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Weed Infestation: A Service Learning Capstone Project

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Abstract

Infestation of weeds can be most upsetting to anyone who finds themselves dealing with them. Whether they are in your garden, lawn, or you pass by them thinking they are a pretty flower, weeds definitely make their appearance in most places. For ranchers, weeds can take a huge toll on them and their operation. Since I live on a ranch it was only fit for me to create a project that would not only benefit myself and other ranchers in the Harney County community. My project was about the importance of weed control. It is a huge part of ranching life and is a big problem in the Harney County ranching community. The sole purpose of this project was to gather information regarding the destruction of weeds through research and interviews around the community and online. I want this project to be successful for years to come and not to stop after this class. My main purpose was to engage the community, educate the community and get the community more involved in controlling the infestation of weeds that seems to be affecting our soil, crops and cattle production. Three keywords that I would choose to describe my project would be; innovative, creative, and necessary.

Introduction to your Capstone Project

Weeds can be detrimental to a rancher's lifestyle. They are unnecessary to have growing on your land, destructive in crops, soil, and cattle production. The point of this project is to find new and creative ways to control the weed population that Harney County ranchers seem to deal with on a year to year basis. It is important to me to be the start of finding new and effective ways to overcome the problem that we have been struggling to overcome for many years now. Through this project, I hope to change the minds of many, and to motivate them to be proactive in turning this problem around and being part of the solution.

Section 1: Innovative Approach

My Capstone Project Proposal is about solving the infestation of different weeds that have an impact on Harney County ranchers soil production, crop production, and cattle production. As a rancher myself, I desire to fix this problem not only for my benefit, but also the benefit of neighboring ranches that endeavor the same problem as I do. Weeds compete with crops, use valuable water and nutrients, interfere with crop harvest, harbor insects and diseases, poison livestock and humans, and are aesthetically unappealing” (Zollinger, 2017). It is my goal to provide the ranching community with more information, through interviews, my own research, as well as providing booklets about the types of weeds that take over throughout Harney County. `

Although myself and many others in the ranching community want this headache to disappear magically, it simply won't happen all on its own. How I believe I differ from other stakeholders within this project is because I am making it apparent that it matters to

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me. I am willing to put in the work, even if it takes a few years to get others involved and willing to be a part of the movement.

I believe that my project is innovative, because I am willing to make a change in the ranching community. Through this project I am creating new ways for how ranchers manage their land through information that I provide them. If they are willing to work with me, and listen to the ideas that I have to offer, I think that as a community we can overcome this problem that is staring us in the face today.

For my sources concerning this project I found a lot of my information online through articles, catalogs, as well as interviews that I plan on performing throughout the following weeks. A great source where I pulled a lot of my information from focused on the cost and the toll it takes on farmers and ranchers when it comes to weed problems. It discusses the importance of irrigation flow, and early weed control (Stewart, 2018). The interviews that I plan to conduct will be with neighboring ranchers, as well as weed experts that live within the Harney County community. These will be contemporary sources, although in future years to come, these sources might find better and more innovative ways to solve the weed problem in this area.

Section 2: Emotional Intelligence

Through my research in my interviews, I hoped to grab the attention of my stakeholders by the questions that I asked them. It is my job to not only gather the information from their own experiences and thoughts, but to bring to the table my passion towards this problem that we face. I really hope to indicate awareness to them through my booklet that I present to them as well as awareness to myself with the information that I will gather through this process. I will learn lots from them and they hopefully will

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learn a few tips and tricks to overcoming this problem through me.

I believe that my approach will be something that will hit home with the audience. Everyone that I plan on discussing this problem with as well as the people that will benefit from my findings, have a lot of skin in the game already. One individual that I had the honor of interviewing happens to be my neighbor. She and her husband have been lifetime ranchers and have always tried their best to overcome the weed problem on their ranch. She stated in our recent interview “I just want there to be an easy way to control all these weeds. My husband and I work too hard and put too much money into cattle the become deformed and crops that get choked out by bad weeds every year” (Betty Drinkwater, Interview). A lot of these ranchers have dealt with the problematic weeds that have affected their crops, soil and baby calves. I think emotionally, this audience will find this project very interesting and beneficial for the ranching community in Harney County.

