City Sprouts Farm Internship

Hannah D. Cole  
*Western Washington University*

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Internship Title: Farm Assistant

Organization Worked For: City Sprouts Farm

Student Name: Hannah Cole

Internship Dates: 04/01/24 - 06/10/24

Faculty Advisor Name: Dr. Manuel Montaño

Department: ESCI

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Executive Summary

City Sprouts Farm was established in 2017 by Annah Young and Ellie Duncan in the Birchwood Neighborhood of Bellingham, Washington and has since grown exponentially. The goal of the urban farm has been to address food insecurity within the neighborhood through sustainable agricultural practices and community learning by fostering an inclusive and educational atmosphere. They were initially faced with challenges regarding the fertility of the land but through determination, have cleared out about an acre that has been home to a diverse array of fruit, vegetables, flowers, and much more! As of 2020, City Sprouts Farm has introduced a sliding scale for their Community Supported Agriculture (CSA) program which has increased the accessibility of community members to fresh produce. As of 2024, they have integrated the cultivation with the Center for Community Learning at Western Washington University to enhance the publics knowledge of land stewardship and land management. This internship mainly involved hands-on work at the farm as well as spatial analysis outside of City Sprouts. A cohesive story map highlighting the Birchwood Neighborhood food desert and aims to acknowledge the impact that the farm has had on the community’s resilience.

Introduction

City Sprouts Farm is located in the Birchwood neighborhood of Bellingham, Washington. In 2017, Annah Young and Ellie Duncan decided to pursue larger scale farming after discovering there was a parcel of land available through the Kulshan Community Land Trust. The Kulshan Land Trust strengthens community members by providing financial and educational services as well as land to meet the needs of the individuals through generosity and mutual respect. Both Annah and Ellie had experience in agriculture through prior years of working on farms and tending to their personal gardens. The farm still consists of two abandoned buildings on the front side of the property, but a majority of the land was dominated by Blackberry bushes and poisonous hemlock, proving to be a challenge from the get-go. Slow but determined, they removed the invasive species to create room for vegetable beds. Overtime, the number of cleared areas had been cleared and the idea of a cooperative farmers market stand in the neighborhood was born. In 2020, City Sprouts started a sliding scale CSA (Community Supported Agriculture) with the mission of decreasing food scarcity in the community. The farm currently has shifted focus to incorporating the community in terms of educational opportunities and has officially become a program of WWU’s Center for Community Learning. My position on the farm was to aid in chores and various jobs on the farm. These activities will be expanded on in further detail later in the writing. The goals I had set for myself prior to starting on the farm were focused mainly on
creating a sense of place while directly communicating with the environment as a land steward. My end goal was to create a story map, highlighting one of the state’s largest food deserts and the impact City Sprouts has had on this devastating issue.

Birchwood Neighborhood has zero grocery stores and limited access to public transportation, leading to a decrease in accessibility for fresh and affordable food. Land stewardship is a crucial topic that for many marginalized communities is inaccessible. Land stewardship can be defined as efforts to create, care for, and hold ourselves responsible for managing and protecting the land and its cultural heritage (Raymond et al., 2016). Connection with the environment is important and should be accessible to those who wish to be involved and implemented to spark the public’s interrelation with the land that they live and prosper on.

Days on The Farm

Throughout the quarter, I worked roughly nine hours on the farm and additional effort was put towards the story map in which I worked on in the spatial analysis lab. During the spring season, there are many factors that can affect the growth and success of the land. This spring consisted of unreasonably warm days followed by unprecedented rainfall. Adaptability is a necessary characteristic to have, especially in this environment. In the beginning of the season, energy was focused on seeding vegetables and other plants in the greenhouse to prepare for planting. This task was monotonous but special. Caring for the land and seeds before they bloom is an important aspect that companies who mass grow produce often overlook.

On beautiful days we transplanted vegetables into the rich yet muddy soil in some cases. We planted tomatoes underneath the greenhouse hoops that would later on be clipped to the trellis for support. Flowers were planted in areas of the farm that we assumed had been a place of garbage dumping. Originally rooted vegetables were to be planted but we adjusted so there would be no direct contact with the bags of garbage that were being resurfaced. Plenty of fences were built using large posts and a post-pounder for the purpose of supporting larger plants that need support to grow upright including, zucchini, cucumbers, and peas. Weeds around newly planted vegetables are common, so extensive weeding proved to be a daily task as invasive weeds have the capabilities of quick growth to steal necessary nutrients from our plants.

