An Examination of Contemporary Initiatives to Facilitate
Sustainable Agriculture Experiences

THESIS

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Abstract

Recent reports suggest the number of farmers exiting the profession is increasing while at the same time the number of individuals entering farming is steadily declining. This information has led to questions among researchers, policymakers, and practitioners as to who will grow our food in the future, where the next generation of farmers will come from, and how the viability of new farming operations can be supported. Situated in the beginning farmer experience, on-farm apprenticeships, internships, and volunteer positions have been gaining federal government support and public participation over the past three decades. The trend has created a need for social scientific examination of this type of unwaged farm labor, to which only a handful of studies have contributed thus far.

This study analyzed data collected from a national survey of sustainable agriculture organizations (n=65) to examine questions related to the extent of facilitation of on-farm work experiences, values that the organizations hold related to facilitation, challenges to facilitation, and organizational characteristics associated with facilitation. A framework for organizational practice was used to develop a model of on-farm work experience facilitation, and the Community Capitals Framework was used to examine perceived values and challenges of facilitation.
Findings from this study indicated that 58% of sustainable agriculture organizations facilitate on-farm work experiences. Human capitals were prevalent in explaining why sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences. Financial capitals were prevalent in explaining why organizations choose not to be involved in on-farm work experiences. Sourcing government funding and seeking to engage disadvantaged populations were two characteristics found to be associated with organizations choosing to facilitate on-farm work experiences. Results indicate that while most facilitators perceive value in helping to lower barriers to entry for aspiring farmers, train new farmers, and connect older farmers with potential successors, uncertain availability of funding and lack of pay for farm interns present challenges. The results of this study may be used to inform the development of new farmer training programs as well as considerations for beginning farmer policy. This study adds to the limited body of literature on the topics of sustainable agriculture organizations and on-farm apprenticeships, internships and volunteer positions.
This thesis is dedicated to the memory of

Jewell O’Rean Noble Smith

Grandma Jewlie, thank you for your mentorship, persistently reminding me to do what is best for me and encouraging me to never stop questioning the limits others set for us. Stories of you and Mom earning your masters degrees together fomented my resolve to pursue this achievement and to persevere despite challenges.

And to the memory of

Brian Ghesquiere

Your love and friendship had a deep impact on the person I am today. Thank you for teaching me that big adventures are waiting to be found right here, at home in Ohio.
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Chapter 1

Introduction

Recent reports suggest the number of farmers exiting the profession is increasing while at the same time the number of individuals entering into farming is steadily declining (Niewolny & Lillard, 2010). Between 2007 and 2012 the United States experienced a decrease in the total number of farmers, and the number of new farmers who were on their operation less than ten years decreased 20 percent (USDA, 2014). Farmers are also getting older. Between 1982 and 2012, the average age of farmers rose from 50.5 to 58.3 (U.S. Department of Agriculture, National Agricultural Statistics Service [USDA NASS], 2014). This information has led to questions amongst researchers, policymakers, and practitioners as to who will grow our food in the future, where the next generation of farmers will come from, and how the viability of new farming operations can be supported. Academic, governmental, and social responses are growing in reaction to these problems.

Study Goals

Agriculture, food systems, and community development researchers and practitioners have responded to the predominance of industrialized agriculture and
excesses of a globalized food system through civic revitalization and social resistance (Hinrichs, 2007; Niewolny & Lillard, 2010; Lyson, 2004). A contemporary alternative agrifood movement promotes the use of more sustainable environmental, economic and social practices to produce and distribute food. Reacting to the industrialization of agriculture, this movement for change urges consumers to pay attention to the origins of the food they eat. More people want to connect with farmers and experience how food is grown. The profile of organizations facilitating connections between farmers and people wanting to experience how food is grown is central to this research.

This thesis sought to expand on examinations of the roles of the nonprofit sector and social movement organizations in the alternative agrifood movement (Meenar, 2015; Levkoe, 2014). More specifically, this study examined the role of organizations that identify as sustainable agriculture organizations in promoting alternative agriculture. Research conducted on the role of nonprofit organizations in alternative agrifood movements has thus far focused on food-related programming in urban areas (Meenar, 2015). An opportunity exists to contribute research to the role of organizations in alternative agrifood movements, focusing on farmer-related programming in rural areas.

To identify and examine this population of social movement organizations, I performed a general analysis of sustainable agriculture organizations across the United States. This study sought to understand the extent to which the role of sustainable agriculture organizations participating in alternative agrifood movements includes facilitation of on-farm work experiences. Often associated with new and beginning farmer training (Levkoe et al., 2015, MacAuley, 2014, Niewolny et al., 2012, MacAuley
& Niewolny, 2016), on-farm work experiences include internships, apprenticeships, and volunteer stays on farms. A deceptively simple question has yet to be answered: How are farmers and interns connecting with each other to participate in these on-farm work experiences? While several studies have examined why farmers host and why interns volunteer their work on farms (Ekers et al., 2016; Ekers & Levkoe, 2016; MacAuley, 2014; Wood, 2013), the intermediary agents (or facilitators) of these experiences have yet to be identified and their role yet to be formally examined.

Scholars who contribute to the fields of sociology of agriculture and food systems have taken up similar questions about the role of organizations facilitating connections and knowledge sharing. Their questions speak to the roles of social change organizations in the formation of meaningful relationships between actors in the alternative agrifood movement (Levkoe, 2014). Scholars who contribute to the field of community development have developed five key dimensions of organizational practice in structuring programming (Kudva & Driskell, 2009). Another line of sociological inquiry related to this study examines motivations and challenges for organizational programming using the Community Capitals Framework (Bregendahl & Flora, 2012; Meenar, 2015).

These theoretical frameworks, and their corresponding research, informed the conceptual and methodological lens used to examine the role of sustainable agriculture organizations in connecting host farmers with individuals seeking work experiences on farms. Specifically, this thesis focused on the extent to which sustainable agriculture organizations facilitate on-farm work experiences, characteristics of organizations that
are associated with facilitation, perceived values of facilitation, and challenges to facilitation. A quantitative design guided the development of a survey instrument to collect data. The survey was utilized to capture quantitative information from directors of sustainable agriculture organizations across the United States. The survey instrument is presented in Appendix A.

**Study Background**

Hundreds of on-farm apprenticeships, internships, and volunteer experience opportunities around the United States can be found within minutes by conducting a simple Internet search. These on-farm work experiences appear to be related to alternative agrifood movements as well as an effort to train the next generation of farmers, and research thus far supports these notions (MacAuley, 2014; MacAuley & Niewolny, 2016). There are multiple ways individuals seeking to be interns, apprentices, or volunteers might connect with a host farmer. On-farm work experience opportunities can be posted directly by a farmer to an online directory. For example, Worldwide Opportunities on Organic Farms, USA (WWOOF-USA) offers a host farm directory currently listing over two thousand organic farms with on-farm volunteer opportunities (wwoofusa.org/about). In this case, the farm internship seeker signs up for a membership to WWOOF-USA, and then contacts a host farm directly about an opportunity. The National Center for Appropriate Technology (NCAT) also offers a directory of sustainable farming internships and apprenticeships, currently listing over six thousand opportunities as part of the National Sustainable Agriculture Assistance Program, a program under Appropriate Technology Transfer for Rural Areas (ATTRA)
(attra.ncat.org/attra-pub/internships). Some of these opportunities are promoted directly by farmers, but many are promoted through a sustainable agriculture organization.

Nonprofits and social change organizations that fall under the sustainable agriculture organization umbrella include organic farming associations, alternative method farmer networks, and educational institutions. Rogue Farm Corps is an example of a collaboration between a college (Rogue Community College), a nonprofit organization, local farmers, and farm advocates. They are focused on training “the next generation of farmers and ranchers” through on-farm internships and apprenticeships to “support the transformation of the food system” (roguefarmcorps.org). For this process, an internship seeker applies to Rogue Farm Corps and is placed with one of a variety of potential host farms across the state of Oregon. Other sustainable agriculture organizations, such as the nonprofit Maine Organic Farmers and Gardeners Association (MOFGA), offer a variety of services and programs for organic and alternative farmers. Among these are their New Farmer Programs, “designed to train and support the next generation of organic farmers.” These New Farmer Programs include MOFGA’s Apprenticeship and Journeyperson programs, which help people wanting to learn organic farming, “find success through on-farm training, educational programs, close mentorship and community support” (mofga.org/Programs, farmbeginningscollaborative.org). These are two examples of sustainable agriculture organizations that are facilitating the connections between individuals seeking experience on farms and host farmers, while also providing programming to support participants in on-farm work experiences.
Networks of nonprofit sustainable agriculture organizations working across different regions of the nation also exist. One such national network is “Farm Beginnings.” Farm Beginnings describes its one-year training and mentoring program as an “effective way to increase the number of beginning farmers who are building food and farm economies that are green, fair, and healthy” (farmbeginningscollaborative.org).

My introductory examination of apprenticeships, internships, and volunteer positions on farms shed light on three common strands that appear to run through the popular knowledge of farm work experience. First, some sustainable agriculture organizations appear to be supporting on-farm work experience programming. Second, on-farm work experiences are connected to alternative agrifood movements. Finally, much of the language around on-farm work experiences involves new and beginning farmer training.

Noting that beginning farmer training and programming is a significant, yet poorly understood area, Niewolny and Lillard (2010) pointed out that even the definition of “beginning farmer” varies regionally as well as nationally. While the USDA defines beginning farmers and ranchers as, “those who have operated a farm or ranch for 10 years or less either as a sole operator or with others who have operated a farm or ranch for 10 years or less” (Ahearn & Newton, 2009:01; Niewolny & Lillard, 2010:65), other organizations may use the term interchangeably to mean “farmers who have not yet begun to farm,” or “farmers who have been farming anywhere from one to ten years” (Niewolny & Lillard, 2010). To review definitions of apprenticeships, on-farm work
experiences, sustainable agriculture organizations and other terminology used in this thesis, refer to Appendix B.

In examining the development, purpose, and future trajectory of beginning farmer educational programming in the U.S., Niewolny and Lillard (2010) noted that program development around new and beginning farmer training intersects several research areas including agriculture, food systems, and community development. Policy and program response is also aimed at a variety of actors from development practitioners and researchers, to farmers, educators, and students. The new and beginning farmer movement, much like the alternative agrifood movement, aims to develop “viable community food systems that meet the needs of the next generation” (Niewolny & Lillard, 2010:66).

While the activity around beginning farmers lends excitement to discussions of research and practice, Niewolny and Lillard (2010:67) urged us to work toward a critical consciousness of the nature and purpose of this work. In doing so, they referred to the work of Freire to remind their community of educators that taking time for intra-area reflection will make possible more equitable and innovative outcomes from their practice (Freire, 1973). Pointing out the differing experiences in beginning farmer education for immigrants and refugees, mid-career changers, new conventional commodity operators, organic growers, small-scale farmers, transitional farmers, urban and suburban agriculturalists, women in farming, and young farmers, they called our attention to the fact that “opportunities vary for social actors participating within and across different spatial boundaries” (Niewolny & Lillard, 2010:67).
It is important to note that longitudinal data do not exist to provide support for the notion that on-farm internship, apprenticeship, and volunteer experiences are a pathway to becoming a new or beginning farmer. Furthermore, research into on-farm work experiences thus far provides evidence that these opportunities are not accessible to all potential farmers (MacAuley, 2014; Niewolny & MacAuley, 2015; Ekers & Levkoe, 2016). Unpacking questions as to how nonprofit sustainable agriculture organizations are involved in connecting people who want to experience farming with host farmers is an important step to inform the development of effective policies and programs. It also offers an opportunity for the academic community to contribute to this topic of popular interest.

Offered in part as a response to the call for reflection by Niewolny and Lillard (2010), this thesis reviewed the literature, conducted a study, and added to the limited body of literature on the topic of on-farm work experiences with three goals in mind. The first goal was to understand whether sustainable agriculture organizations are addressing alternative agrifood issues by providing access to knowledge, human capital, and networks for farmers and apprentices. The second goal was to understand how on-farm work experiences are being facilitated. The third goal was to offer an introductory examination of sustainable agriculture organizations in the United States.

**Significance of Study**

The purpose of this thesis was to examine sustainable agriculture organizations as facilitators of on-farm work experiences. To investigate the relationship between sustainable agriculture organizations and on-farm work experiences, organizational
involvement in providing information, supervising, and supporting on-farm work experiences were analyzed. Perceived values and challenges to facilitating these experiences strengthened the analysis. This study also adds to an understanding of relationship building and sustainable agriculture organizations as social movement organizations.

This research is timely considering current political and social commentary on new and beginning farmers. Discussions in Congress about the 2018 Farm Bill have begun, and programs that support and invest in beginning farmers and ranchers must be reauthorized to ensure continued funding. On-farm work experiences are among a host of new opportunities that have arisen to generate support and knowledge for agriculture and food systems.

In addition to the political and social implications of this work, contributions to three bodies of academic literature were intended: the fields of sociology of agriculture and food systems and rural sociology. First, rural sociologists, community development researchers, and geographers have called for greater attention to non-waged farm labor (Niewolny & Lillard, 2016; Ekers & Levkoe, 2016). The fields of sociology of agriculture and food systems have focused on alternative agrifood movements (Allen, 2004; Besky & Brown, 2015), the agrarian question (Goodman, 2004, Ekers & Levkoe, 2016), and approaches to studying food and farming systems oriented toward consumption or production (Goodman & Dupuis, 2002). Effort toward an understanding of non-waged farm work is in its infancy. Given that concerns with labor and capital are
foundational to the discipline of sociology, effort toward integrating approaches to the study of non-waged farm labor offers an appropriate adaptation for the sociology of agriculture and food systems.

Recent studies of non-waged farm work have shown that motivations for interns participating in on-farm work experiences are likely to include starting a farm operation, while motivations for host farmers are likely to include low-cost labor (Niewolny & MacAuley, 2015). Many barriers exist for individuals without a farming background wanting to farm (Ekers & Levkoe, 2016). This study was distinct from these efforts because it focused on the role of sustainable agriculture organizations in the phenomenon of on-farm work experiences. Instead of focusing on the experience of non-waged farmworkers and their host farmers, which have been documented in several regions of North America, this study explored how farmers and non-waged workers access these experiences through facilitation by intermediary organizations. This thesis is also complimentary to these studies because it responded to their requests for further research. By examining opportunities for on-farm work experiences across the U.S., as well as collecting descriptive characteristics for what on-farm work experiences look like on a national level, this study contributed to a deeper understanding of our changing agricultural environment.

This thesis was a response to the call for greater attention to non-waged farm labor across the fields of sociology of agriculture, community development, and geography. Results of this survey will have implications for organizations wishing to
support and sustain a new generation of farmers. It is also important to inform on-farm work experience practice, while allowing for future policy considerations. Extension educators may use it to inform collaborative efforts in the development of new farmer training programs. Policymakers and food policy council members seeking to develop effective food system and beginning farmer policies may also find this study useful.

**Research Questions**

The overarching exploratory question of this research was: Is facilitation of on-farm work experiences part of the role of sustainable agriculture organizations in addressing the next generation of farmers? This broader question generated four research questions.

RQ 1: Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating?

RQ 2: Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation?

RQ 3: Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation?

