

EDIBLE LANDSCAPE INITIATIVE: A SUSTAINABILITY PROJECT

by

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by

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**Table of Contents**

Abstract.....	3
Introduction.....	5

Signature Honors Curriculum.....	6
Results & Impacts.....	8
On-Going Sustainability.....	10
Group Experience.....	11
Role Divisions and Dynamics.....	12
Conclusion.....	13
Personal Reflection.....	14

### **Abstract**

Climate change is a wicked problem that is faced by every person on earth. Whether this impact comes in the form of food scarcity, weather changes, disease, or the destruction of homes and habitats makes no difference. While the climate does go through a series of changes and rotations, the changes that we are experiencing now are exponentially higher and thus more dangerous. Climate change has been fueled by an excess use in fossil fuels, an excessive amount of deforestation, and an excessive attitude of uncaring within large companies and governments that have the ability and power to create real change. This problem has only grown in the past years and will continue to grow unless a change is made within each citizen of the world.

The Edible Landscape Initiative began as a group of honors college freshmen. Our passion for the environment brought us together to make an impact. The goal: to create an orchard to bear fruit for the community, to promote an ecocentric worldview, and spread love of the environment across college campuses. By giving others the ability to invest in the environment through the establishment of orchards, we ensure future generations have effortless access, and the opportunity to cultivate a love for the natural world.

The Edible Landscape Initiative group procured land, developed plans for the orchard (fruit trees, bushes, and pollinator/herb garden), gained necessary university approvals, and established ties with university communities to create a sustainability plan. Through crowdfunding we raised approximately seven thousand dollars, developed service opportunities, and negotiated purchase of all plants, soil, and tools (planted on April 24, 2021.) The success of this project stands as evidence that not only can students make a difference on their physical campus, but also on the mindset of those around them.

In conclusion, the destruction that climate change causes will not be fixed with one change, but instead a change of mindset within a community is needed. One small orchard within a single community can help to inspire and grow an ecocentric mindset within areas around the community, country, and around the world. The Edible Landscape Initiative actively works to create a change within the world by creating a change within the minds of students who will go on to positively change the world.

keywords: climate change, social impact project, orchard, sustainability

## **Introduction**

Climate change is an apocalyptic level threat that is facing our planet everyday. The overall warming of long-term temperature is causing extinction at alarming rates, is starting potentially catastrophic sea-level rise, and is accelerating the rate of natural disasters across the globe. This rapid and often irreversible change is because of the level of greenhouse gases that we as a species have released into the atmosphere. We currently are releasing carbon, the most recognizable greenhouse gas, into the atmosphere at a rate of 43 billion tons yearly. This is

contributing to a carbon level of around 420 parts per million (ppm), the highest level ever recorded and, excluding the past 100 years, nearly double the next highest number in history.

Greenhouse gasses act as a layer of insulation surrounding the Earth, and this has led to a relatively comfortable climate for the majority of history. As the sun heats the Earth during the day, our temperature rises. Greenhouse gasses absorb this heat and keep it within our atmosphere for longer periods of time. Over the course of many years, this compounding effect results in changes to the overall global climate. This theory was first proposed back in 1896 by Swedish scientist Svante Arrhenius. Many people did not listen.

Forty-two years later, an English engineer named Guy Callendar was able to prove exactly how carbon dioxide contributed to climate change. American scientists followed suit shortly after in 1965 and began warning the president of potential impacts if we did not change our ways. This pattern has continued until today. Scientists warn world leaders and the people of the world of the detrimental impacts of climate change, even listing it as a major reason the world doomsday clock sits at only '100 seconds till midnight'. Yet we as people continue to release more carbon and take only small actions as a means of mitigation. Climate change is threatening or has killed off almost 11,000 species of plants and animals. Billions if not trillions of dollars have been spent on reparations from the increasing rate of severe weather. Since climate change was theorized, we have seen sea level rise of 8-9 inches. The history of climate change is riddled with warnings and people turning a blind eye, and it has led us to a spot today in which we have to make a change.

