

"Fighting Food Insecurity with Individual Hydroponic Farming"

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Project Summary

Seeds2Sustain is a program designed to fight food insecurity through hydroponic farming and gardening education. Many students in the UConn community face food insecurity because of a variety of factors including income, food accessibility and more. It is a known issue that people who face food insecurity often struggle to find nutritious food options that are affordable and often turn to cheaper, unhealthier foods like fast food. This program was founded with the hope that students could participate in a program where they learn how to take care of mini hydroponic systems and then be able to use them in their personal lives to supplement their diet at a low cost. **Our program covered topics in food policy, hydroponic technology, food insecurity, nutrition, cooking, commercial hydroponic farming and more.** Priority was given to applicants who self-identified as being food insecure, but students who were simply interested in hydroponic technology were also allowed to apply.

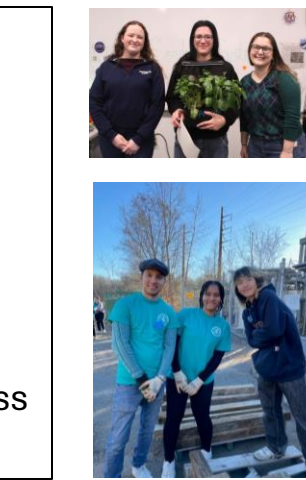
*Students in the program used AeroGarden systems which allow for the growth of 6 plants at one time. They grew produce including, lettuce, tomatoes, jalapenos, bell peppers, basil, thyme, sage, kale and more.

Cohort Selection and Demographics

We wanted to concentrate on a single, dedicated group of students that would be part of our nine-week program. We had an application and review process. We selected 19 students that would be a part of the program from our applicants. Some things that we looked for include:

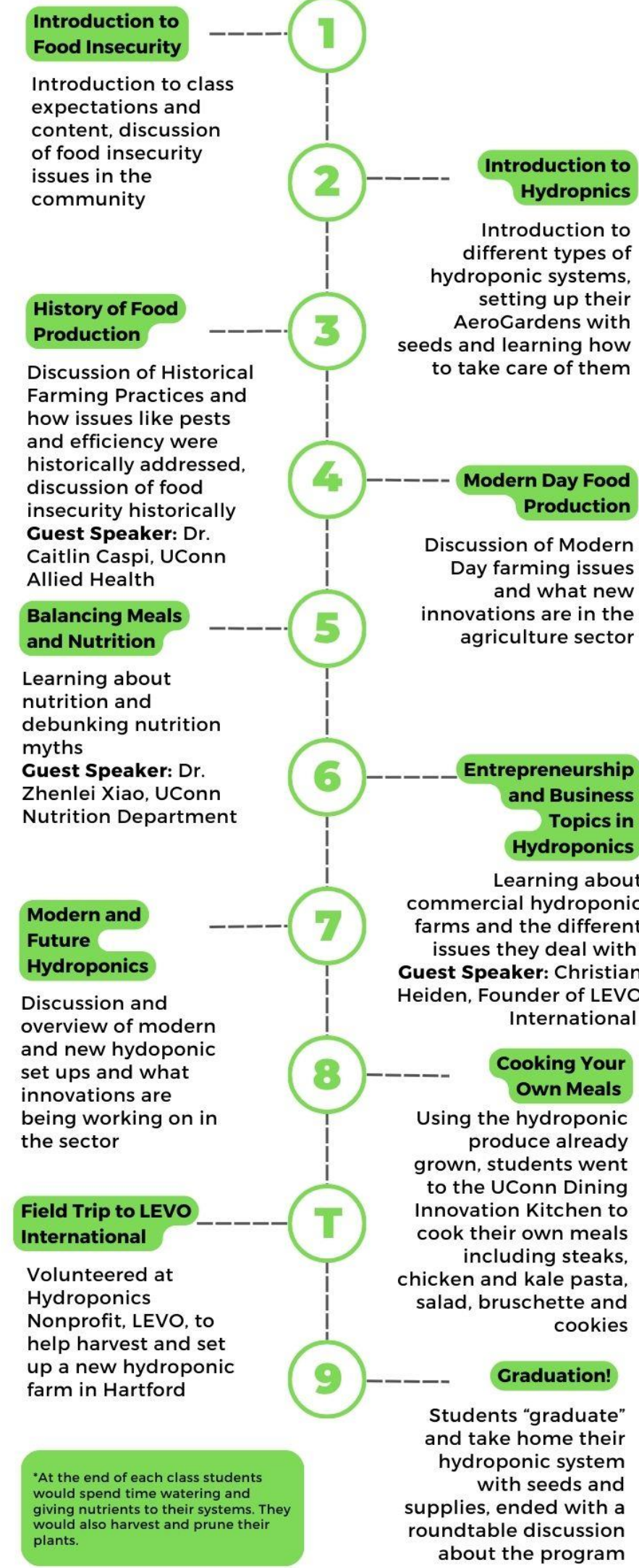
- Enthusiasm for learning about sustainability
- Interest in hydroponics and how it works
- The intention to use this class to learn how to grow their own food in the future.

