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STRONG WOMEN BREAKING GROUND: ROLES OF
WOMEN IN AGRICULTURE IN MICHIGAN

by

April L. Shirey

A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Science
Geography
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STRONG WOMEN BREAKING GROUND: ROLES OF WOMEN IN AGRICULTURE IN MICHIGAN

April L. Shirey, M.S.

Western Michigan University, 2021

Agriculture in Michigan is changing. While the number of farms and farmers continue to decrease, women are increasingly taking on the role of farmer instead of the “farmer’s wife”. The number of female producers increased from 8,275 to 26,059 where the number of producers in Michigan decreased from 56,014 to 47,641 from 2007 to 2017 (USDA, 2007, 2017). Women are becoming the face of farming in Michigan, yet little research examines the impacts of these shifts. In this research, I conduct semi-structured interviews with female farmers throughout lower Michigan beginning in the summer of 2020 to learn more about these women and their lives. Interview questions focus on female farmers’ experiences with agriculture, motivations to farm, attempts to build networks of support for female farmers, and perceptions of their individual farms. The women then take the power of the interview into their own hands to produce a mental map of their farms to literally show what they find important or significant. Mental mapping asks these women to draw their farms, to identify locations they feel are significant, and why they feel these locations are important. This offers another level to my research and offers these women a chance to teach me something about their farm and their lives. The goal of this project is to work with female farmers to understand how they perceive themselves as farmers and to utilize feminist methodologies to examine how women impact agriculture. Given the rising rate of female farmers across Michigan and its impact on the culture of farming, it is imperative that women tell their stories, and geography attends to the shifting dynamics of agriculture today.

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April L. Shirey

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CHAPTER I

AN INTRODUCTION TO WOMEN IN AGRICULTURE

There is a change in agricultural economics, especially sources of farm benefactor.

Women are no longer taking on only the responsibilities of the farmer's wife, they are becoming farmers of record, the USDA's (United States Department of Agriculture) term for the principal farmer. This is important because women are now being recognized for the work that they have done for centuries. Yet, previous research focused on women in the supporting role rather than in the decision-making role in agriculture (Sachs, 1983). According to the agricultural census conducted every five years in the United States, from 2007 until 2017 the number of female-operated farms in the United States increased by 833,466, the number of producers overall in the United States decreased by 162,572 (USDA, 2007, 2017). Women have always been essential to the family farm, it was not until recently that they seemingly began to take the reins, becoming an increasingly significant branch of owner operators.

Michigan follows this same national trend. The number of female producers increased from 8,275 to 26,059 where the number of producers in Michigan has decreased from 56,014 to 47,641 from 2007 to 2017 (USDA, 2007, 2017). Table 1 summarizes the changes for Michigan and the United States, from 2007 and 2017. The table displays the number of women who are primary owners, the amount of land farmed by women, and the average size of female-owned and operated farms.

Table 2 shows the raw numbers from the USDA census, as well as the calculated rate of change from 2007 to 2017. This table shows changes across Michigan and the United States in number of farms, total amount of land in acres, and average size of individual farms. There is also a column to show the amount that each category has changed over the ten-year period.

TABLE 1: WOMEN OPERATED FARMS, SIZE IN ACRES IN MICHIGAN AND THE UNITED STATES, 2007 AND 2017

| | Michigan | | | | United States | | |
|---|----------|------|----------|--|---------------|------|----------|
| | 2007 | 2017 | % Change | | 2007 | 2017 | % Change |
| Number of female producers (% of all farms) | 15 | 55 | +40 | | 14 | 56 | +42 |
| Amount of land operated by women in acres (% of all acres) | 6 | 40 | +34 | | 7 | 43 | +36 |
| Average size of farm operated by women in acres (% of overall average size) | 37 | 74 | +37 | | 50 | 77 | +27 |
| <i>Source: USDA (2007, 2017); Modeled After (Ball 2014)</i> | | | | | | | |

TABLE 2: NUMBER OF FARMS, AMOUNT OF LAND IN AND SIZE IN ACRES BOTH COMPARED IN MICHIGAN AND THE UNITED STATES, 2007 AND 2017

| | Michigan | | | | United States | | |
|---|------------|-----------|------------|--|---------------|-------------|--------------|
| | 2007 | 2017 | Change | | 2007 | 2017 | Change |
| Number of female producers (total) | 8,275 | 26,059 | +17,784 | | 306,209 | 1,139,675 | +833,466 |
| Number of producers (total) | 56,014 | 47,641 | -8,373 | | 2,204,792 | 2,042,220 | -162,572 |
| Amount of land operated by women, acres (total) | 552,075 | 3,928,817 | +3,376,742 | | 64,264,566 | 387,892,663 | +323,628,097 |
| Amount of land farmed (total) | 10,031,807 | 9,764,090 | -267,717 | | 922,095,840 | 900,217,576 | -21,878,264 |
| Average size of farm operated by women, acres (total) | 67 | 151 | +84 | | 210 | 340 | +130 |
| Average size of farm in acres (total) | 179 | 205 | +26 | | 418 | 441 | +23 |
| <i>Source: USDA (2007, 2017)</i> | | | | | | | |

These numbers tell a story through the census, but not the story that is initially assumed at first glance. The fact is that up until the 2017 women were misrepresented and were

inaccurately counted. This massive increase is a misrepresentation of the industry because until an update in 2002 farms were only allotted one principal operator, and the census was not asking about the sex of the operators (Runyon, 2014). This deterred women from claiming the role of farmer on a farm that is jointly run by a man and a woman. Then in 2017 the USDA made a conscious effort to count women as farmers. This explains the jump from 2012 to 2017 (Paschal, 2020). What it does not explain is why women were overlooked in the first place. Many of these women who are now being counted in the industry for the first time have been in the industry for years, but never checked the box to be included. These counts furthered the patriarchy of the industry, but also reflect on the state of our society, solidifying that women within the labor market are not valued, or they are not seen as valuable. This is not only an issue for the agriculture industry, it is a much larger issue that spans the labor market.

Regardless, women in Michigan and throughout the United States are being recognized in leading roles in agriculture. Research has been conducted in other states to examine why women are joining the agriculture sector, but research like this has yet to be completed in Michigan. How do women feel now that they are counted and even considered to be farmers in the industry? How do women farmers understand their positions within a male-dominated sector? What type of networks are formed among women in the agriculture sector? With networks being inherently spatial this is an important question geographically. There may be groups of women who work together to support each other outside the male-dominated mainstream of agriculture. Finally, how do women view their farms and activities and what do they feel is important? This thesis will explore these issues, using both past and current research. The purpose of this research is to explore women in the agricultural sector in Michigan, understand how they see themselves within the agricultural industry, and how they relate to their farms.

In this thesis I examine the stories of women in the agricultural sector in Michigan, to provide growth and strength among a growing network of women. First, I discuss women around the world in agriculture. Following this I discuss how ecofeminism informs my research and informs women's work in agriculture. Next, I provide a brief history of women in the agriculture sector in the United States. I finally examine women who farm in Michigan giving a background about female farmers in Michigan. Next, I explore geographic literature that addresses the role of women in agriculture in the United States to frame my research. Beyond my literature review I discuss my methodologies, followed by the results that were produced, and I end with a discussion on my results and what I interpreted from the data.

Background and Need

Women Farmers Around the World

Worldwide, farming takes on the face of female (Duckett, 2019). Around the world women have been a crucial part of farming, much longer than in the United States. This generally is due to economic standards in developing countries, men are hired on as laborers at wages that will not support families, so women also tend to be involved in subsistence production (Duckett, 2019; Sachs, 1983). For centuries, in many parts of the world, women took the main role in subsistence societies. It was during colonial rule that women began to decrease as decision makers on farms (Sachs, 1983). But what is the issue? There are gender specific problems that women encounter in agriculture; funding, education, access to land, and equality (Duckett, 2019).

An example of the agricultural sector in the global south is in Nigeria; women make critical contributions to food production as well as preparing and processing all meals. In addition, their average working day outside the home is longer than the men in their households.

About 60-80% of agriculture labor in Nigeria is provided by women, therefore women are the heart of the agricultural sector. Even with the amount of time women contribute to the farm sector, they are still denied equal access to land ownership, education, and other resources. Under these conditions' women are not able to realize their full potential, and gender inequality is intensifying (Rahman, 2008). Women must be recognized as part of agricultural development and should have improved access to resources and land (Rahman, 2008). Land rights in developing countries tend to be the largest issue, on average 10-20% of land is owned by women (Duckett, 2019). Controlling the land upon which you work is important, and decision making is generally left up to the man in these areas (Mamaril & Lu, 2019).

These global gendered inequalities in agriculture create an opening for researchers to employ critical social science, to interrogate the intersection of gender and agriculture through a feminist lens. The amount of time women spend working in the field, depends on what the women need to accomplish that day. Women tend to do more of the subsistence farming and tending to livestock. Regardless of the time she spends on the farm her workload in the home does not decrease, meaning there is a double or sometimes triple burden for women (Mamaril & Lu, 2019). With women doing most of the housework on top of their regular employment the number of hours that men put into the housework is far less than women. This tends to not vary by the fact that their wives are wage earners within the home. The addition of housework can take women out of the labor market worldwide (Blau & Ferber, 1990; McDowell, 1999).

Ecofeminism

The idea of ecofeminism can directly be tied in with women in agriculture. Networks between women plays an important role with agriculture, giving them a chance to learn from others and turn to them for support. There is also a direct sense of care for the land, the people

that work for them, and the customers. Ecofeminist ideas help tie together the idea of feminism and women in the agricultural sector. Feminist political ecology also creates an opening to examine affect and emotion, as a component of relationships between women and their land. Feminist approaches seek to reintegrate emotion into analyses.

There is a growing feminist perspective on labor, and with a newfound voice women can say that all women are workers. (Gago & Mason-Deese, 2019). This is an approach that emphasizes feminist ethics of care, slowness, valuing each other, and working toward networks of care to support women and women's work. The feminist movement is not just about women as individuals being treated unfairly but women across all spectrums (including agriculture), coming together to support each other in whatever roles they play (Gago & Mason-Deese, 2019). In fact, Plumwood (1993) argues that researchers, activists, and social movements should move away from detachment and concentrate on care and friendship within relationships within the networks we have.

In the Global North, the idea of gender has been left out of the discussion on how power is dispersed within the realm of agricultural studies. Gender is also left out from the discussion of environmental change and management (Reed & Christie, 2009). There remains a severe gender gap and this reality should be of paramount importance to all environmental research. Women are more likely than men to practice environmental stewardship in their daily lives (Reed & Christie, 2009). Men tend to be the policymakers in environmental decisions and their patriarchal perspectives control landscapes that women work in. Gender shapes environmental change and resource management therefore it must be addressed (Reed & Christie, 2009). As a society we should try and move towards respecting the moral experiences that women have along with men to offer a more comprehensive perspective (Plumwood, 1993).

Western society has constructed a dualism that in which people tend to associate women with nature and wilderness, and men with culture and civilization. The way that society lumps groups into general categories, and then associate them with each other perpetuates these dualisms. Even though dualisms exist they reflect the frequently unchallenged oppression within a society. There should be a conscious effort to remove dualistic ideals, to begin to heal the patriarchal system that has been established. Western society needs to broaden its conception of the nature of connections to and relationships with nature so people can move beyond the stubbornly persistent dualisms of man/woman, civilization/wild, and civilized/uncivilized. Women should not only be related to nature and men to culture. Both gender roles should be included in both, there should not be a separation that reflects this oppression (Plumwood, 1993). In no way is this thesis trying to argue that “the goodness of women will save us” (Plumwood, 1993) because women do not have a special connection to the land and nature than men lack, *per se*. What does connect them to the land and nature is a position that they have held within our society and the way that they have been historically connected with the land (Plumwood, 1993).

Many ecofeminists combine ideas of environmental care along with the ways that women care for people. Women tend to be closer to nature because of where they find themselves socially, it is not as much of a spiritual connection as one might think. However, women tend to present more concern regarding environmental issues when compared to their male counterparts because they are more immediately impacted by environmental issues (MacGregor, 2006). But in truth, all humans are connected to planet earth. Society needs to realize our existences are codependent, and we need to work to care about our planet. If we do not recognize that we are tied and dependent on the earth, there will be no way to exercise the care we need to sustain it (Plumwood, 1993). We need to apply wonder and respect to our relationship with our earth,

treating this tie and relationship in a respectable way instead of a way of domination. We can show care for particular aspects whether that be the land, the soil, or the food that we are producing, this is the relationship with care that can be celebrated. There are wider forms of care that can be expressed such as social action along with including the wider relationships of care like political and family (Plumwood, 1993).

Ecofeminists stand behind environmental ethics that we have a moral obligation to nature (Warren, 2015). There is domination of both nature and women that is unjustified. But ecofeminism is more than this, it is about support and working together to solve issues through the support and network of women. With women supporting each other this puts agriculture in a unique position to work together to solve environmental and agricultural issues (Abatemarco, 2018).

Women, though they produce almost half of the world's food, are still discriminated against when it comes to technology, education, and the economy (Abatemarco, 2018). This creates disadvantages for women, when women are not counted there is a natural bias that occurs toward men and this distributes the economy more into the male favor (Warren, 2015). When women are not counted in an industry it easily makes women forgettable within the industry. This then shifts where the money in the industry goes, going toward the more favored individual. For example, making loans more easily accessible to men within the industry. Patriarchy pervades agriculture today in many ways. For example, tools and equipment are designed and manufactured for men, education is geared toward male farmers focusing more on industrial agriculture, and agricultural networks cater to male farmers' needs. The patriarchal structure of agriculture erases gender differences by assuming the 'default' farmer is male. Which allows manufacturers to produce implements that are ergonomically designed to fit an average male

body, and it enables governmental agencies to exclude women in their census efforts. Denying the existence of gender differences within a patriarchal system recreates the conditions of patriarchy (Plumwood, 1993).

But feminism not only relates to nature and care but also equality for all women (Butler, 2004). This directly connects with why women should be counted in all censuses and brings into question why it took so long for existing women in agriculture to be counted in the first place. Historically, genders have been treated differently in the United States. Men are associated with civilization and being superior where women and animals are associated with being inferior and closer to nature (Warren, 2015).

When we focus upon people and how they view geography men usually regard their knowledge as the only knowledge in geography (Cresswell, 2013). The spaces that women and other genders use every day, no matter how minimal the movements through space, should never be viewed as unimportant. But this is not just physical space, it is time as another dimension of space and the movement through other axes. Looking at how to incorporate feminism in areas that already existed in geography such as landscape and other forms of space. There are underlying themes of masculinity and male traits that have infiltrated geography (Rose, 1993). It is important to adjust the way of thinking and begin to apply geography in creative and meaningful ways.

Ecofeminism has focused on how women experience a closeness to nature, leading to feeling closer to nature and more caring about nature. Second is how women should not feel or be related to nature. In the past this has been held against women. Men have written on the relation of the violent and wild tendencies of nature and how women relate to nature because of these traits (Plumwood, 1993). However, the idea that diversity can be directly linked to

biodiversity brings concepts of nature and women closer together, just as gender and diversity are linked (Mies & Shiva, 1993).

A Brief History of Women Farmers in the United States

Women have always been involved in agriculture, so why has it been so difficult to trace back women existing in this sector? Much like geography when you look back on the history of women in agriculture they seem to have been erased or just never existed. Up until WWII in the United States there was little written about the contributions of women.

The truth is as long as there have been homesteads or hunting and gathering cultures there have been women farmers. Native women had the task of farming, from clearing the land to tending and harvesting the crops while the men were away hunting or fighting. Historically in America, through the Civil War, women were left to tend and keep the land while their husbands were off at war. And if their husbands perished the women were left to take care of the land until it was taken by the government and passed to a man (Levatino, 2015). However, going into WWII women in agriculture began a different chapter of their story.

Once the United States was deep into WWII most men had left to fight, again. The rural women started to become concerned with who would “rescue the crops”. This is when the grassroots Women’s Land Army was formed. There were millions of American women who came forward to help and volunteer to keep food production going and in turn keeping the war machine going. These women were encouraged by the president and along with many farm journals calling these women into action, and they were ready to take the reins and help where they could. The Women’s Land Army had many successful harvests, recruited more women, trained daughters, and held up the land when the men were away (Litoff & Smith, 1993).

After WWII when those that could return home did, rural areas tried to go back to the status quo. The same farm journals that had been calling upon women to enter the fields began to advertise that women should return to the home and that the fields were no place for women. They stated that a women's job was that of a farmer's wife and not the work of a farmer, and that women were too busy to support men in the fields (Carpenter, 2000). However, *Wallaces' Farmer* was a journal that recognized how important women were in the agriculture sector. They advocated to keep women involved saying it strengthened the sector. Women wrote in expressing the joy they felt from working the land, and how what a women's job truly was, was to be there not only in the home but also support in the fields. It was the 1950s when women truly began to see themselves as a partner on the farm instead of just a homemaker (Carpenter, 2000).

Into the 1970s women in the agriculture sector was on the rise. Women's participation in agriculture began to increase (again) during the 1970s, much like the USDA's Agricultural Census currently indicates. The number of U.S. farms were decreasing but the number of female farmers were increasing. They were running farms that were smaller and earning less money than men but at this time women were more likely to own the land that they were running the farm on (Kalbacher, 1985). The fascinating part was that women in 1978 were giving similar reasons for farming as women today. They discussed how farming gave them a sense of pride and rose their self-esteem, how it brought them closer to nature and made them feel free. For these women much like women today it was about a sense of community and more of what the farming could do for them (Kalbacher, 1985). Women have never really left the agriculture sector in the United States, they were just overlooked.

A Little Closer to Home

In this section, I focus on the shifting roles of women in agriculture in the United States as more women participate in agriculture while the number of farmers continues falling across the country. This means that women are taking a larger piece of the pie, so to speak (Runyon, 2014). Statistically it has been shown that women are more likely to raise livestock, grow niche products, practice organic, manage the finances on the farm, and track the records for the farm (local difference, 2019). Attitudes toward women on the farm are changing and challenging the stereotypical white male farmer.

Helen Gunderson of northern Iowa wanted to be a farmer her whole life, but her brother was groomed to take over the family farm. In the 1970s, Gunderson inherited land from her grandparents but still her brother “ran” the farm for her. However, in the 1990s, she decided it was time to start making her own decisions about the farm. In 2008 Helen invited Betsy Dahl to farm part of her land, Dahl was a first-time farmer but learned how to convert the land to produce organic products. Dahl is one of a growing number of young women starting to farm, and this role is taken on for different reasons including interests in sustainability and a desire to contribute to the local food system (*U.S. Sees More Female Farmers Cropping Up*, 2011).

Between 2002 and 2007, there was an increase in the number of women in agriculture. Currently one in every ten farms in the United States is operated by women. Aratani (2009) learned that women have numerous reasons for farming: enjoying independence, making positive environmental impacts, and being able to grow their own food while sharing with others. One of the women interviewed in the Aratani study stated if there was heavy equipment involved, her husband was there to assist but other than that, he focuses on his outside job like many farming spouses (Aratani, 2009).

For women farmers in Michigan, the Michigan Food and Farming System (MIFFS), Women-In-Ag Network, and Annie's Project provide educational programs for women in agriculture. The Women in Agriculture National Learning Network, funded by the USDA, helps women in agriculture balance family and personal obligations by provided resources to share information, support education, and network with other women also practicing farming and ranching. This network was developed from high priority topics such as farm safety, legal issues, land access, management, and business profits (Boehm, 2018).

Census data collected for 2002 and 2012 indicates a 25.5% increase with women as principal operators on farms in Michigan. For the United States, there was a 21.2% increase of women farmers over the same period. Kristi Keilen, owning partner in K&K Dairy, boasts that the agricultural world is changing, and women are just as capable as men on the farm. Jessica Dreyer from Dryer Farms and Daughters also states that she can do everything men can do (Galloway 2018).

Avalon Farms Homegrown in Climax, Michigan is run by Larry, wife Brigitte, and daughter Kelly who in 2018 was serving as the first female president of the Kalamazoo County Farm Bureau. According to Kelly, respect for female farmers is growing in Michigan, with many jobs available for women. Other women in Michigan have taken over family farms and are acknowledging the public's desire for the farm experience and the potential profits from agritourism (*Women in Ag Learning Network*, 2018).

Introducing This Thesis

Purpose of the Study

The purpose of this study is to explore how women in Michigan perceive themselves within the agricultural sector. It is also to show, quite literally, how women view their farms

using mental maps, a technique utilized in cognitive geography. Many women have gone unrecognized within the agriculture sector even though they have always been there. If women continue to go unrecognized, the agriculture sector will continue to tailor itself toward men. The adjustment of the census was the first step in the right direction but now it is imperative to tell the stories of women in this industry. Moreover, few studies have documented how women feel within Michigan about this area and how they feel about growing in an industry predominantly associated with men.

To tell the story of these women, I rely on qualitative and ethnographic methods. I utilize semi-structured interviews along with asking my female research participants to draw mental maps of their farms to examine what they find important and what types of emotions connect them to their farms. Initially my plan was to exchange my time, when applicable, for the time these women spent during the interview. However due to extenuating circumstances of COVID-19, I was only able to meet in person for some of the interviews. I address the impacts of COVID-19 on my research later in the thesis. I collect data that focuses on how women feel about the growth of women as principal operators and examine the reasons behind this growing trend. I employ feminist methodologies in this research to bring the focus of gender to the forefront, by focusing on the fact that these are women within the industry and the trials that they face. I also give them the time to teach me about their farms making us partners within the research. I utilize mental mapping to explore the way individuals view their spatial surroundings and choices. This gives a view into how these women behave spatially and provides a way to produce spatial knowledge about their farms.

Research Focus

My idea behind this thesis is to explore how women are seen within agriculture and how they see themselves fitting within this sector. After researching what others had written on this area and then what current individuals were saying on this subject, I was able to frame these ideas around my research. These ideas helped motivate me to move forward with my research partners and frame my questions that were asked during the semi-structured interview process. The census has changed and women are potentially being counted for the first time, this could expand networks, education, tools, and respect within the agriculture sector regarding women. Help and support may tie directly into networks that are available to women. Within their own space women may view their farms and activities as different, or even face different challenges on their farms.

Significance to the Field

For my research partners there could be some short- and long-term benefits to this study. Most of my research partners thanked me once our discussion was over. I had one woman thank me for talking through her hesitance on subjects that she had not taken the time to think about before. Many of these women were thankful to be a part of this thesis, excited to be a part of something like this, and to contribute. Another few words used were fascinating and fun. I believe these women felt grateful overall for the study and conversation. I hope in the long term that these women can continue to think about and question their place in the agriculture sector. Maybe even for those that do not necessarily resonate with the term farmer giving them a chance to think about why and even except the fact that they are farmers if they choose to do so. The benefits for these women both short and long term will vary from woman to woman being that they are each their own person and benefits will be emotional.

Benefits for the field include a few concepts. This idea of mental mapping in a feminist geographic study when it comes to agriculture really added depth to this thesis. I hope cognitive geography continues to be utilized within studies like these. I think this added a new layer to this study, and hopefully studies will take advantage of this in the future. Another benefit for the field is the acceptance of emotions in research. There is no reason to shy away from emotional knowledge within research. Especially with these women, their knowledge is not less than quantitative research, or any other type of research. Objective knowledge can be proven but this can not necessarily be proven. This way of collecting data can change every time considering the circumstances or mood. This was a once and a lifetime opportunity to emotionally connect with my research partners.

