but water.

Unfortunately, not all students in campus know about this garden project. While this system was implemented, it brought more exposure to the work done in the labs. For instance, if students know more about the aeroponic towers, they may want to take one of the classes that involve them, or they could even want to interact with the plants on their own.

For my capstone project, I utilized two towers and conducted surveys. The goal of my project was to bring awareness to the aeroponic towers in lab room A-514 and through a presentation on the bridge. During my outreach activities, students at Hostos Community College would have the opportunity to engage directly with the towers and partake in my presentation. I prepared a guidebook that included information on how the towers function, where they are located, and what plants are currently growing in them. This information would allow the students to gain some awareness about aeroponics.

A total of 20 students participated in the tabling event. They were surveyed thereafter about the information they obtained from the aeroponic project. Results indicated that 100% of students learned something new during the informational event.

Overall, the students were receptive to the information that was given. 100% reported that they would visit the towers again.



Jessica Lopez promoting the Tower Gardens in campus.

The Fight Against Hunger: A project to understand Food Insecurity at Hostos Community College and to Promote Resources

BY PEACE YIGAN, FOOD STUDIES MAJOR

Peace Yigan presenting her capstone project.

I had written a paper which reports on the project and survey that was implemented at Hostos Community College designed to raise awareness about food insecurity, and promote resources to help this problem on campus, specifically the school's food pantry.

The Hostos Food Pantry is located in the D building, but many students are unaware that it exists. Twenty students on the college campus participated in a presentation on food insecurity and the pantry. They received educational materials on nutrition and pantry products and took a survey to measure the objectives that were initiated.

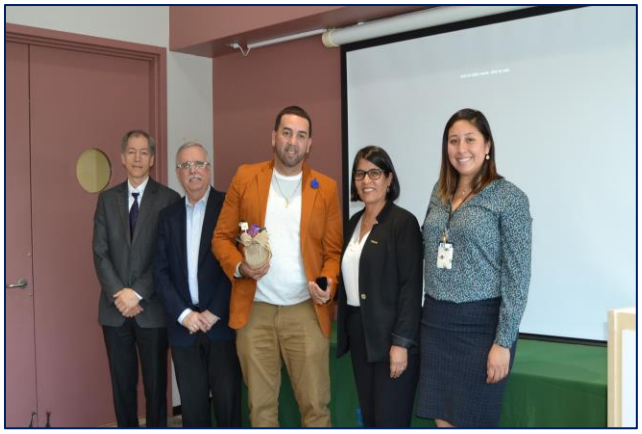
Results from the survey are presented in the paper. Results from the project show that there was an increase in awareness about food insecurity and the food pantry, along with knowledge of nutrition education.

Are the Vending Machine Snacks Healthy? A Capstone Project

BY JOEL RIVERA, FOOD STUDIES MAJOR

The purpose of my capstone project was to make students aware of the healthy snacking criteria for vending machines that exists for snack food items in order to support college student food security. In this project, a poster presentation was done next to a vending machine at Hostos. The posters featured a definition of food insecurity, the New York City Vending Machine Snack Standards, and a poster with select foods nutrition information.

Twenty students completed a survey evaluation. The survey asked questions to evaluate if participants wished to learn more information about food insecurity, if they would consider the healthfulness of food, and if they learned the information from the vending machine snack standards. Overall, participants reported an increase in learning about food insecurity, but more support is needed for healthy vending machine snack standards.



Joel Rivera (center) with Food Studies Faculty: Dean Felix Cardona, Professors Francisco Fernandez, Flor Henderson and Kathleen Delgado.

Our Students

Food Studies Club Report

BY KATHLEEN DELGADO

This spring 2019 semester, the Food Studies Club celebrated the advent of food in the Bronx and supported hyperlocal efforts in food.

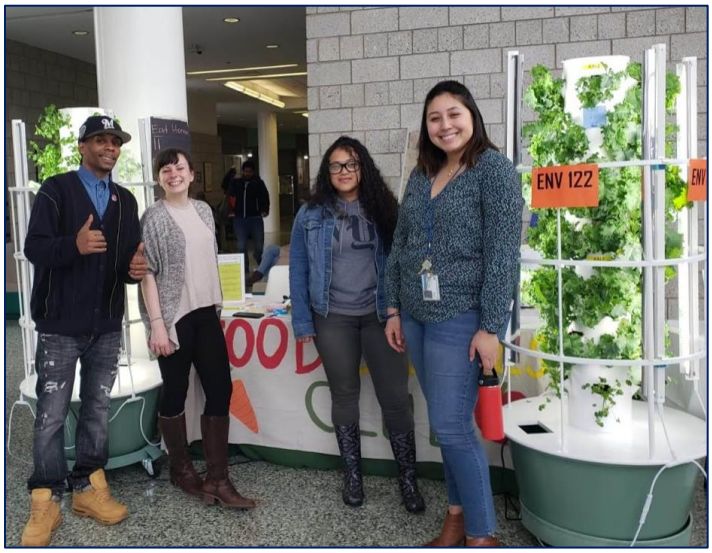
During the Wellness festival, the Food Studies Club put on a food mapping activity and asked for participants who stopped by their table, where they purchased food around Hostos. This activity was grounded in discussion on food miles and was supported with brochures on healthy eating choices from the USDA.

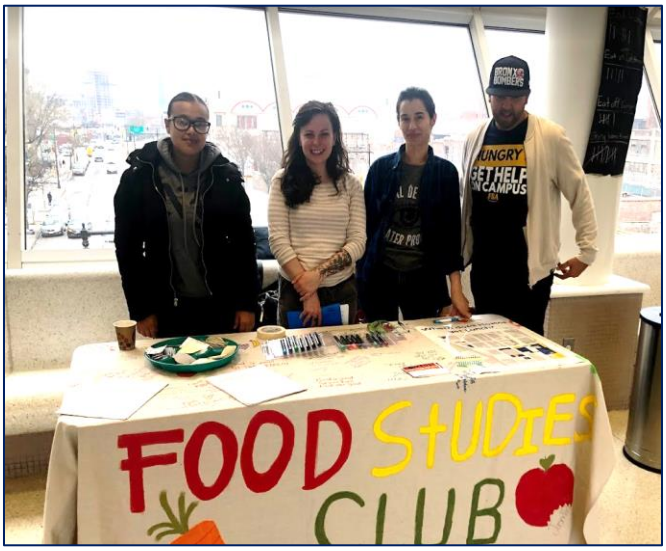
During the Hostos Earth Day Celebration, the club made seed paper with kits provided by the Natural Sciences Department. This was the first time the club made seed paper, and all the students were really into the activity! Seeds for mustard, kale, dill, and other vegetables and herbs were among the seed papers made.

The Food Studies Club hosted a movie night that featured the film Food, Inc. The film is a documentary that presents issues about the sustainability of the current food system, and legalities in food production and food labeling. The movie night was accompanied by pizza, fresh fruit, and beverages. Students from FS 101 joined in movie night as well.

This term, the Food Studies Club also dedicated a significant amount of their budget towards the development of their own hydroponic tower. Purchased from Juice Plus, the tower, during the fall semester, will be located in the club room. For now, the club decided on types of plants they would like to grow for next term, such as kale and eggplant to edible flowers. In the fall, they will receive support from the Food Studies program in troubleshooting their seedlings and plants challenges.

To join the Food Studies Club, please contact the Food Studies Club's president, Allie Pisano (apisano@stu.hostos.cuny.edu) or the primary advisor, Prof. Kathleen Delgado (kdelgado@hostos.cuny.edu)





Food Studies Club hosting the mapping activity (L.) and distributing seed paper in campus (R.)

Food Studies Celebrates Student Success with Support from Goya Foods at the Hostos Gala!