RQ 4: Which organizational characteristics are associated with facilitation of on-farm work experiences?
Structure of Thesis

This thesis is organized into five chapters, including this introduction. Chapter 2 offers the theoretical and empirical bases that inform four hypotheses about facilitation of on-farm work experiences in the United States. Literature was reviewed on the role of organizations in alternative agrifood movements in the United States, sustainable agriculture, as well as examinations of on-farm work experiences. These bodies of literature were the theoretical underpinnings which guided the construction of the hypotheses and empirical models. Research methodology and methods are described in Chapter 3. This includes the data to be analyzed, methods of analysis, and description of the study area. Chapter 4 presents the results of an empirical analysis and importance of these findings. Results are discussed in the context of the existing literature in the final chapter, and avenues are suggested for future research that could offer additional insights to the sociology of agriculture and food systems.
Chapter 2

Literature Review and Hypotheses

The purpose of this literature review was to present a background of scholarly literature relevant to an examination of the role of sustainable agriculture organizations in on-farm work experiences. Literatures from multiple scholarly traditions were surveyed (i.e. history of agriculture, geography, sociology of agriculture and food systems, community development and rural sociology) to develop an overview of the key factors involved, from a variety of perspectives. Given that studies focusing on on-farm work experiences are very new, this chapter begins with a description of the process used to identify and place on-farm work experiences within the broader context of the beginning farmer phenomenon. Then the sustainable agriculture literature is examined to situate sustainable agriculture organizations in the alternative agrifood movement. Further review of the sustainable agriculture literature (historical and contemporary perspectives) is presented in Appendix C. A review of on-farm work experiences led to the first research question, asking whether sustainable agriculture organizations are facilitating on-farm work experiences and how. An overview of studies examining organizational practices contributed toward the second and third research questions, asking why these organizations choose to or choose not to facilitate on-farm work experiences.
To address how sustainable agriculture organizations could be facilitating on-farm work experience programming, a framework for organizational practice was introduced which examines the mechanisms organizations use to encourage participation. The Community Capitals Framework was next utilized to examine motivations and barriers behind organizational practices. The literature aided in forming four hypotheses that are presented at the end of this chapter.

**Review Process**

As stated previously, a wide variety of literature was reviewed to establish the socio-historical context of on-farm work experiences and organizational practices to facilitate them. Few studies have examined the emergence of on-farm work experiences or the role of organizations in their development. Based on the process followed by Niewolny & Lillard (2010) in their examination of beginning farmer programs, a standardized review process was used to frame an inquiry into on-farm work experience programming facilitated by sustainable agriculture organizations.

First, the literature was searched for textual sources like scholarly research articles, popular books, programmatic brochures and reports, and organizational websites using the search terms “farm internship,” “farm apprenticeship,” “farm volunteer work,” “farm work opportunities,” and “farm work experiences.” Focus was placed on issues, policies, program development, and outcomes of on-farm work experience in the United States. I further narrowed my search by examining literature in community development, geography, and the sociology of agriculture and food systems. This aided in illuminating
the intersection between on-farm work experiences, beginning farmer programming and sustainable agriculture, as well as the relationship between sustainable agriculture organizations and alternative agrifood movements.

Next, on-farm work experience initiatives were identified that are illustrative of practices currently being used in organizational programming. This data was collected from organization websites, electronic program publications, and USDA competitive program resources. Initiatives were only included if they involved farm apprenticeships, farm internships, or on-farm volunteer positions. Initiatives were included only if they were designed for an adult audience (i.e. above the age of 18), as compared to those programs offering youth farm internships, farm apprenticeships, and farm volunteer opportunities for youths.

Lastly, the review process for on-farm work experience facilitation programming was standardized by focusing on similar aspects of the farm internship, farm apprenticeship, or farm volunteer positions resources located on the organizational websites or program documents. This included program missions and justification statements. A further search was done for primary aspects of on-farm work experience program structure (e.g. conferences, social events, trainings, workshops, farm tours), intended audience, geographical location, and the organizational collaborations and institutional contexts that the initiatives operate within. These findings helped to inform my survey development. These findings are reported below.
Contextualizing the Problem

Beginning Farmer Programs

To develop a sense of where farming in America is going, it is helpful to consider where it has been. In 1860, farmers made up over half (58%) of the labor force in the United States (USDA, 2005). By 1910, the proportion of farmers in the U.S. labor force had decreased to 31% (USDA, 2005). As of 1990, farmers represented just 2.6% of the U.S. labor force (USDA, 2005). While reports show an increase in minority farm operators, total farmer numbers have continued to decrease slightly over the last two decades, with farmers representing approximately 2% of the U.S. labor force in 2012 (USDA, 2012; BOLS, 2012). It is apparent that the profession of farming has experienced a loss in popularity in America over the past 150 years.

When agriculture was a dominant part of the culture of the United States, people who aspired to farm knew the subject matter through direct experience (Carolan, 2012). Over the span of a century and a half, direct experience with agriculture has lost its dominant role in the sociocultural landscape, leading to a lack of direct farming experience for many potential new and beginning farmers today (MacAuley, 2014). Popular farming methods have also experienced technology and science-driven transformations. Today, not only are fewer Americans exposed to farming, but the number of farms have also been in steady decline. The average size of an American farm, however, has increased (USDA, 2014). The loss of small and mid-sized farms,
along with the notable loss of farmers have contributed to concerns about the future of food production.

In their efforts to address these concerns, alternative farming organizations, farmers, and government agencies have encouraged the emergence of farm apprenticeships, farm internships, and volunteer opportunities across the United States. Several studies locate on-farm work experiences within the alternative agrifood movement. These studies describe characteristics and motivations of participants, as well as their behavior toward to one another within the context of on-farm work experiences. Findings from these studies have raised critical questions as to whether this form of unwaged labor is compatible with the values and goals of sustainability (e.g. MacAuley, 2014; MacAuley & Niewolny, 2016; Levkoe et al., 2015). A review of these studies, and a comparison of historical apprenticeship models with current observations of on-farm apprenticeship, are presented in Appendix D.

On-farm work experiences are being promoted as a tool to grow young sustainability-minded farmers in the midst of statistics that paint a disturbing picture of the future of farming in America. Over the past century, the total number of American farmers has nearly halved, from over 6.3 million in 1910 to just under 3.2 million in 2012 (USDA, 1910:169; USDA, 2012). In addition, the farmers who remain are growing older. The average age of principal farm operators is steadily increasing, while the number of young farmers has declined (USDA, 2012). In fact, for each farmer under 35 there are currently five farmers over 65. After 30 years of steady increases, the average age of an American farmer is now 58.3 years (MacAuley & Niewolny, 2016; USDA
NASS, 2014). By 2030, it is predicted that a quarter of all farmers will retire (USDA, 2007). Findings such as these have inspired federal agencies, farming associations and other organizations to question from where the next generation of farmers will be derived. Amid a growing awareness of the challenges to entering agriculture today, MacAuley and Niewolny (2016) note calls to action put out by fellow academics to inform agricultural education systems and policies that better address emerging issues for beginning farmers.

Access to financial capital and credit; suitable farmland and tenure options; size-appropriate and economically viable markets; and culturally appropriate networking, training, and technical assistance are key challenges that have been identified (MacAuley & Niewolny, 2016: 197). One type of response to the call for better beginning farmer preparation has been offered by the United Stated Department of Agriculture (USDA) with the Beginning Farmer and Rancher Development Program (BFRDP). While education for beginning farmers was available at the advent of the 1862 and 1890 Morrill Land Grant Acts, it was not until the Food, Conservation, and Energy Act of 2008 that funds were appropriated for education, training, outreach, and mentoring program development (nifa.usda.gov). These funds ($75 million for 2009 - 2012) focused on reversing the downward trend in the American farmer population. The Agriculture Act of 2014 is providing an additional $20 million per year between 2014 and 2018 (nifa.usda.gov).

Efforts to increase attention by federal agencies toward beginning farmers are relatively new. In addition to recognizing a change in the farming population size and
age, agencies have also recognized the necessity for new programs to address the needs of a new generation of agriculturalists (nifa.usda.gov). Referencing the Government Accountability Office (GAO, 2007), MacAuley (2014) reported that the USDA has recognized that including assistance for beginning farmers in their departmental policy is likely to assist their efforts to maintain the viability of small farms. Their research found that beginning farmers operate smaller farms, and tend to be younger, more ethnically diverse and female when compared to established farmers (MacAuley, 2014). In an effort to support a new generation of farmers, Niewolny and Lillard (2010:65) found evidence that “adult agricultural education for beginning farmers is taking on new forms and patterns,” and these new forms of education are connected to opportunities for sustainable agriculture knowledge exchange.

Over 40 percent of all U.S. farms are operated by beginning farmers, limited-resource, and socially disadvantaged farmers (MacAuley & Niewolny, 2016: 196). Between 2009 and 2015, the National Institute for Food and Agriculture (NIFA) funded 184 projects through their Beginning Farmer and Rancher Development Program (BFRD)P), totaling more than $90 million (Niewolny & Lillard, 2010). Forty-six of these projects involved apprenticeships in sustainable agriculture, totaling $23 million in funds (nifa.usda.gov). Among the recipients of these projects involving farm apprenticeships and internships were colleges and universities, and community-based and nonprofit organizations, including several organic farming associations. Just over half the states in the U.S. were represented in these awarded projects, reflecting the widespread belief that
farm apprenticeship and farm internship programming is an important part of developing the next generation of farmers.

**Sustainable Agriculture**

Farm apprenticeship, internship, and volunteer programs are connected to sustainable agriculture practices and policies because they have been used as a tool to expose people to alternative farming methods and encourage the growth of more sustainably-minded farmers. While more recent studies have examined on-farm work experiences within the beginning farmer phenomenon, earlier studies placed on-farm work experiences within the sustainable agriculture literature. (A review of sustainable agriculture literature is presented in Appendix C.) In addition to introducing the term *sustainable agriculture*, the late 1980’s saw the emergence of a printed list that included available farm apprenticeships and internships. This publication, titled “Educational and training opportunities in organic, low input or sustainable agriculture,” was first put together by the Alternative Farming Systems Information Center in 1989 (Gates and Bielenburg, 1989). Subsequent lists omitted “organic, low input” from the title, leading to “Educational and training opportunities in sustainable agriculture.” The 1989 publication listed 27 organizations offering farm apprenticeship or internship programs. This list eventually became the list of Sustainable Farming Internships and Apprenticeships, available on the website for the National Center for Appropriate Technology (NCAT) in cooperation with Appropriate Technology Transfer for Rural
Areas (ATTRA), a national sustainable agriculture assistance program providing information and resources to the agricultural community.

The types of organizations on the original list that offered farm apprenticeship or internship programs were universities, farms, and nonprofit organizations. The year 2000 publication noted that farms would no longer be listed for training opportunities and could instead be found in a registry maintained by ATTRA. Currently, the majority of organizations on the list of sustainable agriculture organizations are nonprofits.

ATTRA has maintained a list of sustainable agriculture organizations and publications since 1992. The initial list included 32 national and international sustainable agriculture organizations, 24 organizations from the northeast region, 26 organizations from the southern region, 49 organizations from the north central region, and 16 organizations from the western region, totaling 169 organizations (Adam, 1992). Today, both the database of sustainable agriculture organizations and the database of sustainable farming internship and apprenticeships are published and maintained on the NCAT website in collaboration with ATTRA. In 2015, 299 sustainable agriculture organizations were listed, as well as over 6,000 sustainable farming internships and apprenticeships (ATTRA, 2016). Table 2.1 and Figure 2.1 show increases in sustainable agriculture organizations, host farms, and farm apprenticeships over the last 25 years. While there is evidence that some sustainable agriculture organizations are involved in on-farm work experience, the relationship between sustainable agriculture organizations and on-farm work experiences has yet to be examined formally.
### Table 2.1. Sustainable Agriculture Organizations, Host Farms, and Apprentices 1989-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Sustainable Agriculture Organizations</th>
<th>Host Farms offering Apprenticeships and Internships</th>
<th>Available Apprenticeships and Internships</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>109</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>1995</td>
<td>217</td>
<td>10</td>
<td>N/A</td>
</tr>
<tr>
<td>2000</td>
<td>210</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2005</td>
<td>N/A</td>
<td>298</td>
<td>502</td>
</tr>
<tr>
<td>2010</td>
<td>117</td>
<td>1,243</td>
<td>2,414</td>
</tr>
<tr>
<td>2015</td>
<td>299</td>
<td>2,930</td>
<td>6,401</td>
</tr>
</tbody>
</table>

Sources: ATTRA, September 2016; Gates, 1989; Adam, 1992; Gates, 1995

### Figure 2.1. Host Farms and Farm Intern Opportunities 1989 - 2015

![Graph showing the increase in host farms and farm intern opportunities from 1989 to 2015. The graph displays a significant rise in the number of farms offering apprenticeship and internship opportunities as well as available apprenticeships and internships.](image-url)
**Alternative Agrifood Movements**

Recent studies have also situated on-farm work experiences within the dynamics of alternative agrifood movements and food system politics more widely (MacAuley & Niewolny, 2016). This movement challenges dominant agricultural trends of large-scale, centralized processing and distributing models; increased farm mechanization; reliance on input-intensive, low-diversity biophysical production practices; unexamined ethical arrangements; and different considerations for the nutritional and aesthetic qualities of food (MacAuley & Niewolny, 2016: 196). Initiatives within the alternative agrifood movement vary from economic development, social justice, and environmental sustainability to small and midsize farms, local/ regional food systems, community food systems, and community food security (MacAuley & Niewolny, 2016: 197).

Agrifood literature emphasizes the significant role that beginning farmers play in contributing to the vitality of small and midsize diversified farms, production and distribution of locally and regionally produced foods, and ecological resilience, as well as their role in providing access to socially just, healthful food, in both urban and rural areas (MacAuley & Niewolny, 2016: 197). Within this literature, on-farm work experiences are emerging as what MacAuley and Niewolny (2016: 197) eloquently referred to as “social seedbeds of cultural connections for the next generation of agriculturalists.” From this perspective, on-farm work experiences are not only an increasingly popular approach to beginning farmer education in sustainable farming practices. They are being imparted with responsibility for growing a foundation for alternative agrifood movements. Considering this, MacAuley and Niewolny (2016) and others (Ekers &
Levkoe, 2016; Pilgeram, 2011) have emphasized the need to examine a variety of implications on-farm work experiences may have for the reproduction of structural conditions that govern entry into agriculture as well as the long-term viability of farmers.

Understanding the history of farmers in the United States and how people have traditionally entered farming helped to contextualize the current criticisms pertaining to farming structures and access.

**Farming Pathways: Socio-Historical Context for the Study of On-Farm Work Experiences**

While farm apprenticeships may appear to be growing in popularity currently, historical accounts of U.S. agriculture suggest that the traditional apprenticeship model for farmer training did not fit well. The large farm enterprises rapidly growing across the country at the turn of the twentieth century were more likely to utilize migratory and seasonal farm labor. After the Civil War, a multitude of different kinds of farms developed across the United States. This agricultural development such as the large plantations of the South, the truck gardens of the East, the bonanza farms of the Dakotas, and the agricultural enterprises of California, created the need for different kinds of farm operators and farm labor (Cox 1948). Cox (1948) contended that many of the men who worked on the bonanza farms were part of an important and regular migratory movement of farm labor which characterized the entire western wheat country of the Great Plains until tractors and combines replaced them in the 1920’s (Cox 1948). Further west, the service of cowboys was needed. Cowboys, Cox (1948) noted, were often not considered
farm labor. The notion of cowboys as somewhat distinct from agriculture is partly due to the swift growth of cattle raising to large-scale industry. Cowboys were more closely identified with Midwest family farms rather than with farm laborers.