My research is contributing to feminist geography by using feminist methodologies, exploring a segment of the agricultural sector that is seldom recognized, and emphasizing women and their experiences. Their narrative does not directly come out and say that they are feminist, but they are contributing. They are finding ways to push boundaries outside of how society would normally conceive agriculture. According to one of my partners, Dorothy, believes that, “Women are feeling more independent these days... we are finding more creative ways to be involved in it... different reasons rather than the norm”. Women have always been in this part of work and are continuing to break down barriers. Veronica stated that, “I mean they have been self-appointing themselves as farmers for like, women do whatever the hell they want to do, but like to have the recognition in a census I think that is really important”. These women are proud to be women, and as Veronica stated, “I am very proud to be a woman and I know I have different skills”.

Limitations

It is important to address research for this project was done during the summer of 2020. Many regulations were set due to COVID-19, this severely limited my ability to find women to interview. My original plan was to visit farmers markets, farm-to-table restaurants, and attend events to meet farmers in the area. None of this happened because Western Michigan University suspended all university-sponsored research and travel in response to the pandemic. Farmers markets were suspended, farm-to-table restaurants were shut down, and all events were cancelled.

I was unable to carry out the research project that I intended, so I was forced to redesign the project. I began by emailing what I suspected to be female owned and operated farms in hopes that they would email back. I reached out to a few farmers that I knew personally and was able to gain a few interviews that way. These farmers also helped put me in touch with other farmers that I was able to interview. So, there was a form of snowball sampling that did work. However, this did create a bias in my sampling that needs to be addressed. That means that this is not an accurate representation of women in agriculture in Michigan, it is not a representative sample.

I interviewed nine different women from six different farms. All the women that I was able to interview are white. Many of them fall in the bracket of 20-30 years of age making this group noticeably young. With limited access to my research partners, I needed to interview anyone that was willing that fit the criteria. This is not to say that the interviews that were conducted were any less important or less meaningful. It is just worth pointing out that the demographic is not representative of all female farmers across Michigan.

COVID-19 also prevented me from visiting and helping on farms per my original intention. It was important for me to find a way to give back to these women who were giving me their time for free. My original intention was to give back my time in exchange for their time. I also had felt it was important to see these women in their environments to see and feel what it is like for them daily. Even if this meant helping at a farmer's market or stand. This was not a possibility. Travel restrictions were put into place and I did not want to make anyone feel uncomfortable during the interview. Once restrictions were lifted a bit, I was able to visit a few farms, but we stayed outside, socially distanced, and were limited with the help I was able to provide these women. This was disappointing and limited my original intent on giving something back in this way.

Finally, I had hoped to interview fifteen farmers. This was just not possible with the shutdown. I was only able to find and successfully interview nine women on six different farms. So, my scope was a little smaller than I originally intended. However, the richness of these interviews and being able to see how these women viewed their positions and their farms was very meaningful, nine farmers was powerful even without making it to fifteen.

Ethical Considerations

To ensure that this research was conducted in an ethical manner the protocol laid out by Western Michigan University HSIRB (Human Subjects Institutional Review Board) was followed. This thesis involved human research subjects, so it was important to make sure the regulations and requirements for human subject research was adhered to. The HSIRB exists to protect the welfare of human research subjects.

For WMU HSIRB, there is a four-step process to gaining approval for the thesis. First you must complete the application, then you include the protocol with a detailed description of

the project, next I wrote and followed the guidelines for the consent documents, and finally I included all copies of recruitment materials. For the thesis, the recruitment materials included an email that was sent out to potential women that might fit the criteria. The application was filed and included a description of the project, how the research may benefit the subjects or general benefits, how I was going to recruit the participants, what risks the participants might face, protection from these possible risks, my general open-ended script that was to be used, and, finally, the informed consent.

For my thesis and due to COVID-19 all subjects were sent the informed consent to read ahead of their interview. Each research participant provided verbal consent at the beginning of each interview. For the few participants that I met in person these were signed or verbally consented to. In this thesis there were not many risks for the participants, but it was addressed that there may be a small amount of psychological risk or discomfort with answering some of the questions. Included in Appendix B of this document is the approval cover letter, a copy of the informed consent and the general script that was used during the interview of the participants.

What Lies Ahead

This thesis has four subsequent sections. The next is a literature review that examines previous research on women's roles in agriculture. The third section discusses methods that are employed in this study. The fourth section summarizes the data and results that have come from this study. Finally, the thesis concludes with a discussion on my findings.

CHAPTER II

INTRODUCING WOMEN WHO FARM

Comparing the decade from 2007 and 2017, the number of women who own and operate farms in the United States has grown significantly. Though the number of reported farms operating in the United States is decreasing, the number of farms operated by women is increasing. The trend for the United States parallels the rest of the western world and this holds true for Michigan as well. Women choose to go into farm labor for a variety of reasons, but one thing is clear, women are breaking into a man's world.

The literature review summarizes scholarship in three areas related to the increase of women working in agriculture and focus on women within this male-dominated sector. The first section addresses research related to why and how women acquire farmland as well as accessing appropriate education. The second section focuses on research about women in direct marketing and why this option may potentially provide a good support network for women. Finally, the third section discusses research specifically related to women in the Midwest who farm, and why they have chosen this occupation.

Land Acquisition and Education

Women have always been subjected to male standards, and how women compare to men is a subject that has been broached time and again (Ball, 2014; Keller, 2014; Trauger, 2004; Trauger et al., 2008). Agriculture is another way to impose a western masculine ideal that nature is meant to be conquered and contained (Haugen & Brandth, 1994; Keller, 2014). Farming and farmer are generally regarded as masculine terms and farming is a male dominated occupation.

Historically, women would become involved in working on a farm because there had been a male relative previously involved in farming (Haugen & Brandth, 1994; Pilgeram, 2007).

Women entering a formally male-dominated sector disrupts current gender roles. Past studies focus primarily on women in the role of farmer's wives, not women as farmers. Haugen and Brandth (1994) interviewed eighty-four women sole operators in nine communities in Norway, where the different communities were chosen based upon their farming differences. Both multiple choice and open-ended questions were used during these interviews focusing on why respondents became farmers, their qualifications in the field, their farm size, their roles on the farm, and their enthusiasm for innovation. Haugen and Brandth found younger women are becoming farmers because they find the job appealing, where the older generation of women they interviewed generally take on the responsibility out of obligation. Even with younger women operating farms that are the same size as those of men, women farmers still make less money, and generally have a spouse that works off farm. No matter the age group, women continue to do most of the housework in addition to valuable time spent working in farming (Haugen & Brandth, 1994).

This study suggests that women's lives are beginning to parallel that of men in the professional world but domestically, there are still significant differences between men and women (Haugen & Brandth, 1994). Though this study was done in another country and in 1994, ideas from this study still offer timely questions for a contemporary study, especially the idea of women creating and conquering their own path with or without a partner. Increasingly women are the ones choosing the occupation of farmer.

With women engaging in commercial agriculture increasing in popularity the growth of women in a male-dominated field and their reason for doing so also is of interest in the United

States. One of the most important aspects of farming is land ownership, one of the key elements to being able to farm in the first place. So how do women farmers acquire land? Pilgeram and Amos (2015) explore the ways that women who engage in sustainable agriculture access land, and how these different ways are specific to particular economics and developmental moments in their lives. They argue that most women are entering into the profession of farming with limited capital and possibly choose sustainable farming partially as a financial decision (Pilgeram & Amos, 2015).

In the fall and winter of 2012 to 2013, seventeen women engaging in sustainable farming were identified via online resources and interviewed in the inland northwest, to discover how women accessed farmland. Participating women may or may not own the land but remain involved in farming. There are three main reasons that women gain access to farmland: (1) through marriage, generally these women are in their 50s and 60s; (2) through personal savings or retirement, these women were accessing land after the age of 40; and (3) a younger group of women who decide to farm with a male partner. Women tend to farm with limited capital when they start out unless they marry into crop land, and women with a partner rely heavily on the fact that the partner usually works outside the farm to bring in income (Pilgeram & Amos, 2015).

Though these women all access land in different ways, they are still farmers and still are following their dreams. This study raises the idea that women are entering this profession in a wide variety of ways (Pilgeram & Amos, 2015). This can be applied to other locations, including Michigan. How women come to access land is an important part of the story regarding why they farm. But access to land is not enough to create new farms, it is also learning how to farm that is important. Many of these new women farmers did not grow up on farms and it may be important to find a strong network to help support the learning process.

Trauger et al. (2008) studied differences in education among women farmers in Pennsylvania. The researchers wanted to know the types of support networks that women participating in the study felt important. Social networking plays a major role in the networks that agricultural women create. With increasing risk in farming a sense of comradery can be developed socially to form bonds between women in farming. Bottom line women tend to trust other women in the industry. Existing agricultural networks geared toward women need to become stronger to further the support through networking events (Trauger et al., 2008).

Educational areas like farming in general tend to be male dominated (Trauger, 2004; Trauger et al., 2008). It is important to know what educational opportunities related to farming are lacking. With the growing number of women farmers, it is necessary to discover what works, so that women entrepreneurs can level the playing field when it comes to commercial farming (Trauger et al., 2008). With more farming technologies being introduced women tend to be at a disadvantage, often being excluded from developmental education in agriculture (Sachs, 1983).

There are large gaps in agricultural educational opportunities for women in Pennsylvania, especially when it comes to equipment use and repair. Even when education is sought, women feel a disconnect from the expert or extension agent and the remainder of the audience. This disconnect comes from not being able to relate to the topics being discussed or not being able to learn from just the lecture PowerPoint model (Trauger et al., 2008). This disconnect can curb the ideas that women have that they want to share with other women at educational events. Women agree that the best way to learn is to “get out there and do it”. Five focus groups, ranging from four to nine participants per group were assembled, in different regions of Pennsylvania. Focus groups were used with the goal of letting the participants build off each other’s opinions on the array of topics. The focus groups were also intended to empower

the women and use as a form of networking with other women in the groups (Trauger et al., 2008).

Women report a lack of educational opportunities in the agriculture industry that are specifically geared towards them. Networking is making women stronger in the industry and perhaps that is where new educational sectors can be concentrated. Women acquire land in different ways, but the current feeling is that women are choosing to operate and manage farms not just because they are the “farmer’s wife”.

Women in Direct Marketing and Sustainable Agriculture

Research suggests that a disproportionate percentage of women farmers tend to engage in sustainable agriculture and direct marketing (Jarosz, 2011; Trauger et al., 2010; Wells & Gradwell, 2001). Direct marketing practices include selling at farmers markets, organizing community supported agriculture (CSA) operations, running farm stands, and u-picks. CSAs are a way for farmers to connect to their community as well as providing a way to bring fresh food to these communities (Trauger et al., 2010). The way women reflect of the significance of direct relationships give women the ability to grow their businesses in a different way. Care about their community can give women an incentive to how they connect with their neighborhoods and communities around them.

Wells and Gradwell (2001) researched CSAs and how women relate these practices to a caring practice. In western cultures, there remains the notion that men need to change the land and dominate the area to make it useful to them (Wells & Gradwell, 2001). Wells and Gradwell suggest that women develop a relationship with the land they farm and do not see farming as something to control. Women are not inherently more caring but there is an importance with their emotional relationship to their land and the labor that goes into the land. This in some cases

can lead them to more sustainable agricultural practices. This is how gender is associated with agriculture practices and opportunities and feminist values (Wells & Gradwell, 2001).

Farmers operating CSAs close the gap between producer and consumer (Wells & Gradwell, 2001). Within this study the authors found CSA growers were not looking to exploit and overuse the land as conventional agriculture tends to do. Wells and Gradwell interviewed twenty-one CSA operators (nineteen of whom are women) to examine why women operate CSAs. The disproportionate number of women was purposeful, so as to accurately represent female-dominated CSAs in Iowa. CSAs are not only a way for the producer to sell food to the consumer, but can also represent a resource management system with the distinct component of care (Wells & Gradwell, 2001).

Findings indicate that women report caring for their community, the future, and their place in it. While these women profit from CSAs, what really drives them is what it is doing to benefit those around them. Women farmers participating in the study report the desire to feed their community while increasing awareness of those around them by directly interacting with the members of the CSA. There is also the care of nature, that makes respondents feel as though they are contributing to the health of the world along with the health of their communities (Wells & Gradwell, 2001). Care plays a large role on what motivates women to start a CSA and practice sustainable farming.

CSAs are a trend across the United States. In metropolitan Seattle, women are also becoming involved in CSAs. Jarosz (2011) addresses the idea of ecofeminism and the deliberation of how women relate to the environment, while looking at their motivations for starting a CSA. The concept of care is mentioned time and again, care for those women are

feeding and care for the land they are farming on (Jarosz, 2011; Wells & Gradwell, 2001), along with the idea of not only nourishing yourself but also those in the community (Jarosz, 2011).

Jarosz (2011) investigates what motivates women to continue in farming, not just document their individual motives. CSAs and urban farming are both supported by women who are motivated by self-care that is given to them by providing nourishment to others. Women choose to operate CSAs because this type of farm coincides with their core values such as giving back to the earth and providing a balance between home and work. There were twenty-four semi-structured interviews conducted by Jarosz between 2003 and 2006 (Jarosz, 2011).

Responsibility to others combined with self-care, care ethics, and caring about the work these women are doing, is a combination that continues to motivate women to run small scale farming operations that realistically have limited economic returns (Jarosz, 2011) as compared to large-scale commercial agricultural operations.

Farms operated by women are qualitatively different because women tend to operate smaller farms that are less likely to produce major commodities. Further involvement in livestock operations tend to be popular as well. The concept of direct marketing has been discussed previously, and women are adopting these variations in farming in their communities and on their farms. There is a growing proportion of women-owned farms, but this has not changed the fact that women are still responsible for most domestic work. On top of that, there is the addition of working directly with other members of the community. This also increases the workload for female farmers (Trauger et al., 2010).

Twenty-two women farmers on small to medium sized farms in Pennsylvania participated in this study. Trauger et al. conducted in-depth semi-structured interviews to discover what types of management and strategies contribute to civic agriculture. Communities

desire social activities including market-based activities, and cultural activities such as culturally based foods. Women engaging in civic agriculture are looking to provide such activities to their communities. Women view success in farming operations through the lens of how much they can give back to their community. This is not to say that women do not need to be financially successful to support themselves and their families, but the satisfaction for these women comes from the communal involvement (Trauger et al., 2010).

The women interviewed in the Pennsylvania study were leaders in their communities and this may have biased the results in a way the researchers had not initially anticipated. Regardless, the safe spaces and empowerment women feel when farming are what drives them to feel successful in civic agriculture. Success for women is not just monetary in nature, but also by the ability to respond to the needs and wants of their communities (Trauger et al., 2010). Networking, education, land acquisition, and direct marketing all play major roles for women who farm. These ideas also hold true in the Midwest for women who farm.

Women report a sense of worth from becoming more involved in direct marketing aspects of farming. This also fills a need supporting the feminist idea of care, not just caring for others in their community but self-care is also important to women. Giving back to their communities is crucial and there are many ways that women are accomplishing this in farming.

Women Farmers in the Midwest

Investigating women farmers in the Midwest may help explain why women farm in Michigan. The growth of women farmers across the United States has been documented for several decades (Sachs, 1983). It used to be that when women entered farming the decision making was often overshadowed by men on their farms, but women were still putting in the work and considered themselves to be as much of a proprietor on the farm as their male partners

(Sachs, 1983). This is now changing as an increasing number of women have become the decision makers on their own farms (Ball, 2014; Keller, 2014; Trauger, 2004).

Investigating why women enter farming is important if supportive programs and organizations are to be restructured to support this trend. For years policymakers overlooked the specific needs of women in farming because there were so few women farmers, despite the reality that the number of women participating in agriculture continues growing across the entire Midwest (Ball, 2014).

Ball examined women in Kansas to try and understand current trends (2014). Ball documents an increase of women in agriculture in Kansas between 1997 and 2007. Three major changes occurred in Kansas to help explain the rise of women in agriculture: (1) a move toward smaller farms, (2) a more prominent cultural acknowledgement of women owning farms, and (3) an interest in specialty crop production. Ball's work contributes to the increasing literature on female farmers and was used to explain the increase of female farmers in Kansas. This is one of the first initiatives to study the growing representation of women in the United States occupying the position of "principal farm operator" (Ball, 2014). This project helped frame my proposed research in Michigan laying down the framework of looking at census data and interviews to draw conclusions about the state and the trends that are consistent between Michigan and the United States.

These three major changes were the reasons that women are having an easier time breaking into the male-dominated world of farming. When farms are operated on a smaller scale the idea of being a farmer is changing. There is less of a need for the use of expensive large-scale machinery. If this trend continues men will dominate in the commercial agriculture sector while women will dominate smaller farms that provide different types products that communities are

seeking (Ball, 2014). Before women were recognized as farmer they used to be recognized as the farmer's wife (Keller, 2014; Rissing, 2012). This new identity as principal owner operator is changing not only how communities view women farmers but also how women view themselves. If the community does not view the farmer as equal to her male counterparts, they are less likely to purchase from the female farmer. On top of this if the female farmer does not view herself as up to the task of farming or viewing the job as inappropriate for a woman then they are less likely to pursue farming in the first place (Ball, 2014).

Rissing's (2012) research incorporated a ten-week ethnographic study of thirteen women in Iowa, and participants reported that gender does not influence their views on sustainable agriculture. However, Rissing found women view the earth as a "living thing" and the idea of nurturing is frequently cited as one of the reasons that women choose to farm. Some women report their gender as giving them an advantage in their farming practices, as they feel women tend to be better problem-solvers. This view, respondents noted, helps them make educated decisions about their work (Rissing, 2012).

Women are breaking through stereotypes and gender categories when it comes to farming by exhibiting what it means to be a farmer (Rissing, 2012). None of the women who participated in the Iowa study complained of being delicate, moody, or catty or any other negative stereotype sometimes associated with women. All these women reported being able to accomplish their jobs as a farmer. However, they also note much of the machinery and clothing made for farmers is geared toward men. As the proportion of women farmers increases, it is important that tools made for women with a different body type than men are developed (Rissing, 2012).

Keller (2014) reports in-depth interviews and ethnographic analysis conducted during 2006 to 2007 with 12 women dairy farmers in Wisconsin to identify the difficulties that women

face as farmers, how they manage these issues, and how women farmers are reshaping rural femininity so they will be recognized by their peers as farmers. From 1997 to 2007, female owners and operators of farms in the United States has grown by 46%, and Wisconsin exhibits the same trend. In 2007, women constituted only 12% of the owner operators. Women continue to face issues such as being recognized as “legitimate” farmers and determining what to call themselves as a female in the industry because the term “farmer” is always associated with men. These issues are addressed, based on these interviews, by proving they belong in this industry; whether by learning new skills or finding a supportive partner (Keller, 2014).

Conclusion

Discovering how women connect through networks in Michigan and how they acquire that land is important. It may lead to answering how they feel about being connected to other women that also have not been legally recognized up until this point. When it comes to direct marketing women in Michigan are taking the reins to run CSAs and U-Pick or other agritourism marketing to expand their businesses and open their farms more to the communities around them instead of just large markets.

More research is needed to expand the story of why women own and operate farms in Michigan. To the knowledge of this researcher there has yet to be a study like those reported above to explore why women in Michigan began farming. It could be assumed that the reasons for why women are entering agriculture across United States also holds true in Michigan. However, all women are different, and it leads to this case study of Michigan, to discover if there is in fact a trend in this area as well. The more important question is how women feel about not being counted in the industry up until this point? How has it hindered their education or even

adapting to tools or clothing that is meant for men? Finally support from other networks of women is important, how do women in Michigan feel about the available networks?

CHAPTER III

RESEARCH METHODS

This qualitative study seeks to discover why women in Michigan have chosen to enter the agriculture sector. This study examines how women feel about being counted on the census and do they feel this will work in their favor to expand networks, education, tools, and respect within the agriculture sector, what types of networks are women in Michigan currently turning to for help and support, and finally, how women view their farms and activities and what do they feel is important within their own space.

Semi-structured interviews along with a mental map produced by these women is utilized to acquire data from women who own and operate farms in Michigan. The data collected studies how women feel about their farms and their position on the farm as an owner operator. Also, how women feel about the growth of women as principal operators to examine the reasons behind this growing trend. I have adopted feminist methodologies within this research as to not hold the only position of power as a researcher, but also to focus on gender and bring to the forefront (Pini, 2003) and the fact that these are women participating in farming.

Setting

With the nine interviews conducted there were three different settings. Four of the interviews were conducted via WebEx. The four women either called into the meeting or signed in so we could see each other and interact face-to-face. This situation was not ideal, but due to the extenuating circumstances of COVID-19, it was necessary to make these women feel

comfortable during the pandemic. These women were conferencing in from their homes to have our interview. I was also conducting the interviews from my home as well.

With the other interviews I was able to meet these women in person on their farms. It worked out that we met outside or in a large recreation room practicing social distancing when the restrictions began to lift during the summer of 2020. The first group of three women I met with own and operate a farm that is a therapeutic nature-based learning and working facility located in Michigan. The participants go to the farm to learn applicable skills for daily life through farm work and learning based activities. Interaction with animals and farming helps these participants open to the world. When we met, we toured the farm and then the interviews took place in a large rec room where they work on different projects with the participants.

The next group of two women, I met with second, own and operate a farm that is a diversified specialty crop farm primarily focusing on vegetables. Their farm is located in Southwest Michigan. They also have animals that are being raised on the farm for both meat, dairy, and eggs. Their farm is roughly six acres of land not including the animal areas, this is just what they are using for farming. Our interview took place outside by their family garden beds that were the oldest on the property just off the side of their childhood home.

Research Partners

For this study, the research partners were chosen through purposive sampling. I needed to select partners to participate that met the criteria for this study, in this case women who owned or operated farms in Michigan. My research partners included nine women, some of whom worked on the same farm but managed different aspects of the farm. The initial thought was to use a form of snowball sampling, and in a way that was used to try and recruit partners. However due to COVID-19 a good way to begin the snowball never materialized. All these women were found

through contacts that acquaintances or through a farming network that sent out an email to their appropriate participants. Though snowball sampling was attempted, and some women were contacted through the recommendation of other female farmers it was difficult to set up interviews due to the pandemic, and none of these interviews worked out.

The way this study worked out and the partners that I was able to find led to a group that was not as diversified as I would have liked to see. However, these partners still represented themselves well in the study and gave open and honest opinions as to what their views were. The group of research partners ranged from 24 to 53, with three of the women in their twenties, five of the women in their thirties, and one of the women in her fifties. All the partners were Caucasian, and their highest education completed was six women held their bachelor's degree, one woman held a master's degree, and two of the women held specialty training degrees. However out of all these women, only one held a bachelor's degree in agriculture.