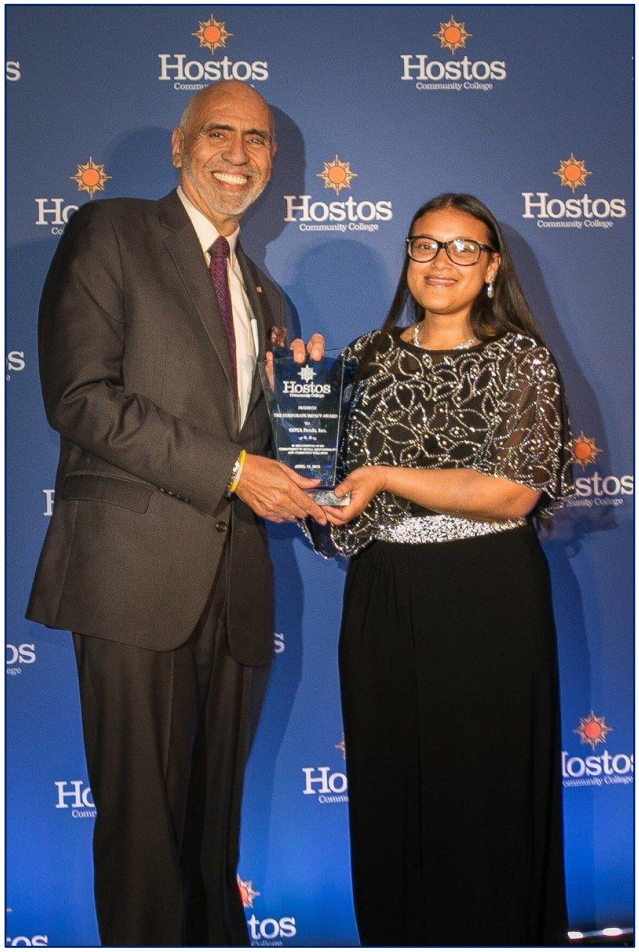
BY JERALDINE SANTIAGO, VICE PRESIDENT OF THE FOOD STUDIES CLUB

I had the honor of attending the Hostos Community College 2019 Annual Scholarship Benefit Gala on Wednesday, April 17, 2019. This formal and eventful gathering was put together in support of the Hostos Community College Foundation, an organization that supports student scholarships and the educational mission of the college.

This year's gala had three Annual Scholarship Benefit honorees. Among those honored were Rafael Toro from Goya Foods, Inc. Goya Foods, Inc. is a food company specialized in selling Latino food products such as beans and grains, pantry items, and most notably, adobo seasoning. As the Vice President of the Food Studies Club at Hostos, I represented the Food Studies program and presented the Corporate Impact Award to Mr. Toro.

During the evening, I learned that Goya Foods is one of the biggest supporters of Hostos Community College. Their recent contributions included donations of canned goods, and other food pantry staples to the Hostos Food Pantry, located in the D building. If a student ever needs to use the pantry services, that student should know that the pantry offers Hostos students the opportunity to take home non-perishable food items such as rice, beans, oatmeal, canned fruit and veggies.

Presenting the award to Mr. Toro was truly a memorable moment for me, as I grew up in a Latino household that used Goya products, and as a Food Studies student I learned about the food pantry on campus through course work this past semester.



This 2019 Annual Scholarship Benefit Gala also marked the 51st anniversary of Hostos CC. A huge celebration ensued with live music from a salsa band, good food, and lots of joy. This is an event that I will always remember from beginning to end!

Have you Thought About your Grandmother's Foodways? I have.

BY ALEXANDRA PISANO, FOOD STUDIES MAJOR

I first became curious about the relationship between malnutrition in the elderly population and the neighborhood the elderly live in when I began having weekly dinners with my grandmother. My grandmother's name is Veda Bell, but I call her Grammy. She's ninety years old, and she retired to New York City from New Jersey twenty-five years ago. Veda recently moved to the same neighborhood I live in, Washington Heights, from her previous residence in Yorkville at 83rd and York, where she had lived for twenty-three years. At one of our recent dinners, I asked her some questions about why she moved, her food access, and her thoughts on malnutrition in the elderly.

Veda moved to Washington Heights because of money. While she was once able to live comfortably on her teacher's pension in a small one-bedroom apartment, the cost of living in the neighborhood and her rent had increased over time. She decided to move because she found herself pinching pennies. In Washington Heights, there are about 25,458 seniors who live in the area. In 2015, 30% of seniors in Washington Heights-Inwood lived in poverty (DiNapoli & Bleiwas, 2015). If the rate of poverty among seniors did not grow in the three years between 2015 and 2018, then that would mean that about 7,638 seniors in Washington Heights-Inwood are living in poverty. And, much like my grandmother, most seniors are reliant on a fixed income. When I asked her about the difference the move and money make in her diet, she emphatically said, "I can live on any amount of money and be happy."

Seniors have unique nutritional needs and physical limitations, as well as unique foodways. Besides the traditional foodways of restaurants, grocery stores, markets and bodegas, seniors can participate in senior center events, congregate meals, and home meal delivery services. Seniors also rely on informal foodways like church, familial support, friends, social gatherings, and neighbors. Seniors utilize formal emergency foodways such as food pantries, soup kitchens and SNAP. I asked Veda to compare her food access in Yorkville and Washington Heights. She talked about how Yorkville was physically easier to obtain food in. Within a block of her apartment she had a deli, a grocery store, and a bus stop. The sidewalks were wide, flat, and well maintained. In Washington Heights she cannot walk to the grocery store, she has to take the bus. The bus stop is three blocks away, and to walk home from the bus stop she has to walk uphill and cross a busy intersection. Veda is incredibly mobile and active and is able to adeptly navigate these barriers, however, she points out that this may not be the case for her peers.

She described a hypothetical situation of an older adult in New York: "They may have lived here twenty years, and started in a walk-up at twenty [years old],

which was fine, but now they are eighty and their children have moved away and are unreliable. A lot of people do not know how to apply for food stamps, struggle with money management when they have been retired and are living on social security or pensions for a while."

In this regard she is right. Food insecurity for seniors has many complex and dynamic sociodemographic and economic factors, and racial minority groups of seniors are at higher risk for food insecurity. But much more so than other groups, seniors are impacted by functional impairments. Indeed, the risk factors often merge. A 2001 study found that "altered ability to use food due to functional impairments, regardless of the availability of food and social supports in the household, has an independent role in characterizing food insecurity among elderly persons" (Lee & Frongillo Jr., 2001). Even if seniors have adequate social support and food availability in the neighborhood, they themselves may not be able to physically prepare or access food.

One good thing to point out is that 80% of the neighborhood reported having helpful neighbors, higher than the citywide average of 70%. Strong community support can help seniors greatly in every aspect of their lives. For my grandmother it's one of the reasons I continue to have weekly dinners with her. Overall, the food access in the area is fairly good, with a supermarket bodega ratio of 1:13 and four farmers markets. However, resident do not feel healthy, with only 68% of residents indicating that they considered themselves in good health. This is much lower than the citywide average of 83%, even though the neighborhood has access to healthy foods. (Barbot, 2018).

Veda also pointed out that older people often struggle with chronic disease, and this changes their diet or ability to provide food for themselves. As she has gotten older she has developed an intolerance of a variety of foods, spices, and additives, which limits her choices in the supermarket. She faces the same conditions as many other seniors in New York City, but she is one of the lucky ones, as she retains full mobility and wonderful health. Even she, however, struggles with absorbing certain foods and nutrients regularly in her diet, simply because she is older.

As seniors age, "the nutrition priorities change towards meeting increased nutrient needs with less energy requirement, and minimizing muscle loss" (Agarwal, Miller, Yaxley, & Isenring, 2013). Seniors often suffer from unintended weight loss caused by 3 primary syndromes: starvation, sarcopenia and cachexia. All three of these are separate causes of malnutrition, and can be experienced together or separately. Starvation is a result of protein- energy malnutrition, otherwise known as PEM; sarcopenia is progressive muscle loss that occurs with aging, and cachexia is "a complex metabolic syndrome associated with underlying illness and characterized by loss of muscle" (Agarwal et al., 2013). PEM is very common in the elderly, with a prevalence of 23-60% in acute care, 16%-70% in residential, and 5-30% in community dwelling seniors. The prevalence goes up as age and care level go up. As of 2015, thirty percent of Washington Heights-Inwood area seniors live in poverty, ten percent higher than the area's twenty percent of people living in poverty overall (Barbot, 2018; DiNapoli & Bleiwas, 2015). Senior citizens are a largely unseen, vulnerable population. Fixed budgets, transportation, distance, and physical limitations are huge barriers to food access for this population. Living in a city notoriously inaccessible for people who have physical limitations, New York City seniors face increased difficulty accessing many resources. Those difficulties are amplified tenfold when living in poverty. The senior residents of the Washington Heights- Inwood area of New York City are more prone than the city's at large population to suffer from malnutrition and food insecurity.

Seniors are a largely invisible population, in terms of food insecurity. There needs to be more studies done on seniors' food shopping and eating habits, because the elderly population is soon going to skyrocket, and this problem will become much more visible. We should not expect all seniors to be as adept as Veda is at navigating these barriers to food access. She works incredibly hard at providing food for herself, but not many seniors can ambulate as well as she can, and thus they fall through the cracks. The next time you are chatting with your grandmother or grandfather, think about their ability to get good,

healthy food, especially if their ability to do so has been impaired.