*Students who self-identified as experiencing food insecurity and/or homelessness were given priority acceptance into the program



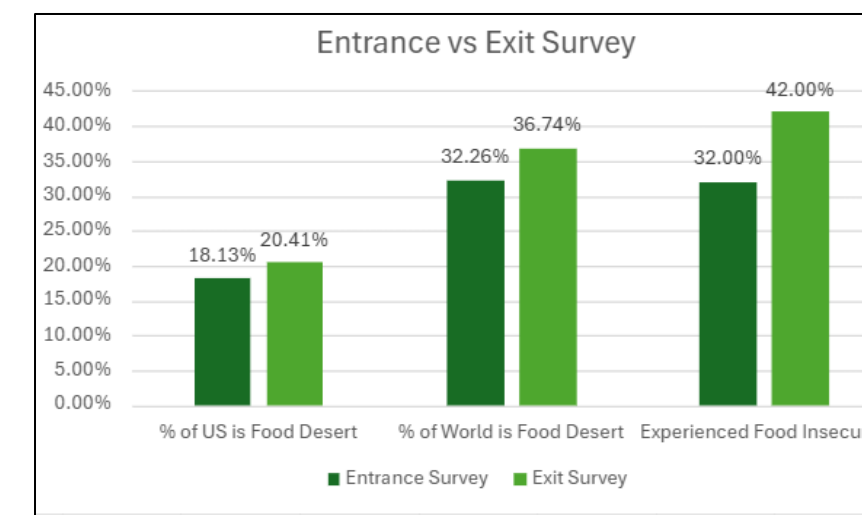
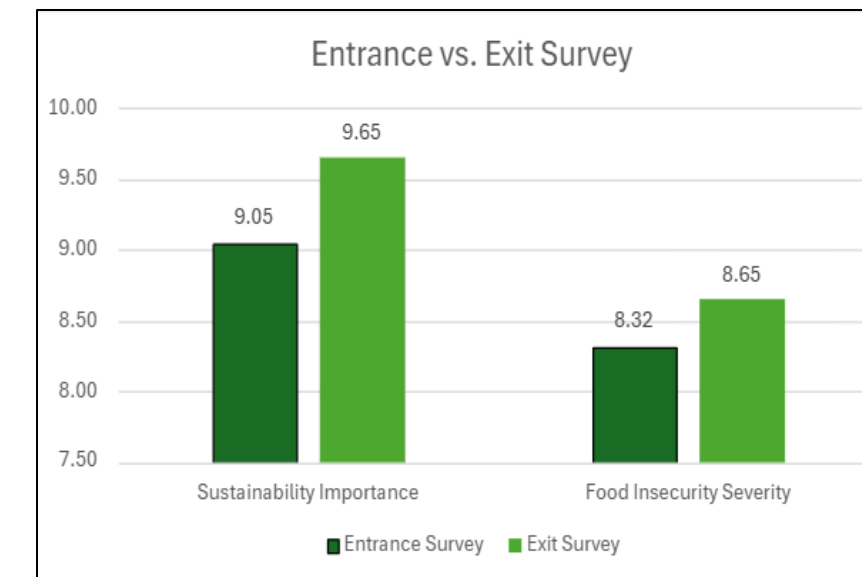
PROGRAM TIMELINE

9 WEEKS



Pre/Post Survey

Before teaching anything, we conducted a survey to determine what the students already knew about food insecurity. We conducted the exact same survey after the course content was completed.