One aspect that separated these women was what type of farm they had chosen to run. One of the women helps run a family farm, this is a cash crop farm that is in the process of moving from traditional cash crops to alternative grains and seeds. As stated above three of the women work and run a therapeutic farm for participants with cognitive disabilities. One of the women runs a textile farm raising sheep and alpaca. Finally, four of the women run farms that produce vegetables, flowers, eggs, and raise animals for meat and dairy respectively.

Measurement Instruments

Feminist methodologies not only take place during the research but also in how the results are presented in the end. During data collection it is important that there is a balance between the researcher and the women being interviewed. The process of the women working with the researcher can lead to a balance of knowledge in the relationship. It is also important to

acknowledge how being a woman myself influenced the collection of the data. In the end inclusive spaces were created (Caretta & Riaño, 2016). Geography, in general, can be inherently masculine (Rose, 1993, 1995, 1997), so it is important to work within a feminist framework.

Within geography women have been an area that has been previously ignored in research (McDowell, 1992; Monk, 2006). When feminist geographers began to emerge, more issues focusing on women came to the forefront of research. Social issues, political issues, or other issues about gender were placed within the research agenda. Focusing on how women fit into the social construct of agriculture along with the sense of place within their space follows the role of feminist scholarship (McDowell, 1992).

Maria Mies (1993) argue that feminist research should acknowledge to researcher's partiality and positionality, involve active participation, and the process should awaken the conscience. I draw upon Mies' work to inform my research agenda. First making sure to identify with my research partners. Though I am not in the agricultural industry, I can identify on the level of being a woman, this brings us more in line with each other on the research plane. The next point I would like to address is that of active participation, it is important not to just stay in the ivory tower. My research partners are dynamic and different, so it is necessary to point out that this research reflects these women. Though there are discussions of women farming in general, in no way do my partners represent all women, nor does my research. It is important to recognize the individuality of each of these women and their stories. This is specifically how my partners relate to their own farms and the diversity of each of their experiences as individuals, it is the texture of these women within the agriculture sector. Next it is important to point out the overall fight against the patriarchal system that exists in the agriculture sector. Though none of these women really point out that they are fighting against a male dominated system they are in

their own way, this will be discussed further in the following chapter. Finally, Mies points out that it is important that research is carried out by the women involved in the research. Mental mapping helped get my research subjects directly involved with the research and they were able to teach me something in the process of our time together (Mies & Shiva, 1993).

It is important to remember as a researcher that not all the information collected on these women apply to all women. There is also the sense of privilege that comes with being a student researcher. I am lucky enough to go to college, so it was important to keep that in perspective during the process. Reminding myself what my sense of place is within this process is imperative. Also, as the academic I am the one interpreting what these women have to say. Throughout these interviews I hold the upper hand and being in the “privileged” position of deciding what direction to take these interviews (Rose, 1997). However, releasing that privilege is what I hoped to accomplish by introducing mental mapping into the process.

Mental mapping has yet to be utilized in a study such as this. Mental mapping can help explore the way individuals view their spatial surroundings and choices. It gives a view into how these women behave spatially as well as provides a way to produce spatial knowledge about their farms. This method seeks to decenter the academic as the person who is capable of producing geographic knowledge and creates an opportunity for women to represent their world. Discovering how people think about geographic space can be as important as observing women in their environment (Kitchin & Freundschuh, 2000). Mental mapping can be a way of seeing how women’s knowledge of the places affects the way they represent them in their illustrations (Jung, 2014).

Mental mapping is a way to give power back to the interviewee in the interview process. Mapping can be a way to give women a voice (Jung, 2014), and a way of sharing the power

(Caretta & Riaño, 2016). This process can tell beautiful unseen stories that marginalized populations, such as women, can tell through the use of images and color connected to emotion (Gieseeking, 2013). This in no way is saying that women have a weaker cognitive capacity when compared to men or that coloring is their strong suit, it is simply a way to connect emotion with images through the mapping process. Women can help readers visualize what they find important on their farms. Because all people view and visualize their surroundings differently this idea, quite literally, shows what is important and where important events have taken place. Geography in particular has a history of being labeled as a masculine discipline (Rose, 1993), so looking to utilize new methods to practice more feminist research should be explored (Jung, 2014). With women participating in the research by producing visual data, this gives women a chance to take back the power of the interview for themselves (Jung, 2014).

Procedure

This study takes place in Michigan but is not restricted to one county. The original hope was that the interviews would take place on the women's farms. However, due to COVID-19 this was not feasible. There were only two farms that I was able to visit in person. With the two farms one had two women running the farm and the other had three women running the farm. For the other four interviews, they were conducted via WebEx. Interviewing on the farm is ideal, not only to interview my research partners but to see them work on the farm during the interview process. The idea was that in person interviews would bring a feeling of trust to the relationship formed while the interviewing takes place. Trust is an important part of this research. Trust promotes responses that are truthful and received well and will make the time together enjoyable overall. I want this to be an enjoyable experience not only for myself but also my research partners. I want them to feel connected to this process, so they also receive something out of it.

The women do not need to own the land that they farm on, but there needs to be some area that they are farming. Farming can include any type of farming from vegetables to livestock, respectively. Initially snowball sampling was supposed to be used, once some of the initial women were identified they would help in further identification of other subjects. In studies that have been done in other locations similar to this thesis, purposive and snowball sampling was utilized to find participants for interviews (Ball, 2014; Rissing, 2012). Though there is the worry that bias may be imposed with snowball sampling instead of the preferred method of random sampling (Ball, 2014), without an existing list of all female farmers in Michigan this makes random sampling next to impossible. However, with qualitative research snowball sampling is an effective form of sampling (Bryman, 2016). Though snowball sampling did not work as well as originally intended due to COVID-19 it was still utilized on a small scale.

By connecting with existing networks such as Michigan Food & Farming Systems (MIFFS), or the West Michigan Growers Group, this led to some of my research partners. Also, the use of shared acquaintances, utilizing sources already known to reach out to women in the farming industry. In total, I reached out to twenty-six groups or female owned farms, out of this I ended up with nine research partners on six different farms. From here we were able to arrange a time and place for our discussions. Each discussion averaged around an hour and a half from beginning to end.

To conduct the interviews, I used the recording feature on WebEx or used my phone to record the in-person interviews. Because these interviews are semi-structured and may not stick directly to a script, and it was imperative that they were recorded to be transcribed later. The use notes were also applied along with legal sized paper (for the in-person interviews). The legal paper is used for women to draw the mental maps of their farm. For the partners that used

WebEx they utilized what they had at home for the drawing portion of the interview. Finally, the script, that is used for the structured portion of the interview process. Though as stated previously the interviews are semi-structured leaving conversation open to evolve with each partner creating more of an organic interview process. Appendix A lists the proposed scripted questions that were used to conduct the interview. Many of the questions were repeated in each interview but many were also added to better showcase their farm and their life as a woman in the agriculture sector.

Data Analysis

Once the interviews were finished, I proceeded to transcribe the data collected. I attempted to use different transcription processes but the easiest way to accomplish this was to transcribe the interviews by hand. Though this was a tedious process it was necessary to truly capture the nuances of the interviews, and really understand what my partners were trying to say. Interview questions were then matched together to see where themes arose within each interview, these questions focused on my initial research ideas. I then proceeded to code the data around my own themes; gender and care being the two largest groups, followed by direct marketing, networks and education that exist within their sectors, and how they view their own space and themselves. I selected direct quotes from these women to focus on these themes and tell their own personal stories.

Once the transcription process was finished, I assigned pseudonyms for my research partners to keep their identity confidential. I came up with a list of twenty-five female movie stars from the 1950's and then made a list of their first names. Their first names were then randomly assigned to the nine individuals that participated in this study. The following names were assigned to my research partners; 1 – Veronica, 2 – Jane, 3 – Mae, 4 – Judy, 5 – Dorothy, 6

– Marilyn, 7 – Audrey, 8 – Grace, and 9 – Ava. For my entire thesis, my partners are referred to by their pseudonyms. This gave the partners a way to answer the questions honestly and openly without any worries of being recognized for their responses.

It is important to address the use of NVivo here. My original plan was to utilize the NVivo software to code and process interview transcripts. However, due to COVID-19 and not being able to come to campus I had to make do with what was available to me. I was able to download a free trial of NVivo that was good for ten days. The software did recognize some themes throughout the discussions but in the end, I was not able to have enough time with the software to really create any meaning from it. So, I had to develop my own themes for this thesis. With what I could get out of NVivo the most common themes were farm, women, farmers, farming, work, and different, just to name a few. Though NVivo can take the transcripts and extract words what it is not able to do is represent the feelings and meaning behind these words. In the end, my coding was done without a program I believe it is more meaningful to extract my takeaways from these discussions. In the next section, I examine the results of these interviews to discuss the importance of women farmer's experiences and connections to their farms in Michigan.

CHAPTER IV

RESULTS

This qualitative study examines how women feel about being counted on the census and do they feel this will work in their favor to expand networks, education, tools, and respect within the agriculture sector, what types of networks are women in Michigan currently turning to for help and support, and finally, how women view their farms and activities and what do they feel is important within their own space.

During my interviews with my research partners four common themes emerged from the discussion: networking and education, direct marketing (including but not limited to CSAs and Farmers Markets), census and gender, and care. Every interview discussed mental maps so the results will be included here as well. Though these interviews had a semi structured script (See Semi Structured Interview Questions) many of the responses were arrived upon through open discussion between myself and my research partners.

Networks and Education

When talking to these women, networks and education emerged as a crucial component to fully comprehend how women farmers practice agriculture. Networks consisted not only of a formal network but also networks of people that they surround themselves with, that either work on the farm or support them off the farm. When it came to the discussion on formal networks and what the women participate in there were varying degrees of answers both negative and positive. Veronica had not had much luck when it came to formal networks.

...I will be like really honest here; it is like really hard to relate to those people... sometimes I think people look at me like I am not a farmer. Which is understandable because I am not but at the same time, this is just like a really small example... I went to a workshop on how to change your farm from organic, just to have more information. It was like a four-hour training lots of people there... and I dressed kind of nicely because I have to meet with grocery store manager, and I don't know it was just part of how I was raised, to dress nicely... I went to this thing and there was a quick break for coffee, and I was standing by the coffee chatting with someone and someone kind of gives me, an older woman actually, she gave me like a once over and was like so are you a farmer? And I am like, it just felt so, anyway so like with those networking groups, I don't know if people would, I don't want to say except me because I don't need anyone to accept me but like I feel like they might be just like, your money hungry or you're not organic or you're not all these things.

Though others have had luck with formal networking, such as West Michigan Growers Group.

Both Jane and Mae are part of the group, and both enjoy the connections and meet ups that the group provides. Jane shares her love for this group and the support that she feels,

I absolutely love being a part of that group. It's just all small sustainable farmers who are really working towards the same common goals and supporting each other along the way. I actually love being a part of that community, especially when you question yourself and your choices and then you meet up with all the other local farmers just questioning the same choices.

For farmers like Judy, Dorothy, and Marilyn they have networks of individuals that they connect and do business with but because they are new to farming, they have yet to find any formal networks that they participate in but are interested and have thought about reaching out to connect with others through formal networks. They have also tossed around the idea of reaching out to other farms that run therapy programs to create a network of their own.

When I asked my partners what they thought about having a formal network of women to connect with, many of them brought up a network that fizzled out called Badass Brunch or Badass Lady Farmers (both responses were given but I could never confirm the exact name). This was a network of women that would get together and occasionally meet to discuss, tell stories, and make connections, but it sounded like this never took off due to time constraints. But

Jane said, “I think gender roles are such an odd thing in agriculture, but it would be awesome just to get female empowerment in one room and really break some barriers in terms of you know, women in agriculture”. And for farmers like Judy, Dorothy, and Marilyn on one farm and Audrey and Grace on another farm they already all farm together so they already have a network of women daily. Grace has also worked on other farms with women in the past, so those types of networks are important to her. Many of the other women brought up personal connections that they still network with, not in a formal setting but as individuals connecting. Grace and Ava also brought up a good point stating that they utilize social media outlets to network and see what other women are doing not only in Michigan but globally.

Education for these women comes through schooling, trial and error, experience, internships, and just getting out there and doing it. As Mae and I discussed formal education when it came to agriculture she stated,

With agriculture I do feel like learning experientially is very valuable...I participated in WWOOF USA which stands for Worldwide Opportunities on Organic Farms...I had a really good experience with that. I had farmers who really wanted to teach other people how to farm and were willing to kind of take a risk on someone that had never done anything before, for all intents and purposes, related to farming.

Though she never attended college for agriculture (Mae actually went to school for art and design), she took advantage of programs like WWOOF and meeting other farmers that were willing to take a risk and show her how to farm. Audrey and Grace who are sisters running a farm together talked about how their education came from growing up on the property they currently farm on. Grace also had other training on different farms, conferences, field days, and working in greenhouses around Michigan. “We actually both grew up here. So, the gardens that are here (referring to the beds by the barn) are basically family heirlooms... 30-year-old raised beds. We learned a lot that way, we absorbed a lot, we were involved in varying levels of

enthusiasm as children (both laugh)”. Audrey echoed her statement, “I grew up here. So, I had a lot of time in the garden with mama... and for me the last five years have been my education”. Audrey had joined her sister more recently on the farm and is taking advantage of this time to learn by doing.

However, when discussing formal education regarding agriculture there was a leaning toward a negative outlook. Though only one of the women went to school for agriculture many of them have taken classes through collages or different programs. Ava though she finds good information on her own with her own research through branches of Michigan State University, she has never had much luck with formal training when it comes to agriculture. “I took a class on sheep...I’ll be honest, I don’t get a lot from those. Sorry to say I actually got my money refunded from the one... because I felt like it was a waste of time... Like I don’t dock my sheep’s tails... I mean, I don’t buy into all those industrial farming practices”. For her this type of training does not make sense. She is not industrial, she is not a large farm, she is a small farm and forging her own path on how to get things done and do them in a way that makes sense for her. Jane went to school specifically for agriculture, she also felt out of place within the program and a push to move away from a small sustainable farm into big agriculture,

I really felt it in school. Like a push to be more, I really felt like when I would explain that I want to grow on less than 5 acres, and I want to grow 200 different varieties of this and that and the other thing. It’s so obtainable and there are so many successful people doing it and I am successful doing it. But there was a lot of push back from peers, whether it be professors or classmates. Just a lot of, just being first generation, I was surrounded by so many people who were like fifth generation. And this was the way they did things and they just didn’t understand other people’s way of doing them.

But Jane now looks at this with a positive outlook,

There were points where I wanted to quit my major because it was so heavily influenced by things I didn’t want to be a part of, so that is just the biggest thing I would like to see shift... But I think being able to show people, like look at their perspectives with an open

mind, but stay true to their own values and eventually just prove them wrong, it really all works out in the long run.

Some of these women are using education in the other direction, where they are educating people on their farms. With Judy, Dorothy, and Marilyn running a farm for individuals with cognitive disabilities, education is what their farm is all about. It just comes in the form of therapy. Jane explains it as "...using the farm work and nature as a medium for therapeutic activities, therapeutic change, and growth for adults with cognitive disabilities". Mae who is the farm manager on her farm discusses how they, "want to engage with people and connect them to nature and where their food comes from". Both farms, Mae's and the other three women, are non-profit farms so education directly ties into not only the goal of the non-profit but also a form of direct marketing for the farm.

Direct Marketing

Veronica and her family do not have people come to the farm for any type of experiences, but her mother has taken it upon herself to begin to fix up the farm and make it look better, "my mom..., just came in and was like we need a beautification committee, and I am appointing myself the beautification committee...she wanted to create a sense of pride around our farm". Though they do not have people out there now Veronica would "love to have people come out and see what it looks like". For now, she uses their alternative grains and seeds and bakes them into granola to sell to stores as well as farmers markets.

Jane participates in farmers markets, farm stands, and CSAs. She also does community outreach on her farm with education and workshops for those in the community. As an urban farm, she feels connected to the community and the direct marketing is "sort of a fun way to get involved and educate the community on what's happening". Mae is the same way, the farm that

she manages for the non-profit participates in farmers markets, farm stands, and CSAs as well as, like Jane, bringing people to the farm (before COVID-19) for education and other unique experiences such as tomato tastings. And as stated previously being the manager of a non-profit Mae has a mission to not only connect people with nature but also where their food comes from.

With Judy, Dorothy, and Marilyn their direct marketing looks a bit different. Not only are they a non-profit but they also cater to individuals with cognitive disabilities to help them learn, adapt, and grow within themselves. However, their plan is to set up a CSA in 2021 as well. In 2020, they participated in some farm stands or markets with the participants to engage them in the process. Judy describes what her goals for this year are, “The idea is for the participants to run the farmers market stand. To work on social interaction and business skills, all that type of stuff... they really enjoy being able to sell something that they made”. In that case Judy was referencing a market that they had participated in at one of the local tractor supplies, and the bird houses that the participants had made at the farm.

For Ava she has a much more specific farm. She does not even call herself a farmer she likes to tell people, “I grow yarn”. She has both sheep and Alpaca on the property that she is then shearing and turning into a fiber primarily for socks (her biggest seller), but in her shop she offers all sorts of options from yarn, roving, scarves, and mittens. So direct marketing looks a little different in the sense that fiber is a specific market and niche, not only because of the product but also the price point. Ava describes the process and price points for her side of the production,

The animals, the sheep get shorn in March; the alpacas get shorn in May. I skirt their fleeces and I send it out and depending on what I'm doing, I send it to two different processors in Michigan, depending on what I want done. Then I have to pay ahead so it's on my credit card and it sits there. Yeah, so that kind of sucks, but it's expensive. Oh, just to give you an idea. I sent out 130 pounds of wool to be made into commercial yarn because then that will get made into hats and stuff, and it was 3,000 dollars. It's very

expensive so that's why, when I talk about my price point, I have to know my market and where I need to sell.

But Ava has adapted, and she knows who to cater to and how to reach them. When COVID-19 is not a factor Ava participates in around eight different expos per-year as well as managing a farm shop located on her property. But it is not only this, Ava also has people out on her property,

I've had photo shoots out here. I've had photo video shoot, because the property is actually really, really pretty. I've got a big willow, so it's really attractive to people, to come out and do photo shoots. I've done schools tours that came out, like a couple of Christian schools, middle schools, and I did a whole, fiber tour for them. So, we learned how to go from the beginning to the end product.

She has also begun to think about outreach to different parts of the community or education even for collage age groups that explains raw fleeces and what this does for different industries.

Audrey and Grace have always participated in farmers markets and offer a CSA. During our discussion with almost perfect timing a car pulled up to grab a premade bouquet that the women had made. While Grace stepped away to help their customers who have now become their friends, Audrey described why they focus heavily on diverse crops for their customers.

Because we are not only growers but avid cooks. I love food. So, I could grow a really good red tomato, but if it does not have as good of a flavor as the pink one, I am going to go for the pink one instead. So that is one of the things that I love about this place, and what kind of sucked me in. It's always been fun and new and a challenge. We love it so people will hopefully like it.

We then moved on to discuss the aspect of the flowers on their farm and how that helps cater to their business,

Multi-dimensional. It really brings a lot of bug diversity out to the fields. Which is definitely a benefit for what we are trying for. And it is really fun. We have a big wedding that we are doing this September, and I am really looking forward to it. It is always so satisfying to see the joy, flowers are so... Also just offering clean flowers. Not stuff that is shipped in from somewhere else, you don't really know what's on it or what preservatives is on it.

Once Grace returned, we continued with the discussion of their CSA and other direct marketing relationships that the farm participates in.

We do farmers markets usually, this year we haven't been. We have just been marketing through the CSA and through an email list, so still pretty much direct marketing. We just send out a list and people are ordering directly for delivery, or occasionally pick up here. A lot of the pickup here is from long term market customers that we know personally after all of these years. And then we do restaurant sales, and we sell through a fellow farmer that takes our produce to Chicago and restaurants there.

For their farm, like all the others, direct marketing not only gets them involved with their customers but also brings in more business for their farm. The significance of their and the rest of my partners direct market relationships will be discussed more in the following section on care.

Care

Care for everyone looks different, and care for these women looks different as well. There may be care about the environment or care about the animals they have, or even care about the people that work for them. However, care is a driving factor on why these women farm. And one thing is for certain, the significance of their direct market relationships ties in with care. It is not just that, care manifests itself in sustainable land practices, customers and their relationships, and even the community around them.

Jane could not imagine marketing herself and her farm in any other way. She loves being on her farm but also sees and cares about her community, "I also want to be out in the community and seeing how my work is impacting them and you know, like the lasting relationships that have been made. And I think you know a lot of the engagement and education that's been spread". She also cares about showing the community what the farm provides, "The majority of my customer base is very urbanized and not familiar with where their food comes

from. So, it's really eye opening and astonishing to see how that sort of all opens up and really impacts our community in a positive way”.

Mae also connects on a personal level with her relationships through direct marketing, and she came to realize this more during the height of the pandemic.

I think that really came to a head for me like when all of the closures and cancellations started happening due to COVID-19. I had a lot of people reach out that were concerned about the farm on a personal level. That I haven't had with other kinds of businesses. And I think there is something about having a CSA or a direct market, or an experience where you are creating. I guess, your meeting people on a weekly basis or people are coming on site to your farm. So, you build connections with people that go beyond transactions.

For her it was not just about people reaching out, but people that are in their CSA genuinely caring for the farm and wanting to see it succeed especially during the pandemic.

It is not just the direct marketing relationships, there is a personal fulfillment that these women are gaining from farming. Jane loves the feeling of being fulfilled by her job. This is what she is truly passionate about, farming.

You know I don't want to spend my life not being fulfilled each and every day. And not enjoying each and every day, so farming is really opened up the opportunity to, I mean it's such hard work like physically and mentally. So much goes into it but at the end of the day you know, I couldn't imagine doing anything else. It's just so incredibly fulfilling maybe that's just the girl who can't sit in the office speaking (laughs). I mean It's just absolutely fulfilling, and I think sort of seeing a previous generation, doing things for money rather than out of passion and out of real interest, I think it really influenced me to sort of take the leap and take a risk into trying something that I'm truly passionate about.

The same goes for Mae. She feels fulfillment within the job and loves working with those around her.

I think that, I mean to some degree more than others, I feel like there is a community around it. And I really enjoy that part of my job. I also really enjoy getting to kind of, when you are working with people that are getting food through your CSA and you're talking with them while you are working, and you are getting to know them a little bit more. It's just been really cool, and I have met some really cool people through this program. I guess I find my job in general very fulfilling and the working shares and working closely with the people that want to support the farm is part of that.

For Judy, it is a little bit different, she gets her fulfillment through her participants as well as their caregivers, “People saying they have not found anything that affects them the way that this work does. It motivates them to do things that they wouldn’t do otherwise”. For her and her two partners they also have a fulfillment through the nature aspect of farming, but the participants stand out the most for them. And for Ava, this fulfillment keeps her going. She sees this as not only a job but a way of life,

Oh, it’s everything! Like, I, for me, my product doesn't sell online. It's tactile. The way I sell and the way I like to sell my product, is face to face because you can talk about the product. And you can get people excited about the product excited about, like, sustainable fibers and natural fibers and natural colors and not using... right now I'm like, really into plant dying... plus meeting people. I mean, people are interesting. They have lives, they have really interesting lives... It would be way too much work to do it if you don’t! Right, in the winter muck and stuff. I guess just getting to the point that I am not a great businessperson because I enjoy it, and it becomes work and then you don't want to do it.