Agarwal, E., Miller, M., Yaxley, A., & Isenring, E. (2013). Malnutrition in the elderly: A narrative review. Maturitas, 76(4), 296–302. https://doi.org/10.1016/j.maturitas.2013.07.013

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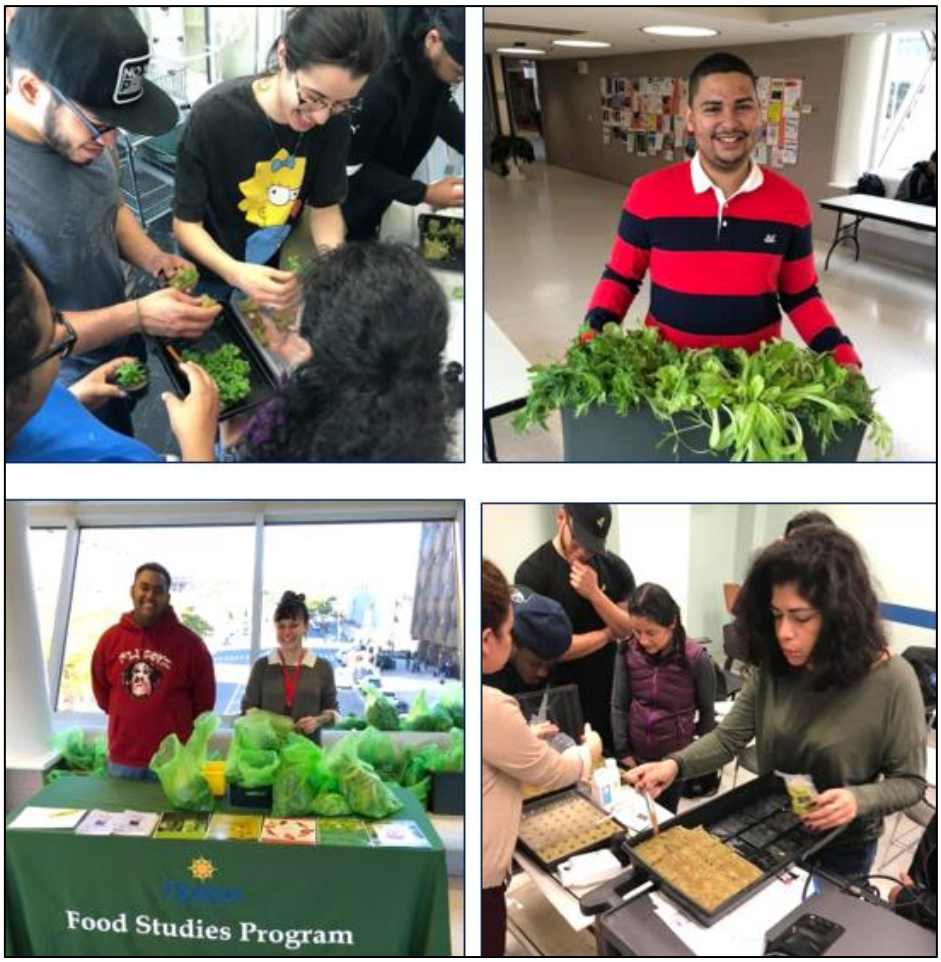
Chung, W. T., Gallo, W. T., Giunta, N., Canavan, M. E., Parikh, N. S., & Fahs, M. C. (2012). Linking Neighborhood Characteristics to Food Insecurity in Older Adults: The Role of Perceived Safety, Social Cohesion, and Walkability. Journal of Urban Health, 89(3), 407–418. https://doi.org/10.1007/s11524-011-9633-y

DiNapoli, T. P., & Bleiwas, K. B. (2015). An Economic Snapshot of Washington Heights and Inwood (No. 2–2016; p. 4). Retrieved from Office of the New York State Comptroller website: https://www.osc.state.ny.us/osdc/rpt2-2016.pdf

Lee, J. S., & Frongillo Jr., E. A. (2001). Factors Associated With Food Insecurity Among U.S. Elderly Persons Importance of Functional Impairments. The Journals of Gerontology: Series B, 56(2), S94–S99. https://doi.org/10.1093/geronb/56.2.S9

Future Food Studies professionals playing active roles in the program and the college.



A Call to Action: Let's Talk about Our Vending Machines!

BY ELIZABETH PAREDES, FOOD STUDIES MAJOR

Have you ever heard of "freshman fifteen"? As a young adult enters college and transitions into a more independent and self-reliant lifestyle, the natural choices made put them more at risk for unhealthy weight gain and obesity (Bryd-Bredbenner, C. 2012). "Freshman fifteen" refers to the typical weight gain of between 2-7 pounds during the first year of college (Bryd-Bredbenner, C. 2012). "College students' diets have been characterized as low in fruit and vegetables and high in fat, sugar, and sodium" (Bryd-Bredbenner, C. 2012). Dietary choices made during these years may leave a lasting pattern of poor health decisions that continue throughout adulthood (Brown, et al., 2014). In addition, students who are already overweight are more prone to be overweight adults and as a result risk a greater chance of diet-related chronic diseases (Brown, et al, 2014).

As a student entering HCC one's obstacles do not end at the "freshman fifteen." Unfortunately, the Bronx has been ranked the least healthy county in New York State for the past nine years, according to the Robert Wood Johnson Foundation County Health Rankings (Robert Wood Johnson Foundation, 2019). The Community Health Profiles of 2018 notes that thirty percent of adults Bronx-wide are obese. Hyper-locally, a whopping forty-two percent of Mott Haven and Melrose residents are obese, twenty percent are diabetic, and thirty eight percent suffer from hypertension (K. Hinterland, 2018). Ninety percent of students enrolled at HCC are either Hispanic or African American (Statistics, 2017-18). The Center for Disease Control states that although issues pertaining to poor health conditions affect all of society, there are significant health disparities depending on race, socioeconomic status, and geographic location (Prevention, 2013).

In 2008 Mayor Bloomberg signed Executive Order 122 that was the catalyst for building a healthier NYC (Standards, 2008). Section 3 of the executive order states that the Food Policy Coordinator along with the Commissioner of the Health Department must develop City Agency Food Standards (Standards, 2008). Moreover, the food standards must be reviewed and revised, ensuring standards that continue to meet or surpass current dietary recommendations constructed upon the latest scientific evidence (Standards, 2008). Pursuant to this order, standards for food vending machines as well as standards for beverage vending machines were created, along with healthy eating posters and fact sheets to help promote and educate on the benefits of healthy eating (Standards, 2008). Vending machine standards require strict nutritional criteria for snacks and beverages, along with comprehensive tools that help agencies with a plan of action (Services, 2017). They encourage private organizations, such as hospitals, schools, and workplaces, to adopt the standards that enhance food environments (Services, 2017). They also advise that snacks should be used as a way to curb hunger in a healthy way (Services, 2017).

In 2011 the Healthy CUNY Initiative (HCI) rolled out the CUNY Campaign for Healthy Food (CUNY CHeF) (CHef, 2012). The program is an all-inclusive dynamic approach at making CUNY the healthiest urban public university in the country (CHef, 2012). A CUNY Chancellor appointed CheF Advisory board made up of students, faculty and administrators brings diversity to a panel that encourages all CUNY campuses follow their action steps to help in fostering healthier environments (CHef, 2012). Their recommendations are constructed from the NYC Department of Health and Mental Hygiene's (NYC DOHMH) standards for food and beverages and its standards for vending machines (CHef, 2012). The

goals of these recommendations are to help reduce the availability and promotion of unhealthy foods, improve the environment in order to increase probability of healthier decision making, and foster policies that protect health and take economic boundaries into consideration (CHeF, 2012).

We are now in 2019, and while we have seen food manufacturers make changes in their products' composition, overall, we have not seen changes in the offerings themselves. Aligning Hostos Community College (HCC) food vending practices with CUNY CHeF and NYC Food Standards could feasibly construct a setting that supports nutritiously sound options for students, staff, and faculty on our campus. "Environments that encourage healthy choices could make it easier for individuals to achieve and/or maintain healthy goals, such as normal BMI, compared to environments that fail to support healthy food choices" (Bryd-Bredbenner, C. 2012). It has been proven that increased consumption of snack foods greatly increases the chance of obesity; if this is true, then why are unhealthy snack foods and sugary beverages ubiquitous in vending machines throughout campus? Students at HCC battle serious health obstacles whether they are aware of the facts about those obstacles or not. A policy to set snack and beverage standards is necessary in order to help influence decision-making and support healthier lifestyles.

I propose that Hostos Community College adopt snack and beverage vending machine standards of the Department of Health's Food Standards that have been suggested by CUNY CHeF CUNY-wide, as a policy (CHef, 2012) (Health N. D., N/A). The policy should go as follows:

For Beverage Machines Located on Campus

All of the following criteria should be met:

A) Require all beverages contain 25 calories or less per eight ounces with the following exception:
A maximum of 2 slots/buttons may stock high calorie beverages (more than twenty-five calories per eight ounces), such as regular soda, lemonade, sweetened tea and juice. The two-slot limit applies no matter how many slots are in the machine. Unsweetened one percent and non-fat milk not included in high calorie limit.