My research is valuable to others because I plan on sharing it to the community. They will find lots of information as well as answers to their questions about the different types of weeds that cause havoc on their ranches. This information will be valuable, because it will hopefully keep them aware of what kinds of weeds to watch out for, as well as the different kinds of weeds that cause harm to livestock eating and living around them. I believe that this research will be valuable, because it will take a team to control the bad population of the weeds that seem to be problematic in the area. I think that everyone will gain value from this research.

A recent catalog that I found concerning weeds happened to focus on how invasive weeds disrupt waterflow and create soil erosion for ranchers. “Weeds can be

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detrimental to soil and water flow that allows good crops to grow” (Sprague, Christy).

This was one of my main focuses because it had a lot of information that I saw potentially going into my research booklet.

Section 3: Creative Thinking

I drew on my creative framework to approach this problem through personal experience.

This is a problem that has affected me and my family ranch for a very long time and I have wanted so badly to figure out a way to solve it. I have seen it with my own two eyes the effect that weeds have on cattle and the land that they live on. It is a topic that I am passionate about and I think that through my creative framework I can change the outcome of the issue. I had to find a basic structure underlying the problem and by getting as many people involved as possible, I thought that would be a successful approach.

My approach to this problem is unique because it's bold. I would like to think that many people agree with my approach to the problem, however I don't know if they will actually follow through. What is unique about this approach is also the fact that everyone has to be on board and be willing to do their part in taking care of the weeds that seem to take over so quickly in the area. This approach is simply putting my trust in others that they will do their part and that to me is a little scary, however not impossible.

I will be sending out booklets to the community and this will be my main product that I will be producing. I want to share as much information as I can possibly gather and to the public about this problem that we face. I believe that even if people think that they are doing what is best for their land as far as weeds go, they can always be provided with

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my information and knowledge about something. That is my plan of action that I want to focus on.

Section 4: Your Innovative Solution

This project is one that I find to be so fulfilling. It is to help not only me but also others around me and potentially create trust between everyone. It will hopefully also create a dependability among others and willingness to work together in resolving the weed problem that many ranchers endeavor each year.

This process may look a little different than what can be expected since we are coming into the winter months and the amount of weeds are slowly dying. “However, the process of planning what is to come should not stop throughout the cold winter months” says rancher John Potter whom I had the pleasure of sitting down with. Although, I am performing interviews with different individuals about this issue, as well as doing my own personal research, and creating a booklet where all can read and plan ahead for when the springtime comes. My initial outcome is for people to be prepared and know understand how they can make a big difference in the population of weeds that can harm our crops and cattle.

I believe that this is more of an innovative approach than some might experience because I am diving into the depths of the community. Working with others on this approach will hopefully be a more effective way of accomplishing this problem that we face ahead. They will be more engaged as well as more informed about the struggles that ranchers are dealing with when it comes to the best production possible for crops and cattle. It will not just be a chance for me to push my ideas on them, but to hear them out

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and to learn new things from each individual that is also passionate about this issue.

There are a couple things that I could do differently to help enhance innovation through this project process, and that could be by appointing individuals to be more involved. This might enhance change because there would be more of an accountability within the process, and it might become a bigger innovative project. Maybe instead of merely interviewing people and getting information from them, I could have given them more of a responsibility to get the word out and create a bigger platform for many more people to learn from.