Farm laborers were unlikely to attain farm ownership, given their low wages and standing in society. Throughout the 1880’s and the early 1890’s there was “constant complaint that those who had formerly worked for hire upon the farms were leaving to seek jobs in industry” (Cox 1948:109). The trend had begun toward concentration of farm labor on larger and more commercial agricultural enterprises. At the same time that the mobility of farm laborers was increasingly headed in urban directions, new machinery was enabling the family farm operator to dispense with hired help. Hamilton (1999) added that as industrial production began to displace craft production, apprenticeship seemed outmoded because machines supplied the precision that previously came from skill. However, expansion of crops such as fruits, vegetables, and livestock created a greater demand for wage labor. Cox (1948:114) noted, “In 1899 farms with crops worth $2,500 or more were only 2.7 percent of all farms, but hired nearly one-third of the man hours of farm labor.” According to Hamilton (1999), the development of vocational education in the U.S. was offered as a more modern alternative to the traditional model of apprenticeship.

So, how then did people traditionally become farmers in the United States? The Future Farmers of America (FFA) and 4-H, with their historic connection to the agricultural era ushered in at the turn of the 20th century, are likely to come to mind when one ponders how people have chosen farming as a vocation. Both the FFA and 4-H
programs are associated with rural areas where participants are more likely to have previous experience with farming before signing up. Traditionally, people who chose to become farmers would likely have grown up in or near a farming family, in a rural location where they either had access to land and resources to purchase it, or would have been expected to take over the family farm from close kin. As urban areas developed, people became more mobile and occupational and educational opportunities increased, children of farming families began moving away from the farm and choosing new occupations (Lobao & Meyer, 2001). At the same time, technological innovations meant established farms specializing in commodity goods could purchase machinery, partially replacing the traditional dependence on family labor. In contrast, current studies of participants in on-farm work experiences on small and midsize sustainable farms have found that on-farm apprentices, interns, and volunteer workers are more likely to have grown up in an urban area and have little to no prior experience with farming (Wood, 2013, MacAuley, 2014).

In his study of sustainable farmers in the Pacific Northwest, Pilgeram (2011:390) found that while most of the younger farmers had interned on at least one farm in their process to becoming farmers, the older farmers were more likely to have been involved in farm-type collectives where they learned to farm with others who were also novices. These literatures suggest that pathways to the farming profession may be changing. While farmers have traditionally been exposed to farming as youths, research suggests that people who did not grow up on or around farms are now seeking exposure to farming via on-farm work experiences. More specifically, studies of sustainable agriculture and
small farms have observed the use of apprenticeship, internship, and volunteer positions. Rather than reproducing the familial farming tradition, on-farm work experiences appear to invite people who have not had access to farms to experience farming. This invites studies into whether the current model of on-farm work experience is helping new kinds of people become farmers, or whether it is a cost-saving technique for small farms.

**Sustainable Agriculture Organizations**

To position sustainable agriculture organizations within the literature pertaining to current sustainability movements several fields of research were used, including environmental sciences, sociology of food and agriculture, community development, rural sociology, city and regional planning, and geography. “Sustainability,” while spanning a range of contemporary discussions, is a contested term. As Kloppenburg (2000:178) pointed out, the term “sustainability” has, “achieved canonization as a kind of cultural shorthand for ‘the green and good.’” Dissemination of meanings and messages for social movements that use the term “sustainability” often comes from organizations. These organizations also take on a key role by encouraging the development of new ideas and relationships that contribute to the growth of meanings and social movements (Hassanein, 1999; Feenstra, 2002).

Hassanein (1999) suggested that sustainable agriculture organizations, having come into existence well before the sustainable food system rhetoric, are a unique population under the sustainable food system umbrella. Her research found two key features of sustainable agriculture organizations: 1. Farmer leadership and/or
participation, and 2. Emphasis on democratic knowledge systems. Sustainable agriculturalists have created a variety of rural organizations and farmer networks that “emphasize farmer-generated knowledge, promote holistic and ecological thinking, and embrace practical research” (Hassanein, 1999:27). The primary mission of these types of sustainable agriculture organizations is to transmit information and ideas about sustainable agriculture via annual meetings, field days, and conferences. Many of these groups were developed as alternative knowledge and research networks when the dominant agricultural research and extension system was firmly focused on conventional farming, prior to the government legitimization process of sustainable agriculture in the 1980’s.

While developing a list of survey participants, I compared Hassanein’s description of sustainable agricultural organizations that started in the 1980’s to those organizations listed under ATTRA’s sustainable agricultural organizations and publications list in the years 1992 and 2015. Results of this exercise revealed that organizations identifying as sustainable agriculture organizations may vary in at least several characteristics, including that of size, scope, status, and mission. This population diversity makes the task of examining sustainable agriculture organizations a challenging one.

The term “sustainability” has grown to encompass a complex set of meanings and is utilized by a multitude of organizations with differing missions that are not necessarily compatible (Allen at al., 1993; Kloppenburg, 2000). There is no set formula for what constitutes an alternative, sustainable food system. Similarly, there are a variety terms to
describe farming methods that can be described as sustainable agriculture. In her study of knowledge networks among sustainable agriculture practitioners, Hassanein (1999) noted the sustainable agriculture organizations that carry a mission of transforming agricultural science. Among these are regional networks called Sustainable Agriculture Working Groups (SAWG). In an effort to link local concerns and efforts at building sustainable agriculture into changes in national research policy, these networks work to give “member organizations concerned with sustainable agriculture a more coordinated voice on federal policy issues” (Hassanein, 1999:25).

Other sustainable agriculture organizations are research institutes, “often founded by scientists or by advocates who employ scientists” (Hassanein, 1999:28). One key attribute of these organizations is an appreciation and emphasis on the importance of farmer-generated knowledge and alternative knowledge systems. These organizations recognize that information is “not only the purview of a relatively small number of people in universities or laboratories but a human capacity that can be developed in everyday life” (Hassanein, 1999:28). While traditional agricultural institutions such as land grant colleges began to integrate sustainable agriculture through policy developments (such as those in the 1990 farm bill that funded training for Extension agents), their ability to guide the movement has been questioned. Sustainable agriculture calls for an interdisciplinary and holistic approach, whereas farm and commodity organizations have traditionally operated in terms of individual farm products and commodities (Youngberg et al. 1993). The participation in sustainable agriculture of land grant colleges and extensions may have a legitimization affect, but at the same time this
might also encourage the conventionalization of sustainable agriculture (Youngberg et al., 1993; Allen, 2004). Hassanein (1999) suggested that research institutes in sustainable agriculture, because they are unattached to the land grant university system, may offer scientific information to the sustainability movement to further integrate alternative farming systems.

Local sustainable agriculture organizations that are farmer-based, Hassanein (1999) offered, also realize this democratic view of knowledge. Local groups have greatly increased across the United States, with aid from private, nonprofit advocacy organizations. She referred to several sustainable agriculture organizations, such as The Land Stewardship Project in Minnesota which has organized several sustainable farming associations; the Maine Organic Farmer and Gardeners Association which maintains the nation’s oldest farm apprenticeship program; the Northeast Organic Farming Association; the Michigan Agricultural Stewardship Association; the Ohio Ecological Food and Farm Association; Practical Farmers of Iowa. While these sustainable agriculture organizations do not share the same mission, they are all local or statewide farmer-based groups that share the purpose to generate and exchange knowledge. One can surmise from this that farmer-to-farmer networks and farmer organizations are represented in the population of sustainable agriculture organizations.

Sustainable agriculture organizations are influential actors in setting the trajectory of movements toward alternative agriculture and assist in assigning meanings to the term “sustainable agriculture” via the networks they build and in which they participate (Corrado, 2010). Despite the potential implications of the role of sustainable agriculture
organizations, most of the academic literature pertaining to sustainable agriculture has thus far focused on examining the behavior and attitudes of producers and consumers.

**Studies of Facilitating Organizations and Participatory Programs**

Examinations of organizational practice and programs in the literature were pulled from areas of community development and sociology of food and agriculture. This section describes the role of organizations in building relationships within social movements. A framework for organizational practice is introduced to examine the mechanisms by which organizations encourage participation. Other studies situate sustainable agriculture organizations within the alternative agrifood movement. Finally, studies are described that used the Community Capitals Framework to analyze motivations and challenges for organizations working toward change in agrifood systems.

**Sustainable Agriculture Organizations Encourage Participation**

To address the first research question, pertaining to whether and how sustainable agriculture organizations facilitate on-farm work experiences, literature focused on organizational practice was reviewed. Organizational practices have been examined to develop an understanding of values sought by organizations beyond profit (Feenstra, 2001; Kudva & Driskell, 2009; Levkoe, 2014). In examining the concept of participation in youth and community development organizations, Kudva and Driskell (2009) found organizational practice to be a vital component. They concluded that whether youth were empowered to participate in community development initiatives was dependent upon the observance of five dimensions of organizational practice. Kudva and Driskell (2009) proposed a framework for analyzing organizational programs which views participation
as a practice for organizations, shaped by five dimensions: normative, structural, operational, physical, and attitudinal. Concerned with issues of power, participation is a concept particularly useful to the examination of community development organizations. What an organization recognizes as “participation” depends on values, perceived goals, moral judgements and intended outcomes (Kudva & Driskell, 2009:367). This concept can also be of use to the study of social movement organizations because it turns attention to the structures, processes, and methods involved in encouraging or discouraging participation. Participation is vital to the growth and maintenance of social movement organizations, and one of the ways on-going participation is established is through programs.

Kudva and Driskell (2009) recognized that shifting a focus from projects (i.e. Feenstra, 2009) to programs requires turning our analytical lens “toward the institutions and organizations in and through which participation happens” (p.368). Their study speaks to a particular concern for the inherent power issues encountered when “outsiders” seek to facilitate local “insider” knowledge, and the ability for these processes to affect meaningful social change. These concerns are paralleled in the Agrifood Initiative and Agrifood Movement literature (Allen et al., 2003; Levkoe, 2014).

Kudva and Driskell’s (2009) research sought to understand how organizations encourage participation and thereby shape participatory processes. The use of existing organizational models such as DiMaggio and Powell (1991) and Ebrahim (2003) did not allow them to capture the dynamics by which participation was encouraged through the interaction of variables like organizational goals, values, or resource constraints (Kudva
& Driskell, 2009: 371). Examining the five dimensions, each relative to the other, enabled the researchers to focus on the role of organizational practice as crucial to supporting or limiting meaningful participation in programs.

The *Normative* dimension captures the organization’s expression of values and is articulated in the organization’s goals and mission. The existence of other dimensions relies on the creation of this normative practice, which identifies whether those within the organization support meaningful and sustained participatory practice. Normative practices affirm participation as an organizational priority, as well as participants’ status and roles within the organization, which may be seen on the organization’s website, fundraising proposals, or speeches of the executive director.

Embedded within normative practice, the *Structural* dimension is embodied in an organization’s programs, staffing, and budget priorities. Normative declarations are meaningless without appropriate structures. Examples of structural dimensions include dedicated staff positions for program outreach and facilitation, resource allocation for training, and program evaluations. Structural practice is tangible; there is evidence of its existence or lack thereof. Participation does not just happen – someone must facilitate it, and someone must pay for it (Kudva & Driskell, 2009:372). They added that someone should be also be leading critical reflections to understand how to better the process.

Embedded within structural practice, the *Operational* dimension is the everyday practice of the organization and actual processes for organizational decision making. For example, while creation of a workshop defines a structural practice, the actual ways in which the workshop operates shapes its effectiveness as a participatory practice.
Participation is encouraged at the workshop when the processes ensure consideration for all voices. This is also related to program feedback and evaluation.

The *Physical* dimension refers to provisioning actual space, such as buildings, rooms, or outdoor space on a farm where program participants can work collaboratively or independently. Kudva and Driskell (2009) referred to the importance that this practice designated territory for participants to use on their own terms.

Finally, the *Attitudinal* dimension is the least tangible of the five practices, and is shaped by the interactions and identities rooted in interpersonal relationships. Able to enrich or undermine the normative, structural, operational, and physical dimensions of participatory practice, it manifests in the interactions between participants. This practice is difficult to measure given its fluid nature, yet Kudva and Driskell (2009) reported this as the most commonly identified barrier to meaningful participation. Attitudinal practice may be expressed as a culture of acceptance, support, and understanding towards participants by people within an organization. It may also be expressed in an individual’s expectations of her right to participate in the program, and her ability to act on that right by actively participating.

The framework developed by Kudva and Driskell (2009) lends support for the role of organizational practice as crucial in facilitating and structuring program participation. It also provided a useful tool for the analysis of the ways sustainable agriculture organizations structure an on-farm work experience program and facilitate participation in on-farm work experiences. This framework was used to answer the first research question: how are sustainable agriculture organizations facilitating on-farm work
experiences? Survey questions were developed to reveal whether organizations are encouraging participation using a variety of activities that can be categorized in the normative, structural, physical, and operational dimensions.

*Situating Sustainable Agriculture Organizations in Alternative Agrifood Movements*

To address the second and third research questions pertaining to why sustainable agriculture organizations choose to or choose not to be involved in on-farm work experiences, social movement organization literature was reviewed. In his investigation of Provincial Network Organizations (PNOs) in Canadian food movements, Levkoe (2015) documented these organizations’ efforts to support alternative food initiatives (AFIs) and to collaborate for food systems change. Playing an important role in building the movement for more “just, healthy, and ecological sustainable food systems,” Levkoe (2015:179) classified PNOs as social movement organizations (SMOs). Drawing on a network survey, he describes the ways that PNOs have established common strategies to facilitate connections of a variety of actors working under the AFI umbrella. He concluded that the creation of physical spaces involving direct contact in places is a key strategy to developing a network of social movement organizations and progressing toward food systems change.

To analyze social movement networking strategies, Levkoe (2015) defined network building “as the construction of relational space through processes of interaction between multiple actors, events, and activities” (p.175, emphasis in original text).

Building on the work of Harvey (1996) and Massey (1991), he emphasized the concepts of space, made up of various processes (physical, biological, social, and cultural) and
meeting places, where multiple relations interweave. This notion of space refers to new relationships that are formed when actors interact in a particular place. For example, we could use this frame to deduce that new relationships are formed when a farm intern interacts with another farm intern at an event for on-farm work experience participants. This is to say that a relational notion of space can be a useful tool to examine the role of sustainable agriculture organizations as brokering connections between farmers and on-farm interns and other alternative agrifood movement actors in a variety of meeting places.

To strengthen his analysis of PNOs, Levkoe (2015) situated PNO’s as social movement organizations (SMOs). Studies of SMOs date back to the 1960s with Mayer Zald and Roberta Ash. Zald and Ash (1966) placed importance on the difference between traditional non-profit organizations and SMOs, being that the former provided a service while the latter sought to mobilize individuals and organizations toward action (Levkoe, 2015:176). Like the PNOs of Levkoe’s study, sustainable agriculture organizations can be classified under McCarthy and Zald’s inclusive description of SMOs as “a complex, or formal, organization which identifies its goals with the preferences of a social movement or a countermovement and attempts to implement those goals” (Levkoe, 2015:176 citing McCarthy and Zald, 1977:1218). The PNOs Levkoe discusses in his paper identify with the goals of working toward a just, healthy, and ecologically sustainable food system.

Levkoe’s (2015) research echoed the need to examine organizations that facilitate and mediate connections between a variety of social movement actors because “support from networking organizations provides insight for studies of SMOs and movement
building more broadly” (Levkoe, 2015:174). This literature relates to the second and third research questions: why do some organizations choose to be involved on-farm work experiences and why do some organizations choose not to be involved? It could be assumed that sustainable agriculture organizations intend to support the sustainable agriculture movement with their practices and programming, but this may not always be the case.