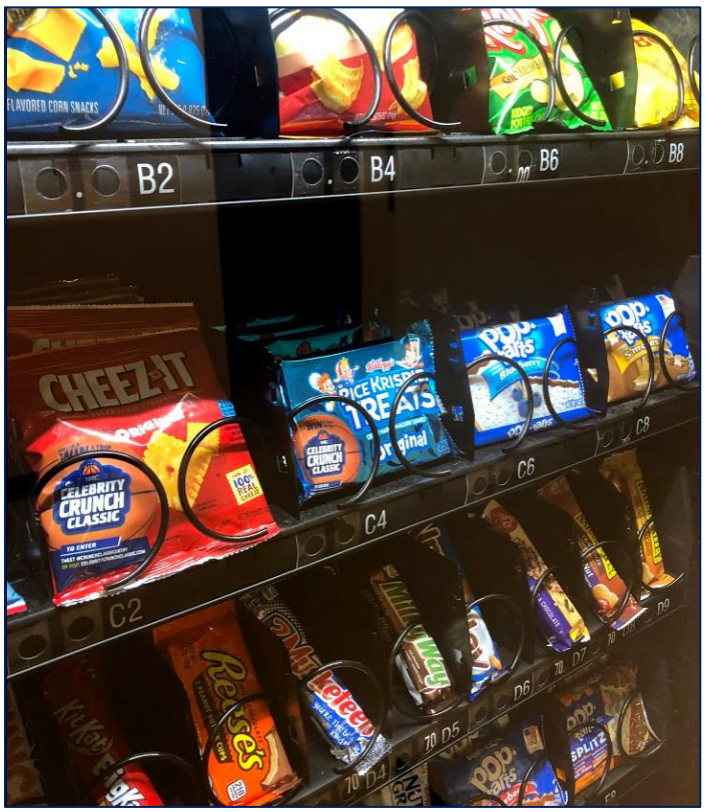
B) Require water be stocked in at least two slots/buttons per machine. Water should contain zero calories with no added color, flavor or sweetener of any kind. If drinking water is readily available in the vicinity of the vending machine, unflavored seltzer water may be substituted for the two slots of water.

C) Require water and seltzer be placed at eye level, or in the highest selling position. High Calorie beverages should be placed farthest from eye level, or in the lowest selling position.

D) Require all high calorie beverages are sold in twelve ounce containers or smaller.

E) Prohibit advertisements of high calorie beverages on vending machines. Promotional material on the front side panels of the machine can advertise water or beverages with twenty-five calories or less per eight ounces.

F) Require calorie information is posted for each beverage, as packaged.



For Snack Machines Located on Campus

All of the following criteria should be met:

A) Require snacks meet all of the following criteria, per package: Calories: no more than two-hundred calories. Total fat: no more than seven grams. Nuts, seeds, nut butters and cheese are exempt. Products containing nuts or nut butters are exempt. Saturated fat: no more than two grams. Trans fat: Zero grams trans-fat. Sodium: no more than two-hundred mg. Sugar: no more than ten grams. Fiber: contain at least two grams of fiber, if product is grain/potato-based (e.g. granola bars, crackers, pretzels, cookies, chips)
B) Require calorie information be posted for each food item, as packaged.
C) For programs serving children age eighteen and under: products cannot contain artificial flavors, artificial colors, artificial sweeteners, or other non-nutritive sweeteners (e.g. stevia, erythritol).
D) Limit grain/potato-based snacks to no more than fifty percent of food items in machine. Certain standards proposed by NYC Food Standards pertaining to food and beverage machines were omitted due to non-applicable variables such as not having refrigerated Snack Vending Machines on campus.

Let's work together to make our campus healthier so that we can improve our health, and the health of our community. Hostos Community College can set an example by putting its students' health before the very meek streams of revenue that unhealthy food can generate (CHeF, 2012). The goal should be to improve the state of the current food environment on campus and not to completely eliminate snacks and beverages categorized as unhealthy. By implementing these changes students, faculty and staff stand a fighting chance against diet-related health conditions.

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Harvest time in the Aeroponic Lab – Discovering new ways of growing healthy food alternatives.

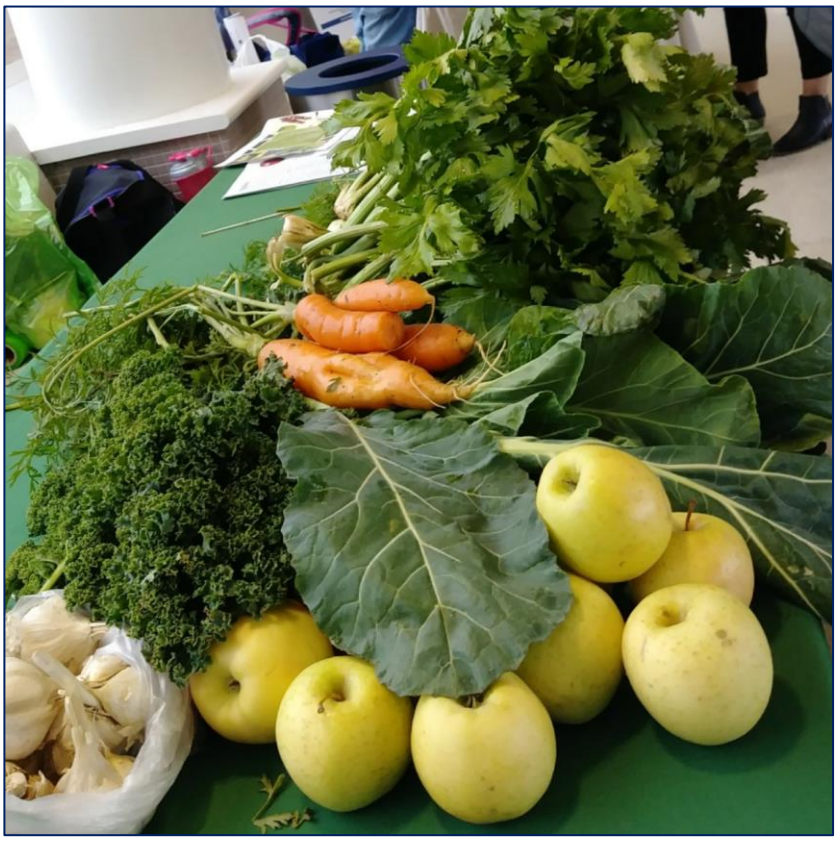
The First Hostos Food Photo Contest

BY FLOR HENDERSON

Inspired by food and food related imaginary shared by people in social media and other venues of mass communication, we felt compelled to garner Hostos CC students' photographic talents by organizing a photo contest. We advertised the contest from September to November 2018 and offered attractive awards to entice participation. A total of thirty students submitted their photographs.

The images were reviewed, evaluated, and ranked by a group of faculty members who in a display of collegial support, donated their valuable time and skills to this task. These colleagues were professors: Felipe Pimentel from the Behavioral and Social Sciences Department, Vyacheslav Dushenkov from the Natural Sciences Department, Louis Bury from the English Department, and Dean Babette Audant.

The happy winners of the first Hostos Food Photo Contest were:

