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Kulshan Carbon Trust Regenerative Agriculture Business Intern

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Western Washington University

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Internship Title: Regenerative Agriculture Business Planning Intern

Student Name: ___ Jessica Espy

Internship Dates: ___ January 2021 - June 2021

Printed Advisor Name Rebecca Bunn

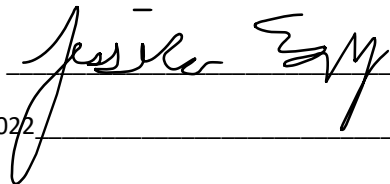
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STUDENT SIGNATURE

A handwritten signature in black ink, appearing to read "Jessica Espy", is written over a horizontal line.

DATE:

___ 05/24/2022 ___

Kulshan Carbon Trust Internship Report

Jessica Espy

Western Washington University, Winter 2021- Spring 2021

Introduction

During my Junior year at Western Washington University, I participated in an internship program through the Kulshan Carbon Trust (KCT). From Jan 2021 until June 2021, I was the research and development intern for the Regenerative Agriculture and Carbon Sequestration sector of KCT. In this role, I reviewed extensive amounts of contemporary literature on the benefits and challenges of regenerative agriculture. Additionally, I conducted interviews with local farms to better understand how regenerative agriculture can be utilized as a part of the carbon sequestration business model proposed by KCT.

The Kulshan Carbon Trust is a local Nonprofit organization. The KCT founders are Howard Sharfstein, Steve Hollenhorst, and Jessa Clark. KCTs mission “is to conserve and sequester carbon through collaborative natural climate solutions in Whatcom and Skagit Counties”. KCT plans to incorporate multiple Natural Climate Solutions to incentivize stakeholders to designate land for carbon sequestration. These Climate Solutions are “Forest Stewardship, Tree Planting & Growing, Biochar Supply, Regenerative Agriculture, and Blue Carbon (marine systems)”. The vision of KCT is “People working together to drawdown carbon in ways that regenerate the land and build prosperous communities”. Ultimately, KCT is interested in creating a financial incentive for carbon sequestration. The KCT model is largely based on the 2017 book “Project Drawdown” which is a compendium of evidence-based strategies for mitigating the impacts of climate change.

Role and Skills gained

My role with KCT was in the Regenerative Agriculture branch of the organization. At the start of my role as an intern with KCT, the organization was newly founded. In my role, I focused on researching and conglomerating scientific and anecdotal information about how to utilize regenerative agriculture in the carbon sequestration model of KCT. To do this, large amounts of literature were to be reviewed. Without this process of cultivating deeper knowledge of the issues and potential solutions, KCT would not be able to move forward as an organization.

In this position, my duties were to conduct independent research about regenerative agriculture and how it can be incorporated into the KCT model as a financial incentive for stakeholders. The question being addressed through the research and interviews was “How can farmers make a profit from converting land to a carbon sink, and how much sequestration can be expected from regenerative practices?” Before my research began, I was paired with a mentor from KCT. This mentor was responsible for creating a structure with my specific objective. A list of potential research sources was created as a guide. Some of these sources included articles from Regeneration International, The Rodale Institute, and the International Panel of Experts on Sustainable Food Systems. Other sources provided were from local farms like Bow Hill Blueberries, Viva Farms, Cloud Mountain Farm Center, and Skiyou Ranch.

There were many hours spent reading various sources. What I learned from the literature review was that the science of regenerative agriculture is relatively new, and the opinions on its practicality and success vary widely. According to Regeneration International, “Regenerative Agriculture describes farming and grazing practices that, among other benefits, reverse climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in

both carbon drawdown and improving the water cycle”. While this definition explains the intention of regenerative agriculture, it does not address the methods of the practice. To better understand what practices constitute a regenerative model, I found The Rodale Institute to be the most expansive and trusted source. On the organization’s website, they list the practices necessary for soil building. These practices are crop rotations, organic no-till, cover crops, and rotational grazing. The evidence for the success of this style of food cultivation can be found in the large-scale trials conducted at the Pennsylvania facility.

At the end of my internship, I was to turn in a deliverable that showed a summary of my work. This deliverable came in the form of an informational brochure which can be used by KCT to spread awareness and easy access scientific evidence to stakeholders. It is important for the dense amount of information on regenerative agriculture and carbon sequestration to be condensed into more digestible materials. Creating the brochure was a way for me to solidify my newfound knowledge and discuss it in a simple and transferrable way across all knowledge bases.

Relevance to coursework and future career interest

My goals after graduation are to work as a support person to farmers that have the goal of converting to or maintaining an organic and biodynamic growing practice. This role may come in the form of consulting, environmental regulation, or project management. The experience gained through the internship with KCT has given me skills and knowledge that can be used in my future profession.