The research conducted for this thesis offers one type of response to the call for further examination of the roles of SMOs in alternative agriculture movements (AAMs) and alternative food initiatives (AFIs). Sustainable agriculture organizations may be mediating connections between different social movement actors, such as farmers and on-farm apprentices, interns and volunteers. Examining their roles in on-farm work experience programming could lead to further inquiry into sustainable agriculture movement building.

Studies of Organizational Motivations and Challenges

To further inform the second and third research questions, agrifood systems literature utilizing the capitals framework was reviewed. As exampled above, there are a number of articles examining the roles organizations may take toward the development of what have been termed sustainable food systems or alternative food initiatives. These articles focused frames that help us analyze the structure, practice, and programming of SMOs, and how these factors relate to their shared goals of social change. Literature examining the motivations of these organizations to participate in a social movement, as well as their perceived benefits and challenges, will now be discussed (Flora and
Bregendahl, 2012; Green & Haines, 2011; Laverack, 2001; Levkoe, 2015; Meenar, 2015). Several researchers have found a capitals framework to be useful in studying organizational motivations, perceived benefits, and challenges. These articles paid particular attention to the concept of social capital, referring to Bourdieu’s forms of capital (1986) and linking to the Community Capitals Framework developed by Emery and Flora (2006).

Community Capitals Framework has offered a way to analyze community development efforts from a systems perspective by identifying the assets in each capital, the types of capital invested, and the interaction among capitals, and the resulting impacts across capitals (Emery and Flora, 2006, p. 20). The seven components of community capital are: built, cultural, financial, human, natural, political, and social. This framework has also been used to analyze perceived values of a program, such as Community Supported Agriculture (CSA).

For example, Flora and Bregendahl (2012) used the Community Capitals Framework as a tool for analyzing the expectations, realizations, and benefits reported by current and former CSA operators and members. Linking reported motivations for participation to the capitals of cultural, financial, human, natural, political, social, and built (stocks and flow of assets), they examined how the organization of a cooperative CSA can affect the creation of value beyond the economic for both producers and consumers. Both CSA producers and CSA members were surveyed for this study. Most producers and members identified social, cultural, natural, and human motivations for participating in the cooperative CSA program. According to the Community Capitals
Framework, producers reported the greatest benefits in natural capital, followed by social, cultural, human, and political. Financial capital benefits were reported among the lowest benefits along with built capital.

Here natural capital translates to benefits that contribute to environment health such as reducing the use of chemicals or food miles. Social capital translates to benefits that contribute toward developing relationships between producers, consumers, and community. Cultural capital translates to benefits that contribute to the sharing of cultural values such as a sense of identity to farming and food. Human capital involves benefits centered on health and learning. Political capital benefits addressed the extent to which members and producers felt they participated in “small” agriculture as a form of protest against “big” agriculture, and whether they made connections with actors who can influence food and agricultural policies. Bregendahl and Flora (2012) combined financial and built capital measures. Items referring to saving money on produce and other financial benefits were considered financial capital, while gaining the means to purchase farming equipment was considered built capital benefit.

Interestingly, political motivations were missing from the reasoning of both producers and consumers. While Bregendahl and Flora speculated that respondents did not view CSA as a political platform, this observation raised questions as to who acts as an advocate for producers: “Who links them with local food system advocacy coalitions, government officials and policy makers?” (Bregendahl & Flora, 2012:337). If producers are not able to invest in the political aspects of local food systems work, research is needed to find who or what does. For example, given that they participate in Alternative
Food Networks, it would be helpful to examine whether sustainable agriculture organizations invest in that role with motivations related to political capital.

While Bregendahl and Flora’s study focused on benefits provided by a program, another study focused on challenges reported by organizations in their facilitation efforts. Meenar (2015) extracted a list of 250 nonprofit organizations working in food programming in Philadelphia, surveying them to examine their capacity to influence change in the community. This research utilized the Community Capitals Framework, specifically human, physical, financial, social, and organizational capitals to identify challenges these organizations face in their efforts to build community capacity. He found that an organization’s constituents, communication types, and partnerships are important variables in explaining their capacity to address food insecurity in the community. Common challenges faced by these organizations were related to budgetary issues, unreliable funding streams, and lack of criteria for eligibility for grant applications, all of which fall under the financial and organizational capital categories. It would be helpful to understand whether similar challenges are affecting the experiences of sustainable agriculture organizations working to broker relationships between host farmers and on-farm interns. Identifying challenges may help to explain why some organizations facilitate while others do not. This literature connects to the second and third research questions, offering a framework for identifying benefits and challenges associated within facilitation work.
Studies of Organizational Characteristics

To address the fourth research question pertaining to characteristics of sustainable agriculture organizations that choose to be involved in on-farm work experiences, agriculture organization literature was reviewed. In a first-of-its kind study of urban agriculture organizations across North America, McClintock and Simpson (2014) surveyed 251 businesses and organizations across Canada and the United States to develop a snapshot of urban agriculture organizations and how they practice urban agriculture. They looked for patterns related to organization size, location, budgets, funding, staffing and volunteer labor.

Their findings suggested that urban agriculture is practiced in a variety of ways. Funding also comes from many different sources. Organizations who took the survey reported relying more heavily on grant funding and volunteer labor than businesses. Urban agriculture was typically not the only focus of organizations practicing it, and many respondents noted that networks or partnerships are important to the work they do.

In addition to descriptive statistics, McClintock and Simpson (2014) were interested in gathering information about the type of activities related to urban agriculture in which these organizations participated. They asked respondents if their group was involved in any of 16 different urban agriculture activities. The results showed that urban agriculture organizations participate in a wide range of agriculture activities, from education and demonstration gardens to animal husbandry and policy/ advocacy. Nearly 90% of respondents indicated they focus on more than one of urban agriculture activity, and on average each group focused on six activities (McClintock and Simpson, 2014:4).
McClintock and Simpson (2014) also gathered information about types of motivations for organizations related to the practice of urban agriculture. They asked respondents to indicate their primary motivations for engaging in urban agriculture, finding that the most common motivations were community building, concerns about food quality, environmental concerns, and interests in sustainability (McClintock and Simpson, 2014:4). If we apply the Community Capitals Framework to their findings, these motivations would be related to the community and environmental capitals.

The data collected by McClintock and Simpson (2014) suggested that there is substantial variation in the ways that urban agriculture is practiced by different organizations in different cities (p16). They found that while a wide range of interests, concerns and values motivated these organizations to practice urban agriculture, community building, sustainability, and food quality were most common. Common challenges faced by groups included funding, labor and access to physical space. If we apply the Community Capitals Framework to their findings, these challenges would be related to the human and financial capitals.

Studies of agriculture organizations appear to be relatively new (see Hassanein, 1999; Levkoe, 2014; McClintock and Simpson, 2014; Meenar, 2015). Only a few studies were found that describe agriculture organizations, analyze how organizations support agriculture, their motivations for doing so, and challenges they faced.
Summary

While academics have thus far made inroads towards identifying participants in on-farm work experiences and located these experiences within the alternative agri-food movement, a review of the literature has identified a gap in our understanding of the agents involved in facilitating these sustainable agriculture experiences, and existing motivations to develop facilitation programming. Though various organizations appear to encourage on-farm work experiences in sustainable agriculture as a path for future farmers, a lack of empirical evidence inhibits an understanding of how seekers of on-farm work experience are connecting to host farmers. Preliminary research suggests that sustainable agriculture organizations are utilizing their resources and non-profit motivations to facilitate relationship building between these two types of actors in the alternative agrifood movement within the context of sustainable agriculture programming.

Organizations have access to human, financial, and technological resources that enable them to reach out to on-farm work experience seekers beyond the capabilities of host farmers. An examination of sustainable agriculture organizations and their role in the facilitation of on-farm work experiences will contribute toward the knowledge base and locating this kind of non-waged, learning-exchange-focused work in alternative agrifood movements. The limited academic information about on-farm internships, apprenticeships, and volunteer positions provides opportunity to contribute informative data and analysis to the academy. This information may also serve organizations which
are either presently implementing facilitation programs or in the process of planning on-farm work experience facilitation programming.

**Hypotheses**

Informed by the literature, the following hypotheses were examined in this study:

H1: Sustainable agriculture organizations facilitate on-farm work experiences.

Structural dimension activities are prevalent in describing current facilitation practices.

H2: Human capitals are prevalent in explaining why sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences.

H3: Financial capitals are prevalent in explaining why organizations choose not to be involved in on-farm work experiences.

H4: The organization age, geographic scope, funding sources, organization type and audience are associated with facilitation of on-farm work experiences.

Table 2.3 presents the four research questions and hypotheses for this study.
Table 2.2. Summary of Research Questions and Hypotheses

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating?</td>
<td>H1. Sustainable agriculture organizations facilitate on-farm work experiences. Structural dimension activities are prevalent in describing current facilitation practices.</td>
</tr>
<tr>
<td>2. Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation?</td>
<td>H2. Human capitals are prevalent in explaining why some sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences.</td>
</tr>
<tr>
<td>3. Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation?</td>
<td>H3. Financial capitals are prevalent in explaining why some organizations choose not to be involved in on-farm work experiences.</td>
</tr>
<tr>
<td>4. Which organizational characteristics are associated with facilitation of on-farm work experiences?</td>
<td>H4. The organization age, geographic scope, funding sources, organization type and audience are associated with facilitation of on-farm work experiences.</td>
</tr>
</tbody>
</table>
Chapter 3
Research Methods

This study was designed to explore the role of sustainable agriculture organizations in facilitating on-farm work experiences by measuring characteristics of sustainable agriculture organizations, their motivations and barriers to facilitation of on-farm work experiences, and characteristics of on-farm work experience that facilitate programs. This chapter presents information on the study design, sample, measurement and instrumentation, data collection, data analysis, and a description of the study participants.

Research Questions

The research questions that guided this study were as follows:

1. Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating?

2. Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation?

3. Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation?
4. Which organizational characteristics are associated with facilitation of on-farm work experiences?

**Study Design**

The study utilized online surveys that were sent to directors of organizations listed on the Appropriate Technology Transfer for Rural Areas (ATTRA) website. These organizations were self-reported as sustainable agriculture organizations. A survey was used to collect data in an effort to include as many programs as possible across the country. Given that the total number of sustainable agriculture organizations facilitating on-farm work experiences is unknown and there is limited research on facilitation of on-farm work experiences, a survey approach could provide descriptive data on on-farm work experiences as well as data to answer the research questions. The cross-sectional survey method was chosen because the aim was to develop a description at a single point in time. The research method was timely and cost effective; the survey was developed on The Ohio State University Qualtrics platform, and the sample was pulled from a publicly available database.

**Sample**

The population for this study was sustainable agriculture organizations across the United States. The sample came from 260 organizations listed on the ATTRA list of Sustainable Agriculture Organizations and Publications as of March 2016. The organizations were located throughout all regions of the United States. Two states had no listed organizations: Delaware and South Carolina. An internet search was conducted on each organization on the list to confirm current status. Three of the organizations on the
list did not offer any contact information besides an organization name, seven listings were repeats, six organizations were found to no longer exist, and seven listings offered no e-mail address (neither on the list, nor on their organization’s website).

The research protocol was submitted to the Institutional Review Board of The Ohio State University. The Office of Responsible Research Practices determined that the project was exempt from IRB review.

**Measurement and Instrumentation**

The survey questions covered facilitation of on-farm work experiences, organizational characteristics, values for facilitation, challenges to facilitation, and other descriptive information about the organizations. Variables are described in the sections below.

**Facilitation**

Facilitation was examined through questions that addressed whether an organization facilitated on-farm work experiences, as well as facilitation practices. Facilitation was measured by the question: “Does your organization currently offer any services or programs to facilitate on-farm work experiences?” The responses were “yes” or “no.”

If the answer was yes, respondents were then asked to indicate their current facilitation practices. Current facilitation practices were measured by the question, “Which of the following types of services and programs does your organization currently provide to facilitate on-farm work experiences?” They were asked to answer “yes” or “no” to a list of 10 items which were developed based on literature on facilitation.
practices. The foundation for this model utilized Kudva & Driskell’s (2009) framework for analyzing organizational practices which included normative, structural, operational, and physical dimensions of organizations. The normative dimension captures an organization’s expression of values and is articulated in the organization’s goals and mission. The structural dimension is embodied in an organization’s programs, staffing, and budget priorities. The operational dimension is the everyday practice of the organization and actual processes for organizational decision making. The physical dimension refers to provisioning actual space, such as buildings, rooms, or outdoor space on a farm where program participants can work collaboratively or independently. The attitudinal dimension is shaped by the interactions and identities rooted in interpersonal relationships. The attitudinal dimension is best measured via observation and interview, and therefore was not included in the survey.

The survey items consisted of “publicize available on-farm work experiences,” “issue guidelines or best practices for on-farm work experiences,” “attain funding to support on-farm work experiences,” “establish a dedicated staff member position to manage facilitation activities,” “coordinate educational workshops, tours, social gatherings, or other related events for participants,” “provide an orientation or other hands-on training and support serves to participants,” “arrange placement of apprentices, interns, or volunteers on farms,” “collaborate or partner with other organizations to develop or implement on-farm work experience programming,” “conduct follow-up evaluations of on-farm work experiences,” and “operate a farm utilizing on-farm
apprentices, interns, or volunteers.” Figure 3.1 presents the 10 facilitation items and dimensions to which they relate.

Table 3.1. Facilitation Practices

<table>
<thead>
<tr>
<th>Which of the following types of services and programs does your organization currently provide to facilitate on-farm work experiences? (Check all that apply.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normative Dimension</strong></td>
</tr>
<tr>
<td>Publicize available on-farm work experiences</td>
</tr>
<tr>
<td>Issue guidelines or best practices for on-farm work experiences</td>
</tr>
<tr>
<td><strong>Structural Dimension</strong></td>
</tr>
<tr>
<td>Attain funding to support on-farm work experiences</td>
</tr>
<tr>
<td>Establish a dedicated staff member position to manage facilitation activities</td>
</tr>
<tr>
<td>Coordinate educational workshops, tours, social gatherings, or other related events for participants</td>
</tr>
<tr>
<td>Provide an orientation or other hands-on training and support serves to participants</td>
</tr>
<tr>
<td>Arrange placement of apprentices, interns, or volunteers on farms</td>
</tr>
<tr>
<td><strong>Operational Dimension</strong></td>
</tr>
<tr>
<td>Collaborate or partner with other organizations to develop or implement on-farm work experience programming</td>
</tr>
<tr>
<td>Conduct follow-up evaluations of on-farm work experiences</td>
</tr>
<tr>
<td><strong>Physical Dimension</strong></td>
</tr>
<tr>
<td>Operate a farm utilizing on-farm apprentices, interns, or volunteers</td>
</tr>
</tbody>
</table>

For respondents who indicated they were not currently facilitating, they were asked, “Did your organization offer any services or programs to facilitate on-farm work experiences in the past?” and “Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future?” The responses were “yes” or “no.”
**Perceived Values of Facilitation**

Organizational perceived values to facilitate on-farm work experiences were measured using a series of 18 items that were obtained from a measure based on the Community Capitals Framework (Bregendahl & Flora, 2012; Flora & Flora, 2008). The items reflected six types of community capitals: cultural, financial, human, natural, political, and social. Cultural capital translates to benefits that contribute to the sharing of cultural values such as a sense of identity to farming and food. Financial capital refers to monetary benefits such as economic growth and profit. Human capital involves benefits centered on health and learning. Natural capital translates to benefits that contribute to environment health such as reducing the use of chemicals or food miles. Political capital benefits address connections with actors who can influence food and agricultural policies. Social capital translates to benefits that contribute toward developing relationships between producers, consumers, and community.