Finally, for Audrey and Grace farming has value beyond that of money, even though the business is of course important to them. Living on and farming their family land puts a whole new level of care into their work. Audrey told me while we were peeling onions about her own personal fulfillment, “I love being physical, I think that is really good for my brain. Like it helps me in everything else that I am doing. So, I think that this work I can really throw myself into it and feel really good afterwards for myself”. She refers to farming as its own artform that she feels a positive affirmation from. And Grace agrees with her, and even adds on more aspects about value for their family, “I wanted to be doing something that felt like it would have value, no matter what, and I like it... and that was important to me. And that’s part of why we manage our fields the way that we do, because I feel like if we walked away or if I walked away, it could still be something of value for my family or to someone else”. And of course, for these two women it is about nourishing others while nourishing themselves mentally.

Every woman that participated in this study practices sustainable agriculture to some degree. Care of the land that they farm on it important. Veronica talks about their family farm that has been in their family for seven generations.

Our farm has been no till and doing crop rotation and cover crops for a very long time. My grandfather started doing no till in the 70s when it first started coming out...Then cover crops for sure, we started using them more recently since my dad took over the farm. And crop rotation we have been doing that since probably that idea or concept came out as well.

With a generational farm that had been traditionally soybeans and corn, it is astonishing that they began to switch over so early. And now they are making a transition from the typical Midwest farm to alternative grains and seeds, another way to create sustainability from the norm.

Four of the farms either currently have or are currently working on the Michigan Agriculture Environmental Assurance Program (MAEAP) certifications. Ava has put in a Monarch waystation and the program will help cost share putting up fencing for rotational grazing for the sheep and alpaca. Even though the extra work is time consuming she looks at everything like a new experience that helps “build character”. Judy, Dorothy, and Marilyn work to get all their grain through a local source, and much of their facility runs through donated products and tools. Not only are they working toward MAEAP, but they also plan to practice more carbon farming type principles with their farm.

Audrey and Grace focus on care for their land through soil health, cover crops, minimal tillage, organic seeds, and minimal irrigation leading to little water usage overall. They also make sure that there are no plastics used in the field. What is fascinating about their fields was the way they transitioned them. Grace describes the process,

We put our goats in there for a few months and kind of moved them through that space, so they were in small sections, so they were rotated through. Then after the goats had gone through and eaten what they wanted and done their thing, then we put the pigs in there in the same way and moved them through in sections, through the whole winter.

Then they kind of tilled that up, so they did most of the primary tillage like what a plow would do. And then after we took them out, we gave it some time, because you need at least 90 days from when you have animals in there to putting your crop in for food safety. We gave it that amount of time and then we went in there with our pretty light weight older tractor. We have this 140 from the 60s, and then we disked it, which is like vertical, so you are not actually inverting. Just to kind of smooth it out, and then from there we did the rest by hand and a broad fork.

This was just one of the fields the second field they found another way to stay sustainable while turning it over to begin farming on the land. Grace stated, “We have a friend who has a team of Percherons and so he brought his horses here. And he brought this old plow ...over 100 years old, an old mold board, like single bottom plow. So, we plowed that with the horses, which was amazing”. Even though this method may have damaged the soil a little bit there was “less compaction and no fossil fuels involved”. Not only are they finding new sustainable ways to do thing, but they are fulfilling a dream of theirs at the same time, to turn over fields with animals.

Finally, the level of care that these women feel in general is astounding. Mae talks about how when she was in school and the idea of farming just clicked for her,

I guess something just clicked and I was like oh! I can apply this line of thought to everything (laughs)! where my food comes from matters, where my clothes come from matters, like everything is connected and I was like (snaps with both hands in the air) oh my gosh it just really came alive for me and it came through thinking about sustainability, learning about sustainability, and really wanting to do my part, to contribute to the local movement, I guess.

For her as well, there is a lot of care in creating a safe and positive work environment for those who work for her on the farm. But it is not only that, “when I bring a box of seeds into a greenhouse and I know it’s going to turn into to hopefully a bountiful harvest throughout the season, it still blows my mind. I can create the conditions to the best of my ability, but the spark of life is innately in that seed”. And it is personally rewarding for her to even gain trust with the animals on the farm and work to making the whole farm better for everyone.

Veronica of course cares about her family's land being a seventh-generation farming family it comes with the territory. She also cares a lot for the business of alternative grains and seeds as well as the granola she is making for consumers. Her level of care does not reach some levels as the others, but Veronicas care it still was passionate in other aspects, "I care about my customers because they are incredible, and they push me to grow and all that sort of thing. The deep hippy woo, woo, I care so passionately about the land, every bacterium in the soil, I am not at that level, and maybe that's just how I think".

For Jane, her care transfers over to the land and the community leading to a sense of empowerment on top of the care, "I feel like that is part of the most empowering part of the work. I am such a steward of the environment that you know part of me going into this was to utilize part of the environment and be within the environment, but also take care of it. Make sure that I am being a good steward and treating the land with respect and what not. As well as the community". Jane is an urban farmer, so community plays into her level of care immensely, she reflects here about urban agriculture and how this sense of care keeps farmers in general going,

But especially being endowed in urban agriculture and some of the organizations that I work with, just seeing how it impacts all areas of the community. How it impacts our local businesses, how it impacts local demographics within our community, and extending out into other communities close to our community. It's so empowering, and even on the toughest days I think that is what keeps farmers going. It is like a maternal instinct. Like these people are depending on me for their next meal to some extent. I think the whole care aspect is sort of the push that drives people to do things and do them well.

Judy, Dorothy, and Marilyn all feel like farming and working with the participants is more a way of life instead of a job. But they also feel care about the work as a job. Dorothy explains how she cares about the farm in a new way for her, "This is something that I really, really want to see succeed and just blow up. And so, going home, we will be like, ok maybe we can make time tomorrow because we have to get that one thing done. Then feeling a sense of

pride when you give things like eggs to all my friends at work. They are just like whoa, these are like the best eggs ever”! For these ladies, the care runs a lot to the participants as well, it makes them continue to want to be a part of something amazing. Dorothy describes an encounter that Judy had with a participant recently, “Another girl that just came recently and just in her pouring dirt into a pot, and her mom was just weeping. Judy asked what she was crying about. She responded that we have been trying to get her to put something inside something else for her whole life. And it is just little tiny things like that, I don’t know it’s just crazy how it takes over you”.

With Grace and Audrey sometimes how much, they care can even become overwhelming. Not necessarily in a negative way but emotionally. Being on family land, that they were both literally born on, comes with a deeper level of care. Grace and Audrey discuss back and forth this idea of care,

Yeah, for the land, definitely. Especially doing it here, even more so. And there is a lot of things that maybe, like sometimes getting a planting in that we have to do something that’s maybe going to be a little bit more destructive to put it in, we often will choose not to. You know, so we will forgo money in exchange for care a lot of the time.

So, our irrigation system is run off the well here. And we don’t irrigate much at all! But right now, would be really great to put a little extra water out there. And we have kind of made the decision to not overtax the well. And the water table here.

Yeah, because we need water for the house instead, care for the people that live here... but yes definitely a sense of care. And care for people who work for us too. There is a lot of, we pay pretty close attention to what is going on, make sure people are drinking water, feed people, sometimes end the day sooner rather than we would like to for a task and all that.

For all these women care plays into their farms daily. In all aspects of the farm and their families. And beyond that care ties into their gender as they will discuss in the subsequent section.

Census and Gender

It is imperative that I begin this section by saying this is how my research partners feel, and how their experiences have happened. This does not reflect on all women in the farming world, but these are the things these women have either seen or lived and experienced. This is true for all the sections in this chapter but this one is especially important to address before beginning.

When my partners and I discussed the idea of why they believed more women were choosing to enter the occupation of farming, there was a variety of responses. Dorothy and Marilyn discussed this a little bit, Marilyn stated, “I guess we have the same interest as any of our male counterparts. You know growing food, the environmental aspects”. Then Dorothy followed with her own response,

I don't know maybe women are feeling more independent these days. If you go into a farm store its mostly dudes. But maybe we found different reasons to want to try and farm. For instance, Judy's idea of this therapy farm. That is a different reason to get into farming. So maybe we are just finding more creative ways to be involved in it, I don't know. Just different reasons rather than the norm.

Grace saw farming as something that was fulfilling to women that gravitated toward farming. As well as the idea of thinking about their future, but also her and her sister's future on their own farm.

Maybe there is more now because there are more, so more women see that as an option... Maybe because there is more interest in the small specialty farms so there is more niche opportunities. And maybe women tend to be more drawn to that sort of specialty. And some women are doing it because they have children at home and that is a way that they can combine and bring everything together. And that is a motivator for us too. To like to make the farm a place that we can like live our lives and have a livelihood, and if we wanted to have kids, we feel like we could integrate them into that.

Ava also brought up the idea of children and how when women will come visit her farm and they talk this idea comes up of how they want their children raised on a farm, or in a more natural

environment. She also addressed the idea that, “people are not satisfied with the way life is going. They are missing, they feel like they're missing something”.

Jane addressed the idea of sustainable agriculture and how it is something that is widely accepted within agriculture. She believes that this makes farming more approachable especially to women. Also, the idea of knowing where your food comes from could make this occupation more attractive to individuals.

Mae has thought about the idea of why she was seeing more women entering the agriculture sector previously, on her own, before we even began our conversation.

I kind of view it as like right up there with other blue-collar jobs that were primarily male dominated. So, it used to be like farming, engineer, like Plummer, you could just like list off the trades. I think farming is just something that because of the way our like food systems have evolved, is something that, like I do, I would be curious that like a lot of farms that are like out in the breadbasket of the United States, like out in Nebraska and what not, I bet you a lot of those larger farms are still primarily owned by men. I don't know that but that's my guess. But I think that a lot of the smaller scale more connected like fueled by passion, more small farms popping up in areas all over the country. Those are where I think I have personally noticed it being more women.

Without even knowing Mae had led our conversation directly into the next topic of conversation. We then moved the conversation into why these women thought that women tend to run farms that are half the size or less of their male counterparts. Jane stuck with her ideas of sustainable agriculture stating that, “I would like to think that we are just a little bit more sustainable”. What was interesting is that she had both an optimistic view of why this is and then a pessimistic view of why this is; “My optimistic side is like when I tell you I am not going to take on more than I can take on. I think that women have a very, just generally speaking, I think we are being very smart and strategic about how we do our farms; we are not going to bite off more than we can chew”. When she discussed her pessimistic view, it was a story that really hit home for her. Before she found the land, she currently farms on she had the idea of starting a hop

production. She had come up with a good financial plan and brought it to numerous investors and loan officers, many of their responses leaned on very sexist tones, "...a lot of it was like well you're a woman. Can you drive a tractor by yourself can you drill a well by yourself, can you do all this by yourself? You know there was just a lot of like well you know that's a man's job not something that you can do. Can you sit and work in the field for fifteen hours a day? Or are you going to have to take breaks because you are tired and not as strong or this and that". She often wonders if the financial opportunities are just not available to women or minorities in this industry.

Mae, Judy, Dorothy, Marilyn, Audrey, Grace, and Ava all brought up the fact that they believed it had to do with family farming and inheriting the land. When you do not have the land to farm on it is a lot harder to get access to funding. As Mae said,

I think that because I feel as though more women in agriculture is a recent thing there is less inherited land, there is less places that you can just go and be like I'm going to start a farm give me money (laughs). I personally think it has to do with economies of scale. if you are going to start a business you want to start at a scale that is manageable with the resources that you have...Just because if you are starting up a farm in recent history the chances of you having the capital to start big or have the experience right off the bat to start big are pretty slim.

Grace even specifically stated that most family farms have a trend that the land and the farm are passed along to the son. Audrey agreed with her and then brought up the same idea that Mae had, that land is difficult to acquire so if you are a woman just starting out, a smaller piece of property is easier to acquire. She also brought up another interesting idea, "I think women tend to run specialty operations, more than commodity operations, that could be part of it". Ava also addresses the fact of inheritance. She then took it a step further to discuss what she believes we might see in the future with large farms, "I think they're going to be broken up and you're going

to see a lot more a lot of smaller farms. This just goes back to the consumer, right? And like, and how we need to change our way of thinking”.

When Judy, Dorothy, and Marilyn were discussing this idea the idea of land being passed down was the main point that was addressed. Generations of farming and land being passed along from grandfather to son and so on, as Marilyn called it a “cohesive situation”. But then our conversation took an interesting turn.

Marilyn: It’s sort of funny” the landowner “is always like, oh well this is how the guys do it. The guys don’t do it that way. It’s always like, the guys the guys.

Judy: Always talking about the guys.

Dorothy: I need to meet these guys.

Marilyn: Who are these fucking guys (laughs). I guess we just have to do it like the guys do it.

Judy: Yeah, they are always talking about the guys, it makes us crazy.

Dorothy: Well, we are just some girls trying to farm, that is another one that we got.

Judy: We joke about getting, well we are going to get them, shirts made up that say kind of like a farmer. Because people don’t see that we are actually farming. Oh, it looks like you are kind of like a farmer, yeah!

Dorothy: Telling the story of where we birthed goats. Like we were goat midwives the other day and they are like, whoa it’s kind of like you guys are really farming. Or you give someone some produce, or we have the egg fridge, and people are like wow you have that many eggs, wow you guys are like farming or something.

Once we discussed farm size and the number of women in agriculture growing, I talked to them about the change in the 2017 census and how they felt about it. The only woman out of all nine woman that was aware of this change was Jane. She had learned about this in college because she was enrolled in her program while this change was taking place. Jane stated that,

It was always something that was very frustrating to me because it was a lot of you not being counted or like you been missed yeah, I mean women farmers, I don’t know if this is still true but when I was in college we were considered like a minority. It just feels so

odd to be like pushed into that name or demographic ... you know when you get pushed into that minority demographic it's almost like am I lesser than you know the men who are doing the exact same thing or like maybe even doing less.

Even though the other women did not know about the change they still gave small incites to what it felt like finding out this information. Veronica when talking about others being able to be recognized stated,

I think it is incredible that other women can embody that completely ... I think it's incredible that women that do want that title can now legally have it. I mean they have been self-appointing themselves as farmers for like, women do whatever the hell they want to do, but like to have the recognition in a census I think that is really important. I am happy to champion that effort for others.

And for Mae she was also not aware of the change but processed the information and said, "It doesn't surprise me, that's great, and yeah being counted for the first time in all these years might contribute to why there is a large, recorded number (laughs)". Audrey and Grace were also unaware of the change. Grace brought up an interesting point about other family farms, and how seeing things like this happen motivates her to keep her own farm.

I have known a lot of people in farming partnerships and often times the women are at least as involved, they are often times the ones who are creating a lot of the relationships, doing a fair bit of the marketing and the communication part, and often times the bookkeeping, and often a lot of times work on the farm itself. And then in a lot of cases they are not the ones that actually own the property. Then when that relationship end, they are kind of out in the cold. I have seen that happen more than once, and I didn't want to have that happen so that was a motivator to start my own thing and do it here.

From here many of our conversations went into how tools and clothing are made for men and not women. A lot of times manufacturers will cater to who is involved in the industry. If the census says it is dominated by men than there is not really a reason to make tools and clothes for women in the industry. Ava talked about her experience with her Kubota, "So, I got the small Kubota, but I had to have my neighbor turn the seat thing off, because I wasn't heavy enough to keep the seat down, so it kept turning off on me when I was driving". She also brought up the

fact that most pockets on women's pants are not deep enough to put tools in them. Dorothy brought up the fact that apparel out there for women is often a big deal. Marilyn echoed in agreement, "It's funny trying to find clothes, overalls, boots all of that kind of thing. There are a couple of really cool companies, but they are still kind of like dumpy clothing (all laugh). You are like, I really love what you are doing but there is still like a mom ass (all laugh)". Dorothy followed with her response and brought up tools as well, "And there are not many! The options are very few, like its Carhartt or this new brand that just started. Like Judy got some overalls that were like skintight. I was like that's not practical for like bending and lifting things. I was watching Judy clip the goat's hooves with those HUGE pliers". Judy agreed that everything was just big then took it to another level of advertisement, "Even just the ads and things. It's just all men in all the ads for all the clothes or whatever. I guess I don't really use a ton of tools that would be affected by the size. But now that you pointed that out, those are tricky". With these three being newer to farming, they just assumed that some things were just more difficult than they should be and that maybe they are not even aware when things like that happen to them.

After our discussion on the census, we moved into what these women see themselves as. My question to them was, "When you are in a social situation are you identifying with the term farmer, do you call yourself a farmer are you taking on that term"? Though the term farmer resonates with some these women there were some that do not call themselves a farmer. Veronica who from the very beginning of our communications was adamant that she was not a farmer. She says, "Yeah, I and maybe this is a whole other discussion, I usually downplay what I do. I say I am in the food industry and I or I say I make granola. Probably there is definitely some imposter syndrome in there...I don't call myself a farmer, yeah, but I do say that we are doing it so maybe that is kind of part of it. That is an interesting thought". She explained to me

that if people really continue to ask her, she will tell them about their family business and the alternative grains and seeds, but most people just get really excited about granola. She then told me about some of her store experiences, “Although some people don’t know what granola is, and I am like... it’s like old men... When I do demos at grocery stores and they are like what is this bird feed?! And I am like no you dick... sorry (laughs). I have literally gotten, my wife eats that horse food, and I am like... ugh... hay... thanks for stopping by. Have a good one”.

Ava has come up with her own term instead of farmer. When people ask what she does she says, “I raise alpacas and sheep; I grow yarn”. She does not even know if she could say that she is a farmer. She also elaborated a little bit on what our images in the United States lend us to ,

We have this concept in the U.S., like, we have to look like something if we're doing that occupational, like, think about those brewers, like the beer brewers they all have beards or lumberjack shirts. It's like, why do you have to look like that or go pick up a goat farming book from the library and flip at the back and look at the picture. She's got like, braids and a long skirt on and he's wearing overalls. I'm like, come on. So, I think most people don't actually think I'm a farmer.

Judy, Dorothy, and Marilyn being new to this side of the industry are trying to learn to accept this term and refer to themselves in that way. Marilyn said, “I think that is more of like selling ourselves short, I think. Like instead of claiming that title and being comfortable with it. But the more we do this and the further we get into it, maybe next year I will be like, yeah, I am a farmer. But I should probably say it now, I don’t know”. Judy agreed with her and elaborated further, “It is hard to see yourself that way when other people are telling you that you are not good enough. But I think I am getting there”.

For Mae, she calls herself a farm manager because she is farming for a non-profit and does not own the land she farms on. But does get a bit annoyed when people walk by her area and refer to the farm as a garden, she always tries to correct them and say it is a farm. Jane also has no problem now referring to herself as a farmer, but it did take her a little bit of time to work

up to the term. “Yes, I would say I did not always, now I can confidently, at this point in life, confidently say that I am a sustainable agriculturalist, or I am a farmer . . . If you would have asked me five years ago when I was really first delving into my independent projects and like really actually being a farmer. I was very cautious about that term”. Now there is no question, she embraces this term because that is what she does for a living. Grace and Audrey are the same way. Grace says, “Yeah, that is what I would say I do now. And then I might expand on that. But if I am just going to give a short answer, I say I am a farmer. Then I kind of like to let that sort of hang and let people imagine whatever they think that means”. Her sister also agrees that she has had that experience too, specifically when it comes to the farmers markets. Audrey discussed some of her experiences with Grace, “And then benefit for me too is that I am the grower, I am not just the girl at the market. That has been very satisfying to get to talk to people and have those conversations and be a lot deeper than just what do you have on your table”. Grace then brought up the fact that some people are surprised when you say you are the grower. Audrey agreed, “Actually, it is me and there is no, where is your husband, well the response is well it’s me”. Grace gave one of her experiences as well with a customer at the market, “There was this one guy, I can’t remember what it was that he asked me, it was something about heirloom tomatoes or like do you ever save seeds. And I launched into a whole thing, I was going way deeper than he wanted and he actually started backing away (all laugh). I was like OK got it, you just wanted to say you know about that”.

From here my conversation moved with the women to discuss if they believed that the term farmer was revealing something about femininity or masculinity. All the women agree that there are stereotypes around the term farmer. Multiple women brought up the fact that they just like to feel feminine, but others do not see them as even being able to dress nicely because they

are in the farming world. To almost echo what Grace was talking about before she said, “Only when I see it surprise people when I say that. I think it reveals something about maybe the person that I am talking to, more than just the term”. Her sister Audrey agreed with her. But they do not get upset by these questions they find them almost amusing. Audrey said, “They have like suggestions, like well have you ever thought about selling to a restaurant. It’s like... Yeah we do that already”. Graced followed that up with saying, “Occasionally someone will ask if we help on the farm”. Audrey agreed and said, “Like at market someone will ask where’s your husband. Or I have a question for the farmer. It’s like yeah ok...”, Grace chuckled and said, “That’s yep, here she is”.

That image of the farmer came up in my conversation with Mae when she was explaining that there is still a masculine connotation behind the term, she also discussed dressing more feminine,

I think if you were to ask somebody to picture a farmer an old white man in a straw hat and flannel t-shirt and bib overalls would probably come to mind. So, and I have talked with other women farmers about this, and they are like we need to make a sign that says, "yes I am the farmer" when we are at market because, and we have even talked about like if we dress up a little bit for the farmers market, like if we are wearing more of our farm clothes people are more apt to recognize us as "famers". So, I definitely think there is like this little bit of a disconnect still between appearance and vocation when it comes to farming. It’s like if you look clean and you are not wearing flannel and you’re a woman people will have a harder time believing that you manage a farm than if you’re like filthy (laughing).

Veronica talked about even with more women involved in agriculture there is still an image around the term farmer, she would even love to be able to say that is changing but she is not sure that it is. She wants women to be more aware that they are possibly part of a bigger movement that is happening, “Let’s not just let’s be the female version of the typical farmer image or stereotype etc. like women are incredible and we have different skills than men. I truly believe that men and women are not equal I think that we have skills that complement each

other. I think that we were created that way”. She went on to talk about what women bring to the table, “I don’t think women bring enough of their feminine power to the farming world. So, we are good at a lot of things and I think farming can definitely use more”. She then went on to talk about the skills that women hold, “We have different skills, we can connect with people emotionally much better, much, much better. We think about creative ways to solve problems, we can we are the mothers of the hearth or whatever that phrase is, we are domestic like naturally, we just can, I think that is the problem. I see women farmers these days just being women counterparts of, or like the female version or their male counterparts, and that is frustrating”.

What Veronica said segued us into another question that I ended up asking all my partners, asking them if they felt unique or different from their male counterparts or the same. Obviously, Veronica agrees in equality with access to funding, land, rights, and pay; she still feels that women are unique and should embrace this fact,

Women we are skilled at so many different things, and I see that women are trying to be good at everything that men are. Instead of realizing that we can offer a lot more by being ourselves. I don’t even know if that is a feminist point of view, we are all feminist inside. But I don’t identify as a feminist, I don’t resonate with the movement or like the traditional culture around feminist. But I fully support the step into your own, like be who you are and be who you are good at. And strengthen your strengths. Don’t try and strengthen your weaknesses. Other people are good where you are weak, so get those people on your team and be really good at what you are really good at.