Section 5: Results

This project's benefits will get the community more involved in this issue that we face ahead. It will allow others to learn about new ways to work together to solve the weed problem in Harney County, and will bring to surface new ways to attack it. This project is just the start to something that becomes more effective as time goes on if all of the stakeholders, meaning the neighboring ranchers are willing to participate. The benefits of this project will first start with the interaction between stakeholders, second will bring to life new innovative ways to accomplish what this project has to offer, and third will potentially grow as time goes on, giving more and more people the tools to overtake the weed problem.

This project will have a positive impact on all of the stakeholders that are included. Every single one of them will be provided with new and helpful information that they will need to know in order to solve this problem. It is going to be a positive experience for everyone involved and will allow for new and innovative ideas to be thrown out for

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everyone. The negative impact that this project could have on stakeholders, is if there are only a handful of people that do their part. This project takes everyone to be able to solve the issue that lies ahead of us. This can cause havoc to people who are doing their part, if neighboring ranchers are not doing theirs. It is a team effort. In the long run this project will have a positive impact on the ranching community, however could take a turn for the worse, if stakeholders do not do their part in taking care of the weed problem that they have control over.

Section 6: Different Approaches

Some approaches that I could have taken for a different result could have been contacting others virtually, instead of face to face interactions. I could have taken a different route in finding my information, by just researching it instead of asking community members about their own experiences concerning the weed problem. I also could have advertised on the radio about a meeting that would get everyone involved instead of just one on one interaction.

I didn't expect the best result, because quite frankly I didn't think that people would be too interested in solving this issue. However, I was merely surprised when the word got around the community and a few people were willing to sit down with me and talk about possible solutions. That to me is something started, and at least the community has more information to follow come spring time when it is time to start taking action.

Ideally, I would have loved to see more interaction in myself and the community. Although this was my first time, I now know a few things that I can do to better motivate the community members and instil more confidence in them. We will see over the next couple years if my determination and hard work was worth it, and if the infestation of weeds has drastically

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decreased. This is a process, but a process I am willing to take on and follow as an individual and proud member of this community.

Section 7: Conclusion

For this project I chose the service learning approach. I believed that this approach would not only pursue me to dive deeper into my research concerning the project, but also would give me the opportunity to work face to face with the stakeholders that were included in this project. I believed that this method would give me a better chance to hear what others had to say about the topic I was researching and also the problem with weeds that we deal with every day. I learned so much over the course of this project. I have learned that I can take in information rather than deal it out to individuals when discussing certain issues like this one. I have learned that it is easy to get upset when some stakeholders don't want to be a part of the movement, but knowing that it's okay. I have also learned a lot about weeds and since that was the main focus of this project, I'd say that was pretty fulfilling. I benefited so much from this process because I needed to know the information to be able to share it with others that were and will be a part of this process. Now I have the knowledge for later in life if this topic happens to pop back into my life. I also have acquired lots of skills that I can now use down the road. These include, organization skills, listening skills, research skills, adaptation skills and much more. This project has been a wonderful experience and I can't wait to see how this community will benefit from mine as well as others findings concerning weeds.

Sources

- Drinkwater, Betty. "Harney County Weed Infestation." no. Weeds/Ranching, 29 Oct. 2021.
- Potter, John. "Harney County Weed Infestation." no. Weeds/Ranching, 5 Nov. 2021.
- Sprague, Christy. "Weed Control Guide for Field Crops (E0434)." *MSU Extension*,
www.canr.msu.edu/resources/2015_weed_control_guide_for_field_crops_e0434.
- Stewart, R. E. (2018, May 17). *agricultural technology*. *Encyclopedia Britannica*.
<https://www.britannica.com/technology/agricultural-technology>
- Zollinger, Richard. "Drought -- When Weeds Can Become Friends." *NDSU Agriculture and Extension*, 23 July 2021,
www.ndsu.edu/agriculture/ag-hub/ag-topics/crop-production/diseases-pests-and-weeds/weeds/drought-when-weeds-can-become#:~:text=Weeds%20compete%20with%20crops%2C%20use,humans%2C%20and%20are%20aesthetically%20unappealing.