Respondents were asked to answer the question, “How much do you agree or disagree with the following statements? Facilitating on-farm work experiences as an organization is valuable because it helps us to…” Examples of items included “immerse citizen-eaters in the realities of agriculture,” “grow support for small and mid-sized farmers,” “connect older farmers for potential successors for their farms,” “strengthen interest in environmentally friendly farming methods through hands-on learning,” “develop relationships with sustainable agriculture advocates,” and “inspire trust among farmers and eaters.” Responses were on a 5-point Likert scale ranging from 1 =
“Strongly disagree,” 3 = “Neither agree nor disagree,” and 5 = “Strongly agree.” Table 3.2 presents 18 perceived values for facilitation and capitals to which they relate.

<table>
<thead>
<tr>
<th>Table 3.2. Perceived Values for Facilitation of On-Farm Work Experiences Using the Community Capitals Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitating on-farm work experiences as an organization is valuable because it helps us to...</td>
</tr>
<tr>
<td>Cultural Capital</td>
</tr>
<tr>
<td>Immerse citizen-eaters in the realities of agriculture</td>
</tr>
<tr>
<td>Support the farming tradition in the area</td>
</tr>
<tr>
<td>Increase access to organically grown or raised farm products</td>
</tr>
<tr>
<td>Financial Capital</td>
</tr>
<tr>
<td>Grow support for small and mid-sized farmers</td>
</tr>
<tr>
<td>Create or save local jobs</td>
</tr>
<tr>
<td>Reduce or share risks associated with farming</td>
</tr>
<tr>
<td>Human Capital</td>
</tr>
<tr>
<td>Make up for a lack of availability of formal educational programs for sustainable farm operation</td>
</tr>
<tr>
<td>Lower barriers to entry for aspiring sustainable farmers</td>
</tr>
<tr>
<td>Connect older farmers with potential successors for their farms</td>
</tr>
<tr>
<td>Make the knowledge of more experienced producers more accessible to producers who have less experience</td>
</tr>
<tr>
<td>Train new or beginning farmers and ranchers</td>
</tr>
<tr>
<td>Natural Capital</td>
</tr>
<tr>
<td>Strengthen interest in environmentally friendly farming methods through hands-on learning</td>
</tr>
<tr>
<td>Political Capital</td>
</tr>
<tr>
<td>Develop relationships with sustainable agriculture advocates</td>
</tr>
<tr>
<td>Counteract the effects of industrialized agriculture</td>
</tr>
<tr>
<td>Encourage networking amongst supporters of the alternative agrifood movement</td>
</tr>
<tr>
<td>Social Capital</td>
</tr>
<tr>
<td>Inspire trust among farmers and eaters</td>
</tr>
<tr>
<td>Help farmers participate in direct agricultural markets</td>
</tr>
<tr>
<td>Build community around sustainable agriculture</td>
</tr>
</tbody>
</table>
**Perceived Challenges to Facilitation**

Organizational perceived challenges to facilitation of on-farm work experiences were measured using a series of 12 items that were obtained from Meenar (2015) which was based on the Community Capitals Framework (Bregendahl & Flora; Flora & Flora, 2008). The items reflected five types of community capitals: cultural, financial, human, political, and social. Cultural capital translates to benefits that contribute to the sharing of cultural values such as a sense of identity to farming and food. Financial capital refers to monetary benefits such as economic growth and profit. Human capital involves benefits centered on health and learning. Political capital benefits address connections with actors who can influence food and agricultural policies. Social capital translates to benefits that contribute toward developing relationships between producers, consumers, and community. Natural capital was not included in measuring challenges to facilitation.

Respondents were asked to answer the question, “How much do you agree or disagree with the following statements? Facilitating on-farm work experiences as an organization is challenging because of…”. Examples of items included “unreliable collaboration partners,” “administrative or budgetary issues,” “unreliable availability of on-farm interns, apprentices, volunteers,” “lack of evidence that on-farm interns, apprentices, volunteers become farmers,” “lack of local and diverse community participation.” Responses were on a 5-point Likert scale ranging from 1 = “Strongly disagree,” 3 = “Neither agree nor disagree,” and 5 = “Strongly agree.” Table 3.3 presents 12 perceived challenges to facilitation and capitals to which they relate.
Table 3.3. Perceived Challenges to Facilitation of On-Farm Work Experiences Using the Community Capitals Framework

<table>
<thead>
<tr>
<th>Facilitating on-farm work experiences as an organization is challenging because of...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural Capital</strong></td>
</tr>
<tr>
<td>Unreliable collaboration partners</td>
</tr>
<tr>
<td>Conflicts with our organizational mission</td>
</tr>
<tr>
<td><strong>Financial Capital</strong></td>
</tr>
<tr>
<td>Administrative or budgetary issues</td>
</tr>
<tr>
<td>Uncertain availability of funding streams</td>
</tr>
<tr>
<td>Need for the means to incentivize on-farm work experiences (e.g. monetary or in-kind)</td>
</tr>
<tr>
<td>Need for housing, transportation, or childcare for on-farm work experience participants</td>
</tr>
<tr>
<td><strong>Human Capital</strong></td>
</tr>
<tr>
<td>Unreliable skillset of on-farm interns, apprentices, volunteers</td>
</tr>
<tr>
<td>Unreliable availability of on-farm interns, apprentices, volunteers</td>
</tr>
<tr>
<td><strong>Political Capital</strong></td>
</tr>
<tr>
<td>Lack of evidence that on-farm interns, apprentices, volunteers become farmers</td>
</tr>
<tr>
<td>Lack of access to information about applicable laws, best practices, or liability issues</td>
</tr>
<tr>
<td><strong>Social Capital</strong></td>
</tr>
<tr>
<td>Lack of local and diverse community participation</td>
</tr>
<tr>
<td>Lack of interest from our constituents</td>
</tr>
</tbody>
</table>

**Organizational Characteristics**

The survey asked respondents about a number of organizational characteristics. These included when the organization was founded, geographic service area, funding sources, organization type, audience, sustainable agriculture activities, and sustainable agriculture motivations.
Organization founding year was measured by the question, “In what year was your organization founded?” Possible choices included “Before 1949,” “1950 – 1974,” “1975 – 1999,” 2000 – 2016.” Respondents were to check one answer.

Geographic service area was measured by the question, “Which category best describes the geographic service area of your organization?” Possible choices included “Local area (includes City, Municipality, Town, or Village),” “Statewide or regional within a state,” “National or regional across multiple states,” or “International.” Respondents were to check one answer.

Funding sources were measured by the question, “Does your organization derive revenue from any of these sources?” Possible choices included “Government Funding,” “Private Foundations,” “Individual Donations,” “Corporations,” “Fees for Services or Products.” Respondents were to check all answers that applied.

Organization type was measured by the question, “Which type best fits your organization?” Possible choices included “Community Based Organization,” “Government,” “Non-profit or Charity,” “Private Business,” “Public or Private Partnership,” “College, University, or Cooperative Extension,” or “Other.” Respondents were to check one answer.

Audience was measured by the question, “Does your organization seek to engage with any of these populations? Possible choices included “Disadvantaged populations (e.g., older adults, lower-income, minority, refugees, ethnic groups, and minority religious groups),” “Military Veterans,” “New or Beginning Farmers and Ranchers,”
“Organic Farmers and Gardeners,” “Students,” or “None of the above.” Respondents were to check all answers that applied.

Table 3.4 lists the year founded, geographic service area, funding sources, organization type, and audience variables.

Table 3.4. Organization Founding Year, Geographic Service Area, Funding Sources, Organizational Type, and Audience Variables

<table>
<thead>
<tr>
<th>Organization Founding Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1949</td>
<td></td>
</tr>
<tr>
<td>1950 – 1974</td>
<td></td>
</tr>
<tr>
<td>1975 – 1999</td>
<td></td>
</tr>
<tr>
<td>2000 – 2016</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic service area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local area</td>
<td></td>
</tr>
<tr>
<td>Statewide or regional within a state</td>
<td></td>
</tr>
<tr>
<td>National or regional across states</td>
<td></td>
</tr>
<tr>
<td>International</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Funding sources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Government funding</td>
<td></td>
</tr>
<tr>
<td>Fees for products or services</td>
<td></td>
</tr>
<tr>
<td>Individual donations</td>
<td></td>
</tr>
<tr>
<td>Private foundations</td>
<td></td>
</tr>
<tr>
<td>Corporations</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>College, university, or cooperative extension</td>
<td></td>
</tr>
<tr>
<td>Community based organization</td>
<td></td>
</tr>
<tr>
<td>Non-profit or charity</td>
<td></td>
</tr>
<tr>
<td>Private business</td>
<td></td>
</tr>
<tr>
<td>Public or private partnership</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantaged populations</td>
<td></td>
</tr>
<tr>
<td>Military veterans</td>
<td></td>
</tr>
<tr>
<td>New or beginning farmers and ranchers</td>
<td></td>
</tr>
<tr>
<td>Organic farmers and gardeners</td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

56
Sustainable agriculture activities were measured by the question, “Is your organization involved in any of the following types of sustainable agriculture activities? Possible choices included: “Education,” “Research,” “Cooperative Farming,” “Demonstration Farm,” “Community Gardens,” “Policy/ Advocacy,” “Farmers Markets,” “Community Supported Agriculture,” “Organic Farming,” “Permaculture,” “Biodynamic Farming,” “Organic Certification,” “Urban Agriculture,” “Heritage Animal Breeds and Heirloom Crop Varieties,” “New or Beginning Farmer and Rancher Training,” and “Values-Based Supply Chains.” Respondents were to check all answers that applied. Sustainable agriculture activity items were obtained from a study of urban agriculture organizations across North America by McClintock and Simpson (2014).

Sustainable agriculture motivations were measured by the question, “What are your organization’s primary motivations for engaging in sustainable agriculture? Possible choices included: “Community Building,” “Education,” “Food Quality,” “Small and Mid-Size Farm Viability,” “Food Security,” “Environmental Conservation,” “Farmland Preservation,” “Public Health,” “Food Justice,” “Rural Development,” “Social Justice,” “Food Sovereignty,” “Ecological Restoration,” “Job Training,” “Development of Local and Regional Food Systems,” “Income/ Profitability,” “Faith-Based,” and “Farm and Food Policy.” Respondents were to check all answers that applied. Sustainable agriculture motivation items were obtained from a study of urban agriculture organizations across North America by McClintock and Simpson (2014).

Table 3.5 indicates the sustainable agriculture activities and motivations variables used in this study.
Table 3.5. Sustainable Agriculture Activities and Motivations Variables

**Sustainable Agriculture Activities**
- Values-based supply chains
- Cooperative farming
- Farmers markets
- Organic farming
- Community gardens
- Demonstration farm
- New or beginning farmer and rancher training
- Research
- Organic certification
- Community supported agriculture
- Biodynamic farming
- Heritage animal breeds and heirloom crop varieties
- Policy / advocacy
- Urban agriculture
- Permaculture
- Education

**Sustainable Agriculture Motivations**
- Social justice
- Faith-based
- Job training
- Rural development
- Farm and food policy
- Community building
- Small and mid-size farm viability
- Income/ profitability
- Education
- Food quality
- Environmental conservation
- Ecological restoration
- Food sovereignty
- Food security
- Farmland preservation
- Public health
- Food justice
- Development of local and regional food systems
Descriptive Variables

Additionally, data on a number of other variables were obtained to describe the sustainable agriculture organizations. These included network affiliation, annual budget, advisory board, size of membership, partnerships, full and part-time staff, and volunteer workers. These questions were based on a study of urban agriculture organizations across North America by McClintock and Simpson (2014).

Data Collection

In summer 2016, an e-mail was sent to 237 organizations via Qualtrics Survey Software, asking directors to complete a short online survey about their organization and on-farm work experiences. Participants were contacted up to three times, including the initial survey link along with notification e-mail explaining the purpose of the study sent on June 27, a reminder e-mail sent on July 08, and a second reminder e-mail sent on August 01. No incentives were offered to participants. Of the 237 e-mails sent, 18 bounced. In total, 219 organizations received an invitation to participate in the survey. To encourage completion of the survey, organization directors were sent three reminders over a period of six weeks. The goal was to obtain responses from throughout the United States, representing a broad range of sustainable agriculture organizations.

Prior to sending out the survey, a pretest of the survey instrument was conducted. A rough draft of the survey was administered to eight non-participants consisting of fellow graduate students in a research and survey design seminar for the School of Environment and Natural Resources. These pilot participants provided feedback on the design of the survey and its ability to answer the research questions. Later, a link to the
draft of the survey was administered to six more non-participants who were familiar with sustainable agriculture organizations and on-farm work experiences. This second round of feedback focused on the readability and clarity of the survey. These two rounds of feedback were incorporated into the final survey instrument. Threats to reliability and validity were minimized through appropriate design of survey questions (Dillman, Smyth, and Christian, 2009).

**Data Analysis Plan**

The survey data were transferred from Qualtrics into to Statistical Package for Social Sciences (SPSS) software v. 24.0 for analysis. Descriptive statistics, chi-square, and $t$-tests were used to address the research questions.

**Description of Participants**

Of the 219 organizations contacted directly, 74 began the survey and 67 of those organizations finished it, yielding a response rate of 31%. All responses were received between July and August 2016. Two incomplete responses were omitted from the final dataset. In the end, a total of 65 responses were retained from 31 states. Of the 65 responses in the final dataset, 1 was completed by a private business, 49 were completed by non-profits, and 15 were from other types of organizations including government, educational institutions, and community based organizations.

The organizations that responded were located in 31 different states and all 7 U.S. Department of Agriculture Regions. The majority of respondents ($n=36$) were from the Northern Plains, Midwest and Northeast states. Eight were from the Southeast, 3 were from the Southern Plains, 7 were from the Southwest, and 6 were from the Northwest.
California, Iowa, and Wisconsin were the three states with the greatest number of responses.

Table 3.6. Location of Survey Respondents by Region

| Location of sustainable agriculture organization | Number of respondents | \(^1\text{Percentage of sample} \)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1 – Southwest</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Region 2 - Northeast</td>
<td>10</td>
<td>15%</td>
</tr>
<tr>
<td>Region 3 - Northwest</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>Region 4 - Northern Plains</td>
<td>14</td>
<td>22%</td>
</tr>
<tr>
<td>Region 5 – Southern Plains</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Region 6 – Southeast</td>
<td>8</td>
<td>12%</td>
</tr>
<tr>
<td>Region 7 - Midwest</td>
<td>12</td>
<td>19%</td>
</tr>
</tbody>
</table>

\(^N = 60\text{ respondents}\)
\(^1\text{Percentage does not add to 100 since respondents were given option to skip this question}\)
Figure 3.1. Map of Regions Used to Identify Geographic Distribution of Surveyed Sustainable Agriculture Organizations.


Representativeness of Sample

Whether the sample reflects the overall population characteristics of sustainable agriculture organizations is unknown. To the researcher’s knowledge, the total number of sustainable agriculture organizations in the U.S. has not been estimated and a census of
the population has yet to be attempted. The organizations on ATTRA’s list of sustainable agriculture organizations are self-reported, and the available information is limited to contact information. Therefore, it is not possible to know whether the resulting sample of \( N=65 \) contains incongruences with characteristics of the total population of sustainable agriculture organizations.