Judy, Dorothy, and Marilyn all agree that they feel completely different than their male counterparts. Most of their exposure is to the man that owns the land that they farm on and they feel completely different from him. Judy explains a recent interaction that she had with him and a few other male farmers,

I have that in many situations where it’s like a couple of guys, guy farmers, including [the landowner] where we are all trying to do some sort of interaction related to like buying something or making something, or building something or whatever. And the

communication is like, (laughing) how do you know what each other is even saying?! You are not even like communicating anything, or being at all like, I don't know it is just like a pure business interaction thing. Whereas I'm like I want to know about you, I want to know like what you are doing, or forming some sort of relationship or connection or something. And they are all just working through grunts or whatever (all laugh) I don't know. They communicate very differently is I guess where I was going with that.

Ava also gave me an instance to explain why she feels different and unique,

I feel different and unique. They can, they can bite it for all I care. I don't care. Like I have, there's a guy who does alpacas and he's dissed me a couple times because, like, I would put my alpaca. I didn't have a I don't have a trailer and when I was showing, I would put my alpaca in the back seat of my truck, right? Just drive because you gotta do what you gotta do to do what you need to do. Maybe that's from having kids I just did what I needed to do to get it done. You know what I mean? Anyway, he was like, you're going to break their grumble, grumble I'm like. Oh Jean, just stop, you know, like they're fine. You know don't need your opinion quit mansplaining.

When Grace was asked this question, she said it was both that she felt but did not elaborate much further. Jane had a similar answer to this question in saying it is a little of each,

You know as the female farmer I definitely see where there are gender roles and barriers that need to be broken. But at the same time, I try to maintain an equal level within myself when I discuss with male counterparts and I participate in things involving male counterparts, I really try to maintain an equal boundary with them. And I think they do a good job as well. We are all in this together, we are all working toward the same common goals. Then again, I think that there is something special with feminism within female farmers.

Though there were many other questions and conversations in this section I feel it is important to discuss the idea of empowerment for these women. I asked each woman if this occupation makes them feel empowered in a way another occupation would not. All the women answered this with a resounding yes. Mae once she agreed that she felt very empowered every time she does something, she never thought she would. She gave me the example of when she was in the WWOOF program,

I was working on a queer run sheep farm in Maine. And they were very, very, clear that they only wanted queer or women working on their farm because they had enough of people coming in and thinking they know how to do things better than them. But fresh off the bus they shoved me in my spot, and they were like ok you are going to get trained on

how to use a chain saw and you're going to help us clear some new pasture and they had some trained sawyers take the trees down but then I helped with liming the downed trees and arranging brush piles based on size of brush. I felt so good wearing the chaps and the steeled toed boots and working with the chain saw for the first time. That was the most prominent empowering experience that stood out in my mind. And then just to see this like 70- year-old queer women manage draft horses to get all those logs out of the pasture; I mean I have a lot of respect for the work that they do, and I learned a lot from them.

Veronica also feels empowerment even if it is not through physical farming, "I feel empowered in the sense that I am bringing something new to the market...I feel empowered that we are going to create impact and create more jobs. Help other farms turn from corn and soybeans and wheat to alternative grains and seeds because I know there is a market for it. So that empowers me".

Jane feels the same way and even gives examples of other jobs,

It's so empowering. Sometimes I have friends that seem a little lost, don't like their job, probably won't like their next job, and they already know it. I am like you just gotta take the risk and try what you love. I couldn't imagine sitting in a mediocre position, where it might pay well but it doesn't fulfill me every day.

Judy, Dorothy, and Marilyn have come up with a system of farmer points that makes them feel empowered, "We joke about farmer points, getting farmer points to being more toward a real farmer. So, like you know birthing goats gave us a significant amount of farmer points. So, we are very empowered by our farmer points". Audrey and Grace find empowerment not only from the work but also being in a farming partnership with each other as sisters. On top of that Grace explained, "Yeah, it's definitely empowering, I think that is part of the point. I think its empowering, as a woman its empowering, and also just as a person. Growing our own food and doing what we do is an empowering occupation". Finally, Ava really hit it home by asking me, "Oh, my word. Have you driven a tractor? Driving a tractor is... yeah, I think it does because I'm pushing, like It pushes your envelope to do things that you didn't think you would do... And it's empowering. Yeah, and it's liberating".

Mental Mapping

Maps are a common theme in geography and support both spatial data and can even strike an emotion with the reader. But to combine maps and the users emotions is different, and that is where the idea of mental mapping comes into play (Pirani et al., 2020). Where emotions are often overlooked in research this thesis wanted to embrace the idea of emotions and feelings when it came to the farms that these women farm on. The prompts for the mental mapping exercise prompts can be found in Appendix B: Data Collection Instruments, at the end of the semi structured interview questions. All the mental maps can also be found in Appendix A: Mental maps, these images are larger and much easier to see details.

Veronica explains to me her mental map, shown in figure 1, and the memories that she had while she was drawing,

We were encouraged, sometimes forced to spend a lot of time outside. You can ask my mom, this if you ever talk to her, sometimes she just straight up just locked us outside. And so, we would be locked outside so we would have to entertain ourselves. So, we would go down to our creek a lot. Which you have to walk through two acres of pasture to get there. But the creek was really important, I like it. I honesty haven't gone back there since I was a kid. The creek was kind of important to my siblings and I it was where we bonded a lot because we would walk through corn fields, and sometimes we would get lost because we are short and there are really tall corn stocks and stuff.

When we moved onto the next part, she pointed out the dark circle in the middle top left,

“Another important part of this that is on here that I have circled pretty darkly (laughing) it's the spot where I told my parents I hated the farm and burst into tears and said I would never come back”.



FIGURE 1: VERONICAS MENTAL MAP

She reflected that, “I think that was the first time I vocalized that I hated living out in the country and living so far away from friends and I felt very distant and far away”. Laughing she realized that this memory stuck out as the second place she drew, “It is funny that that first spot where I told my dad I didn’t like the farm, that stuck out as the very first thing, that was the second thing I drew on here. I drew a box for the house and then a circle for the spot. So that clearly has a lot of...(laughing)”. Veronica pointed out a few more images or what she ended up leaving off due to space, “I will label the new facility, that to me really represents, it’s kind of crazy how my dreaming and my pushing has influenced the farm...And then not pictured on here is the first alternative grain and seed field, which is just hilarious that we knew so little, and I was so naive. It’s funny to think about how much we have learned in five years”. As we finished up our conversation, Veronica discussed how our conversation went for her, “I think it is awesome what you are doing, it has provoked thought, I have never really talked through why I don’t identify as a farmer. Or what my issues or hesitance is with that. The way I hold back around other women

farmers, and maybe why I do that, so it was cool to talk through... I am glad to like to be a part of something like this”.

When Jane and I sat down to have our conversation it was over the phone. Though she said she would send me her mental map later she never got back to me. This was completely fine, but I still want to discuss what she told me over the phone while she was drawing her map. She began by pointing out spaces on her farm that were significant and important, “So, one of my favorite parts is where I have kind of a community area. I have like picnic tables and handicap accessible areas that sort of includes different demographics within. Whereas a traditional farm is not really accessible. So, I really think that is an important part”. She also explained that her hoop houses are really important to her as well and hopes that one day she will be able to say she has a greenhouse instead of hoop houses. Another part she pointed out was a technology factor, this was unique amongst all the women, “I am also going to weirdly going to just draw my laptop on the ground because it sort of goes everywhere with me and sort of, as much as I hate to admit it, it is sort of the thing that keeps me stable...it keeps my stuff together and keeps me making sure that everything stays organized. As much as I hate to admit technology is a really important part of what I do”. She drew in her poultry area being utilized for quail and chickens; this is a new endeavor for Jane, so she was quite excited about the prospect of providing eggs especially quail eggs to her county. Jane also has a cut flower area; this is not located on her farm but at her home. She described the area to me, “I like my cut flower production as well, you know I have a sea of green and its absolutely beautiful, and I have every shade of green and it makes me so happy, but the cut flowers really add a rainbow to the scene. And it really just makes me so happy to look at and see that dream come true. And it also

brings more than the average person, more than the average customer to my farm”. Flowers remind her of what she wanted to do growing up,

So yeah, the cut flowers I do always lean back to those because it was a little catch phrase that I told people so they would leave me alone and stop asking me what I am going to do. I just want to grow flowers. I think that is also an empowering thing to know that I have made that full circle back to that original thought and dream and goal. It’s really empowering to say I have made it if I wanted to solely farm I could solely farm. And I am kind of diving into these other opportunities and following them more out of passion than out of necessity.

She is now able to branch out from just the market crops and like Audrey and Grace has been asked to do a few weddings. This is another opportunity that has helped her grow.

Mae’s map is pictured under figure 2. Mae began by describing what was on the property to help give me an idea of what I was looking at,

We have a huge deer fence around our main field which is what that rectangle is. There is a pretty large greenhouse that we use to start all of our plant starts and we do plant sales as well, so we start things in there. We also grow in the ground in our greenhouse, so we have tomatoes, cucumbers, and greens in there. We have our north field where we grow our potatoes each season. There is kind of a tree and grass and wildflower zone between the two we have a pasture space and a well head that goes to the green house and feeds the irrigation. Then there are a couple of barns on site one that we use for CSA distribution and packing for the market that has a couple of I guess coolers in there and we have a pole barn for tool and equipment storage as well as a lean-to.

She then went on to point out what she finds special about the farm she manages,

I put tomatoes with a couple of stars by it, something that is very special to me this year. Last year we had terrible luck with tomatoes for multiple reasons. One was the weather; we planted them and then got a whole bunch of rain and then it was in the 50s which is not weather tomatoes thrive in. I also tried an inter crop strategy that completely failed. So, the tomatoes that survived that weather were completely smothered by the cover crops that I had intended to suppress weeds (laughs). So, this year I have learned from that.

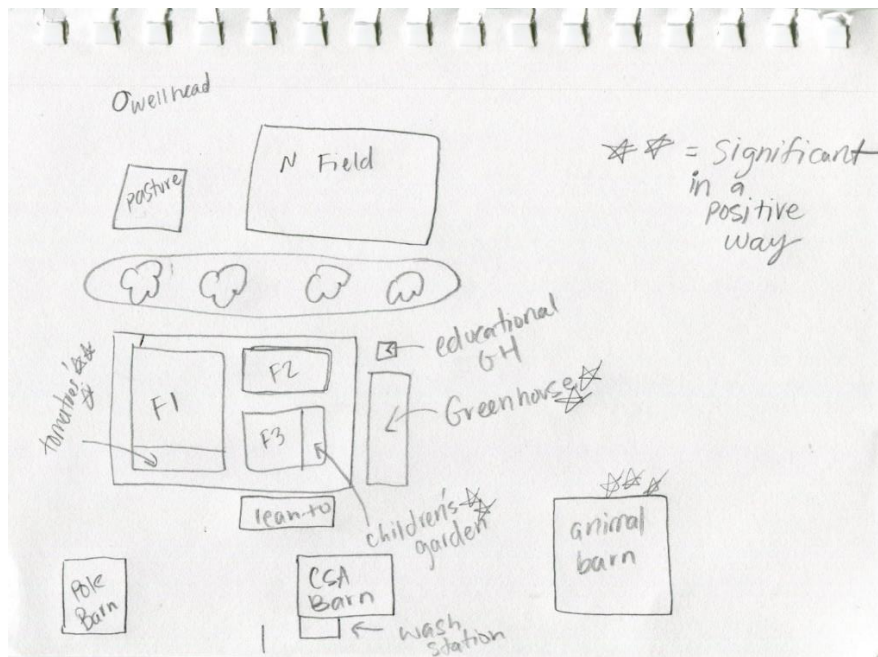


FIGURE 2: MAE'S MENTAL MAP

She finds the children's garden to be significant to their farm as well other essential pieces that makes their farm unique,

I think the children's garden I put a few stars next to because that is a space that we do a lot of work to maintain and keep very beautiful to engage in. And that's where we have our raised beds with herbs for the herb CSA and it's a beautiful space that I absolutely love. I started the animal barn because learning how to properly care for animals specifically sheep and goats is something that I learned after working here and is something that I feel like I have learned a lot about, and I am really proud of. And then I started the greenhouse because that is an essential piece of infrastructure on the farm. It allows a season extension allows us to do a winter CSA in November and December and it's kind of like, we were able to start all of our starts its probably one of the most crucial pieces of infrastructure on the property.

When we talked about what she finds challenging on the property or about farming in general she responded, "Honestly, I could circle the whole thing (laughing). I think my first-year managing was rough. I am so proud of myself for sticking through it and I actually got this tattoo (displays her tattoo to me proudly) as a way to celebrate the fact that I learned from the experience and got stronger from it instead of being defeated by it". She then related this to being a woman managing a farm, "So, I think the biggest challenge was taking over the farm as someone who

Once she was finished with her description Judy made sure to point out that it was a beautiful map and Dorothy agreed. Giving all of them positive reassurance for what they were doing. Judy went next, her map is pictured under figure 4.



FIGURE 4: JUDY'S MENTAL MAP

Judy started with explaining the chicken coops and how this was unique for them, “Moving the chicken coops is a nice activity that everyone loves. So, people tend to work well together and communicate. So, we can work on a lot of goals with that”. I asked her to explain to me what they do with moving the coops, “We used the gator tractor to move them forward each day across the field, so the chickens get a new little patch of ground”. She then went on to explain other pieces of her map,

I put participants conquering fears I put that by the tree house, but that is kind of metaphorical lol. I mean a lot of them do work up to climbing in the treehouse but all around the farm they are constantly facing things that they are uncomfortable with. Participants accomplishing new tasks, again that's kind of everywhere but I put it in the garden. Just because of that recent example with the girl that was pouring the soil. Participants gaining independence, confidence, self-esteem I put that in the work room because this is usually where we are processing tough stuff and giving them what we are going to do for the day. Goat birthing earned us farmer points so that was good (all laugh). Sensory room I put participants understanding when to take breaks and how to use coping skills, it's a big thing for a lot of them. For the donkeys, I put, participants

learning empathy compassion, care for other, which really applies to all of the animals but... challenges, the greenhouse is just a real bitch (all laugh). It's just not been... Then I put by the office, money is probably the biggest challenge as I am sure it is for any farm. And then at their house I put being doubted, looked down upon, discouraged, by the people who own it.

Dorothy went last and a lot of her images matched up with Judy and Marilyn, but she still describes what is significant to her. Dorothy's map is pictured under figure 5. She started by explaining things that she found significant, "The goat birth was obviously a significant event. Putting this whole place together was significant. Down to making it look the way that it looks, I mean we painted all of it ourselves. And built it basically, I mean we didn't put the floors in or anything but it's a new skill that we will probably get soon".



FIGURE 5: DOROTHY'S MENTAL MAP

She then reflected on how everyone worked together to make this farm work,

I mean everyone worked really hard to make it this cool. So that was a huge challenge, it's also a huge challenge to keep it here, and that is what we are facing right now with COVID. Significant events, moving the chickens out to these. We had a sled involved and all kinds of weird stuff. It was very fun and very silly, and I never thought I would ever see Marilyn hold a chicken, right before that moment (laughs).

The three of them told me the story about Judy locking both Dorothy and Marilyn in the chicken coop at one point and they all laughed about the “traumatizing” experience. Dorothy went on to continue with other challenges they have faced on the farm,

Challenges yeah, the greenhouse was just a complete bitch. Every time we would come, we would be like oh no all the plants would just be white all of a sudden. Just heating it, like we had wood donated, and it was the wrong wood. Then the landowner didn’t tell us, and he heated it with his wood. And then we had to deal with that, so we were like just don’t heat it. It’s just annoying, it’s just the most annoying place here (all laugh) besides these two places. I circled the landowner; he is the one that runs it. It has been a challenge to keep my mouth shut because I am not as good at that as Judy would be. And when he is saying stuff about anything to Judy and making her feel small or whatever it just makes me so angry, so that is a huge challenge for me. And then I circled the pigs and the cows because they are leaving to be eaten, so I want to go check out these pigs because they are super cool but yeah... they are going to be gone soon. And then the garden because its unique, it has every kind of structure ever and it was a huge challenge and Marilyn totally knocked it out of the park. And made this huge, beautiful map, and its significant because now we are seeing it flourish, and it’s this whole event every day. We see new thing and we are like oh my god! The rob is robin, and the broc is broccin.

Judy laughed and explained that they like to turn every vegetable and what is happening to it into a verb. Finally, Dorothy finished off by saying, “This whole thing, all the purple everywhere is because it’s all very unique its Judy’s grand scheme, and its coming to life and its great. Like we have these weird goats and their unique, we got these donkeys, and they are all a family, their unique and they are so sweet”.

In my next discussion with Audrey and Grace we did this exercise the same way. Even though we were all out cleaning onions together at a table they drew their maps on their own and then came together to compare. While they were drawing the subject of animals came up and how empowering it is to assist in the birth of an animal, “empowering and yeah last year was the first year we had to do that. Like go in and reposition a kid. Yeah, this one was sideways, it was intense, but it worked out”. They also talked about their younger sister, I asked if she was going to come back and work on the family farm as well, Grace says she continues to encourage her to

do so and some days she comes over to help. Audrey began with explaining her map, pictured in figure 6, and Grace right away commented on Audrey's, "Wow the barn is so central in yours, I like it". Audrey went on to explain, "Yeah, I think it's because it's probably right there, in my field of vision. I think that one of the unique features of the farm is it actually is kind of segmented by a shared driveway, and we share this fence line with the neighbor also, which I think is kind of cool. Each of these I gave their own distinction too because they have all had different processes to work them up". She then went on to describe the fields pictured in her image as A, B, and C, "Then obviously working the land up with the horses, was a pretty special moment in my life. Just because it was absolutely amazing, and also, I think that's pretty cool to be able to do, to integrate that into the farm. I kind of gave them all their own distinction. Then there's field beyond this that we have not opened up yet, that is sort of the pollinator habitat and stuff". She pointed out where they have their hives located and then discussed the family garden beds,

I called these the heirloom long beds this is kind of representative of the entire back garden here. Just that they are kind of an heirloom that has been passed down to us. And then I have spent a lot of time planting and spending time with my mom and stuff. One of the times I can remember specifically is having to plant onion, like bare root onions. They are so small when they are seedlings, and they are so difficult to get planted because you can't plant them too deep, and I remember that every year. Because as a child it was fairly frustrating to have to do that and now I do it for hours and choose to do that. That was one of the big things I remember, and I find kind of entertaining. And then obviously the dome in the woods (their family home) is kind of central to this whole operation because it's kind of like our calm, and it's cool in there always. It's a unique home it has tons of childhood memories.

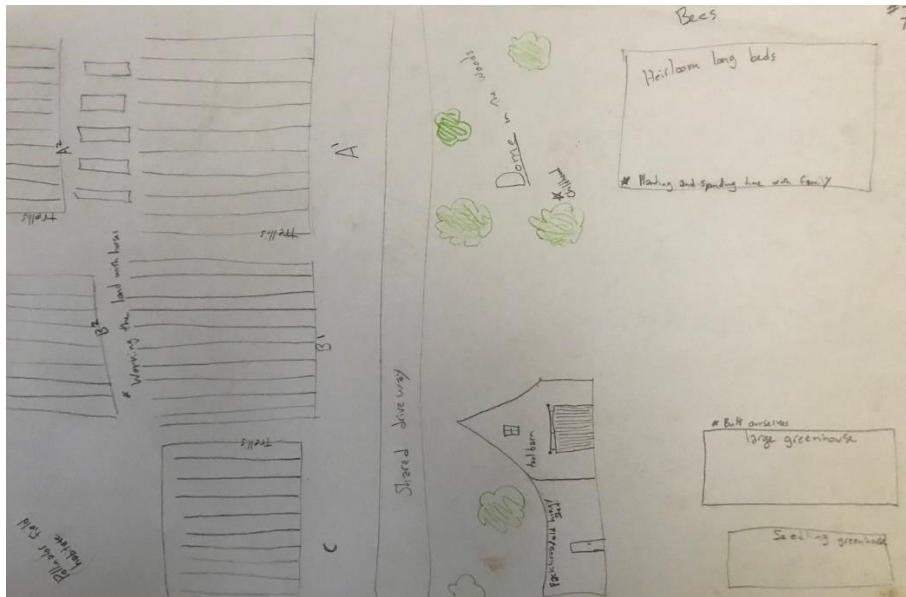


FIGURE 6: AUDREY'S MENTAL MAP

She continued to explain a bit more of why she loves the dome in the woods, “We go to have lunch, and it’s in the middle of all this, it’s very serene and cool and calm in there. I just love that about it. And that we have that we have these big open fields, but we also just get to come into the shade, that’s very welcoming to me. The pack house and the barn I think are really cool, because it started as just the barn that my dad and mom built”. Grace added another family friend that helped work on the barn with her mother and father. Audrey then continued with her description of the barn,

Then they added on this little off shoot which is the old honey shed. We used to do all of our honey extraction in there, but we have transitioned it to be a pack house, so it has a bunch of stainless-steel tables and stuff and our wash tanks are in there, and a refrigerator. I just think it’s a unique feature to the farm, and that it’s kind of shaded too so we kind of have these like shade fingers that come out, and then there is the full sun stuff. Then we have our little seedling greenhouse, and then the large greenhouse that you can see. That one is, we purchased it and went and took it down, around somebody else’s garden, so that was unique day and adventure. We had to take it down literally around plants, so that was difficult, and then we put it back up here. So, it’s like a recycled completely, and then we managed to build it onto existing also heirloom garden beds, which we ultimately kind of re- oriented them. But that was still original...So, you know I think its special. It is kind of like what we do like we were talking about. Sometimes we don’t get a crop in because something that would hurt the actual land here.

Grace added to this that sometimes they will not do something or get a crop in for a family memory reason as well. Audrey finished up by saying, “Yeah, because this whole place, it was kind of hard to pick. I just put like childhood here because this whole place is covered in my childhood. So, lots of memories”. Audrey then finished up and invited Grace to explain her map to us, Grace’s map is pictured in figure 7, “So I started with the house. I actually started with the dome. Because that is the original structure here. And this is the house that our mom bought, just the dome within the woods. That’s where Audrey was born, that’s where our sister was born, so a lot happened there”. She then continued to explain why the house holds a lot of significance and challenges for her and the business,

Now the farm office is in there, but there is also still family positions and stuff in there. That’s actually a difficult thing for me because it’s hard, it’s a difficult transition in a lot of ways. And it’s hard in some ways to have a current life and a current farm operation in all this history because we kind of don’t want to change it but change is also inevitable. So, it is kind of, that’s an ongoing theme and challenge that we are working on. How to change this place in ways that are positive and needed without messing stuff up. Because, we have this option to hold on to some of these things.