The desire and drive to create a change led to the formation of our honors college group. In Honors 2000, seven of us had the same passion for the environment and the drive to do what we felt was right. While climate change was an overwhelming topic, we still wanted to find ways

we could help. After conducting hundreds of interviews and many hours of research, we decided on the creation of an edible landscape area on the East Carolina University (ECU) campus. This space can be used as a way to get people involved with nature and help them realize the beauty and importance of the very thing that we all are playing a hand in destroying.

As we moved on to our second semester, Honors 3000, we managed to bring six new members into our team. We continued to push forward with our cause and divided our thirteen member group into subsections to make the development of the project more manageable. We had two groups which were responsible for design and community engagement, respectively. This way everyone was working on creating the best possible plan and we could follow through on the creation of the orchard as quickly as possible. While we initially hoped to be able to plant the orchard during this semester, we encountered many setbacks and a lot of red tape that halted and slowed our progression. Our Honors 3000 semester planning eventually led to five of us returning for the Honors 4500 campaign.

### **Signature Honors Curriculum**

In order to actually make a real difference toward climate change, the group decided we would carry on in Honors 4500 with our original goal of establishing an orchard on campus so we could create not only action, but education on East Carolina University's campus. In order to do this, we needed to raise funds, develop partnerships, and instill a sense of faith in the members of our group (since ECU's faculty and administration needed to be confident we would continue to uphold our standards and agreement in regards to orchard maintenance).

In order to raise the funds needed to establish the orchard, our group members reached out to Jennifer Watson (part of ECU's University Advancement team), as referred to us by former Interim Chancellor Ron Mitchelson. They believed that the University crowdfund could

be a potential solution to our fundraising trouble. However, we would be the first students ever to use this platform, as it was primarily used by professors and University organizations. In order to prove that we were responsible enough to not only run a crowdfund campaign, but to manage the money raised, we had several discussions with ECU administrators and department heads, including Bill Bagnell, John Gill, Chad Carwein, Mike Van Scott, and Ron Mitchelson. During these meetings we were asked to create blueprints for the orchard and secure Memorandum of Understanding between our group and student organizations to prove there was interest on campus once the orchard was established. Once these documents were secured we were given final approval to proceed with a crowdfund campaign.

The campaign was scheduled to run from January 1, 2021 to March 15, 2021, and for those 45 days we would be expected to post announcements, contact and gain donors, and push out information not only about our group members and initiative, but also about our future plans for the orchard and Stratford Arms location. Our team worked on creating a comprehensive social media plan prior to the beginning of the crowdfund campaign. We created posts, videos, and outreach messages to be sent to potential donors and orchard contacts. On January 1st we began our campaign. We posted on our Instagram, Twitter, and Facebook pages information about our mission, where to donate and what we would do with the money. We made personal appeals and personal asks to individuals within the community we knew, and by the end of the campaign raised \$6,464 to go towards the establishment and maintenance of the orchard.

After completing our crowdfund campaign, we had one more task to get our group ready for the orchard establishment, and that was collaboration with groups on campus. We worked closely with administration throughout our crowdfund and in planning for our orchard establishment. We received help from Azad Atashi in developing a blueprint for our orchard

layout, and we received help from John Gill in determining what days would be the best and working around other campus events. However, we did most of our collaboration with faculty in the Nutrition Science department and the Honors College. These groups provided the most support in regards to volunteers, from students, faculty, and supplies. These steps, the crowdfund campaign and connections with campus organization and groups set us up for our future and establishment of the Edible Landscape Initiative Orchard.

### **Results & Impacts**

The goal of the Edible Landscape Initiative was to reach out to our local community and get people engaged in helping slow climate change and promoting a more environmentally sustainable future. We used a couple different media sites and metrics to help us gauge our impact and see how far our reach spread. Our primary methods of reaching out to people include a website and Instagram. Each platform had a similar role in promoting events or encouraging an environmentally sustainable lifestyle by the means of posts that would address such topics.

We chose Instagram and a webpage as the primary platforms for the grounds of communication to our audience because we believed that these two forms of media allowed us to have a broader reach to the general audience. We believe that the relative ease of use of these two platforms are a great way to communicate our ideas and views to the audience. Instagram serves as a great method to update our audience about how the project is going and serves to push out reminders. We primarily used this platform because it is a great way to reach out to the general audience and the app also is easy to use. The website was also a great way to further interact with the audience and talk about other aspects of our project.