In comparison with the ATTRA list of sustainable agriculture organizations, the most well-represented states on ATTRA’s list were California (19), Minnesota (16), Wisconsin (14), New York (13), and Iowa (10). Together they make up over a quarter of the list of sustainable agriculture organizations (28%). Organizations from these five most represented states on ATTRA’s list represented a similar portion of survey participants (32%). Two states had no listed sustainable agriculture organizations on ATTRA’s list: Delaware and South Carolina and therefore were not represented in the study’s findings. Additionally, no responses were obtained from respondents in 17 states with few ATTRA listings: Alabama (1 listing), Alaska (1 listing), Colorado (4 listings), Connecticut (2 listings), Florida (2 listings), Hawaii (3 listings), Idaho (2 listings), Kentucky (2 listings), Louisiana (3 listings), Maine (3 listings), Mississippi (2 listings), Nevada (2 listings), New Hampshire (4 listings), Oklahoma (3 listings), South Dakota (2 listings), Utah (2 listings), Virginia (5 listings).

Most organizations surveyed were nonprofit. A search was conducted for each organization listed on the ATTRA website in the database maintained by the National Taxonomy of Exempt Entities (NTEE) on the National Center for Charitable Statistics (NCCS) website. This system is used by the IRS and NCCS to classify nonprofit
organizations. At least 54% of the organizations on ATTRA’s list of sustainable agriculture organizations were classified as nonprofit as of March 2016. In addition, at least 21 other organizations on ATTRA’s list were found to be educational institutions (8%). In comparison, non-profits represented well over half (75%) of survey participants, while educational institutions represented 6% of survey participants.

The remaining 98 organizations that could neither be identified as having nonprofit status nor as educational institutions may include community based organizations, government, private businesses, and other organization types. While they represented about a third of ATTRA’s list, these types of organizations together represented 18% of survey respondents.

**Descriptive Characteristics of Responding Organizations**

To provide a general overview of the sustainable agriculture organizations that responded to the survey, a number of characteristics were examined to describe these organizations. These included network affiliation, annual budget, advisory board, size of membership, partnerships, full and part-time staff, and volunteer workers.

The majority (67%) of organizations were not affiliated with any kind of network such as a local or regional chapter, or a national or parent office.

Respondent organizations varied in size of budget, but most derived revenue from individual donations, government, and private foundations. Most sustainable agriculture organizations reported budgets between either $100,000 to $500,000 (33%) or more than $1 million (35%).

The majority of organizations had an advisory board (95%), and most of those boards had between 5 and 15 board members. About half (48%) of organizations reported fee paying members, and of those organizations 45% had between 50 to 500 fee paying members, and 45% had over 500 fee paying members.

Sustainable agriculture organizations reported partnering or collaborating with other organizations. Most organizations reported collaborating with colleges, universities, or extension (97%), nonprofits (98%) and community based organizations (95%). Fewer organizations reported collaborating with private businesses (71%) and trade schools (47%).

Respondent organizations varied in staff size, but most used volunteers. Nearly half of organizations reported 1 to 5 full-time paid staff positions (47%). More than half of respondents reported 1 to 5 part-time paid staff positions (67%). Fewer organizations (10%) reported having no full-time paid staff positions, and only 7% of organizations reported having over 50 full-time paid staff positions. More than half of sustainable agriculture organizations reported utilizing 1 to 25 volunteers (59%). Fewer organizations (14%) reported having no volunteer positions, while 27% of organizations reported having over 50 volunteer positions.
Table 3.7. Descriptive Characteristics of Sustainable Agriculture Organizations

<table>
<thead>
<tr>
<th>Network Affiliation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>19%</td>
</tr>
<tr>
<td>Affiliated</td>
<td>14%</td>
</tr>
<tr>
<td>Not Affiliated</td>
<td>67%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Budget</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>16%</td>
</tr>
<tr>
<td>Medium</td>
<td>49%</td>
</tr>
<tr>
<td>Large</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advisory Board</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory Board</td>
<td>95%</td>
</tr>
<tr>
<td>No Advisory Board</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of Advisory Board</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few</td>
<td>2%</td>
</tr>
<tr>
<td>Some</td>
<td>78%</td>
</tr>
<tr>
<td>Many</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fee-Paying Members</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership</td>
<td>48%</td>
</tr>
<tr>
<td>No Membership</td>
<td>52%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of Membership</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few</td>
<td>10%</td>
</tr>
<tr>
<td>Some</td>
<td>45%</td>
</tr>
<tr>
<td>Many</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collaboration and Partnerships</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private businesses</td>
<td>71%</td>
</tr>
<tr>
<td>Trade schools</td>
<td>47%</td>
</tr>
<tr>
<td>Community based orgs</td>
<td>95%</td>
</tr>
<tr>
<td>Non-profits</td>
<td>98%</td>
</tr>
<tr>
<td>Educational institutions</td>
<td>97%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full-Time Staff</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>10%</td>
</tr>
<tr>
<td>Few</td>
<td>47%</td>
</tr>
<tr>
<td>Some</td>
<td>36%</td>
</tr>
<tr>
<td>Many</td>
<td>7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part-Time Staff</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>14%</td>
</tr>
<tr>
<td>Few</td>
<td>67%</td>
</tr>
<tr>
<td>Some</td>
<td>17%</td>
</tr>
<tr>
<td>Many</td>
<td>2%</td>
</tr>
</tbody>
</table>
Table 3.7 continued

<table>
<thead>
<tr>
<th>Volunteer Workers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Few</td>
<td>1 to 5</td>
</tr>
<tr>
<td>Some</td>
<td>6 to 25</td>
</tr>
<tr>
<td>Many</td>
<td>Over 50</td>
</tr>
</tbody>
</table>

*Organization Founding Year*

The majority of organizations were founded prior to 2000 (71%), with 37 founded between 1975 and 2000, and 9 founded before 1975. Only 19 were founded 2001 or later. See Table 3.8.

Table 3.8. Founding Year for Sustainable Agriculture Organizations

<table>
<thead>
<tr>
<th>Organization Founding Year</th>
<th>Sample Statistic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
<td>Percentage of</td>
</tr>
<tr>
<td></td>
<td>respondents</td>
<td>sample</td>
</tr>
<tr>
<td>Before 1949</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>1950 – 1974</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>1975-1999</td>
<td>37</td>
<td>57%</td>
</tr>
<tr>
<td>2000 - 2016</td>
<td>19</td>
<td>29%</td>
</tr>
</tbody>
</table>

*Geographic Service Area*

The majority of respondents served a statewide area (48%) or regional area (40%). Few organizations reported serving a local area (8%) or international area (5%). See Table 3.9.
Table 3.9. Geographic Service Area for Sustainable Agriculture Organizations

<table>
<thead>
<tr>
<th>Geographic service area</th>
<th>Number of respondents</th>
<th>Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local area</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Statewide or regional within a state</td>
<td>31</td>
<td>48%</td>
</tr>
<tr>
<td>National or regional across states</td>
<td>26</td>
<td>40%</td>
</tr>
<tr>
<td>International</td>
<td>3</td>
<td>5%</td>
</tr>
</tbody>
</table>

*N = 65 respondents

1Percentage does not add to 100 due to rounding

_Funding Sources_

Most organizations reported deriving revenue from government (89%), individual donations (83%) and private foundations (80%). Fewer organizations reported deriving revenue from corporate entities (71%), and fees for products or services (68%). See Table 3.10.

Table 3.10. Funding Sources for Sustainable Agriculture Organizations

<table>
<thead>
<tr>
<th>Funding sources</th>
<th>Number of respondents</th>
<th>1Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government funding</td>
<td>49</td>
<td>89%</td>
</tr>
<tr>
<td>Fees for products or services</td>
<td>37</td>
<td>68%</td>
</tr>
<tr>
<td>Individual donations</td>
<td>50</td>
<td>83%</td>
</tr>
<tr>
<td>Private foundations</td>
<td>47</td>
<td>80%</td>
</tr>
<tr>
<td>Corporations</td>
<td>39</td>
<td>71%</td>
</tr>
</tbody>
</table>

*N = 60 respondents

1Percentage does not add to 100 since respondents were given option to check more than one funding source
**Organization Type**

By far, the majority of respondents were non-profit organizations (75%). Respondents were also government (8%), educational institutions (6%) and community based organizations (3%). Only one respondent was a private business. See Table 3.11.

**Table 3.11. Organization Type for Sustainable Agriculture Organizations**

<table>
<thead>
<tr>
<th>Organization type</th>
<th>Sample Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
</tr>
<tr>
<td></td>
<td>respondents</td>
</tr>
<tr>
<td>Educational institution</td>
<td>4</td>
</tr>
<tr>
<td>Community based organization</td>
<td>2</td>
</tr>
<tr>
<td>Non-profit or charity</td>
<td>49</td>
</tr>
<tr>
<td>Private business</td>
<td>1</td>
</tr>
<tr>
<td>Government</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

*N = 65 respondents*

**Audience**

Respondents varied in the audiences they sought to engage as an organization. The majority of organizations reported seeking to engage new or beginning farmers and ranchers (*n=52*) and organic farmers and gardeners (*n=52*). Many organizations also reported wanting to engage disadvantaged populations (e.g., older adults, lower-income, minority, refugees, ethnic groups, and minority religious groups) (*n=41*). Fewer organizations sought to engage students (*n=36*) and military veterans (*n=21*). Two
organizations reported that they seek to engage none of these populations. See Table 3.12.

Table 3.12. Audience of Sustainable Agriculture Organizations

<table>
<thead>
<tr>
<th>Audience</th>
<th>Number of respondents</th>
<th>(^1)Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disadvantaged populations</td>
<td>41</td>
<td>69%</td>
</tr>
<tr>
<td>Military Veterans</td>
<td>21</td>
<td>36%</td>
</tr>
<tr>
<td>New or Beginning Farmers and Ranchers</td>
<td>52</td>
<td>88%</td>
</tr>
<tr>
<td>Organic Farmers and Gardeners</td>
<td>52</td>
<td>88%</td>
</tr>
<tr>
<td>Students</td>
<td>36</td>
<td>61%</td>
</tr>
<tr>
<td>None of the above</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>

\(^1\)Percentage does not add to 100 since respondents were given option to check more than one audience

**Sustainable Agriculture Activities**

Respondent organizations reported participation in a variety of activities related to sustainable agriculture. All but four organizations indicated focusing on more than one sustainable agriculture activity. Most organizations reported participating in three activities. The majority of organizations participated in education (\(n=54\)). Many also participated in new or beginning farmer and rancher training (\(n=39\)), policy/advocacy (\(n=37\)) and organic farming (\(n=36\)). Fewer organizations reported participating in a demonstration farm (\(n=14\)), cooperative farming (\(n=13\)), permaculture (\(n=13\)) and biodynamic farming (\(n=9\)). See Table 3.13.
Table 3.13. Descriptive Statistics for Sustainable Agriculture Activities

<table>
<thead>
<tr>
<th>Sustainable Agriculture Activities</th>
<th>Sample Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
</tr>
<tr>
<td></td>
<td>respondents</td>
</tr>
<tr>
<td>Values-based supply chains</td>
<td>21</td>
</tr>
<tr>
<td>Cooperative farming</td>
<td>13</td>
</tr>
<tr>
<td>Farmers markets</td>
<td>26</td>
</tr>
<tr>
<td>Organic farming</td>
<td>36</td>
</tr>
<tr>
<td>Community gardens</td>
<td>16</td>
</tr>
<tr>
<td>Demonstration farm</td>
<td>14</td>
</tr>
<tr>
<td>New or beginning farmer and rancher training</td>
<td>39</td>
</tr>
<tr>
<td>Research</td>
<td>25</td>
</tr>
<tr>
<td>Organic certification</td>
<td>18</td>
</tr>
<tr>
<td>Community supported agriculture</td>
<td>23</td>
</tr>
<tr>
<td>Biodynamic farming</td>
<td>9</td>
</tr>
<tr>
<td>Heritage animal breeds and heirloom crop varieties</td>
<td>13</td>
</tr>
<tr>
<td>Policy / advocacy</td>
<td>37</td>
</tr>
<tr>
<td>Urban agriculture</td>
<td>22</td>
</tr>
<tr>
<td>Permaculture</td>
<td>13</td>
</tr>
<tr>
<td>Education</td>
<td>54</td>
</tr>
</tbody>
</table>

N = 63 respondents

1Percentage does not add to 100 since respondents were given option to check more than one activity

**Sustainable Agriculture Motivations**

Respondent organizations reported a variety of motivations for engaging in sustainable agriculture. The majority of organizations reported being primarily motivated by education (n=48), small and mid-size farm viability (n=48), development of local and regional food systems (n=47) and environmental conservation (n=46). Many also were motivated by farm and food policy (n=35), farmland preservation (n=36) and income/profitability (n=36). Less than half of organizations reported being motivated by public
health \(n=26\), social justice \(n=25\) and food sovereignty \(n=22\). Fewer organizations were motivated by job training \(n=16\) and faith \(n=3\). See Table 3.14.

Table 3.14. Descriptive Statistics for Sustainable Agriculture Motivations

<table>
<thead>
<tr>
<th>Sustainable Agriculture Motivations</th>
<th>Sample Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
</tr>
<tr>
<td></td>
<td>respondents</td>
</tr>
<tr>
<td>Social justice</td>
<td>25</td>
</tr>
<tr>
<td>Faith-based</td>
<td>3</td>
</tr>
<tr>
<td>Job training</td>
<td>16</td>
</tr>
<tr>
<td>Rural development</td>
<td>34</td>
</tr>
<tr>
<td>Farm and food policy</td>
<td>35</td>
</tr>
<tr>
<td>Community building</td>
<td>44</td>
</tr>
<tr>
<td>Small and mid-size farm viability</td>
<td>48</td>
</tr>
<tr>
<td>Income / profitability</td>
<td>36</td>
</tr>
<tr>
<td>Education</td>
<td>48</td>
</tr>
<tr>
<td>Food quality</td>
<td>34</td>
</tr>
<tr>
<td>Environmental conservation</td>
<td>46</td>
</tr>
<tr>
<td>Ecological restoration</td>
<td>28</td>
</tr>
<tr>
<td>Food sovereignty</td>
<td>22</td>
</tr>
<tr>
<td>Food security</td>
<td>37</td>
</tr>
<tr>
<td>Farmland preservation</td>
<td>36</td>
</tr>
<tr>
<td>Public health</td>
<td>26</td>
</tr>
<tr>
<td>Food justice</td>
<td>33</td>
</tr>
<tr>
<td>Development of local and regional food systems</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>1Percentage of</td>
</tr>
<tr>
<td></td>
<td>sample</td>
</tr>
<tr>
<td>Social justice</td>
<td>40%</td>
</tr>
<tr>
<td>Faith-based</td>
<td>5%</td>
</tr>
<tr>
<td>Job training</td>
<td>25%</td>
</tr>
<tr>
<td>Rural development</td>
<td>54%</td>
</tr>
<tr>
<td>Farm and food policy</td>
<td>56%</td>
</tr>
<tr>
<td>Community building</td>
<td>71%</td>
</tr>
<tr>
<td>Small and mid-size farm viability</td>
<td>76%</td>
</tr>
<tr>
<td>Income / profitability</td>
<td>57%</td>
</tr>
<tr>
<td>Education</td>
<td>76%</td>
</tr>
<tr>
<td>Food quality</td>
<td>54%</td>
</tr>
<tr>
<td>Environmental conservation</td>
<td>73%</td>
</tr>
<tr>
<td>Ecological restoration</td>
<td>44%</td>
</tr>
<tr>
<td>Food sovereignty</td>
<td>35%</td>
</tr>
<tr>
<td>Food security</td>
<td>59%</td>
</tr>
<tr>
<td>Farmland preservation</td>
<td>57%</td>
</tr>
<tr>
<td>Public health</td>
<td>41%</td>
</tr>
<tr>
<td>Food justice</td>
<td>52%</td>
</tr>
<tr>
<td>Development of local and regional food systems</td>
<td>75%</td>
</tr>
</tbody>
</table>

\(N = 63\) respondents

\(^1\)Percentage does not add to 100 since respondents were given option to check more than one motivation
Chapter 4

Results

This study examined the role of sustainable agriculture organizations in connecting host farmers with individuals seeking experience on sustainable farms. More specifically, the research questions were: 1) Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating? 2) Why do organizations choose to be involved in on-farm work experiences? What are their perceived values? 3) Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges? 4) Which organizational characteristics are associated with facilitation of on-farm work experiences?