Audrey agreed and brought up the point that they are the caretakers of the land and this is part of their family. Grace continued on to explain why this family land is a struggle for her at times, “But for me it can also feel kind of it can be restricting too. And then I drew the well because the well is another difficult thing. I resisted putting in irrigation because I didn’t want to pull too much out off of the well. Because the well in so many ways is important to the house and survival to this. So, to pull off of that for the business part is kind of difficult. That can be stressful”. Grace is always trying to find a balance between the farm and the family property,

So, there is this constant sort of pull from me between finding it really satisfying and really nice to be farming on family property and also feeling like it can’t fulfill my needs in the long term. How do we create something that is good and can stay here and also can kind of move on? It is an interesting combination of permanent and impermanent, planning going on here, and I find that very challenging. And that comes up in almost every space. It is the same with the family garden beds. They are a gift and also a

responsibility. I think they are wonderful, and I don't want to change them, the soil in them is incredible.

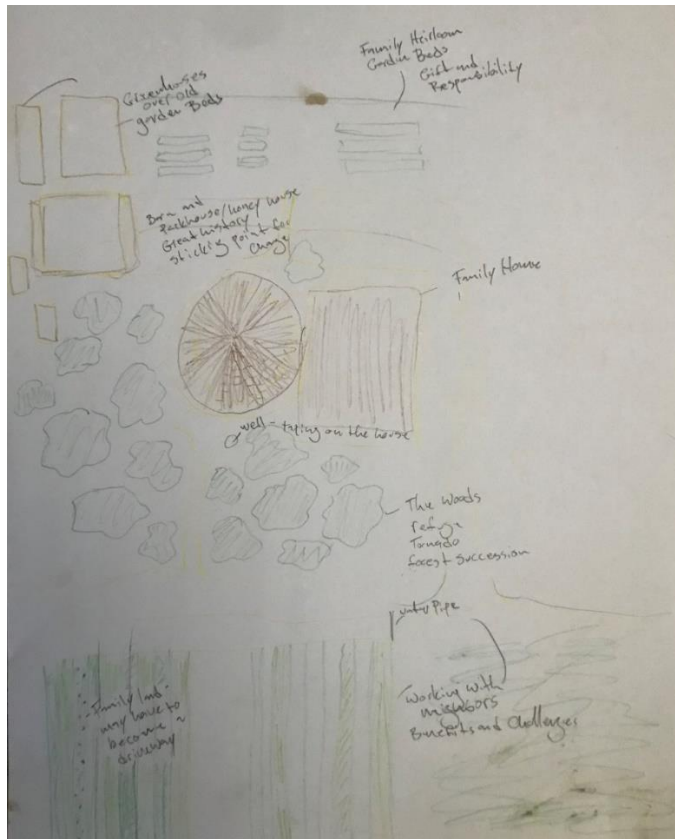


FIGURE 7: GRACE'S MENTAL MAP

Grace moved on from there to describe the other parts of the property.

The greenhouse that we brought here, that was cool. But that was another thing, we struggle to find a place for it. Because the only option was over existing garden beds, we didn't necessarily want to do that. We ended up reorienting them and that was a difficult decision to make. Because it does kind of mess things up for a little while its disturbing for a little while. The soil life has to adjust to all of that... And it comes up in the barn again because the barn has this cool history, but it's not necessarily arranged the way I need it too... That was the honey house before and now it's our pack house on the side there. And then yeah there is the chicken coop and the horse barn. The woods are cool because they are a nice place to be for one thing. I spent a lot of time in there as a kid, so I still really like them. But then they were leveled by these flat line winds.

Grace told me that their precious woods were leveled about fifteen years before that. But what it did give them an opportunity to see was forest succession in real time. Both Audrey and Grace found this fascinating. She then went on to describe the fields and other benefits and challenges,

I drew the fields out here; I drew the water pipe that's across the driveway. And this field in particular, I mentioned working with neighbors. And benefits and challenges, because I think it's really amazing but then at the same time it really hits me, how much of our livelihood relies on good relationships with other people. And that's a lot so there are benefits to that and challenges. There is a lot of investment on property that is not our own. The water pipe, it seems like a simple enough thing, we have to run a pipe from our well out to our field. And then we have to have a lengthy discussion with the neighbor that lives here because of that. And we have to talk to other people, there is just a lot of discussion that has to happen about things that might be straight forward if there were not so many people involved. And that comes up with the house too. Because our mom is involved and our sister is involved there are a lot of people concerned with what happens, so a lot goes into that. It is a lot of extra time.

Some of these decisions led to complications but both Audrey and Grace try to stay positive and keep moving forward. Grace finished up by talking about the driveway they may have to install through one of their fields,

And then this I mentioned I just wrote family land may have to become a driveway. so, it is very satisfying to me that its family land and when I was leasing land it was difficult to do everything, I wanted to do to improve the soil because that takes time and it takes a lot of effort and it takes money too, to buy compost or whatever amendments we are using. It is satisfying that its family land but then it also may have to become a driveway so its weird combination of permanent and impermanent.

We finished up our day with Grace thanking me for the experience. She said, "Yeah! It has been cool, we never would have sat down and done this today (all laugh)".

My final conversation was with Ava, her map is pictured in figure 8. While she was drawing, she joked about how she made things too large to fit on the map, "I'm going to run short, I went too big. Oh, this is funny. The main part of it is the house, right? What does that say"? She also realized that she had not added the pasture or all her wonderful trees. We laughed as she tried to fit everything in. She pointed out that she had her son's wedding on the farm, and this holds special significance for her. It was also interesting that Ava told me, "So, here's the thing, like, when I look at my property, I look at it as one, like it's all one thing. You know, so

there's no, it's not like the barn is separate from the house. I mean, it is physically. But, mentally to me, it's all like one". We then began to talk about her map once she was finished,

FIGURE 8: AVA'S MENTAL MAP

we had to build a garage cause it's not a garage in the winter. It looks really cool with two Kubota's in there.

We ended our conversation talking about how she finds vaccinating the animals one of her challenges, she usually recruits her husband to assist with this task. And finally, she added, “So, you have a lot of small farming things that you need to invent. And that's when it gets challenging. Because nine times out of ten, when I want to do something, it's not available and I have to. Figure it out on my own, like, figure out rig up something to do it on my own”. We ended with her thanking me for the conversation and talking about how farming needs new individuals, “Well thank you. Yeah. I feel like. You know, like, because you made me think too, like, it was good for me to think about it as well. It was a new way of thinking about it... Yeah, but maybe that's what farming needs are people who don't know about farming because that's when innovation comes, and entrepreneurship and things advance”.

CHAPTER V

IN THE END A REVELATION

In 2017 the agricultural census was adjusted giving many women an opportunity to be counted for the first time on the agricultural census. Women though they had always been involved in agriculture were being overlooked, especially when it came to the family farm. This created a challenge for women in this sector whether that was being overlooked when it came to tools or clothing, education and grant opportunities, or just the ability to claim what they actually did for a living, farming.

This was the case across the United States, and this is no different within Michigan. The trend shows that women in agriculture are a growing number not as drastic as originally thought but they are still growing where other numbers are shrinking. Research shows that women farm for many reasons, but it is not just one reason because women are all individuals, capable of their own feelings and emotions that need and should be expressed and embraced.

This qualitative study was to tell the story of women who farm in Michigan. To discover what types of networks and education are available to them, what types of direct marketing are they utilizing, is there a sense of care gained from this type of work, how do these women feel about being a woman in the agriculture sector and what are their thoughts on the census and change, and finally how do they view their farm and what makes it special and unique. Feelings and emotions are something that should not be shied away from in research, this study takes advantage of the fact that these women are individuals and capable of their own emotions.

Discussion and Interpretation

Before going into my discussion on each section individually there are some important aspects to point out. First, it is important to note that this section will mirror the last section in headings. This is to tie the discussions and interpretations directly to my themes that were selected, drawing conclusions about each subsection that was utilized before: Networks and Education, Direct Marketing, Care, Census and Gender, and finally Mental Mapping. Within each section I will give my interpretations and conclusions on the discussions I had with my research partners. This research was a challenge for me. I struggled with how to represent these women in my discussion. I was concerned with accidentally misconstruing something that one of them said or misrepresenting them in some way. I struggled with this throughout my thesis. How was I going to interpret what these women had told me in a meaningful way? In the end I realized that I could only do so much. I am faithful to what these women told me but moving forward this is my interpretation of our discussions, this is what I have taken away and the conclusions that I have drawn. This is a discussion about my research partners and what I felt from our conversations.

Exploring Networks and Education

Networks in a way are inherently geographical, how people connect is an important aspect in geography. Education ties directly into networking because in a way it is a form of networking just with peers. Networking for these women is important it just mostly comes in other forms other than a formal network group. Even though not all these women had positive experiences when it came to formal networking, they still found ways to network.

One aspect that was fascinating was with Veronica and her network experience. Veronica does not view herself as a farmer, she views herself as the farm liaison or sales representative for

the farm. But without Veronica the farm would not be doing as well as it is. She has pushed them into the future by “reaching out and making connections with potential buyers for our alternative grains and seeds”, she also “keeps an eye out for opportunities that would benefit our farm. So, grants, programs, and ways to kind of push the farm forward.” So even though she does not call herself a farmer she is an integral part of their family farm. I believe for her this is one of the reasons that she has a hard time connecting with formal networking. How she does connect is through the marketing of her farm. She meets people and sells this wonderful idea of alternative grains and seeds and how it can move agriculture into the future. These are her networks; she is forming her own and it does not need to be formal in the sense that it is organized by someone else.

The two women, Jane, and Mae, that are involved in West Michigan Growers Group really enjoy their time they have with that formal network. Though even may said at one point when you are busy on the farm it is difficult to meet up with different groups and be involved. But I think what is important is that the support is there. I liked what Jane said about meeting up wanting to discuss maybe a problem or an issue you are having. When you go in you think you are the only one but then you realize everyone has had this issue or is facing the same issue. I believe this helps people not just women feel more connected and not so alone. There is a benefit to formal networking it is just finding the right group and the time.

I had hoped that there was a network of just female farmers that these women were involved in. I loved the idea of Badass Brunch or Badass Lady Farmers. This sounded like the couple women that were involved really enjoyed these meet ups and the connection they got from this group. But I understood when I was told that the women who organized it just got too busy. Farming is work and women are devoting their lives and time to this work. Winters in

Michigan become about the only time that you can really devote to networks like these and even then, you are spending a lot of time planning for the year ahead. But after talking to these women some seem to want something like this. Some sort of connection to other women a way to empower each other and support each other. Empowerment and support could really lift these women up through a collective network.

I love that these women take advantage of personal networks. I think this is the way that they are connecting with other women. With Grace for instance, she used to work on a larger farm with another women, they still talk, they still help each other, or run ideas by each other. Personal networking is important to her. And as I stated in my findings Grace and Audrey work on the farm together not only are they sisters but, in a way, they are a female farmer network. This is true for Judy, Dorothy, and Marilyn as well. They all support each other and work in their own ways like a network, there are there for support, to lift each other up and help each other through difficult times. This is inherently what a network is.

Social media was another network that came up with multiple of these women. Ava even began to follow female farmers of color during the Black Lives Matter movement so she could become more involved in her own way. She is also heavily into social media herself keeping her farm regularly active on Instagram updating her followers with daily alpaca antics or displaying how she is dying yarn with pear branches out of her orchard. Judy is also heavily into social media posting about the participants and what progress they are making. When they helped their mama, goat give birth the babies were up on social media right away to introduce them to the world. Veronica as well runs the social media account for her family farm. She tells stories and fills people in on what is happening just a general way of connecting with people. Yes, maybe these are not in person networks, but this is a way for these farms and women to put themselves

out there and connect. And honestly, social networking is part of our world now especially in times like now where people truly cannot connect in person.

Finally, to address the aspect of education. I believe after talking with these women that this is something that could change. I have to say it, we are moving away from industrial agriculture. Small farms are going to be the way that agriculture survives. Even Veronicas family has moved away from the corn, soy, wheat side of things and have found a way to adapt and move into the future with alternative grains and seeds. So why are we still shoving big ag down the mouths of students in agricultural programs? As Jane said when she was in school, she was discouraged for the fact that she wanted to run a small farm and practice diversity instead of monocropping. Then looking at the few classes that Ava tried to take, she is not industrial she does not practice industrial practices with her small herd of sheep and alpaca. These women have found what practices work for them and that is what they are doing. It came up in almost every interview YouTube. Many of these women do their own research and then learn through trial and error. Small farming is the way of the future and this industry would do well to begin to recognize and support that.

Not all these women had bad experiences with education. Mae brought up Worldwide Opportunities on Organic Farms(WWOOF). I believe this is the type of education that needs to become more of the mainstream for women in agriculture. She discussed WWOOF with me multiple times both when talking about education and empowerment (more on this in census and gender). Small programs that cater to small farms giving women opportunities to get out there and work and empower themselves.

In the end education and networking proved to be important for different aspects of these women's farms and lives. Finding ways to cater more towards women could help expand

networking and education. We need to look forward with education and not continue down the same destructive path of agricultural education that we have been on. Bringing women together is not enough, we need to find educational opportunities. Not that society need more opportunities but what women and what they need is an education that caters more towards their needs. Networking opportunities will not necessarily fix the problem. It all needs to be intentional to build a framework that fits women.

Exploring Direct Marketing

All six of the farms participate in some sort of direct marketing, farmers markets and CSAs being the two that were discussed the most. As I stated previously, there are other sorts of direct marketing experiences that these farms are offering like educational opportunities. Some of the women offer opportunities on the farm and others find it is better to go to markets to meet and interact with their customers for liability reasons. It is important to recognize they are all taking advantage of direct marketing opportunities.

There are multiple farms that have incorporated cut flowers into their practice. These women are catering directly to weddings on top of enhancing the biodiversity of their farm. And they love doing it. The cut flowers are an aspect that really brings joy to these women, providing a product that enhances their farm, and offers something more than just your standard mixed market crops that you would find at a farmer's market or within your CSA pickup. It is caring about these weddings, to provide something beautiful and healthy for them along with sticking local.

All these women have found ways to utilize direct marketing and have it work for their farm. Of course, farmers markets and CSAs are common among small farms, but it really works for these women. Ava for instance has found out how to market her product even though her way

is a bit different than the others. She likes getting people excited about her product and that takes face to face not just online. Textiles are a tactile and product interaction at shows really help support her business, because textile is an expensive part of the agricultural industry to be in. Her upfront cost to make these products really racks up so without being able to find a way that works her farm would never succeed. But it is not just that, Ava along with the other women really enjoy getting to know people that purchase from them, as Ava told me, “people are interesting, they have lives, they have really interesting lives”.

These women really enjoy their direct market relationships that they have developed. Multiple times these women referred to their customers as friends, this is something that stood out to me. Relationships that have been cultivated enough to refer to them as friendships moves beyond your standard direct marketing relationship. These are not just farmers that go to market and have no interaction with customers other than to sell their products. It is backing up the fact that personal relationships mean something. Not just the way that they feel about their customers but the way their customers feel about them. This is a two-way relationship, customers seek them out to buy their products and support their farms and really, them, in the sense that they are the farmer.

Beyond that there is a real feeling of pride when these women discuss how they market to the community. Take for instance Veronica and her mother, their farm is literally being beautified. They want to show people what they are doing because they believe it is something special, and it is. They are moving into a new realm of possibility with alternative grains and seeds and taking their farm from your typical model of corn and soy to something new and exciting. Taking pride in their farm pushes these women to do more.

Another aspect that makes these women unique is their ability to adapt and grow their farms with different ways of direct marketing. Education plays a large role on many of these farms. Jane discussed education of her community and workshops, Mae discussed educating the public through the non-profit, Ava talked about bringing classes out to show where textiles come from and even possibly expanding beyond that, and finally Judy and her partners utilize the farm for education and therapy for individuals with cognitive disabilities. This is a unique way to look at direct marketing, but it is not only that. Educating people on where their food comes from not only markets your farm, but the food system in general along with eating healthy and improving society. Collectively, these women are trying to educate our society to grow a larger understanding of agriculture.

I am not saying that men do not feel any of this with their customers or their direct marketing relationships. There might even be a beautification committee out there, but for these women this is what is working and how they are moving forward, creating profits and opportunities for their farms. It is all this on top of their personalities. These women really know how to sell their product, really talk to people, and get them excited about what they are doing. They have moved beyond just running a farm and really showing what the farm can do and what it can provide for their community. All this directly ties into care and how these women feel about providing for individuals outside of themselves.

Exploring Care

As stated previously, care for everyone looks different and care for these women looks different as well. They show care for the environment, care for the animals they have, or even care for the people that work for them. Care is one of the driving factors for why these women farm. One thing is for certain, the significance of their direct market relationships ties in with

care. It is not just that, care manifests itself in sustainable land practices, customers, and their relationships, and even the community around them. Direct marketing relationships are significant for each individual and each of them feel the relationships in a different way.

Care appears throughout the conversations I had with all my research partners. First, I would like to discuss how care played into the direct market relationships. Jane really hit it home when she said she could not imagine it any other way. This is a way for her to market herself, to create a partnership with her customers, and those that come to her farm. For Mae she really felt this during the pandemic when individuals reached out to her to make sure the farm was doing ok and that she was doing ok. This really solidified for her the relationships that she has built with individuals. There is an importance behind what they are doing as farmers. They have built a sense of fulfillment from this line of work that they did not necessarily feel with other jobs.

Next, I would like to discuss how it plays into the idea of sustainable agriculture. There is a deep sense of care for the land that these women farm on. They care about being good stewards of the land and taking care of what was entrusted to them. Some have a deeper care than others. Veronica for instance even says it is not a deep care in the hippy land sort of way, but she cares a lot about her family farm and the product that they are producing, as well as her customers and the business she has built with her family. I believe this is because she does not work the land as much as some of these other women. As discussed previously Veronica does not even view herself as a farmer just a liaison for the farm. With the other women of course, there will be more of a sense of care for the land, they are working with it daily and need to care what is happening with their soils, carbon, or other aspects of the farm. Passion for their farms is a bit different, and that is alright, because as stated before all these women are different and unique. The concept of maternal instinct came up with Jane and then even in a back way with Mae. Jane came out and

said that there was a maternal instinct to take care of the land. Where Mae went about it, discussing the way that the spark of life happened within the seed. This idea of giving life to the land showed itself multiple times.

On top of this there is care for the individuals that work for them. It is not simply just paying someone, letting them work, and go home. These women are always trying to consider living wages and how to make lives for those that work on the farm better. Mae talked about a positive working environment with me, and how to keep everyone happy and on task, so they stay productive. Audrey and Grace are the same way, cutting days short if it is too hot to help protect the people that work for them and even making sure they spend time in the shade by their home to cool off, on top of this making sure they eat and drink enough water. This is beyond just a sense of caring for the people that work for you this is personally taking care of them.

There was naturally a sense of care for the animals on their farms as well. Especially for Ava whose farm relies solely on the health and wellbeing of her animals. It is not just for her; Mae also talked a lot about the animals and this sense of trust that she has built with them. This has enhanced her experience on the farm, learning a new side of farming with animals and their care.

When it comes to caring about individuals that come to the farm Judy discussed her participants. This I believe comes naturally to their farm because the participants are the main aspect instead of the agriculture. It is not just that, for these three women they really get excited to bring eggs to people they know and work with and there is pride beyond care. The farm no longer seems like a job to them, it is becoming a lifestyle. They leave the farm and think about how to make more time to come back the following day even if they do not necessarily need to.

This is a true level of care when you cannot wait to come back and see what more you can do to improve the land and the farm.

This motivation exists, care exists for these women. These women see themselves as caring. It does not take them coming out and directly saying it but there is an empowerment that they feel behind the sense of care. There is even an overwhelming sense of how much they care that can come over them, like Audrey and Grace discussed. They think about how they care about their family land on top of the people that they are feeding and that can become overwhelming. They use this to push themselves forward to think about all aspects and motivate them to do better in parts of their farm. This, in a way, is true for all the women. Finding ways to do better for their farms so that it positively effects the land, and the environment motivates them. There is care that ties them to their customers and that motivation helps them do better.

I believe this sense of care comes from the fact that they are women. This is not to create a dualism between men and women but to simply call out that they are women, and this is leading them to care for aspects that others may not. Care for the land comes from being a farmer, there is no gender delineation in that aspect, because caring about the land leads to a better yield and leads to making more money. What I am talking about is that level beyond just caring about the land and your business. It is this sense of fulfillment beyond just producing a product. There is an inspiration behind what they are doing and producing and wanting to be a part of this community of agriculture. This is where I believe the idea of being a woman plays in. Women have an aspect of care that goes beyond the norm for agriculture. It is following their dreams and finding out what makes them happy. It brings emotion and reason together to motivate them. There is satisfaction at the end of the day not just, when is this day going to be

done. I am sure it is not like this every day, but these are the aspects that they discussed, not how hard it is to be a farmer.

Exploring Census and Gender

These discussions really opened my eyes to what women are really facing with the farming industry and how they view themselves as women within the industry. In a way this was the crux or catalyst of my thesis. These concepts though brought up by me really led these women to think beyond just their daily routines about issues that they face or have seen others face.

First the concept of why women are entering into the occupation of farming. Yes of course these women have the same interests as men within the industry, they all want to grow food or produce a product for people and make a business out of it. There is this idea of independence and feeling like they can. Dr. Njuki said, in a recent lecture I attended on women in agriculture, that it is the power through. This idea of the collective agency. Women seeing other women do and this leads to confidence in yourself or the power within (Njuki, 2021). It is not only that, but there is also a theme of growing a future to pass along to your children or family. This was not only to their own families but other women who are not farmers wanting farming in their lives because they believe it will bring enrichment to their children. Women care beyond just themselves and then think toward the future of others. Then there is a movement of passion, passion for the environment and sustainable agriculture and then a passion toward the food system. Society is beginning to see a shift in how we view the job of agriculture, but we are not there yet. However, if women see that they can do it than they will.

This concept of women running smaller farms I really agreed with my partners on. I believe there is a movement with women, and farmers in general, to be more sustainable. This is

generally much more easily achieved on a smaller farm. What really stuck out to me was the idea of generational farming. I believe this to be accurate. It was not until recently that women were even considered to take over the family farm, especially if there was a son in line to take the farm over. Then there is the aspect of land, it is much more obtainable now to find smaller plots of land instead of large-scale farms for sale. So, women that are just starting out will need to start out on smaller land to gain capital and work toward finding a larger plot of land. However, this concept of money points to a larger darker issue at hand. Jane brought it up with not being able to obtain funding. The USDA has a proven history of discrimination claims against women and minorities; Keepsegle a Native American, Love a women, and Garcia whom is Hispanic (Bennett, 2011). This agency has in the past denied women and minorities of loans and grants based on their gender and race. Loans from the USDA tie directly in with large financial institutions, this could make it exceedingly difficult to move forward with your business when you are not granted opportunities like others in the industry. There should never be the question can you do that because you are a woman. If there is a solid business plan in place with reason to succeed, then women and minorities should be treated no differently than white men within the agricultural industry.

From here it is pertinent to discuss the sidebar between Marilyn, Judy, and Dorothy about “the guys”. I would like to believe that this idea is phasing out among farmers, but after this part of the conversation I am not sure. Why are these women being told to do it like the guys or that they are just girls trying to farm? None of this is helping their confidence and for just starting out it puts a bad taste in their mouths about other farmers. And it is not just the landowner, there are other people telling them, it is kind of like you are farming. The truth of the matter is this is what causes women to be hesitant about claiming the term farmer for their own. Not all women, but

for some of these women that is true. This concept of death by one thousand cuts, not just you are a woman but also in the sense that you are so lucky to be a woman this idea repeatedly leads to low confidence and not being able to move forward within oneself.