Key Takeaways:

- On Average, the rating of importance increased for every category.
- The number of students who believe they have experienced food insecurity increased
- On average, students believed there was more food insecurity and food deserts than they did before participating in the program.

Results

Exit Survey Quotes

I ENJOYED BEING ABLE TO LEARN HOW TO LIVE SUSTAINABLY. I WILL DEFINITELY BE USING THINGS I LEARNED IN MY FUTURE TO GROW FOOD AND HELP OTHERS LEARN HOW TO BE SUSTAINABLE AS WELL.

I THOUGHT IT WAS REALLY INFORMATIVE AND IT WAS JUST INTERESTING TO SEE HOW WHAT WE WERE LEARNING IN CLASS WAS APPLIED TO, LIKE HELPING COMMUNITIES, BUT ALSO ENTREPRENEURSHIP.

I LIKE SEEING HOW THEY GREW BECAUSE I'VE NEVER LIKE DONE HYDROPONICS BEFORE, BUT IT'S COOL TO SEE IT ACTUALLY WORK.

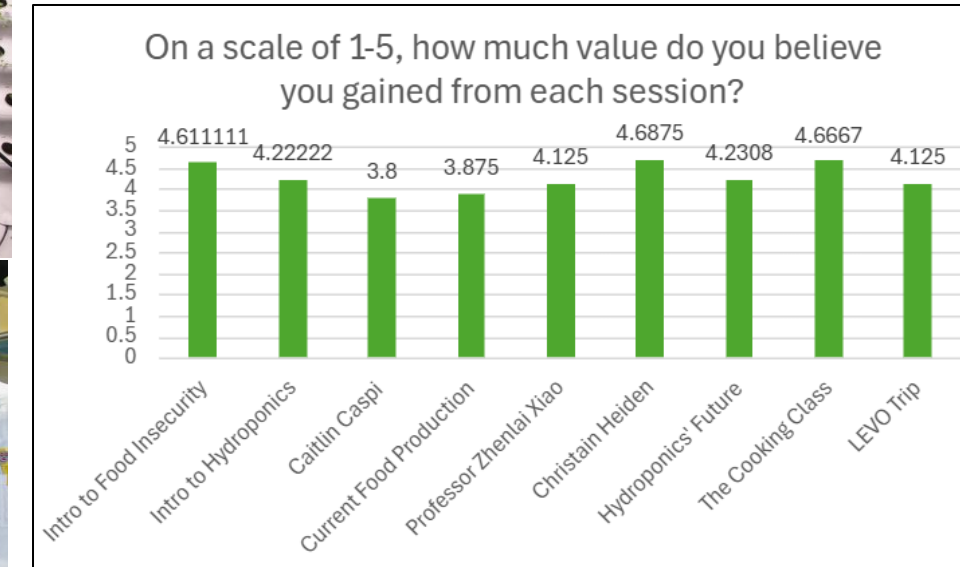
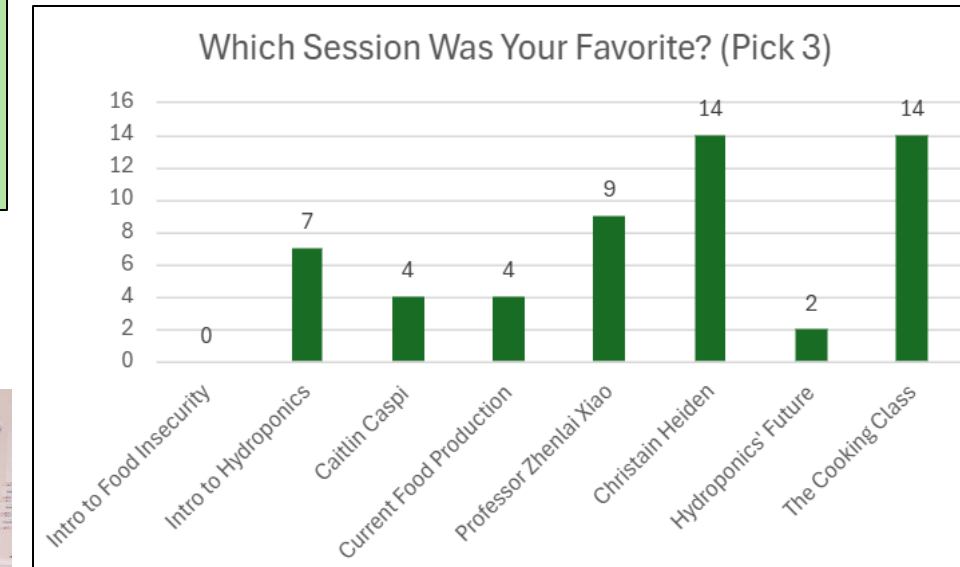
THIS WAS ONE OF THE BEST PROGRAMS I'VE EVER PARTICIPATED IN AS A GRADUATE STUDENT! I TRULY HOPE UCONN CONTINUES TO SUPPORT AND EXPAND FUNDING FOR IT. I'M ALSO EASIER TO FIND WAYS I CAN CONTRIBUTE AND BE INVOLVED IN THIS INCREDIBLE PROGRAM TO HELP IT GROW AND THRIVE!