Research Question 1

Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating? For the purpose of analysis, each of the responses were grouped into two analysis groups based on whether or not an organization reported currently facilitating on-farm work experiences. The analysis groups are: *current facilitators* and *not-current facilitators*. Current facilitators responded “yes”, they are currently involved in on-farm work experience programming. Not-current facilitators
responded “no”, they are not currently involved in on-farm work experience programming.

Of the 65 total respondents, 38 organizations reported currently facilitating on-farm work experiences (58%), while 27 reported they do not (42%). Of the organizations that do not currently facilitate, 10 reported wanting to facilitate in the future, 1 facilitated in the past and does not plan to again, 3 facilitated in the past and also want to facilitate in the future. Thirteen respondents have neither facilitated in the past, nor do they want to facilitate in the future. See Figure 4.1.

Table 4.1. Distribution of Respondents by Analysis Group

<table>
<thead>
<tr>
<th>Respondent groups</th>
<th>Sample Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of respondents</td>
</tr>
<tr>
<td>Current Facilitators</td>
<td>38</td>
</tr>
<tr>
<td>Not-Current Facilitators</td>
<td>27</td>
</tr>
</tbody>
</table>

N = 65 respondents
1Percentage does not add to 100 due to rounding

Those respondents who reported currently facilitating were then asked to indicate their specific on-farm work experience facilitation activities from the list of 10 items representing normative, structural, operational, and physical dimensions. Respondents reported utilizing aspects of the normative, structural, and operational dimensions of facilitation in on-farm work experience programming. Most current facilitators reported that their main facilitation activity consisted of coordinating educational workshops,
tours, social gatherings, or other related events for on-farm work experience participants
\((n=35)\). This is a structural dimension of facilitation. Many current facilitators also
reported publicizing available on-farm work experiences \((n=31)\); a normative dimension.
As a normative dimension, publicizing available on-farm work experiences captures the
organization’s expression of values and identifies whether the organization sees
participation as an organizational priority. Finally, most organizations reported
collaborating with other organizations to develop or implement on-farm work experience
programming \((n=28)\). While not included in Kudva & Driskell’s (2009) study,
collaboration with other organizations is an operational dimension of facilitation because
it reflects processes for decision making and shapes the effectiveness of a program as a
participatory practice.

About half of current facilitators \((n=20)\) attained funding to support on-farm work
experiences. The same number of respondents reported providing an orientation or other
hands-on training and support services to participants. Eighteen sustainable agriculture
organizations reported that they established a dedicated staff member position to manage
facilitation. These three facilitation activities fall under the structural dimension, within

 Fewer current facilitators reported conducting follow-up evaluations of on-farm
work experiences \((n=16)\), which are an operational dimension. Fewer also reported
arranging placement of apprentices, interns, or volunteers on host farms \((n=15)\), a
structural dimension. Respondents were least likely to issue guidelines or best practices
for on-farm work experiences \((n=14)\), a normative dimension of facilitation. Fourteen
sustainable agriculture organizations reported that they operate a farm utilizing on-farm apprentices, interns, or volunteers. Operation of a demonstration farm is a physical dimension because it refers to assigning an actual place where program participants can work either together or alone.

Table 4.2. Descriptive Statistics for Facilitation Items

<table>
<thead>
<tr>
<th>On-Farm Work Experience Facilitation Activities</th>
<th>Sample Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT FACILITATORS</td>
<td>Number of respondents</td>
</tr>
</tbody>
</table>

**Normative dimension**
- Publicize available on-farm work experiences: 31 (82%)
- Issue guidelines or best practices for on-farm work experiences: 14 (37%)

**Structural dimension**
- Attain funding to support on-farm work experiences: 20 (53%)
- Establish a dedicated staff member position to manage facilitation activities: 18 (47%)
- Coordinate educational workshops, tours, social gatherings, or other related events for participants: 35 (92%)
- Provide an orientation or other hands-on training and support serves to participants: 20 (53%)
- Arrange placement of apprentices, interns, or volunteers on farms: 15 (40%)

**Operational dimension**
- Collaborate or partner with other organizations to develop or implement on-farm work experience programming: 28 (74%)
- Conduct follow-up evaluations of on-farm work experiences: 16 (42%)

**Physical dimension**
- Operate a farm utilizing on-farm apprentices, interns, or volunteers: 14 (37%)

*N = 38 respondents*

1Percentage does not add to 100 since respondents were given option to check more than one activity.
Table 4.3 offers another view of current activities facilitating on-farm work experiences, organizing them by those practiced by most organizations, the items practiced by about half of organizations, and items practiced by fewer organizations. Structural dimension activities are well represented in current facilitation practices. Operational, normative, and physical dimension activities are represented less in current facilitation of on-farm work experiences.

Table 4.3. How Organizations Currently Facilitate On-Farm Work Experiences

<table>
<thead>
<tr>
<th>Facilitation Item</th>
<th>Dimension</th>
<th>Freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most Organizations</strong></td>
<td>Coordinate educational workshops, tours, social gatherings, or other related events for participants</td>
<td>Structural</td>
</tr>
<tr>
<td></td>
<td>Publicize available on-farm work experiences</td>
<td>Normative</td>
</tr>
<tr>
<td></td>
<td>Collaborate or partner with other organizations to develop or implement OFWE programming</td>
<td>Operational</td>
</tr>
<tr>
<td><strong>Approximately Half of Organizations</strong></td>
<td>Attain funding to support on-farm work experiences</td>
<td>Structural</td>
</tr>
<tr>
<td></td>
<td>Provide an orientation or other hands-on training and support services to participants</td>
<td>Structural</td>
</tr>
<tr>
<td></td>
<td>Establish a dedicated staff member position to manage facilitation</td>
<td>Structural</td>
</tr>
<tr>
<td><strong>Less than Half of Organizations</strong></td>
<td>Conduct follow-up evaluations of on-farm work experiences</td>
<td>Operational</td>
</tr>
<tr>
<td></td>
<td>Arrange placement of apprentices, interns, or volunteers on host farms</td>
<td>Structural</td>
</tr>
<tr>
<td></td>
<td>Issue guidelines or best practices for on-farm work experiences</td>
<td>Normative</td>
</tr>
<tr>
<td></td>
<td>Operate a farm utilizing on-farm apprentices, interns, or volunteers</td>
<td>Physical</td>
</tr>
</tbody>
</table>
Hypothesis 1

Findings supported the hypothesis that sustainable agriculture organizations will be found to facilitate on-farm work experiences. Of 65 total respondents, 38 reported currently facilitating on-farm work experiences (58%). Findings also supported the hypothesis that structural dimension activities will be prevalent in describing current facilitation. Three out of the top 5 most practiced organizational activities were structural.

Research Question 2

Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation? Respondents that currently facilitate perceive a variety of values to facilitating on-farm work experiences. They assigned the highest overall value to human capital items. Helping to lower barriers to entry for aspiring sustainable farmers ($M = 4.24$, $SD = 1.18$), training new or beginning farmers ($M = 4.21$, $SD = 1.34$), and connecting older farmers with potential successors for their farms ($M = 4.18$, $SD = 1.24$) had higher means than other items. Helping to strengthen interest in environmentally friendly farming methods through hands-on learning (a natural capital item) was amongst the highest rated items as well ($M = 4.18$, $SD = 1.42$). Helping to grow support for small and mid-sized farmers (a financial capital item) also had a high mean value ($M = 4.15$, $SD = 1.30$).

Helping to build community around sustainable agriculture was the highest rated social capital item ($M = 4.09$, $SD = 1.42$). As a group, cultural capital items were the
lowest rated overall, with all means below 4.0. Helping to support the farming tradition in the area was the highest rated cultural capital item ($M = 3.94$, $SD = 1.44$). Helping to encourage networking amongst supporters of the alternative agrifood movement was the highest rated political capital item ($M = 4.0$, $SD = 1.44$).

Average scores for all value items suggest that, on average, current facilitators perceived many values for on-farm work experience facilitation. While no value factor averaged below neutral agreement, helping to immerse citizen-eaters in the realities of agriculture ($M = 3.64$, $SD = 1.25$) and reducing or sharing risks associated with farming ($M = 3.62$, $SD = 1.26$) received lowest agreement scores reported by current facilitators. Overall high average value scores suggest high value perception of facilitation of on-farm work experiences among sustainable agriculture organizations currently facilitating. See Table 4.4.
Table 4.4. Descriptive Statistics for Perceived Values of Facilitation by Current Facilitators

<table>
<thead>
<tr>
<th>On-Farm Work Experience Values CURRENT FACILITATORS</th>
<th>Sample Statistic</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Range</td>
<td>N Reported</td>
</tr>
<tr>
<td><strong>Cultural Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immerse citizen-eaters in the realities of agriculture</td>
<td>3.64</td>
<td>1.25</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Support the farming tradition in the area</td>
<td>3.94</td>
<td>1.44</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Increase access to organically grown or raised farm products</td>
<td>3.74</td>
<td>1.38</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td><strong>Financial Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grow support for small and mid-sized farmers</td>
<td>4.15</td>
<td>1.30</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Create or save local jobs</td>
<td>3.88</td>
<td>1.34</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Reduce or share risks associated with farming</td>
<td>3.62</td>
<td>1.26</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td><strong>Human Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make up for a lack of availability of formal educational programs for sustainable farm operation</td>
<td>3.91</td>
<td>1.26</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td>Lower barriers to entry for aspiring sustainable farmers</td>
<td>4.24</td>
<td>1.18</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td>Connect older farmers with potential successors for their farms</td>
<td>4.18</td>
<td>1.24</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Make the knowledge of more experienced producers more accessible to producers who have less experience</td>
<td>4.09</td>
<td>1.38</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td>Train new or beginning farmers and ranchers</td>
<td>4.21</td>
<td>1.34</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td><strong>Natural Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strengthen interest in environmentally friendly farming methods through hands-on learning</td>
<td>4.18</td>
<td>1.42</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td><strong>Political Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop relationships with sustainable agriculture advocates</td>
<td>3.88</td>
<td>1.32</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Counteract the effects of industrialized agriculture</td>
<td>3.74</td>
<td>1.29</td>
<td>1, 5</td>
<td>34</td>
</tr>
<tr>
<td>Encourage networking amongst supporters of the alternative agrifood movement</td>
<td>4.00</td>
<td>1.44</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td><strong>Social Capital</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspire trust among farmers and eaters</td>
<td>3.76</td>
<td>1.44</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Help farmers participate in direct agricultural markets</td>
<td>3.79</td>
<td>1.22</td>
<td>1, 5</td>
<td>33</td>
</tr>
<tr>
<td>Build community around sustainable agriculture</td>
<td>4.09</td>
<td>1.42</td>
<td>1, 5</td>
<td>33</td>
</tr>
</tbody>
</table>

*N = 33 to 34; scale = 1 to 5, 1 = strongly disagree to 5 = strongly agree*
Hypothesis 2

The hypothesis that human capitals are prevalent in explaining why sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences was supported by the findings. Current facilitators reported strong agreement scores for valuing on-farm work experience facilitation as a mechanism for lowering barriers to entry for aspiring sustainable farmers, and as a tool to train new or beginning farmers. Connecting older farmers with potential successors for their farms was also on average a highly rated motivation for current facilitators, along with making the knowledge of more experienced producers more accessible to producers who have less experience. All of these are related to human capital.

Social and cultural capitals were not found to be as prevalent as human capital in explaining why sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences. Borrowed from Flora and Bregendahl’s (2012) study, social capital values for this study assigned to on-farm work experiences included building community around sustainable agriculture, helping farmers to participate in direct agricultural markets, and inspiring trust among farmers and eaters. Cultural capital values assigned to on-farm work experiences included supporting the farming tradition in the area, increasing access to organically grown and raised products, and immersing citizen-eaters in the realities of agriculture.

Natural and financial capitals also scored high as values of on-farm work experience facilitation. Current facilitators reported an average of somewhat agreement that facilitating on-farm work experiences strengthens interest in environmentally
friendly farming methods, helps to grow support for small and mid-sized farmers, and helps to create or save local jobs.

**Research Question 3**

Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation?

Respondents that do not currently facilitate perceive a several challenges to facilitating on-farm work experiences. They assigned the highest overall value to financial and built capital items. Among the most challenging items reported were administrative or budgetary issues ($M = 3.90$, $SD = .99$), uncertain availability of funding streams ($M = 3.76$, $SD = 1.18$), the need for housing, transportation, or childcare for on-farm work experience participants ($M = 3.43$, $SD = 1.08$), and the need for the means to incentivize on-farm work experiences (e.g. monetary or in-kind) ($M = 3.20$, $SD = 1.15$).

Notably, respondents reported disagreement with most challenge items. While all financial and built capital items reported means above 3.0, all other capital included items with means that fell below neutrality on the agreement scale.

Organizations not currently facilitating reported generally disagreeing with challenges related to cultural, human, political and social capital. The cultural, human, political and social capital items were the lowest rated overall, with all means below 3.0. “Conflicts with our organizational mission” was the highest rated cultural capital item ($M = 2.62$, $SD = 1.47$). “Unreliable availability of on-farm interns, apprentices, volunteers” was the highest rated human capital item ($M = 2.90$, $SD = 1.12$). “Lack of access to
information about applicable laws, best practices, or liability issues” was the highest rated item related to political capital \((M = 2.90, SD = 1.09)\). “Lack of interest from our constituents” was the highest rated social capital item \((M = 2.57, SD = 1.25)\).

Average scores for all value items suggest that, on average, not-current facilitators perceived several challenges to on-farm work experience facilitation. While most of the challenge items averaged below neutral agreement, “lack of local and diverse community participation” \((M = 2.40, SD = 1.12)\) and “lack of evidence that on-farm interns, apprentices, volunteers become farmers” \((M = 2.55, SD = 1.15)\) received the lowest agreement scores. Overall low average challenge scores suggest low challenge perception for facilitation of on-farm work experiences among sustainable agriculture organizations not currently facilitating. See Table 4.5.
Table 4.5. Descriptive Statistics for Perceived Challenges of Facilitation by Non-Current Facilitators

<table>
<thead>
<tr>
<th>On-Farm Work Experience Challenges NOT-CURRENT FACILITATORS</th>
<th>Sample Statistic</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Built and Financial Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative or budgetary issues</td>
<td>3.90</td>
<td>.99</td>
<td>1, 5</td>
<td>21</td>
</tr>
<tr>
<td>Uncertain availability of funding streams</td>
<td>3.76</td>
<td>1.18</td>
<td>1, 5</td>
<td>21</td>
</tr>
<tr>
<td>Need for the means to incentivize on-farm work experiences (e.g. monetary or in-kind)</td>
<td>3.20</td>
<td>1.15</td>
<td>1, 5</td>
<td>21</td>
</tr>
<tr>
<td>Need for housing, transportation, or childcare for on-farm work experience participants</td>
<td>3.43</td>
<td>1.08</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Cultural (Organizational) Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unreliable collaboration partners</td>
<td>2.60</td>
<td>1.19</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Conflicts with our organizational mission</td>
<td>2.62</td>
<td>1.47</td>
<td>1, 5</td>
<td>21</td>
</tr>
<tr>
<td>Human Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unreliable skillset of on-farm interns, apprentices, volunteers</td>
<td>2.70</td>
<td>1.22</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Unreliable availability of on-farm interns, apprentices, volunteers</td>
<td>2.90</td>
<td>1.12</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Political Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of evidence that on-farm interns, apprentices, volunteers become farmers</td>
<td>2.55</td>
<td>1.15</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Lack of access to information about applicable laws, best practices, or liability issues</td>
<td>2.90</td>
<td>1.09</td>
<td>1, 5</td>
<td>21</td>
</tr>
<tr>
<td>Social Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of local and diverse community participation</td>
<td>2.40</td>
<td>1.12</td>
<td>1, 5</td>
<td>20</td>
</tr>
<tr>
<td>Lack of interest from our constituents</td>
<td>2.57</td>
<td>1.25</td>
<td>1, 5</td>
<td>21</td>
</tr>
</tbody>
</table>

*N = 20 to 21; scale = 1 to 5, 1 = strongly disagree to 5 = strongly agree

**Hypothesis 3**

The hypothesis that financial capitals are prevalent in explaining why organizations choose not to be involved in on-farm work experiences was supported by the findings. Financial and built capitals were found to be the most prevalent aspects of the challenges to facilitating on-farm work experiences for sustainable agriculture.
organizations not-currently facilitating. Challenges are posed by uncertain availability of funding streams, need for the means to incentivize on-farm work experiences (e.g. monetary or in-kind), administrative or budgetary issues, and the need for housing, transportation, or childcare for on-farm work experience participants. Human capital was not found to be as prevalent in explaining why some organizations choose not to be involved in on-farm work experiences facilitation.