Next to address the change to the agricultural census that was made. At first, I could not figure out why all but one of these women had not heard of the change, but then it hit me. There would have been no reason for them to know about this adjustment because they were already able to claim the term farmer on the census. There would have been no change for them because they are the owner operator of the farm, or the farm manager, they are already claiming this as an occupation. It was interesting to watch Grace lead herself into the story about other women that she knew and watching them end up with nothing at the end of a relationship because they were not the landowner. This concept of the census changing is far more important for women that are on a farm where they are not the principal owner operator. What some of these women could relate to is what not being counted on the census leads too, like clothing and tools.

It is not only the idea that clothing and tools in the industry are marketed to men it is the idea of safety and health. When tools are too large or not made correctly it makes it difficult for women to do their jobs. More tools need to be designed to work with women instead of against them. This is not simply painting a handle pink and calling it a day, it is finding a way to restructure tools, so they work. Pink should be a chosen option for a tool color not the only option. Clothing as well, women should be able to fit tools in their pockets or not have to worry about ripping a pair of overalls because they are too tight. And you know what women want, to have functional clothing while they are working, this should not be too much to ask from this industry.

From here we moved into how women view themselves and what they call themselves. Some women do not utilize the term farmer because they do not feel like they can. I believe this goes back to what I was discussing before, if you are told repeatedly that you cannot do something than it becomes true in your mind. However overall, I believe this is something that is changing, and it is evident with some of these women. They claim the term farmer because that is what they are and there is no question with that. Even if it takes them time to work up to the term, they are still farmers even if they “grow yarn”. I believe that concept of how people view the term farmer really plays into this as well. When you picture a white man in overalls it becomes harder to see yourself as a farmer and this perpetuates the stereotype. I also agree with Grace and Audrey when they said seeing someone surprised when you say you are the farmer reveals a bit more about the person asking than themselves. So perhaps it is society that needs to change and adjust how they view farmers, not the women themselves. Women should be able to dress nicely if they want to, they do not always need to look like they just walked off the farm and out of the muck to be considered the farmer. Women should not need a sign or muddy boots for people to believe that they are a farmer.

The idea of women being the same or different from men that farm also was discussed. I believe this idea is both for women. They want to embrace the fact that they are unique and different, but they also want to be held on the same level as men in the industry. Women and men have different skills, and this is not a bad thing. Taking communication as one aspect, like Judy said its more about getting to know someone on top of the business transaction. This is a give and take balance, and I believe how you feel is up to every woman within the industry individually. If women want to be more like men in the industry then so be it, and if women want to be different that is fine as well. It is just the fact that they are all in this together, but

individuals all bring something new to the table. The point is that they should have the option to choose how they would like to be viewed in the industry and it should not be you are a man, or you are a woman. It should be, I am producing a wonderful product that consumers want to purchase, and I am doing it well.

Finally, the idea of empowerment came up in our conversation. Empowerment as I discussed before is a leading factor into why these women farm. Seeing yourself do something new no matter what industry someone is in feels empowering, but these women get to feel that all the time. There is not a daily normal, everyday is different, and they are always learning something new about their farms or the industry itself. These women get to feed people for a living or provide them with goods that they cannot get other places like “home grown” textiles. It is the liberation that keeps these women farming and moving forward.

There is a distinction to make between femininity and feminism. Where feminism and even ecofeminism encompass the political side of women who farm, femininity is much more than that. It is the femaleness that these women bring into their occupation. Though these women might not see their work as feminist there can still be a femininity behind it. It is the roles that they are accepting, and the way that they are applying their own views into the work that they do. Femininity does not have to be the way that we would normally associate it with women, like gentle or graceful. However, it can be feeling feminine as well. There is a stereotype around these women that they must play the role of the male farmer instead of embracing the fact that they are and quite frankly want to look like women. During many of our conversations this idea came up of sometimes just wanting to wear a dress but if they do, they are not looked at as being the farmer. This can be frustrating to have to specifically look a certain way even if you feel like looking another. I believe Ava said it perfectly when she said, “We have this concept in the US,

like, we have to look like something if we're doing that occupation". Many of the other women brought up looking specific ways but maybe wanting to look another way. Jane gives a good example of this, "I love wearing sundresses, but they don't always think I can wear sundresses because I am a farmer. You know my hands are always dirty, I can't get a manicure with my friends because it's going to get dirty, but really, I can if I want". Mae also discussed this point when she was talking about how she feels they need a sign at market that states "yes I am the farmer" this way they are not questioned if they want to dress nicely. She even brought up the fact that, "It's like if you look clean and you are not wearing flannel and you're a woman people will have a harder time believing that you manage a farm than if you're like filthy". Sometimes women just want to dress nicely but this should not put into question if they are a farmer. This form of femininity more accepts the fact that they are women within agriculture and bringing their own aspects and ideas into the role. Challenging and changing the way society would normally think of this sector of work.

Exploring Mental Mapping

Mental mapping was a wonderful way to engage my research partners into discovering emotional connections that they have with their farms. Maps are a common geographical theme to show data, but what about individual emotions and how women view their farm? Mental mapping helped show me their farms from their point of view along with what they found difficult or challenging or just what they find unique and important.

For this process it would have been nice to have other maps to compare individual maps with to see what each woman found as unique to the farm. This worked with Judy, Dorothy, Marilyn and then Audrey and Grace. This created a truly rich experience to find out how each of

them viewed their farms. However, for individuals it was fascinating to learn about their experiences or trials that they have faced on their farms.

Multiple women related this exercise back to their childhood. For Veronica that was the first and second aspects we discussed. First, she talked about being a child and playing with her siblings in out by the creek and in the barns. These were experiences that she was relating to the property it was not just about the barn or what fields were located where, even though this was an important aspect as well. Secondly, she talked about never wanting to be on the farm and how much she hated it. This is interesting considering she still will not say that she is a farmer and has found alternative ways to discuss what she does for a living. She then continued to point out how dreaming up this idea with her parents is pushing the farm into the future. This emotional drive and connection to the property really showed much more than just how its laid out. She also included the home her grandfather was born in, solidifying that family farm setting that she talked about throughout our conversation.

Jane also related her drawing to her childhood. The fascinating part with this was the fact that she was not born and raised on the property she farms on. She related all this back to what she told people she wanted to do as a child, grow flowers. Now she is living that dream by providing them as part of what she offers. It was also the way she described the flowers that I found special. She discussed seas of color and how this invoked emotional response within her, it was not simply, I grow and sell flowers. I found it interesting that she also drew her laptop. This was unique to all the women. I am sure that all the women use technology on their farms, but she was the only farmer to draw attention to this. I have a few theories as to why that was; first, she is younger than the other farmers, and secondly, she went to school for agriculture so she would have done a lot of her learning on a laptop in an academic environment. Like the other women

she also pointed out structures on the farm like hoop houses and her poultry area. Finally, she talked about the farm having handy cap accessible areas. The along was not only brought up with her farm but also the trio of women. Creating an inclusive environment is important to these women.

For Mae we started out with how the farm was laid out. This makes sense because she is the farm manager of this farm, so she constantly is thinking about the layout and what makes sense for the productivity of the farm. But there is also less of an emotional connection with the farm itself even though she of course cares for the farm and is very emotionally invested. I believe her being a farm manager explains why she started with the layout and not specific emotional connections. The tomatoes came up as something she had found challenging but something she was also excited about for this season. She was driven from her experience the previous season to find ways to make this better and how she learned from her mistakes. She talked about the animals and the relationship she has built with them and how proud she is of this relationship. This showed her capacity for learning new things on the farm and how her experience has caused her to grow. Finally, we talked about the issues she has faced on the farm and I love that she said the whole thing. I thought her getting a tattoo to commemorate sticking through the tough experience and growing from it really shows how committed she is to her growth as a farmer. Being questioned is never easy especially if it is in the back of your head that it is because you are a woman.

With Judy, Dorothy, and Marilyn they all took the time to draw maps separately and I found it fascinating how even though their layouts were the same they all had different aspects that they highlighted or different stories that they related the farm to. For Marilyn if you look at her map a lot of the focus is on the agricultural area and the greenhouse. When they moved onto

this property Marilyn was the one to lay out the agricultural area, so this was prominent on her map along with the chickens, but she overcame a lot of fears with the chickens throughout their experience on the farm. Next with Judy's map all the areas she points out has to do with the participants. This also makes sense; she is the occupational therapist on the farm, and this was her dream to start this. As much as she cares about the farm what she really cares about is the participants and seeing them grow and develop strengths that they would not have developed without the farm. She also brought up the chickens and how they are moving them through the field for rotational grazing something she was very proud of. Finally, with Dorothy, her map was pretty well rounded, but this also makes sense. She helps with all aspects of the farm not just one area predominantly like Judy or Marilyn. She had helped design and build out some of the rooms inside the main check in area for the farm and this was a bit more detailed on her map. Chickens of course came up again and how Marilyn had faced her fears with the chickens. One interesting aspect to draw attention to is the size of the landowner's home. Dorothy has a hard time watching the landowner speak to Judy the way he does so this is a big challenge for her. Though his home is not the same size as the barns it certainly appears that way on her map.

All three of these women pointed out a few similarities the first was the area where they assisted in the goat giving birth. I think this really stood out as important for a few reasons; First it was still new they kids were still young when I was out at their farm, second, this experience really showed these women that they could really do anything they set their minds to and it really brought them closer to being able to call themselves farmers or at least gained them some major "farmer points". The other aspect that they all addressed was the issue with the landowner. They all pointed out his home and how communication was the biggest issue. Obviously when

someone continues to stand in your way and tell you that you cannot do something repeatedly that is going to stand out as a challenging aspect to your farm.

For my time with Audrey and Grace we did this exercise the same way. They were able to draw separate maps and then we came together to compare. Both Audrey and Grace related a lot of their maps back to childhood. This made sense they were literally born in the family home and raised on the property. Audrey does not live on the property now, but it still holds a lot of significance for her. For Audrey who acts as the farm manager of the property it was interesting to see how the fields took up half of her map as well as the garden beds. The garden beds she related back to time spent with her mom remembering planting onions when she was young. All the objects on her map have a story attached; the beds, the home, the barn, the greenhouse, Audrey does a nice job with making you feel connected with the property as she talks about it. For Grace, her central area is the home and the forest then the beds and the field take up other areas on her map. Grace currently lives in the family home, so this also makes sense, she also runs the farm business out of the home so spends a lot of time working withing the home on the business itself. A lot of what Grace discussed was about restrictions she can feel with the farm. It is a significant struggle for Grace to keep the family home and land in balance with the farm business so when Grace talks about what is difficult for her, I believe that is because this is what is constantly on her mind. She was able to bring a whole other view to the farm to the forefront and that was how to give and take with the family farm.

The last map was with Ava, she right away pointed out the fact that she drew her home the same size as the barn something that is not accurate. But she lives on the farm and this is an important aspect to her property, it is understandable that she would start with the home and make it a focal point. She pointed out where they had her son's wedding, relating the property to

family much like Grace and Audrey do. Another area on her map that is quite large is the sacrifice¹ area. I think for farmers like Ava who really care about the aesthetics of their property looking out and seeing the sacrifice area can be difficult, but it is a natural part of a farm practicing rotational grazing. She talked a lot about the trees and what her property holds that is unique. This aspect was very important to her and thing she was proud of to share with me. I believe the trees stand out as well because she is trying some new dying techniques with the yarn that is new to her, such as using pear branches as a nature dye. Finally, it was interesting that she pointed out that she views her property as one entity, so it was difficult for her to separate things out and draw them on the map. This was an interesting challenge but when you are thinking about the farm as a whole and how to make it function as one entity this is the way that you would view your property.

Limitations

Although I tried my best to find a variety of women for this study it was extremely difficult in the time of a pandemic. The biggest limitation here was being unable to enroll female farmers of color to share their experiences within agriculture for this thesis. If the circumstances had been different, or I had more time, I believe that I would have been able to fix this issue with my work. Another oversight was not being able to interview more female farmers from family farms. Though Veronica works on her family farm and Audrey and Grace and a family farm it would have been beneficial to find women that were on the farm in a partnership with men. I believe this would have changed the answers about the census and how these women felt about being counted for the first time in 2017. The issue was that most of these women run their own

¹ When fams use rotational grazing there is usually an area on the property called a sacrifice area. This is the area that provides space when the animals are not out in the pasture. Generally, there will not be any growth in this area, and it is used to feed the animals alternatively to grazing.

farms so there was no reason not to be counted before 2017. They would have been counted and it made almost all of them unaware of the existing changes.

Finally, COVID-19 truly hindered my work and my experiences with my research partners. There was a large disconnect through phone and web interviews. The two farms that I was able to visit these interviews were so much richer in person. To be able to see these women in their own environment where they were comfortable really opened them up and the discussions became much deeper than some of the others. There was nothing that I could do to change this limitation for the time this is how the research had to be done. Even when it came to the mental mapping. There was something richer about this being done in person and seeing the farm than having to view then maps over a camera or even just listen to these women describe them. This is not to say that the information was not meaningful in any way it just became something different when it was in person.

Recommendations for Future Research

Based upon my research there are several recommendations I would make for future studies. I would work on trying to get a more diverse population sample. This must include minorities as outlined in the limitations, I believe this was one part that was lacking most in this study. A second recommendation I would make would be to find women and men that run farms together interview them and then have each of them draw a separate mental map to compare them. It would have been fascinating to see what stood out to those of the opposite sex on the same farm. Also, to see what each individual view as important, what they see their roles are on the farm, what the difference in challenges were, or even what they found to be unique about their farm. I believe if I could have done this with my study it would have made for a much richer outcome.

Conclusion

Every day these women move forward despite the challenges they face daily. Despite people telling them they are not good enough. Despite the feeling that they have that they might not be a farmer, or they might not fit in. They have come up with unique ways of talking about themselves or explaining what they do. They have grown stronger with networking and educating themselves. They find their own ways of practicing agriculture and this is what is changing the face of this industry. They are finding ways to do agriculture differently like non-profits, textile farming, farming for education and therapy, and honestly just farming to feed people in their communities.

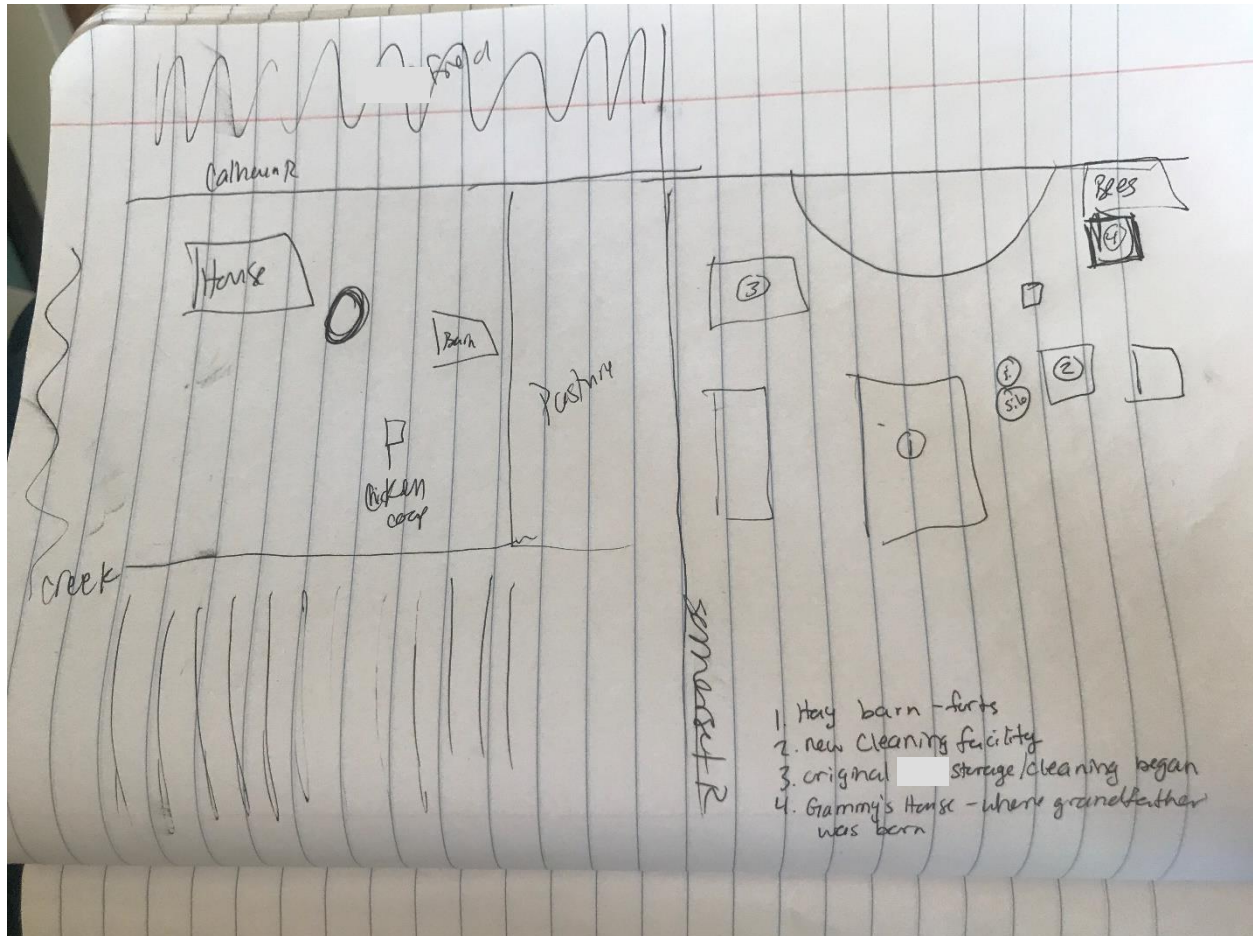
We need to find a way to fix the system, it is not the women that are broken or different, these women do not need to be fixed. Qualitative research gives a deeper understanding into these women's lives and emotions, it explains the how not just the what is. Emotional knowledge should never be considered as less than. These women's knowledge is not less than. Research like this can help move a patriarchal system into a more neutral system.

Women are not necessarily coming out and saying that they are challenging the patriarchy of agriculture. Patriarchy is a system to keep individuals down or hold them back. And agriculture, for a long time, was just that. It was holding women back from learning, advancing, and identifying as a farmer. But in their own way all these women are pushing against the patriarchy. They are challenging the patriarchy by being the owner, manager, and liaison of their farms. They are challenging it by being there and moving forward into the future.

APPENDICES

A: Mental Maps

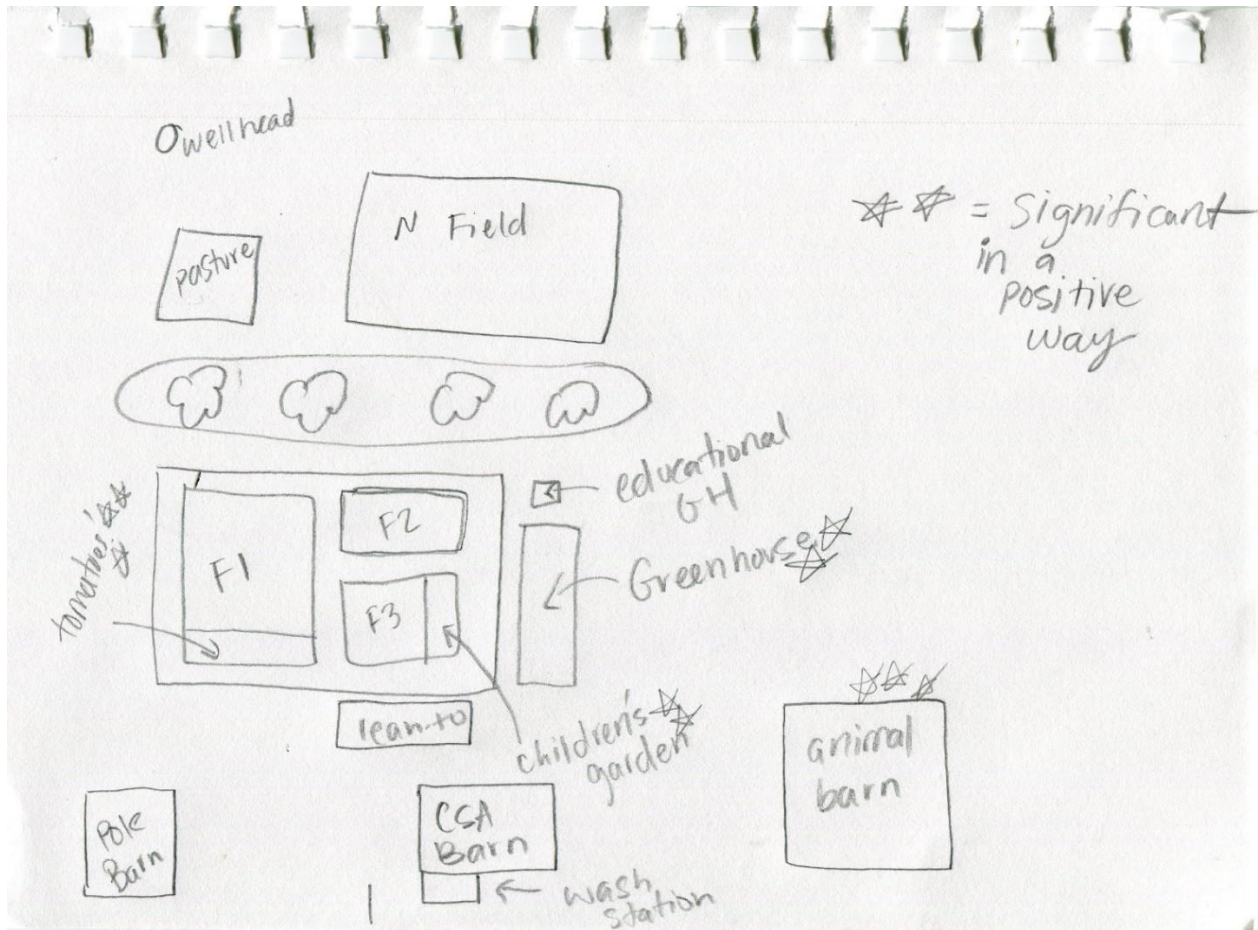
Veronica



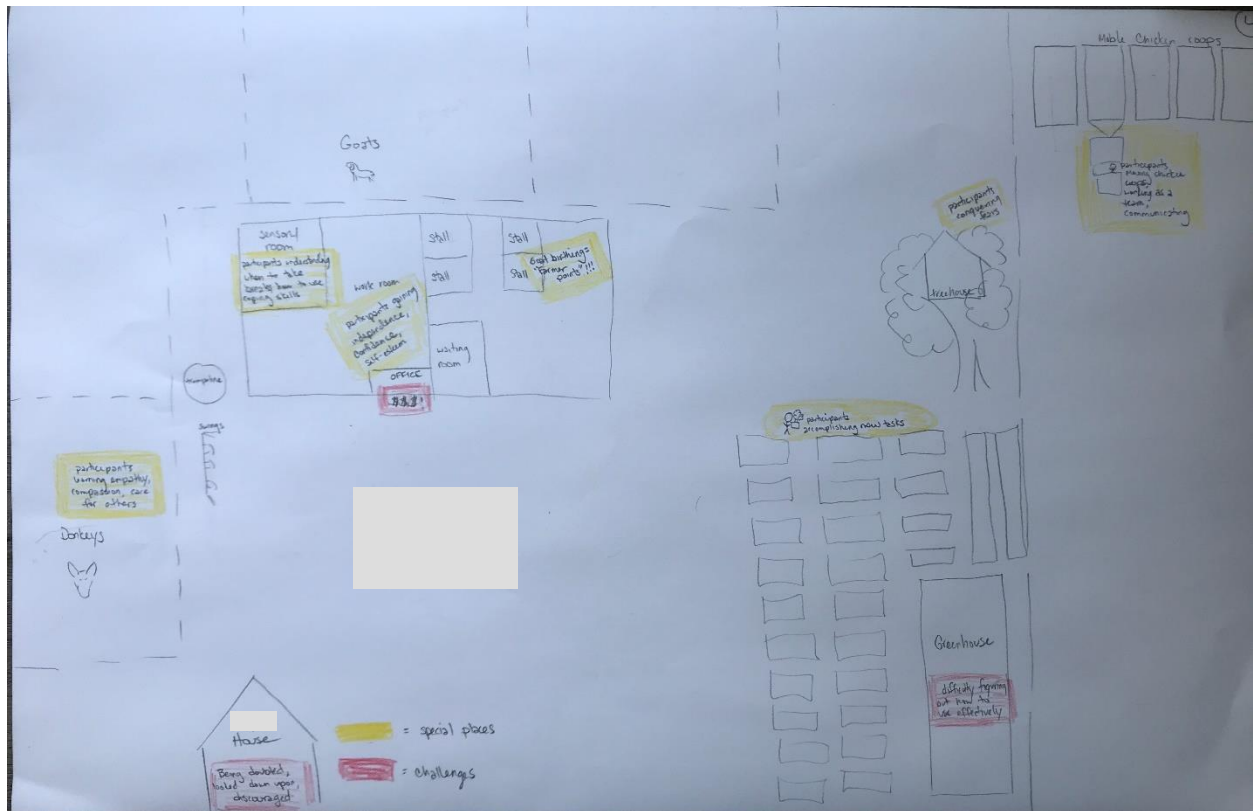
Jane

Interview 2 map never sent; email inquiries were sent but she never followed up.