When looking at the analytics of the website we saw that the February 26 to March 26 had some of the highest activity. This came around the same time that we initially launched the

project and were new to the website. We primarily populated the webpage about the project and the team, we then transitioned over to posting on our blog page where we talked about various aspects of the project, the environment, and other activities that can encourage sustainable activities. During the summer the overall activity of the webpage had decreased slightly, and we noticed the lowest amount of traffic through the website. However, upon noticing the lower flux of people going to the website, we implemented a more routine system where we implemented blog posts on various environmental subjects to help increase foot traffic.

Our Instagram account is the most popular method that we introduced and since starting that we have received much success. Looking at the analytics we have 121 posts that pertain to upcoming events, any changes that we are introducing, or other information that we wish to communicate to the audience. Our follower base is currently standing at 440 while we are actively following around 750 people and are growing in both areas. Over the last 90 days the total number of accounts reached has gone up by 19.3%. An overwhelming part of that group is from Greenville at 55.3% followed by other cities such as Raleigh, Pactolus, and Winterville at 2.2%, 1.6%, and 1.2%, respectively. Our primary audience are people from the ages of 18-24 years old at 52.7% followed by 25-34 years old at 17.1%. Our reached audience is primarily female with approximately 70% and 30% male.

### **On-Going Sustainability**

Throughout our time working on the Edible Landscape Initiative a main concern has been how this project will be sustained for years to come. The members of our organization will move on from ECU and continue with their own separate goals but that does not mean that the goals of the Edible Landscape Initiative will change. We want the impact that this project makes to be ever growing and far reaching. In order to accomplish this goal our team began planning and

preparing to have this project become more than a single goal. Within the Honors College at ECU, each student is expected to complete a Senior Honors Project (SHP) that showcases an impact that each student is making within this community. We plan to use this requirement as a way to motivate honors students to take the beginning of this project and continue to add new aspects, new ideas, and new research to increase the scope and the reach. Students will be invited to continue the ELI in new and exciting ways for their own projects which will help to sustain the base work that has already been completed and then to increase the effect that is created. The Edible Landscape Initiative has been enveloped by the RELEAF team as a way to ensure that this project will continue for years to come. We have worked with RELEAF to explain and share our ideas for how to increase the effectiveness and scope of this project. For example, we started communication with the Honors College Student Council where we are working to incorporate a new addition that will focus solely on environmentalism with the starting point being the Edible Landscape Initiative Orchard. We have shared these communications with the RELEAF team in the hopes that this discussion will be continued. This addition will ensure the upkeep and continuation of this project for as long as the Honors College Student Council stands. Each year students who are excited and passionate about environmentalism and sustainability will be given the opportunity to make an impact without having to start from the basics each time. These conversations between the Edible Landscape Initiative and the Honors College, and the Honors College Student Council have been ongoing and are continuing to be worked on to ensure the next group of students will have everything necessary to excel. For example, our team has worked diligently to ensure that volunteers are ready each and every week throughout the year to ensure the upkeep and continuation of the orchard. Volunteers are being recruited from Living Learning Communities that require volunteer hours, from local schools, science classes, and

more. Students from around the community are excited to help their environment and are energized to be a part of something that promotes a better future for their world and has endless opportunities to expand.

### **Group Experience**

As the Edible Landscape Initiative has grown since its beginnings in Honors 2000, the group's makeup has evolved right along with. The group's initial makeup was created from a summer survey sent out on behalf of the ECU Honors College before August 2019 that asked students what issues in the world or community intrigued them the most. These issues make up the basis of the "wicked problems" that the ECU Honors College has long sought to have students work towards understanding, as well as creating their own solutions for these problems. For this group, it was the wicked problem of climate change that brought the initial group together for Honors 2000. It was this first group that laid down the foundation for what the Edible Landscape Initiative has become within the ECU Honors College today. Students from all walks of life and academic interests came together for what they felt was a common problem that needed solving: the issue of climate change that is destroying our planet. It was these different perspectives that came together to create what is here today and what has evolved from a simple thought into a fruitful endeavor. As time has gone on, this group has undergone major changes within its organization that greatly expanded its makeup. After Honors 2000 came presentations that would not only determine the group's survival, but also bring in even more members that would be helping make these ideas reality in Honors 3000 during the Spring of 2020. With the new course came new individuals. The group's expansion brought even more perspectives and ideas that had not been introduced or fully fleshed out before, and created an even deeper foundation that carries on today. It was here where ideas such as a website, weekly blog, and