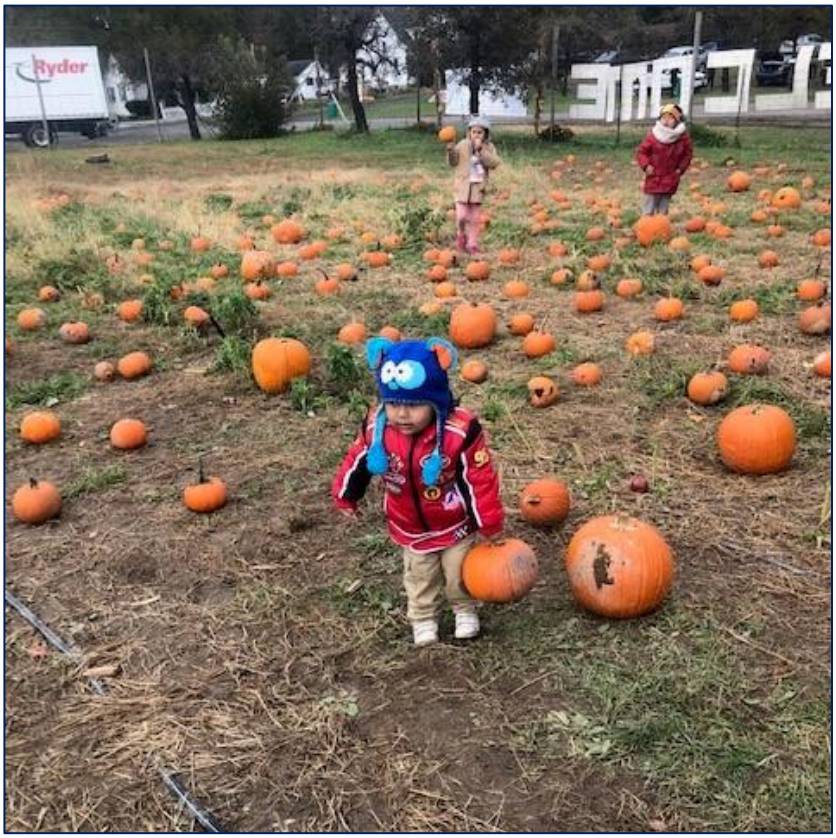


1st Place

"The Joy of Food Studies"
Ndeye Gueye

2nd Place

"The Flavors and the Colorful Bliss of Autumn"
Zoilo Saldana

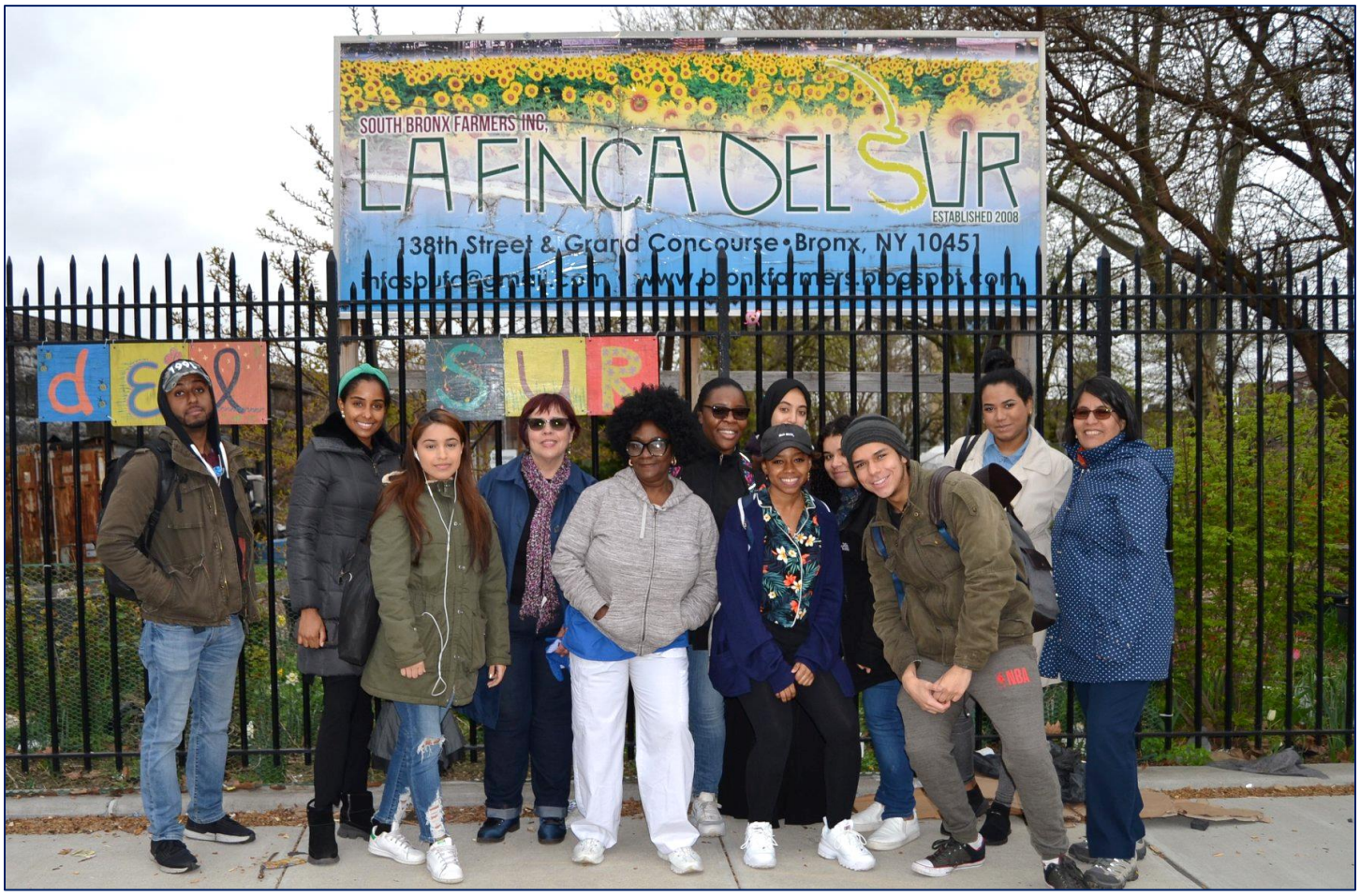


3rd Place

"Pumpkin Land"
Joyce Ramirez

Field Trips

Remembering Home in La Finca del Sur



Plants and Society students with Nancy Ortiz of La Finca del Sur.

BY AFFUL COMFORT

A field trip to La Finca del Sur Urban Community Farm in the South Bronx. was one of the best experiences I ever had while being a student at Hostos Community College. It was important because I grew up in a rural area in Ghana, Africa, before leaving it behind for the city of Accra. I did not go back to the village after the move. My grandmother used to teach us about working the land and farming when we would visit her from school on the weekends. She planted plantains, cassava, pepper, onions, and other vegetables. I remember how she would cook food before we returned home. We would eat the food in the bushes because the distance we had to walk was long. She used to tell us that it would be too late to eat by the time we got home, and that by then we would have only tea and snacks. All those

memories came back to me while visiting La Finca del Sur. The visit gave me that wonderful feeling of the soil under my feet again.

As a student of BIO 131 Plants and Society, I learned and experienced growing plants indoors using hydroponic towers. Although the experience was new, I felt the contrast and the reality of life when we visited La Finca del Sur. There, we learned about ways of using organic soil to grow fresh vegetables and fruits in small scale.

Ms. Nancy Ortiz, the farm keeper and teacher, welcomed our group and took us around the farm. She is one of the founding farmers. She has been taking care of La Finca del Sur for the past ten years. The farm renders service to the South Bronx Community. The members farm crops like onions, garlic, lettuce, carrots, and many other kinds of vegetables and fruits.

We learnt about farming in beds, which have been apportioned to community members who are interested in farming and who also are devoted to the maintenance of the farm. La Finca del Sur was started by a group of women and is currently supported by donations. Their mission is to produce fresh and healthy food and to give Black and Latino members the opportunities they deserve. The members grow the crops they choose. The beds are distributed for a little token of $40 a year. These funds help to keep the farm going.

At the beginning I didn't understand why the farmers would use wooden beds for their crops. Later I learned the reason was soil contamination in the area. The beds are filled with good soil, so plants will take uncontaminated nutrients. For the last ten years the farm has been doing well, the soil is checked periodically, and it is led to rest to reboot its strength to produce better crops.

This urban farm needs dedication, energy and time investment. The daily tasks would not be easy for people that do not like farming or understand how the life of a real farmer is. Some people may desert it, especially when the weather becomes hot and wet. Farming looks challenging when there is a choice of going out and enjoying life instead of working outdoors and sweating under the sun.

Ms. Ortiz also mentioned that some other challenges she faces are finding support to do the work and for maintaining good care of the beds, the fences, and other structures. But, serving people in the community becomes a priority and mission. Back in Africa, the challenges my grandma faced in her farm, were the disturbing insects that destroyed her crops and the cost of chemical fertilizers. At La Finca del Sur, they give the crops for free to members that need it. Any left overs are sold in a local farmers' market. The funds of the sale are saved for the following farming season or to replace equipment.

La Finca del Sur is also an educational center. The farmers and staff give tours to school visitors; they offer space for community events. There is a small wooden stage for activities and teaching space, and picnic benches for reunions.

It was nice to have a field trip and to compare our experience of growing plants indoors with outdoors farming practices. I took some pictures to show to my grandparents, to educate them about alternative ways of growing crops and not to just sit down and go hungry when a particular season is over. Also, to show others that there are easier and healthier ways of growing crops for sale and for consumption. I want to thank my professors for the scientific enlightenment and for deepening my knowledge of the world of plants.