Mae



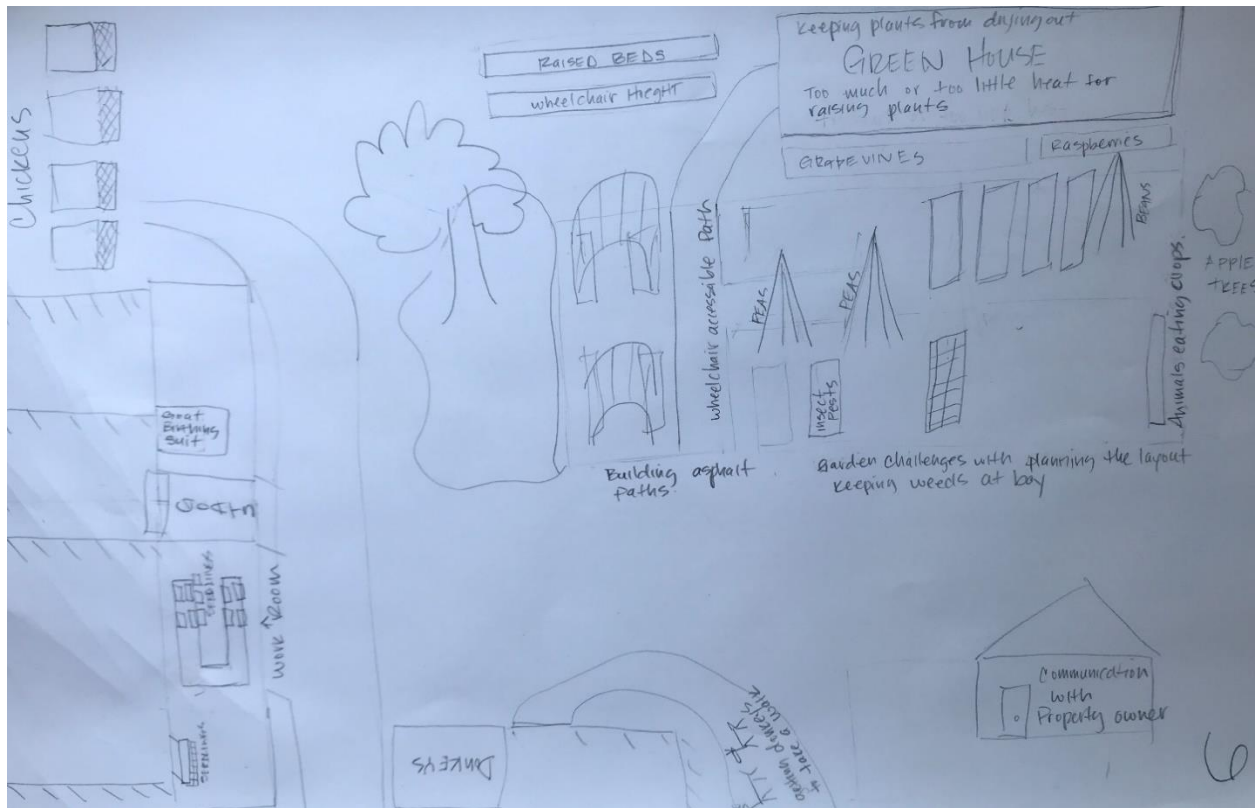
Judy



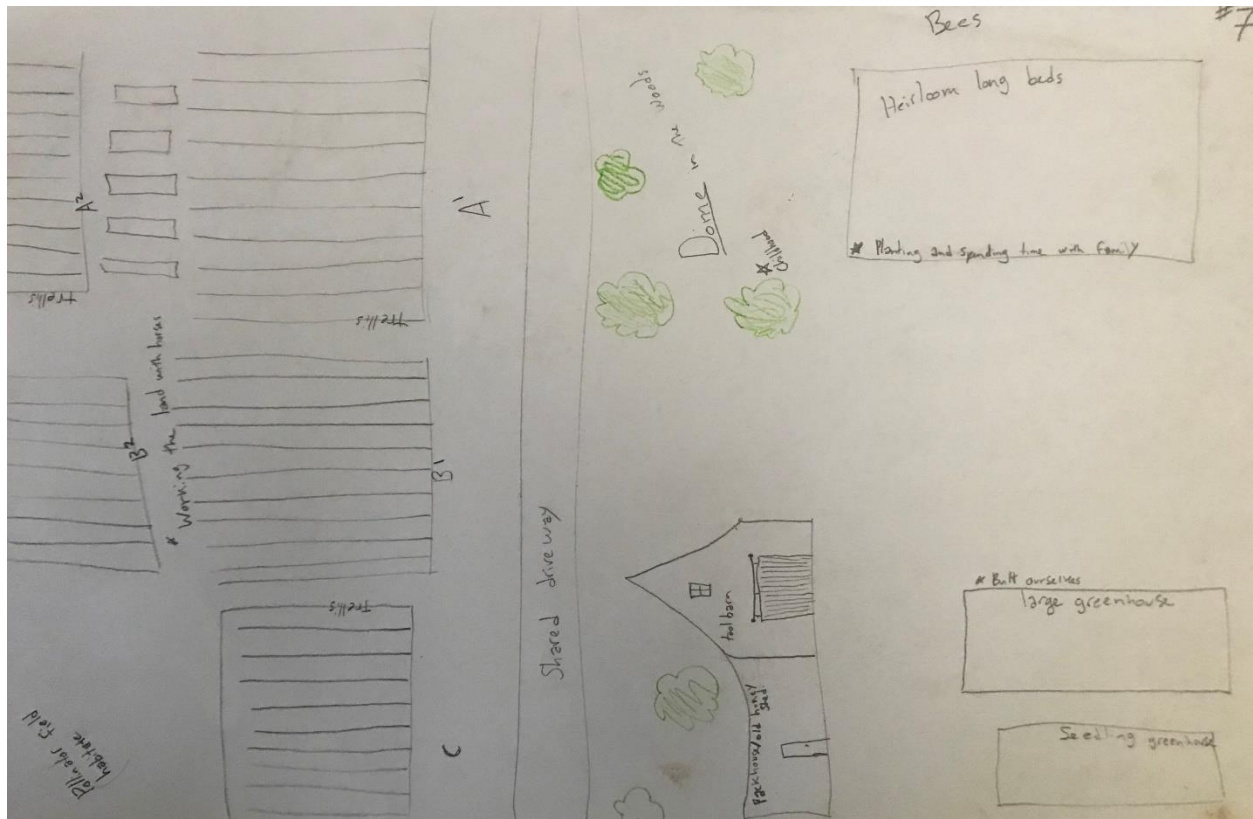
Dorothy



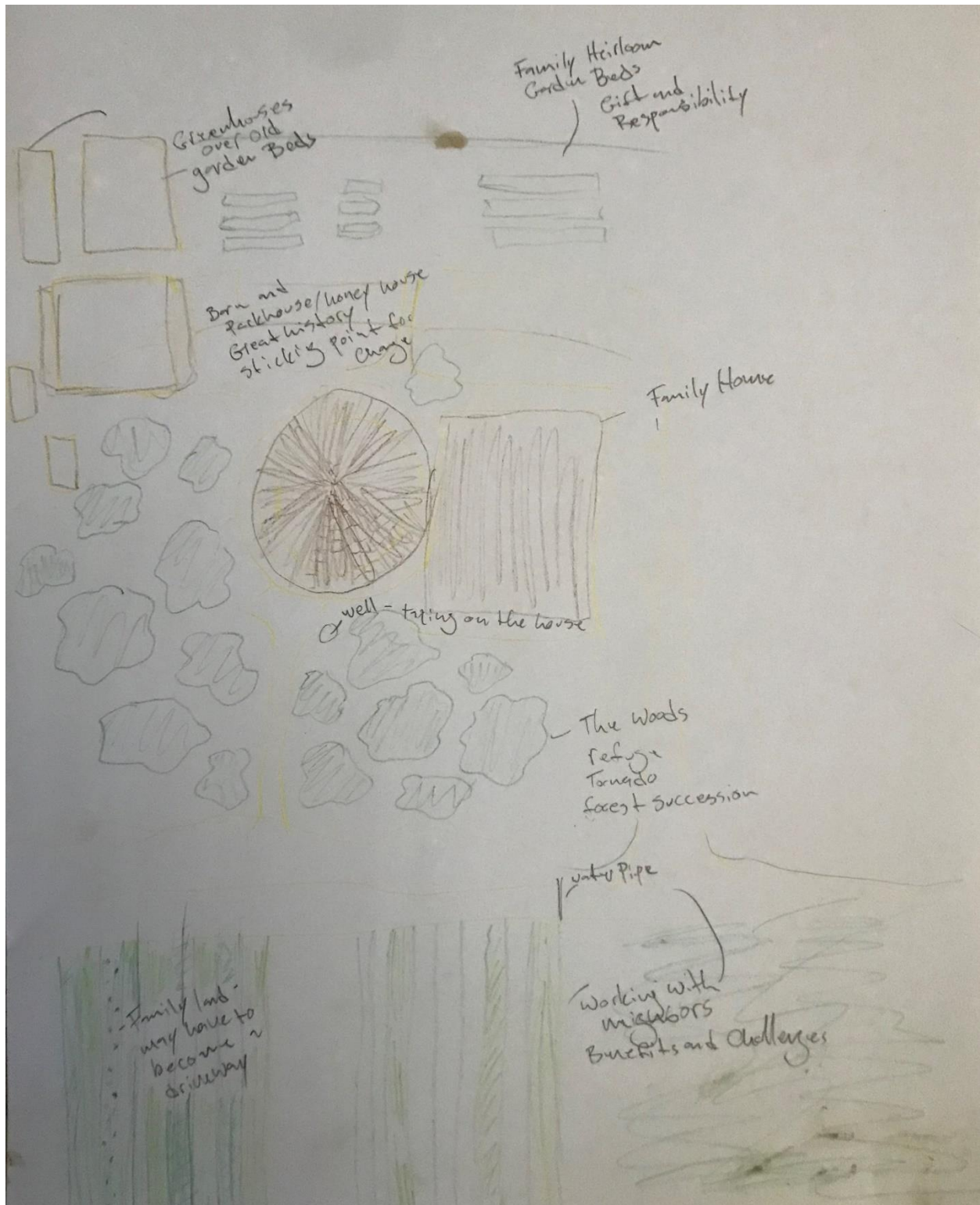
Marilyn



Audry



Grace



Ava



B: Data Collection Instruments

Semi Structured Interview Questions

The following questions and script will be used for each semi-structured interview. Semi-structured will leave areas open for discussion that are going well with each individual woman interviewed. As well as allowing me to leave aspects out if I feel they will not be received well, or we run out of time.

Each interview will start out with me stating what number interview it is 1, 2, 3, etc. This will correspond to a separate excel document that has the number with their real name and farm name. This way the potential for the data being identifiable is lowered substantially.

START HERE – PRESS RECORD!

“I am addressing the informed consent before the interview begins, I am giving you an opportunity to ask questions, and if you agree to participate in the interview, we will begin immediately follow the consent. By participating in this phone/WebEx interview you agree that the answers provided by you be used for research. This is applied consent and if you do not agree the session is ended, do you agree and consent to this interview?”

I would like to start out by letting you know that your name will remain anonymous. I will ask for your name and farm name now, but any information presented or published your name, and the name of your farm will be changed. Please keep in mind that any of the questions may be skipped if you feel uncomfortable answering them, please feel free to tell me and we will move onto the next question. One of the last parts of this interview I will ask you to draw a mental map of your farm. Once you are finished with the map, we can address whether you are comfortable with me using the map during any presentation or in the publication of my thesis. If you are not, I will just generally discuss the map within my writing and presentation but not utilize the actual map. Also, as far as disclosure of your farms location I plan on leaving them to a county wide location instead of a distinct location.

1. In what area of Michigan is your farm located (generally)? County is fine...
 - a. What is the size of your farm in acres?
2. How old are you? Please answer based in five-year increments (i.e. 30-34, 35-39, 40-44)
3. What is your race?
4. What is your education?
5. Are you in a domestic partnership?
 - a. If so, does your partner work on or off the farm?
 - b. What type of support does your partner offer you?
6. What type of farm do you currently run? (Farm animal, crops, herbs, etc.)
 - a. What do you grow or raise?
 - b. Do you practice any type of sustainable agriculture? What are some of the practices you use to manage your farm more sustainably?
7. How long have you been a farmer?
8. What is your farming background, or what did you do before becoming the operator of your farm?
 - a. What type of formal or informal education do you have in agriculture?
9. Do you currently have another job outside of the farm?

10. Do you participate in any sort of direct marketing of agri-tourism? (i.e., CSA, farmers markets, farm stands, u-pick, etc.)
 - a. Can you reflect on the significance of these direct relationships with other business?
 - b. What, if any, is the personal fulfillment with this type of work?
11. Do you have a network that you participate in for education or just general connection with other farmers?
 - a. If not do you wish there were a network of perhaps other female farmers that you could get involved with?
12. What do your responsibilities include on the farm?
 - a. What do your responsibilities include off the farm (i.e., raising children, household responsibilities, caring for aging parents)
13. Who, if anyone, assists you in day-to-day operations on the farm?
14. Why did you choose to enter the occupation of farming? Or what made you decide to become a farmer?
15. How did you acquire the land that you currently farm on?
16. Perhaps you are aware of the growing number of women in agriculture. Why do you think more women are entering this occupation?
17. Perhaps you are aware of the recent agricultural census adjustment making it much easier for women to be recognized as a farmer, and really counted for the first time ever. How did this make you feel to be recognized “legally” as a farmer?
18. Perhaps you are aware that women who operate farms tend to own or run farms that are half the size of those run by their male counterparts. Why do you think that is?
19. In what ways do you consider yourself a farmer? Or when you refer to yourself in social situations do you identify yourself with the term farmer?
 - a. Do you find the term farmer to reveal something about femininity or masculinity?
 - b. Or... Do you feel as if you are challenging a set gender role with taking on the term farmer?
20. Can you juxtapose your farming practices with your male counterparts? How do you think your practices differ from theirs?
21. Do you believe your gender influences your farming perspective in any way?
22. Do you feel equal to your male counterparts or do you feel different or unique?
23. Does this occupation make you feel empowered in any way or do you just view it as another occupation?
24. Do you feel a sense of care in farming? Care either for the land or for the community around you that you feed?
25. Finally, if you would like I would love for you to draw a mental map of your farm (explain mental map if needed). If you could indicate any areas that hold special significance to you that would be encouraged.
 - a. You can begin by drawing the general shape of the farm, include important structures/buildings. Feel free to include any natural features you would like.
 - b. I would love to invite you to identify places that you feel important events have happened or include features that make your farm unique.
 - c. If you would like to point out areas that present the greatest challenges to you as a female farmer that would give me a lot of insight into your farm and practice
 - i. You could also include challenges within the home if you felt inclined.

Now that the interview is over, and you have drawn your map do you feel comfortable with me sharing your map. The chosen pseudonym will be used in association with the map that you have produced.

HSIRB Approval Letter

WESTERN MICHIGAN UNIVERSITY



Institutional Review Board
FWA00007042
IRB00000254

Date: February 27, 2020

To: Nicholas Padilla, Principal Investigator
April Shirey, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 20-02-08

This letter will serve as confirmation that your research project titled “Strong Women Breaking Ground: Changing Roles of Women in Agriculture in Michigan” has been **approved** under the **expedited** category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes to this project (e.g., ***add an investigator, increase number of subjects beyond the number stated in your application, etc.***). Failure to obtain approval for changes will result in a protocol deviation.

In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

The Board wishes you success in the pursuit of your research goals.

A status report is required on or prior to (no more than 30 days) February 26, 2021 and each year thereafter until closing of the study.

When this study closes, submit the required Final Report found at <https://wmich.edu/research/forms>.

Note: All research data must be kept in a secure location on the WMU campus for at least three (3) years after the study closes.

Office of the Vice President for Research
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PHONE: (269) 387-8293 FAX: (269) 387-8276
WEBSITE: wmich.edu/research/compliance/hsirb

CAMPUS SITE: Room 251 W. Walwood Hall

WESTERN MICHIGAN UNIVERSITY

IRB Approved

FEB 27 2020



WMU IRB Office

**Western Michigan University
Department of Geography**

Principal Investigator: Dr. Nicholas Padilla
Student Investigator: April Shirey
Title of Study: Strong Women Breaking Ground: Changing Roles of Women in Agriculture in Michigan

STUDY SUMMARY: This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. Participation in this study is completely voluntary. The purpose of the research is to: discover how women perceive themselves as farmers and how they feel the growing number of women in Michigan is affecting the industry. It will also address networks available to women in Michigan and will serve as April L. Shirey thesis for the requirements of the Master of Science in Geography. If you take part in the research, you will be asked to participate in a semi structured interview and draw a mental map of your farm. Your time in the study will take around an hour to complete the interview but could possibly be longer in some cases depending on how the interview progresses. Possible risk to you for taking part in the study may be mild discomfort from answering what could be perceived as sensitive questions. The only cost associated with this process is the time spent during the interview. Potential benefits of taking part may being able to tell your story as well as others reading or hearing about your story later. Your alternative to taking part in the research study is not to take part in it.

You are invited to participate in this research project titled "Strong Women Breaking Ground: Changing Roles of Women in Agriculture in Michigan" and the following information in this consent form will provide more detail about the research study. Please ask any questions if you need more clarification and to assist you in deciding if you wish to participate in the research study. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form. After all your questions have been answered and the consent document reviewed, if you decide to participate in this study, you will be asked to sign this consent form.

What are we trying to find out in this study?

The purpose of this study is to discuss female farmers and their experiences with agriculture, what motivates them to farm, what attempts to build networks of support for female farmers exist, and perceptions of your individual farm.

Who can participate in this study?

To participate in this study, you must identify as a woman and be over the age of 18. You must also be the owner operator of a farm. Those who do not identify as a woman, are under the age of 18, or do not own or operate their own farm will be excluded from this study.

Where will this study take place?

Interviews will take place at an agreed upon location by the farmer and interviewer. If we are unable to meet in person interviews will take place via phone or WebEx (video conferencing).

What is the time commitment for participating in this study?

This interview should take around 30 - 75 minutes depending on the way the interview progresses. If necessary, follow up meetings, phone calls, or email may be scheduled.

What will you be asked to do if you choose to participate in this study?

During this interview you will be asked a series of questions these questions may lead to other conversation and that is acceptable. You will also be asked to draw a mental map of your farm, pointing out where important incidents have occurred or things that you find important. A mental map is just a simple overall drawing of your farm. It can contain as much or as little detail as you see fit to show me what you find important. If the interviews must be conducted over the phone or video conference the map may be photographed and sent via email to the researcher.

What information is being measured during the study?

This section will describe the measurements that we are going to take during your participation in the study. The measurements will be the interview and mental map produced.

What are the risks of participating in this study and how will these risks be minimized?

There is minimal risk to you for participating in this study. The minimal risk may include mild inconvenience or potential for disclosure of information that you may find sensitive. To help alleviate this discomfort you are more than welcome to stop the interview at any time or opt to skip over any question asked. Also, by the interviewee choosing the location for the interview this is to help you feel more comfortable with the environment we are in. This includes choosing to speak via phone or video.

What are the benefits of participating in this study?

The potential benefits for this study will be to give a voice to you, the female farmer involved in the industry in the state of Michigan. It is possible that your story has not been told before so you may benefit from being able to tell your story. In the long term the published thesis could benefit other researchers because a study like this has yet to be done in Michigan to my knowledge.

Are there any costs associated with participating in this study?

Other than your time and travel expenses if interview is located off your farm there are no costs associated with this study.

Is there any compensation for participating in this study?

There is no compensation for this study.

Who will have access to the information collected during this study?

This research may be shared both at conferences during presentations and/or poster sessions. It will also be shared during the thesis defense with the chair and committee. During the writing of the thesis the chair and committee will also be privy to the information. Finally, the thesis will be available through Western Michigan University in the thesis archives once the thesis is approved. To keep your information anonymous your name will be changed to a pseudonym and farm locations will be kept to county.

What will happen to my information collected for this research after the study is over?

The information collected about you for this research will not be used by or distributed to investigators for other research.

What if you want to stop participating in this study?

You can choose to stop participating in the study at any time for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact April Shirey at 616-460-9236 or april.l.shirey@wmich.edu. You may also contact the Chair, Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Western Michigan University Institutional Review Board (WMU IRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

WESTERN MICHIGAN UNIVERSITY

IRB Approved

FEB 27 2020



WMU IRB Office

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

Participant's signature

Date

If this interview is being conducted via phone/video conference via WebEx than consent will be given verbally before the interview process begins.

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