social media outlets were created as a means to get the word out that this group was striving to accomplish something big. As the Spring semester pushed on and the Covid-19 pandemic suddenly pushed everyone apart physically, more change was brought to the group as the semester wound down and final presentations were created and presented. The desire to pursue this project never died, so as members were leaving to pursue other projects and obligations, the current members that are here today carried on, and have finally brought a working orchard to ECU's campus. With this shuffling of members throughout the years have also come some different changes in both the division of roles and the dynamics that came with them.

### **Role Divisions and Dynamics**

Role divisions and dynamics within the Edible Landscape Initiative have evolved right alongside the group itself. As the group first started, it was a small group that shared responsibilities amongst themselves. As it evolved with greater responsibilities and the number of individuals grew, so did the divisions of responsibility within the group. In Honors 3000, the group was divided into smaller subsections with certain individuals assigned to a subsection to assist with daily activities. While one group was handling the social media platforms and doing community engagement at ECU, another group was collecting research data on what plants would be viable in Eastern North Carolina and what the orchard would look like, and another group was organizing a crowdfunding campaign as well as other avenues of funding in order to get the project off the ground. With these groups came a leader within each group who organized what occurred within each subsection and then came together to bring everyone towards a common goal. As the group size decreased into its current states, these groups became individual assignments for each person within the group, until an official reorganization occurred that laid out responsibilities across the new group. With this reorganization came official group titles and

the leadership of our first president, Ms. Heather Mauzy. Going forward the future remains uncertain as to what further changes will come with group dynamics or division of responsibility as new organizations and individuals have gauged interest in the project, but the future looks bright towards what can be achieved moving forward.

### **Conclusion**

The Edible Landscape Initiative has not only made an impact on the members of this group, but also among the members of East Carolina University's faculty, staff, and student body, along with the greater Greenville community. The Edible Landscape Initiative Orchard provides volunteering opportunities, fresh produce/herbs, and a learning opportunity for all. This orchard has provided, and will provide, opportunities in nature for future college students and generations to come, and has made positive change towards overcoming climate change. This initiative will not end with this group, and we are excited to see the message of sustainability and perseverance of the natural world extend beyond our time.

### **Ethan Patel's Personal Reflection**

As a member of the Edible Landscape Initiative, I have learned a lot, and this has truly been a very enriching experience. I was a member of the original Honors 2000 team and our transition to 3000 then to 4500 is something that has taught me many lessons. Prior to entering the Honors 2000 class I was very introverted and had a difficult time expressing my ideas and making bonds with other people. I was also very afraid of challenges and failure. Being in the Honors program and specifically our Honors group I was able to grow out of my introverted shell and this slow transition was made possible by talking with my fellow peers and other students, by giving small presentations, and doing other activities that would encourage such growth.

When entering Honors 3000, I think I was able to grow the most and was able to confront my fear of both being an introvert and addressing the idea of failure. In Honors 3000 we are exposed to the idea of failure and that failing is okay and this is something that was very difficult at first, but was an important skill that I learned. This was especially important in going into Honors 4500 because we had to deal with a lot of set backs and other issues that I was prepared for handling.

I think in Honors 4500 and 4550 I was able to grow the most and it had the most impactful meaning to me. In Honors 4500 we were implementing steps to set up our orchard and this came with a lot of setbacks and obstacles that made the process slightly difficult. We had to go and talk to many people and reach out to various people. This was something that really helped grow my social skills as I started to get considerably more comfortable with interacting with different people. Being able to lead meetings and learning to communicate effectively and efficiently was something that I had started to excel at. COVID-19 was an obstacle that we also faced and working around this was something that I found to be challenging and dealing with this also taught me many things about addressing situations and how to not give up and continue to push through. Having the mindset to be able to continue to fight through and not give up is something that I truly believe is the best lesson that I had learned and still believe is something that I can take to and apply to my future career.