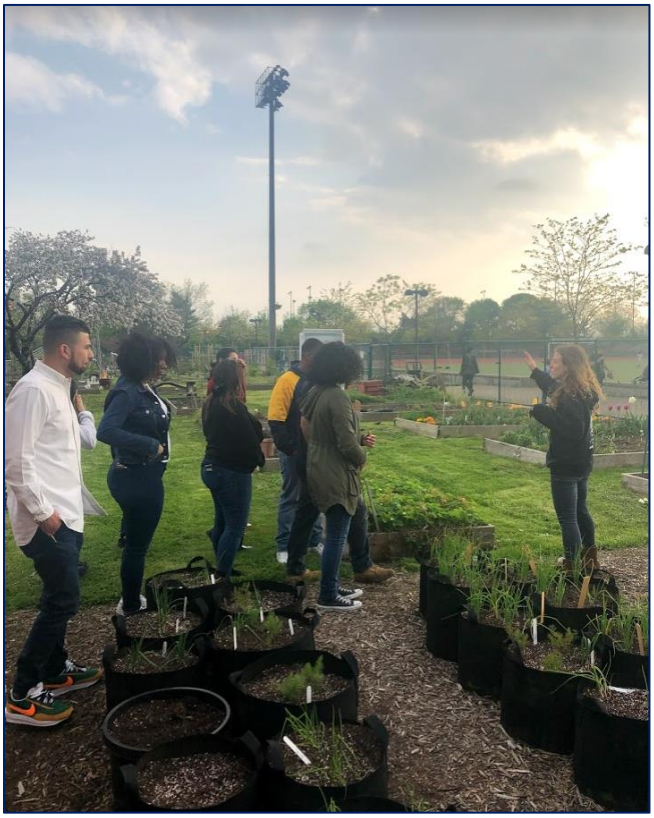
Hostos Trip to Riverbank State Park

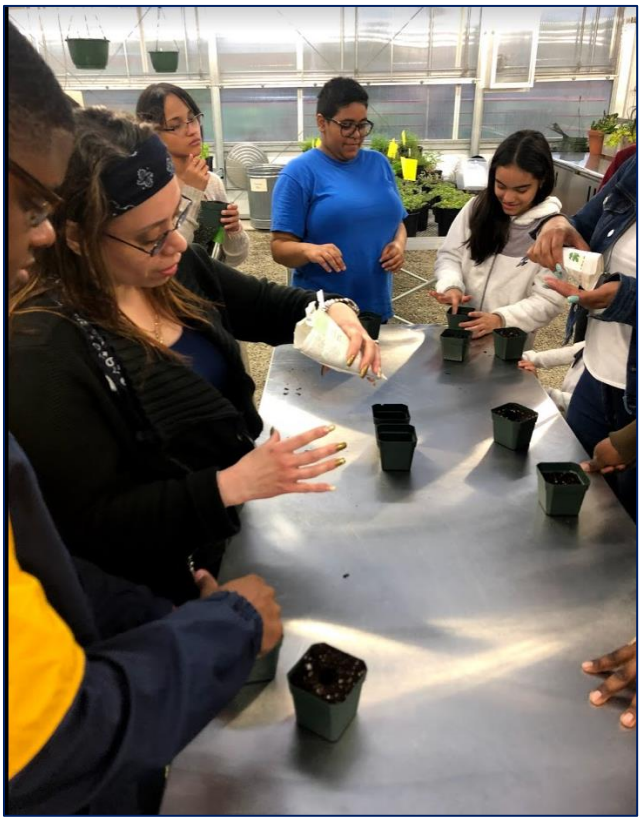
BY KATHLEEN DELGADO

Nestled in the upper most region of Manhattan on its west side sits Riverbank State Park. Many lucky New Yorkers have found this gem through the years and have called it their athletic home. Featuring a soccer field, tennis courts, an Olympic sized pool, and a covered skating rink, this 28-acre multilevel recreational haven is also a foodie's paradise. Nestled in the park is the Greenhouse –a city gardener's dream escape. Run by the New York Horticultural Society, the Greenhouse features hundreds of varieties of edible and ornamental plant varieties.

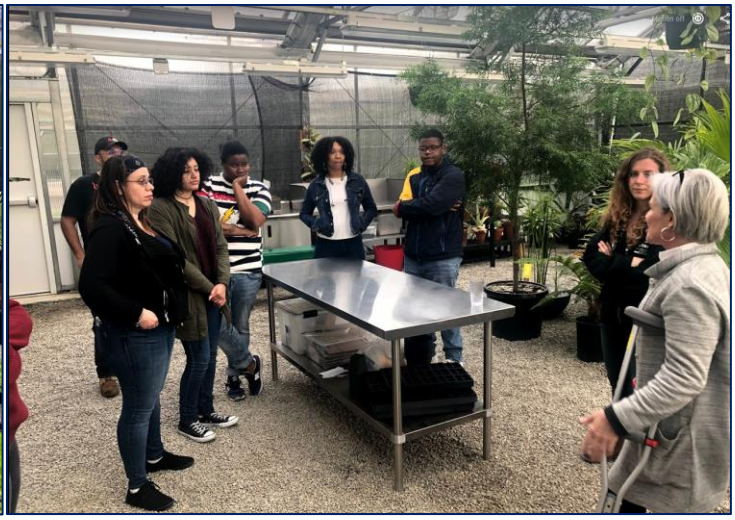
This spring, the Food Studies 101 class took a trip to the Greenhouse and met with Annette Nielsen, Manager of Community Partnerships and Food, Nutrition, and Culinary Programs at the New York Horticultural Society. Annette and her garden manager, Kristen Lucey, gave us a tour of the Greenhouse and community garden where community members plant all kinds of vegetables and greens for their personal consumption. This community garden space operates by lottery, and members have access to the garden for two years.

Food Studies students learned about the dynamic ways in which this garden interacts with the community members and learned about Annette's path into food career. Students were then treated to tasting an apple crisp from a homemade recipe and took home a potted basil and a parsley plants.





On the left: students get a tour of the community garden at Riverbank State Park from Kristen Lucey. Food Studies 101 students. On the right: Students are taking home potted seeds of basil and parsley.

On the left: Prof. Delgado, Kristen, Eddania (top), Ayanna, Erica, Hector, Michelle, Wanya, Claritza, Ambal, Wenindiligde, Nahomy, and Elizabeth and her children.
On the right: Food Studies students are introduced to Riverbank State Park and received a warm welcome from Annette Nielsen and Kristen Lucey.

Our Team

First Place in Poster Category Universities Fighting World Hunger (UFWH) Summit 2019

BY FLOR HENDERSON

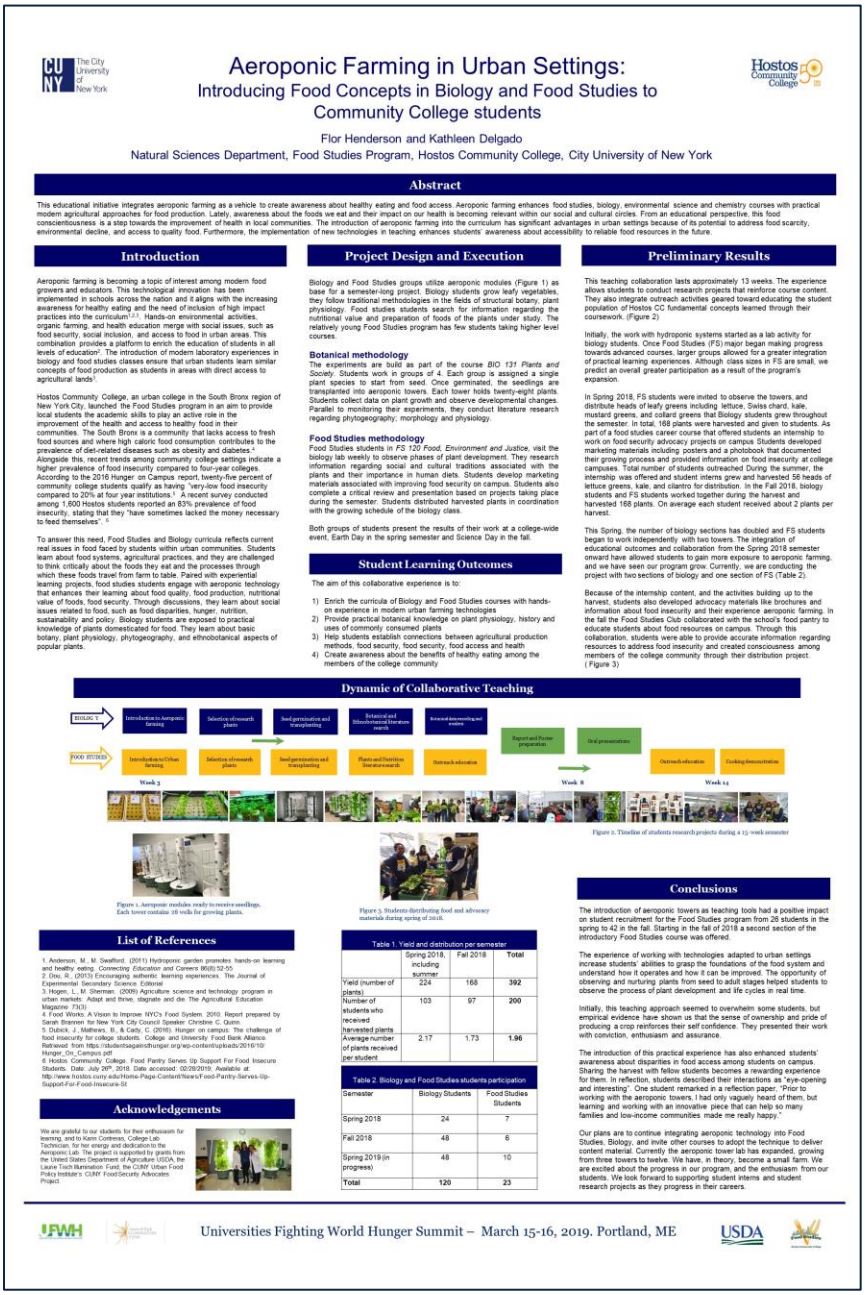
On March 16th, Food Studies Professor Kathleen Delgado and I attended the Universities Fighting World Hunger (UFWH) Summit in Portland, Maine. This year, the summit theme was entitled "Fighting Hunger in a World of Plenty: Shifting Power and Taking Action". The appeal of the theme gave us the opportunity to share the work we are conducting at Hostos Community College of implementing aeroponic towers as teaching tools in Biology and Food Studies courses.