Farming relies on the environment, which is unpredictable, so challenges in cultivation are bound to happen. This includes climate variability, pests, and soil fertility. During my quarter at City Sprouts, I encountered all three. We experienced an atmospheric river in the beginning of June that led to flooding and the washout of several rows of cabbage. Several times when working we would come across wire worms; the
larvae of click beetles, which will destroy anything in its path and significantly decrease the yield of a crop. There was concern initially when several were discovered in the compost pile, but overall, we saw minimal effects from the wire worms. In addition, there were barriers in the soil that affected the fertility of the soil. There was either garbage or saturated soil which hindered the richness of the soil. To combat this, a broad fork was put to use to aerate the soil if densely saturated with groundwater and we planted produce that does not have direct contact with the soil. Adaptability was valued in these cases as the farm is always changing and growing.

In figure 2, the diagram illustrates Three Sisters agriculture or the Milpa. This tradition stems from Indigenous ecological knowledge from the Mesoamerica; a cultural region that consists of Southern Mexico, Guatemala, Belize, El Salvador, Western Honduras, Western Nicaragua, and Western Costa Rice (Landon, 2008). The Three Sisters are maize, beans and squash. We first planted the maize, four stalks in the corners of the mounds, followed by two beans at the base of the stalk. We planted two beans for each for quality assurance but later removed all except one bean sprout per stalk to avoid overwhelming of the maize. Once we saw pronounced growth, squash was planted on each side of the mound. The focus of this agriculture is codependency and reliance on each other. The beans utilize the maize stalk for support, while the squash leaves protect the beans by mitigating the number of weeds on the ground by shading them. Indigenous agriculture often uses what they call companion planting, and the Three Sisters is a prime example. When implementing different styles of agriculture, we wanted to also acknowledge that we are farming on the ancestral homelands of the Lummi Nation, Nooksack Tribe and other federally recognized and unrecognized tribes as well as the history of agriculture that has been built upon slave labor and continuous injustice.

As a team we are still in the process of seeding produce such as pumpkins, watermelon, and cucumber. As my time on the farm wraps up, I have seen the plants grow exponentially but there is still plenty of time for the blossoming of the sunflowers and the fruiting of the tomatoes. In the meantime, I have spent my days trimming the towering hawthorn trees, scuffling the soil around the beets, as well as weeding underneath the remay where the kale is growing modestly. I hope to return to the farm during the summer to observe and bask in the results of our hard work. Being able to reap the benefits and see how the community is impacted from City Sprouts will prove to be instrumental in feeling like my goals of the internship were satisfied.

Discussion

Throughout this internship, I was concurrently working on a spatial analysis project that focused on the factors that play a role in supporting food deserts. The mission that City Sprouts Farm is actively working towards is to “build community resilience by stewarding a productive farm space where people can come together to learn, increase food access, and demonstrate how community vitality can grow through our food system”. Through hands-on experience with small scale agriculture, I was able to integrate this knowledge into my spatial research. Figure 3 represents the Birchwood Neighborhood, and the grocery stores adjacent. We can see that there are no grocery stores with the nearest “grocery store” being a corner store that does not sell produce in any form. In my analysis, I highlighted neighborhoods in Bellingham that have shown
an above average occurrence of poverty. I hope that my story map will support the farm and other community members in acknowledging the food deserts that exist within the county by showcasing the history, present, and future of City Sprouts Farm’s mission. The goals that I initially set for myself were exceeded through hard work and dedication for the project.

The future goals of my project as well as City Sprouts Farm are closely aligned. The farm plans to continue providing a collaborative atmosphere to the community with the hopes of decreasing food insecurity within the Birchwood Neighborhood and engaging with the community. I also plan to implement what I have learned during this internship and incorporate the lessons I have learned on the farm and through my spatial analysis research. This includes the fundamentals of land stewardship and as well as learning the basics of sustainable agriculture.

Acknowledgments

I would like to extend my gratitude to City Sprouts Farm for allowing me to play a role in this beautiful project and trusting my abilities in spatial analysis to create a project that fully communicates the views and purpose of the farm. I would also like to thank all the members of the tiny farm project for creating a welcoming atmosphere that fostered growth and imagination through daily food-for-thought questions and complete inclusion to their project. My spatial research was also supported by Dr. Francisco Laso, indirectly through his teachings in GIS 4: Advanced GIS Applications. Everyone stated above were instrumental in the progress of this project and I cannot thank them enough.