Much of my work was in the literature review process. The other aspect of my role was to conduct in-person interviews with local farmers. This was by far my favorite task and is directly related to what I want to do post-graduation. Conducting these interviews gave me first-hand

experience in understanding the complexities of growing food in a system that is designed to have small farms struggle. It was my responsibility to find the farms to contact and formulate interview questions that would provide the most insight. Some of these questions were “what is the greatest challenge converting to RA?”, “How feasible is RA for a larger operation?”, and “How can farmers be incentivized to convert land to practices that sequester carbon?”. I interviewed 4 different small organic and regenerative farms in Whatcom and Skagit County: Songbird Farm, Wellfed farm, Eternity Farm, and Regenerative farm. What I learned from these conversations was that these farmers are committed to their connection to the community through the land. The challenges with RA are completely different for each piece of land being managed. There is no universal right way of doing things. What is successful for one farmer may be a death sentence to another. In the future, this must be recognized when working with regenerative systems. A common struggle amongst the individuals interviewed was the challenge of competing with large-scale industrial systems that are purchasing more and more land, making it even more difficult for small farms to expand and thrive. Many of the farms expressed concern for the loss of community due to the encroachment of the industrial food system. From my interaction with farmers, I have gained confidence in my ability to be adaptable to complex problems in our food system.

Summary

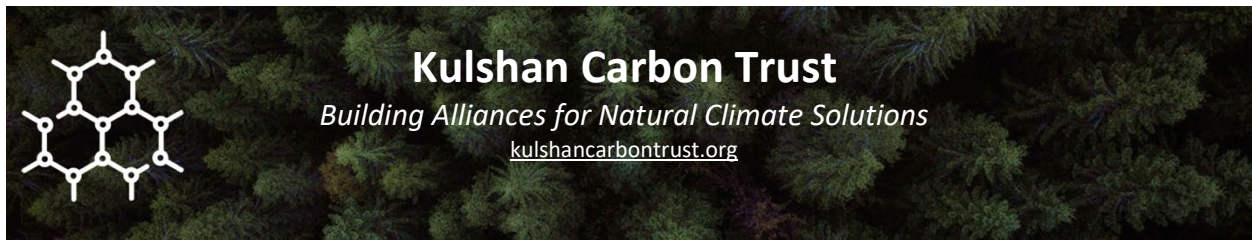
The internship with Kulshan Carbon Trust was educational and gave me hands-on experience talking with farmers and learning what their challenges are. I feel that the experience I gained through this role prepared me to work in the field I am hoping to pursue post-graduation. The most valuable skills I acquired are the ability to review dense literature pieces and condense the information in a way that can be shared with a wider audience, infographic design, communication with farmers, and increase my experience in knowing where to find reputable

research sources. This role required a self-starter attitude, which increased my ability to work independently without direction or supervision. This will be a valuable skill for future positions that I find myself in as an employee. I would recommend this internship to anyone looking to gain a wide array of research and communication skills.

Time Log

Week of	Hours	Description of Activities
1/4	5	Onboarding meeting, playbook review, read CCT paper, Introductory meeting with Emily *, began reading Project Drawdown,
1/25	7	Finished reading Project Drawdown, began literature review of documents recommended by Emily *, Started word doc to organize literature reviews, met with Emily* to check in on progress & challenges.
2/15	6	Literature Review/Research: challenges to Regenerative Ag, Ability of RA to sequester Carbon, contacted farms in Skagit and Whatcom County for interviews
2/22	4	Interview with Eternity Farms, Reviewed Foundational Documents, finished final project proposal, Literature review of IPES document, SARE research
3/15	3	SARE research, IPEC review, created contact list of farms for interviews, formulated interview questions doc,

3/22	3.5	Interview with Songbird farm, Literature Review; Rodale Institute, Marine Carbon Project.
3/29	3.5	Researched potential farm contacts & contacted farms for interviews, Revision of literature review doc, edited interview questions.
4/12	3	Literature review and research into incentivizing carbon sequestration, carbon sequestration as a business model, small farm food production, government subsidies, contacted farms for interviews, edited interview questions
4/26	6	Check-in meeting with Emily, literature review of carbon sequestration as a business model, Whatcom soils & small farms, carbon sequestration subsidization models, review of Project Drawdown
5/10	3.5	Meeting with Emily & Howard Sharfstein to discuss final deliverable for project, Transcribing of farm interviews, edit of literature review.
5/24	3.5	Interview with Regenerative Farm, meeting with Emily,
5/31	4	Interview with Wellfed Farm, Edit of literature review, started final brochure.
6/1	4	Final meeting with Emily to discuss final deliverable and edited Regenerative Ag Brochure
6/6	4	Final edit of brochure



MEMORANDUM

To: Rebecca Bunn
CC: Jessica Espy
Steve Hollenhorst
From: Howard Sharfstein
Date: May 24, 2022
Subj: Jessica Espy Internship

Rebecca, this memorandum confirms that Jessica Espy successfully completed an internship with the Kulshan Carbon Trust (KCT) during the Winter and Spring quarters of 2021. During her time working with our local nonprofit, Jessica conducted valuable research on regenerative agriculture. In so doing, she interviewed several practitioners in KCT's service territory of Whatcom and Skagit counties. Her work product on regenerative agriculture took the form of a helpful literature review that KCT continues to use as a reference and a publication quality brochure.

The Board of Kulshan Carbon Trust is grateful for Jessica's many valuable contributions.