Universities Fighting World Hunger is a coalition of institutions of higher education dedicated to educating students in all disciplines about the causes of hunger and to focusing efforts on training students to take effective action and look for solutions. Since its inception, UFWH has involved 300 campuses. The 2019 summit gathered over 500 students, faculty, and activists together at the front lines of fighting hunger.

Our poster on "Aeroponic Farming in Urban Settings: Introducing Food Concepts in Biology and

Food Studies to Community College Students" described our approach to teach food production using modern technology while creating awareness about healthy eating, food access, and food justice. The connections we established delivering course content and practical experiences echoed well with the core theme and mission of UFWH. As a result, our poster was granted first place in its category. The inclusion of hands-on approaches for addressing food scarcity, environmental decline, and access to reliable food resources among college students conveyed a powerful message.

The significance of the award reassured us on our work and our contribution to the Food Studies program and its students and inspired us to continue exploring new ways to introduce aeroponic farming in other academic areas.



Aeroponic Farming in Urban Settings:
Introducing Food Concepts in Biology and Food Studies to Community College students

Flor Henderson and Kathleen Delgado
Natural Sciences Department, Food Studies Program, Hostos Community College, City University of New York

Abstract

This educational initiative integrates aeroponic farming as a vehicle to create awareness about healthy eating and food access. Aeroponic farming enhances food studies, biology, environmental science and chemistry courses with practical modern agricultural approaches for food production. Lately, awareness about the foods we eat and their impact on our health is becoming relevant within our social and cultural circles. From an educational perspective, this food conscientiousness is a step towards the improvement of health in local communities. The introduction of aeroponic farming into the curriculum has significant advantages in urban settings because of its potential to address food scarcity, environmental decline, and access to quality food. Furthermore, the implementation of new technologies in teaching enhances students' awareness about accessibility to reliable food resources in the future.

Introduction

Aeroponic farming is becoming a topic of interest among modern food growers and educators. This technological innovation has been implemented in schools across the nation and it aligns with the increasing awareness for healthy eating and the need of inclusion of high impact practices into the curriculum[1,2,3]. Hands-on environmental activities, organic farming, and health education merge with social issues, such as food security, social inclusion, and access to food in urban areas. This combination provides a platform to enrich the education of students in all levels of education[2]. The introduction of modern laboratory experiences in biology and food studies classes ensure that urban students learn similar concepts of food production as students in areas with direct access to agricultural lands[3].

Hostos Community College, an urban college in the South Bronx region of New York City, launched the Food Studies program in an aim to provide local students the academic skills to play an active role in the improvement of the health and access to healthy food in their communities. The South Bronx is a community that lacks access to fresh food sources and where high caloric food consumption contributes to the prevalence of diet-related diseases such as obesity and diabetes.[4] Alongside this, recent trends among community college settings indicate a higher prevalence of food insecurity compared to four-year colleges. According to the 2016 Hunger on Campus report, twenty-five percent of community college students qualify as having "very-low food insecurity" compared to 20% at four year institutions.[5] A recent survey conducted among 1,600 Hostos students reported an 83% prevalence of food insecurity, stating that they "have sometimes lacked the money necessary to feed themselves". [6]

To answer this need, Food Studies and Biology curricula reflects current real issues in food faced by students within urban communities. Students learn about food systems, agricultural practices, and they are challenged to think critically about the foods they eat and the processes through which these foods travel from farm to table. Paired with experiential learning projects, food studies students engage with aeroponic technology that enhances their learning about food quality, food production, nutritional value of foods, food security. Through discussions, they learn about social issues related to food, such as food disparities, hunger, nutrition, sustainability and policy. Biology students are exposed to practical knowledge of plants domesticated for food. They learn about basic botany, plant physiology, phytogeography, and ethnobotanical aspects of popular plants.

Project Design and Execution

Biology and Food Studies groups utilize aeroponic modules (Figure 1) as base for a semester-long project. Biology students grow leafy vegetables, they follow traditional methodologies in the fields of structural botany, plant physiology. Food studies students search for information regarding the nutritional value and preparation of foods of the plants under study. The relatively young Food Studies program has few students taking higher level courses.

Botanical methodology

The experiments are build as part of the course *BIO 131 Plants and Society*. Students work in groups of 4. Each group is assigned a single plant species to start from seed. Once germinated, the seedlings are transplanted into aeroponic towers. Each tower holds twenty-eight plants. Students collect data on plant growth and observe developmental changes. Parallel to monitoring their experiments, they conduct literature research regarding phytogeography; morphology and physiology.

Food Studies methodology

Food Studies students in *FS 120 Food, Environment and Justice*, visit the biology lab weekly to observe phases of plant development. They research information regarding social and cultural traditions associated with the plants and their importance in human diets. Students develop marketing materials associated with improving food security on campus. Students also complete a critical review and presentation based on projects taking place during the semester. Students distributed harvested plants in coordination with the growing schedule of the biology class.

Both groups of students present the results of their work at a college-wide event, Earth Day in the spring semester and Science Day in the fall.

Student Learning Outcomes

The aim of this collaborative experience is to:

1) Enrich the curricula of Biology and Food Studies courses with hands-on experience in modern urban farming technologies
2) Provide practical botanical knowledge on plant physiology, history and uses of commonly consumed plants
3) Help students establish connections between agricultural production methods, food security, food security, food access and health
4) Create awareness about the benefits of healthy eating among the members of the college community

Preliminary Results

This teaching collaboration lasts approximately 13 weeks. The experience allows students to conduct research projects that reinforce course content. They also integrate outreach activities geared toward educating the student population of Hostos CC fundamental concepts learned through their coursework. (Figure 2)

Initially, the work with hydroponic systems started as a lab activity for biology students. Once Food Studies (FS) major began making progress towards advanced courses, larger groups allowed for a greater integration of practical learning experiences. Although class sizes in FS are small, we predict an overall greater participation as a result of the program's expansion.

In Spring 2018, FS students were invited to observe the towers, and distribute heads of leafy greens including lettuce, Swiss chard, kale, mustard greens, and collard greens that Biology students grew throughout the semester. In total, 168 plants were harvested and given to students. As part of a food studies career course that offered students an internship to work on food security advocacy projects on campus Students developed marketing materials including posters and a photobook that documented their growing process and provided information on food insecurity at college campuses. Total number of students outreached during the summer, the internship was offered and student interns grew and harvested 56 heads of lettuce greens, kale, and cilantro for distribution. In the Fall 2018, biology students and FS students worked together during the harvest and harvested 168 plants. On average each student received about 2 plants per harvest.

This Spring, the number of biology sections has doubled and FS students began to work independently with two towers. The integration of educational outcomes and collaboration from the Spring 2018 semester onward have allowed students to gain more exposure to aeroponic farming, and we have seen our program grow. Currently, we are conducting the project with two sections of biology and one section of FS (Table 2).

Because of the internship content, and the activities building up to the harvest, students also developed advocacy materials like brochures and information about food insecurity and their experience aeroponic farming. In the fall the Food Studies Club collaborated with the school's food pantry to educate students about food resources on campus. Through this collaboration, students were able to provide accurate information regarding resources to address food insecurity and created consciousness among members of the college community through their distribution project. (Figure 3)

Dynamic of Collaborative Teaching

Figure 2. Timeline of students research projects during a 13-week semester

Figure 1. Aeroponic modules ready to receive seedlings. Each tower contains 28 wells for growing plants.

Figure 3. Students distributing food and advocacy materials during spring of 2018.

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Table 1. Yield and distribution per semester

	Spring 2018, including summer	Fall 2018	Total
Yield (number of plants)	224	168	**392**
Number of students who received harvested plants	103	97	**200**
Average number of plants received per student	2.17	1.73	**1.96**

Table 2. Biology and Food Studies students participation

Semester	Biology Students	Food Studies Students
Spring 2018	24	7
Fall 2018	48	6
Spring 2019 (in progress)	48	10
Total	**120**	**23**

Conclusions

The introduction of aeroponic towers as teaching tools had a positive impact on student recruitment for the Food Studies program from 28 students in the spring to 42 in the fall. Starting in the fall of 2018 a second section of the introductory Food Studies course was offered.