I GUESS IT'S JUST THE WAY THAT WE CONSIDER THINGS, IN THE SENSE THAT IT'S MUCH MORE THAN JUST NOT HAVING ACCESS TO FOOD BUT LIKE THE QUALITY OF THE FOOD AND HOW CERTAIN AREAS DON'T HAVE THE ACCESSIBILITY TO BE ABLE TO GET HEALTHY, NUTRITIOUS FOOD. HYDROPONICS MIGHT BE THE SOLUTION FOR MORE PEOPLE TO HAVE ACCESS TO FOOD.

A SKILL I OBTAINED (THROUGH THIS PROGRAM) IS BEING MORE COURAGEOUS (GETTING OUT OF MY COMFORT ZONE).

I THINK IT WAS DEFINITELY A VALUABLE EXPERIENCE. IT BROUGHT AWARENESS TO THE ISSUE AROUND THE WORLD OF MALNUTRITION, SUSTAINABILITY ISSUES, AND GAVE A WAY TO FIX THEM... THE FIRST STEP TO FIXING A PROBLEM IS TO BRING AWARENESS TO IT AND THIS PROGRAM DID JUST THAT AND GAVE SOME SOLUTIONS AS WELL.

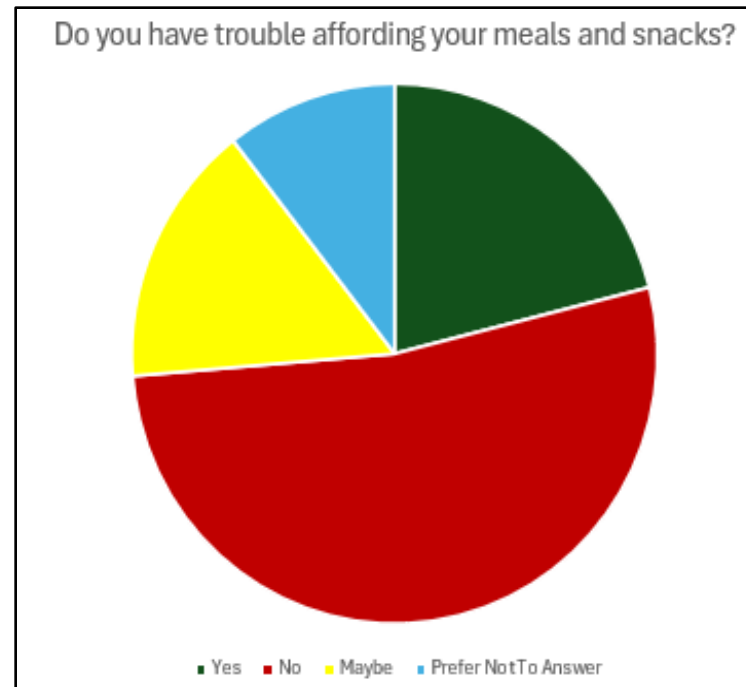
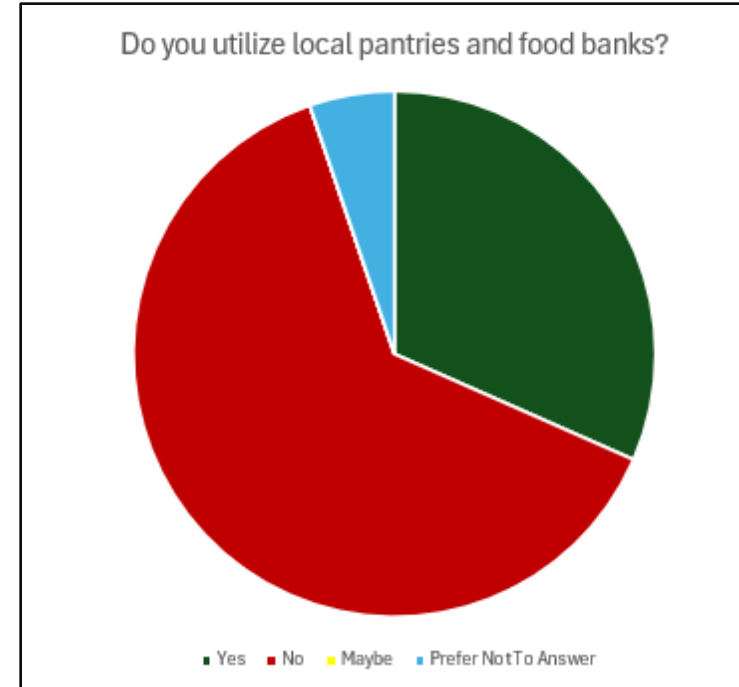