Appendices


Weekly Farm Log

April 1 - 5

We mainly seeded vegetables to start growing in the greenhouse. Compost was wheelbarrowed and raked across the 5, 100-foot beds for the tiny farm project. Areas that were covered in tarps were then uncovered and broad-forked so the dirt could air out. Compost was spread across 100-foot beds for City Sprouts. A pea fence was also made by post-pounding metal into the bed and wrapping chicken wire around it. The peas will eventually latch onto the fence for support.

April 8 - 12

As a team, we took apart a greenhouse structure to move in order to cover different beds. This involved moving the large metal hoops, untying wire, and prying rebar out of the ground. We then post-pounded the rebar back into the ground at a different location. We spent most of the time weeding the newly planted onions to ensure they are not overtaken by weeds.

April 15 – 19

This week we set up the lines that hold the greenhouse cover onto the frame. This involves two people on each side of the greenhouse, throwing the rope that is tied onto a roll of tape for support. It is kind of scary, but we have quite a bit of trust in each other. After we have crisscrossed through each eye-hole ring in the ground, we take turns reducing the amount of slack to create a pattern that is as tight as possible. We also weeded and used the hula ho on most of the paths on the tiny farm and other rows of City Sprouts.

April 22 – 26

My boss was away this week, so I worked on my GIS story map instead. I’m focusing on addressing the variables that make up the Birchwood Neighborhood food desert and how they impact the community. I will be including a link to the project along with my final paper and work log.

April 29 - May 3

Tomatoes were planted in one of the greenhouses covered areas in four, 100-foot beds. Landscape fabric runs along the beds and has holes in the middle for the tomatoes to grow. Eventually we will set up a trellis to support them to grow straight. We also planted many rows of corn with each bed consisting of two cornrows. This season, the farm is experimenting with the three sisters' style of agriculture. The three sisters are squash, beans, and corn, also known as a milpa. They are planted on top of mounds and the corners are corn, with one bean per corn stalk. The squash leaves will eventually protect the beans and mitigate the number of weeds.

May 6 – 10
This week was focused on smaller tasks on the farm as there was not much to do. I seeded some vegetables in the greenhouse and watered the sprouts as they were looking dry. Weeding is always a task that is beneficial, so I spent most of my week picking garbage out of the empty beds on the southern section of the farm, using the hula ho to chop up weeds in the pathways, as well as scuffle the soil around the vegetables to decrease the amount of little weeds trying to grow.

May 13 - 17

This week we planted eggplant underneath the greenhouse cover that was taken apart and rebuilt. It was a sunny day and we planted so many zucchinis, cucumbers and fennel. While planting, I helped Ellie post-pound a fence into the beds that will hold a trestle later to help the vegetables grow. As always, weeding had to be done around recently transplanted vegetables to help them grow. We planted many rows of a variety of beans such as red kidney, cow, orca, and several others.

May 20 - 24

We mainly weeded around the onions and scallions in the tiny farm area as well as the kale that is covered in remay to protect from the insects. Slugs ate most of the cabbage, so we used the hula ho, a tool that is circular and has a sharp blade to cut any weeds that are growing and then we raked them into piles to put into the compost.

May 27 - 30

I made up most of these hours in the spatial analysis lab due to a funeral I had to attend that was outside of Bellingham. The farm also received extensive flooding that washed out some zucchini, cucumber, and some flowers. Weeding is impossible when it's muddy, so I hung a string for the trellis and then attached clips to the end of the strings to allow the tomatoes to grow straight up. I harvested some rhubarb to make pie as well as some kale as both were ready to pick.

June 3 - 7

During this week, we laid down landscape fabric that had three rows of holes. We will transplant winter squash when the weather is right, as it has been hot and not suitable for planting. While eating lunch we realized that the drip tape had not been set up yet. This required us to snake the drip lines underneath the fabric that had been laid down. We also weeded as usual, around the onions, radishes, turnips, and within the greenhouse.
A link to my story map:
https://arcg.is/a0SH1

City Sprouts: Nourishing Bellingham's Food Deserts
How one farm is building community resilience through food equity

Hannah Cole, Western Washington 2024
June 9, 2024