The experience of working with technologies adapted to urban settings increase students' abilities to grasp the foundations of the food system and understand how it operates and how it can be improved. The opportunity of observing and nurturing plants from seed to adult stages helped students to observe the process of plant development and life cycles in real time.

Initially, this teaching approach seemed to overwhelm some students, but empirical evidence have shown us that the sense of ownership and pride of producing a crop reinforces their self confidence. They presented their work with conviction, enthusiasm and assurance.

The introduction of this practical experience has also enhanced students' awareness about disparities in food access among students on campus. Sharing the harvest with fellow students becomes a rewarding experience for them. In reflection, students described their interactions as 'eye-opening and interesting'. One student remarked in a reflection paper: "Prior to working with the aeroponic towers, I had only vaguely heard of them, but learning and working with an innovative piece that can help so many families and low-income communities made me really happy."

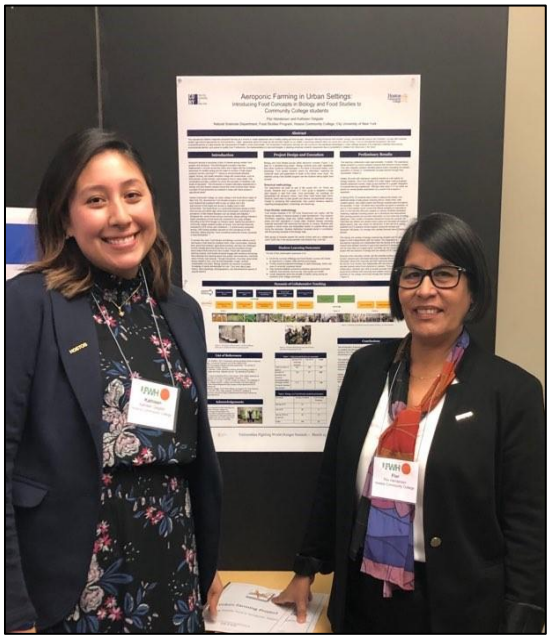
Our plans are to continue integrating aeroponic technology into Food Studies, Biology, and invite other courses to adopt the technique to deliver content material. Currently the aeroponic tower lab has expanded, growing from three towers to twelve. We have, in theory, become a small farm. We are excited about the progress in our program, and the enthusiasm from our students. We look forward to supporting student interns and student research projects as they progress in their careers.

Acknowledgements

We are grateful to our students for their enthusiasm for learning, and to Karin Contreras, College Lab Technician, for her energy and dedication to the Aeroponic Lab. The project is supported by grants from the United States Department of Agriculture USDA, the Laurie Tisch Illumination Fund, the CUNY Urban Food Policy Institute's CUNY Food Security Advocates Project.

Universities Fighting World Hunger Summit – March 15-16, 2019. Portland, ME

Professors Kathleen Delgado and Flor Henderson at the 2019 Universities Fighting World Hunger Summit. Portland, Maine.



A Dream Comes True

BY KARIN CONTRERAS

The Food Studies program has grown tremendously since its implementation in 2017. An example of this is how the number of aeroponic towers has increased from only three towers to twelve currently running at full capacity. Initially, this increase presented a major challenge due to the lack of available space. However, the relevance of the towers and the need to support the program became a priority for the Natural Sciences Department and the Office of Academic Affairs, with Dean Felix Cardona who has supported us from day one.

The summer of 2018, thanks to the valuable assistance of Chairperson Dr. Francisco Fernandez and Senior College Laboratory Technician and supervisor, Dora Villa, a vacant office A-514 was fitted out as a laboratory to host the growing number of aeroponic towers. This new space has expanded the horizons for new projects and increased the number of faculty and students working in different projects around the towers.

For instance, Professor Flor Henderson and her students in the Plants and Society class compared the growth and development of plants growing in different growing media. In the same way, Professor Allison Franzese and her Environmental Science class students compared plants growing in hydroponic towers opposed to plants growing in soil. Professor Anna Ivanova has also involved her Environmental Science students in comparing plants growing under artificial and natural light. Food Studies Professor, Kathleen Delgado and her students, have grown microgreens and shared the harvest with Hostos college students. Recently, Professor Henderson and Mr. Emilio Pena, College Laboratory Technician, have initiated a project for producing our own blend of nutrients for the different types of vegetables we grow.

The aeroponic tower laboratory has also become an internship site for a student, Jessica Lopez, who conducted her capstone project to learn about the potential of the towers as teaching and outreach instruments. Jessica is one of the first three students graduating with an A.S. degree in Food Studies at Hostos Community College this spring.

The Food Studies program concluded this academic year successfully. We are very pleased with our contribution to the work of our faculty as they provide quality education to Hostos students. We are convinced that this is just the beginning of an educational experience that will motivate students to advance in their careers here at Hostos CC and beyond.

Kathleen Delgado, Flor Henderson and Karin Contreras in the Aeroponic Lab Room A-514

Guest Speakers

April 11, 2019	Student-driven Food Justice at Hostos Community College **Karla Ignacio** CUNY Food Security Advocates Project
April 9, 2019	Supporting Sustainability in NYC **David Gaul** Zero Waste, GrowNYC
April 9, 2019	Teaching about Sustainability **Patti Wood** Executive Director, Grassroots Environmental Education
April 9, 2019	Supporting Sustainability at Hostos Community College **Diahann McFarlane** Director, Health and Safety Operations
April 9, 2019	Environmental Impact of Food **Claudia Lifton** Factory Farming Awareness Coalition
November 19, 2018	Food Justice and Teens in NYC **Charita Johnson** City Urban Food Policy Institute
November 18, 2018	Food Safety and USDA Regulations **Francois Franceschini** Consumer Safety Inspector, USDA, FSIS, Philadelphia District
October 24, 2018	Basil in Inwood: A Story of Community Organizing **Catarina Rivera** Program Manager, City Harvest
October 17, 2018	Food as Social Empowerment **Henry Obispo** CEO Born Juice
October 15, 2018	Entrepreneurship in Food **Yadira Garcia** Director, Happy Healthy Latina

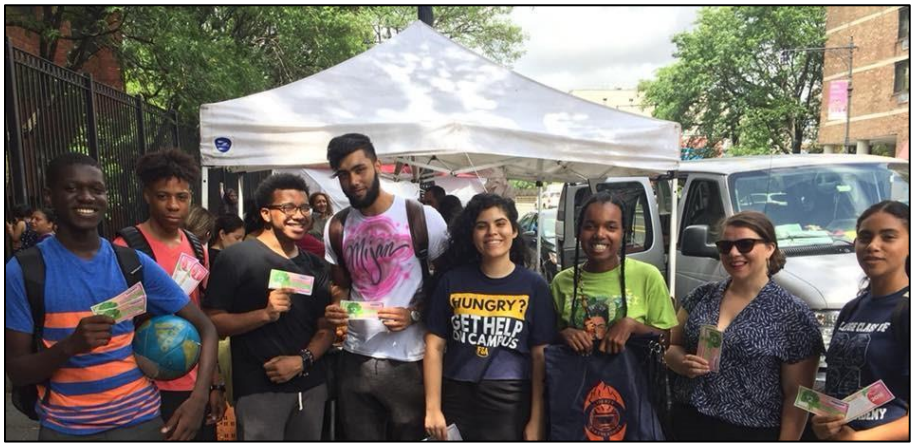
A.S in Food Studies

The Associate in Science (A.S.) Degree in Food Studies at Hostos Community College consists of 60 credits, which includes: Common Core courses required by the City University of New York; Food Studies core courses; a career practices course; and a required internship. After the first semester students select a track in one of four areas: Food Policy; Food and Social Issues; Health and Nutrition; or Environment and Sustainability. These tracks prepare graduates to transfer into four-year bachelor's programs in food studies and related fields such as political sciences, urban studies, nutrition, and environmental studies.

- * -

El programa Asociado en Estudios Alimenticios de Hostos Community College consiste en 60 créditos, que incluyen cursos básicos requeridos por City University of New York; cursos en Estudios Alimenticios; practica pre-profesional; e internado. Despues del primer semestre de estudios, el estudiante selecciona una de cuatro líneas de especialidad: Política Alimenticia; Alimentación y la Sociedad; Salud y Nutricion; o Medio Ambiente y Sostenibilidad. Estas áreas de especialización preparan a los graduados para transferencias a programas de bachillerato de cuatro años en estudios alimenticios y otras profesiones relacionadas, tales como ciencias políticas, estudios urbanos, nutrición, y estudios medio ambientales.

The program is open to:
Freshmen students
Current or transfer students with less than 24 credits



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