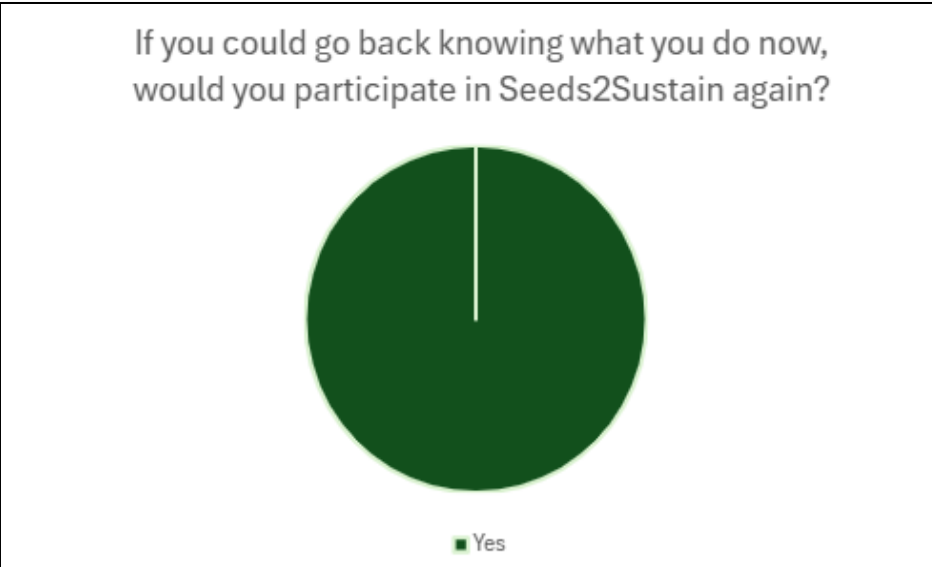
MY FAVORITE THING ABOUT THE PROGRAM WAS THE PART WHERE WE HAD TO HARVEST AND KEEP MAINTAINING OUR HYDROPONIC SYSTEM.



3 students listed gaining confidence or making connections as the greatest skill they learned.

12 students would like to participate in a follow-up program that is more technical and in-depth.

Before participating any sessions, 6 people mentioned lack of nutrition as being a part of food insecurity. After participating in the program, that number increased to 18.



Why did you want to join Seeds2Sustain?

"I am interested in the Food Insecurity Hydroponics Program because it is something I always wanted to do but didn't have access to. I also just a heavy emphasis on buying and growing organically grown produce rather than ones with pesticides."

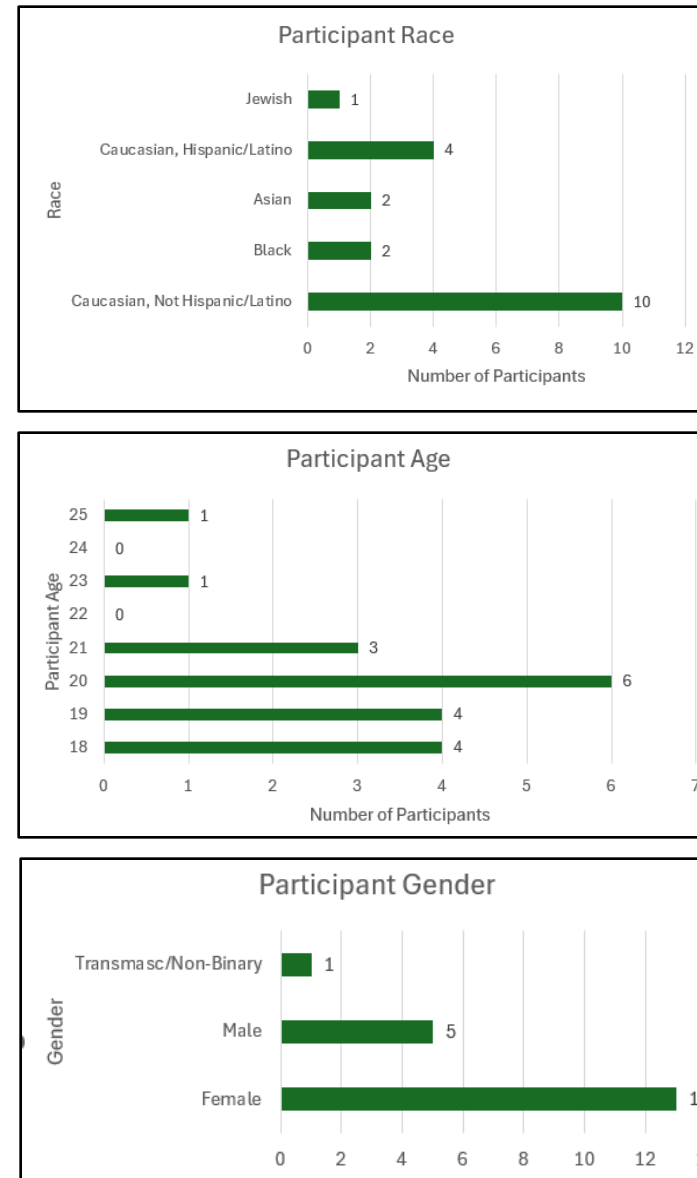
"I have always been interested in helping marginalized communities with no access to clean, fresh food. Food insecurity is one of the biggest plights the world faces today and this program will not only help me learn how to maintain a hydroponic farm, but also educate my fellow students on the subject."

"It would provide me with the knowledge and skill set to grow my own food in a sustainable manner and help cut down on produce costs. I also enjoy the ability to grow my own food and how it feels to make dishes with it."

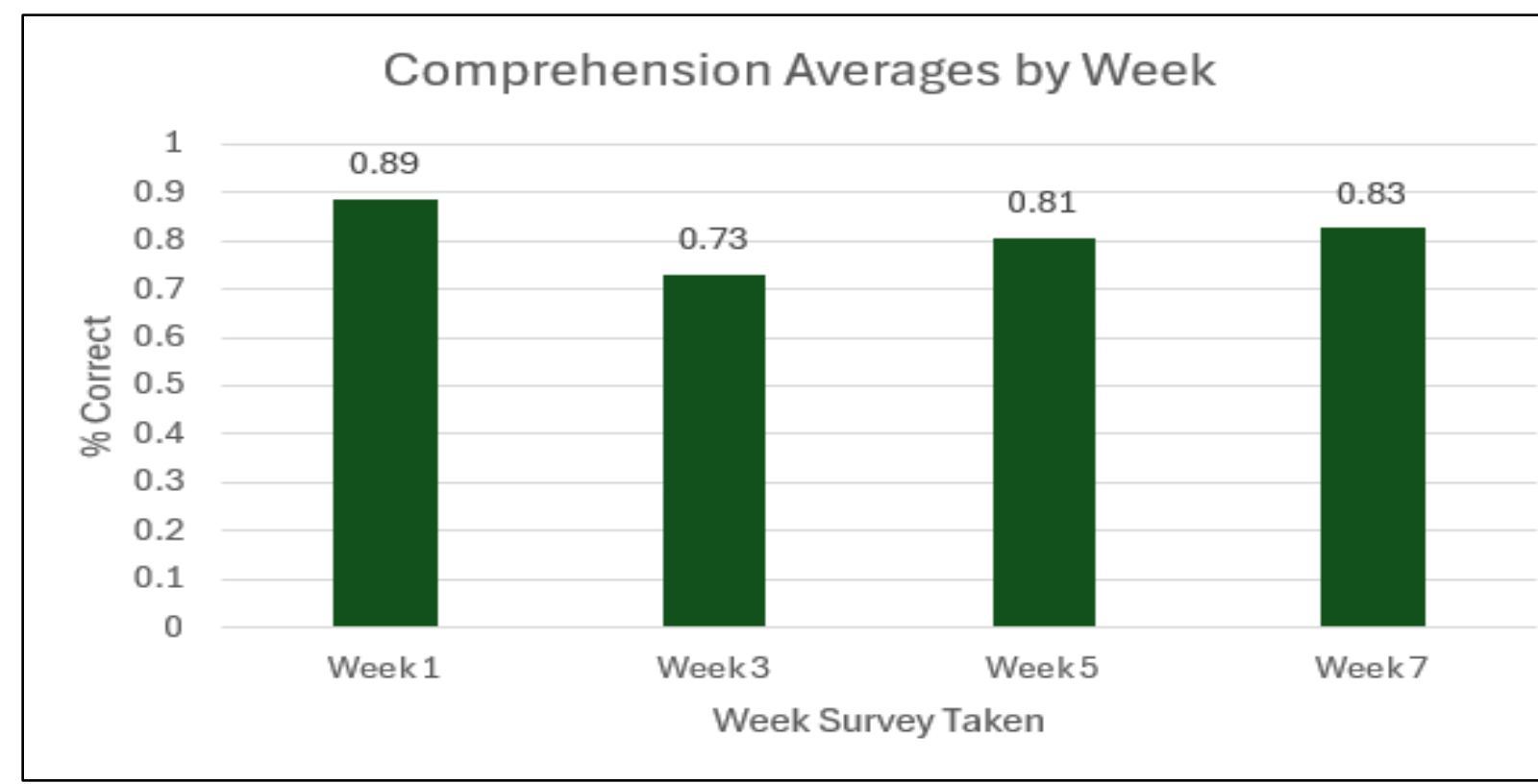
"I am interested in this program because I am on track to be a lifelong producer of goods and hydroponics is the future of the farming world. Building an understanding of this technique will be monumentally beneficial towards my long term success."

"I want to help my friends and specifically my dad with growing food since he currently struggles with buying food and due to the expenses of healthy choices he is unable to eat foods that can sustain his body. With this program I hope to not only help my dad but possibly others that he knows with food insecurity and grow food for them."

"It would help me have more access to fresh food since fresh produce is expensive. Having a hydroponics setup would help me have access to fresh foods and continue me hobby of gardening."



Comprehension



Every two weeks, the students filled out a quick survey. The survey asked questions to determine how much of the information they learned was retained. All scores were compiled and tabulated. Overall, the students got 81.5% of the questions correct.



Next Steps

The plan is to take all of the information we gathered and run the program again. We want to make it an official Innovate Labs program that will run every fall semester.

Things we would change in the future include:

- Adding more technical portions to the program
 - Building a PVC Pipe System
 - Plant Maintenance
 - PH Sensors and Nutrient Balancing
 - Identifying Different Plants
 - More In-Depth Science Behind Hydroponics
- Revamping the nutrition portion of the course to include nutritional value of the specific plants being grown
- Adding more hands-on activities

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