For not-current facilitators, social and cultural capitals received the lowest average agreement scores for challenges to facilitating on-farm work experiences. Respondents not currently facilitating generally disagreed that challenges are posed by a lack of interest from constituents and unreliable collaboration partners.

**Research Question 4**

Which organizational characteristics are associated with facilitation of on-farm work experiences? Pearson’s chi-square tests of association were used to determine which examined characteristics were associated with facilitation. To conduct this test, all respondents were grouped into “current facilitators” and “not-current facilitators.”

**Organization Founding Year**

*Organizational founding year* was divided into two groups: “founded before 2000” and “founded after 2000”. The chi-square test results indicated that the period in which an organization was founded was not statistically associated with an organization’s facilitation status; the results showed no relationship in being founded before 2000 and being founded after 2000 between organizations facilitating on-farm work experiences.
and organizations not facilitating. These results suggest that age of the organization is not associated with whether an organization facilitates on-farm work experiences, $X^2 (1, N = 65) = 1.36, p = .243$. See Table 4.6.

**Geographic Service Area**

*Geographic service area* was divided into two groups: “local or statewide” and “national or international”. The chi-square test results indicated that geographic service area was not statistically associated with an organization’s facilitation status; the results showed no statistically significant associations in serving a local or statewide area versus serving a national or international area between organizations facilitating on-farm work experiences and organizations not facilitating. These results suggest that geographic service area is not associated with facilitation, $X^2 (1, N = 65) = .98, p = .323$. See Table 4.6.

**Funding Sources**

*Funding sources* was divided into two groups: “government funding” and “no government funding”. The chi-square test results indicated that deriving revenue from government funding was statistically associated with an organization’s facilitation status; the results showed statistically significant associations in government funding between organizations facilitating and those not facilitating. There was a significant relationship between facilitation and government funding, $X^2 (1, N = 55) = 5.27, p = .022$. Receiving government funding was associated with facilitation. Among current facilitators, 97% derived revenue from government funding, compared to 77% of not-current facilitators. There was a medium effect size, which was .310. See Table 4.6.


**Organization Type**

The chi-square test of association was not performed on the organization type variable because 75% of respondents reported non-profit status.

**Audience**

*Audience* was divided into two groups: “new or beginning farmers” and “other audiences.” The chi-square test results indicated that seeking to engage new or beginning farmers and ranchers was not statistically associated with an organization’s facilitation status; the results showed no statistically significant associations in engagement between organizations facilitating on-farm work experiences and organizations not facilitating. These results suggested that engaging new or beginning farmers and ranchers was not associated with facilitation, $X^2 (1, N = 59) = 2.53, p = .111$.

The chi-square test was performed on *Audience* again after dividing it into these two groups: “organic farmers and gardeners” and “other audiences.” The chi-square test results indicated that seeking to engage organic farmers and gardeners was not statistically associated with an organization’s facilitation status; the results showed no statistically significant associations in engagement of organic farmers and gardeners between organizations facilitating on-farm work experiences and organizations not facilitating. These results suggested that engaging organic farmers and gardeners was not associated with whether an organization facilitates on-farm work experiences, $X^2 (1, N = 59) = .11, p = .746$. The results of the Pearson’s chi-square test of association can be seen in Table 4.6.
As noted in the section on descriptive characteristics of respondents in chapter 3, many organizations reported wanting to engage disadvantaged populations (e.g., older adults, lower-income, minority, refugees, ethnic groups, and minority religious groups) \((n=41)\). The chi-square test was performed on *Audience* again after dividing it into these two groups: “disadvantaged population” and “other audiences”. The chi-square test results indicated that seeking to engage organic disadvantaged populations was statistically associated with an organization’s facilitation status; the results showed statistically significant associations in engagement of disadvantaged populations between organizations facilitating on-farm work experiences and organizations not facilitating. These results suggested that engaging disadvantaged populations was associated with whether an organization facilitates on-farm work experiences, \(X^2 (1, N = 59) = 9.56, p = .002\). The results of the Pearson’s chi-square test of association can be seen in Table 4.6.
Table 4.6. Results of Chi-Square Test and Descriptive Statistics for Organization Characteristics by Facilitation

<table>
<thead>
<tr>
<th>Organization Characteristic</th>
<th>Facilitation Status</th>
<th>( \chi^2 )</th>
<th>Fisher’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founded before 2000 Founded after 2000</td>
<td>Current Facilitators: 29 (76%) 9 (24%) Not-Current Facilitators: 17 (63%) 10 (37%)</td>
<td>1.36</td>
<td>.278</td>
</tr>
<tr>
<td>Statewide or smaller service area National or larger service area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government funding source No government funding sourced</td>
<td>32 (97%) 1 (3%)</td>
<td>5 (23%) 17 (77%)</td>
<td>5.27*</td>
</tr>
<tr>
<td>Beginning farmer audience No beginning farmer audience</td>
<td>16 (43%) 21 (57%)</td>
<td>5 (23%) 17 (77%)</td>
<td>2.53</td>
</tr>
<tr>
<td>Organic farmer audience No organic farmer audience</td>
<td>33 (89%) 4 (11%)</td>
<td>19 (86%) 3 (14%)</td>
<td>.11</td>
</tr>
<tr>
<td>Engage disadvantaged populations Do not engage disadvantaged populations</td>
<td>31 (53%) 6 (10%)</td>
<td>10 (17%) 12 (20%)</td>
<td>9.56*</td>
</tr>
</tbody>
</table>

*Note: numbers in parentheses indicated column percentages.

* \( p < .05 \)

The Fisher’s exact test was an additional test that was run due to small sample sizes, and the results were similar to \( p \)-values reported for each variable.

**Sustainable Agriculture Activities and Motivations**

Is there a difference in levels of sustainable agriculture activities practiced by organizations that facilitate on-farm work experiences and those that do not? Is there a difference in levels of sustainable agriculture motivations based on facilitation?

Respondents of this survey answered these two questions, based on the survey of urban
agriculture organizations by McClintock and Simpson (2014) (see Chapter 2). An independent samples t-test was performed to test the hypothesis that differences would be found between facilitators and not-facilitators. Sustainable agriculture activity items were either yes or no and summed for a total score ranging from 0 to 18. Sustainable agriculture motivation items were either yes or no and summed for a total score ranging from 0 to 16.

Results of the independent samples t-test showed that mean sustainable agriculture motivation levels differed between current facilitators ($M = 9.92, SD = 4.76, n = 38$) and not-current facilitators ($M = 8.84, SD = 3.92, n = 25$) at the .058 level of significance ($t = -.944, df = 61, p \geq .05$, 95% CI for mean differences -3.37 to 1.21). There was not a significant difference in the reported sustainable agriculture motivation levels for those respondents currently facilitating on-farm work experiences and those respondents not currently facilitating on-farm work experiences, $t(61) = -.94, p = .349$.

Results of the independent samples t-test showed that mean sustainable agriculture activity levels differ between current facilitators ($M = 7.13, SD = 3.85, n = 38$) and not-current facilitators ($M = 4.32, SD = 3.36, n = 25$) at the .05 level of significance ($t = -2.98, df = 61, p \leq .05$, 95% CI for mean differences -4.70 to -.92). Organizations currently facilitating tend to have a higher sustainable agriculture activity level than organizations not currently facilitating. Cohen’s $d$ was calculated to determine that the effect size was large (0.8). A graphical representation of the means and the 95% confidence intervals is displayed in Table 4.7.
Table 4.7. Results of T-Tests and Descriptive Statistics Sustainable Agriculture Activity and Motivation Levels by Facilitation

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Group</th>
<th>95% CI for Mean Difference</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Not-Current</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilitators</td>
<td>Facilitators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable Agriculture</td>
<td>9.92, 4.75, 38</td>
<td>8.84, 3.92, 25</td>
<td>-3.37, 1.21</td>
<td>-.94</td>
</tr>
<tr>
<td>Motivations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable Agriculture</td>
<td>7.13, 3.85, 38</td>
<td>4.32, 3.36, 25</td>
<td>-4.70, -.92</td>
<td>-2.98*</td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

While levels of sustainable agriculture motivation were not found to be significantly different for current facilitators and not-current facilitators of on-farm work experiences, there was a significant difference in the reported sustainable agriculture activity levels for those respondents currently facilitating on-farm work experiences and those respondents not currently facilitating on-farm work experiences. This means that organizations facilitating on-farm work experiences are, on average, practicing sustainable agriculture in more ways than those organizations that do not facilitate on-farm work experiences.

**Hypothesis 4**

Sourcing funding from the government and seeking to engage disadvantaged populations were found to be associated with facilitation of on-farm work experiences. While there was not a significant difference in levels of sustainable agriculture
motivations based on facilitation, there was a difference in levels of sustainable agriculture activities based on facilitation. Organization founding year and geographic service area were not significantly associated with on-farm work experience facilitation.

Summary

This study examined the role of sustainable agriculture organizations in connecting host farmers with individuals seeking experience on sustainable farms. Results indicate that 58% of sustainable agriculture organizations facilitate on-farm work experiences. The three most prevalent facilitation practices include coordinating educational workshops, tours, social gatherings, or other related events for on-farm work experience participants, publicizing available on-farm work experiences and collaborating with other organizations to develop or implement on-farm work experience programming.

Some organizations chose to be involved in on-farm work experiences because they felt it helps to lower barriers to entry for aspiring sustainable farmers, trains new or beginning farmers, connects older farmers with potential successors for their farm, and helps to strengthen interest in environmentally friendly farming methods through hands-on learning. The highest rated perceived values were related to human capital.

Some organizations chose not to be involved in on-farm work experiences because of administrative or budgetary issues, uncertain availability of funding streams, the need for housing, transportation, or childcare for on-farm work experience participants, and the need for the means to incentivize on-farm work experiences (e.g. 92
monetary or in-kind). The highest rated perceived challenges were related to financial and built capitals.

Organization founding year and geographic service area were organization characteristics not found to be associated with facilitation of on-farm work experiences. Sourcing funding from the government and seeking to engage disadvantaged populations were found to be associated with facilitation of on-farm work experiences. While there was not a significant difference in levels of sustainable agriculture motivations based on facilitation, there was a difference in levels of sustainable agriculture activities based on facilitation. See Table 4.8.

Table 4.8. Summary of Research Questions and Hypotheses

<table>
<thead>
<tr>
<th>Supported or Not Supported</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported</td>
<td>H1. Sustainable agriculture organizations facilitate on-farm work experiences. Structural dimension activities are prevalent in describing current facilitation practices.</td>
</tr>
<tr>
<td>Supported</td>
<td>H2. Human capitals are prevalent in explaining why sustainable agriculture organizations choose to be involved in facilitating on-farm work experiences.</td>
</tr>
<tr>
<td>Supported</td>
<td>H3. Financial capitals are prevalent in explaining why organizations choose not to be involved in on-farm work experiences.</td>
</tr>
<tr>
<td>Partially Supported</td>
<td>H4. The organization age, geographic scope, funding sources, organization type and audience are associated with facilitation of on-farm work experiences.</td>
</tr>
</tbody>
</table>
Chapter 5
Conclusion and Future Directions

The purpose of this study was to investigate the role of sustainable agriculture organizations in on-farm work experiences across the United States. Specifically, this thesis focused on the extent to which sustainable agriculture organizations facilitate on-farm work experiences, characteristics of organizations that are associated with facilitation, motivations for facilitation, and barriers to facilitation. Because new and beginning farmers have been on the decline, this study has implications for beginning farmer programming. The theoretical frameworks used in this research are organizational practice as described by Kudva & Driskell (2009) and Community Capitals Framework (Emery & Flora, 2006) as it relates to motivations and barriers to organizational programming (Flora & Bregendahl, 2012; Meenar, 2015). This thesis sought to address its purpose with these research questions: 1) Do sustainable agriculture organizations facilitate on-farm work experiences? If so, how are they facilitating? 2) Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation? 3) Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation? 4) Which
organizational characteristics are associated with facilitation of on-farm work experiences?

The findings, limitations to the research, implications, and future research on the topic of sustainable agriculture organizations and on-farm work experiences are discussed in this chapter.

**Discussion of Results**

The United States is experiencing a decline in farmers. Recent reports suggest that experienced farmers are leaving the profession at an increasing rate while the numbers for new farmers entering the profession are declining (Niewolny & Lillard, 2010). Farmers are also getting older. Between 1982 and 2012, the average age of farmers rose from 50.5 to 58.3 (MacAuley & Niewolny, 2016; USDA NASS, 2014). This information has led to questions amongst researchers, policymakers, and practitioners as to who will grow our food in the future, where the next generation of farmers will come from, and how the viability of new farming operations can be supported. Academic, governmental, and social responses are growing in reaction to these problems.

While sustainable agriculture is a topic of popular debate today, comparatively little research has focused on understanding the growing population of organizations working toward sustainable agriculture. To the researcher’s knowledge, this study is the first attempt to collect descriptive data from self-reporting sustainable agriculture organizations on a national scale in the United States. It was grounded in past research
supporting that sustainable agriculture organizations are associated with on-farm work experiences, as well as studies that place on-farm apprenticeships and internships within the beginning farmer experience. To address the research questions a survey was designed for self-reported sustainable agriculture organizations across the U.S., which received 65 responses.

Do sustainable agriculture organizations facilitate on-farm work experiences? Of the 65 total respondents, 58% reported currently facilitating on-farm work experiences.

How are they facilitating? The three most prevalent facilitation practices included coordinating educational workshops, tours, social gatherings, or other related events for on-farm work experience participants, publicizing available on-farm work experiences and collaborating with other organizations to develop or implement on-farm work experience programming. About half of current facilitators have also attained funding to support on-farm work experiences, provided an orientation or other hands-on training and support services to participants and established a dedicated staff member position to manage facilitation.

Four out of the six most prevalent facilitation activities practiced by respondents were related to the structural dimension within Kudva & Driskell’s (2009) facilitation framework. This adds to our understanding of the activities organizations are practicing to facilitate on-farm work experiences. Participation in on-farm work experiences does not just happen – someone must facilitate it, and someone must pay for it (Kudva & Driskell, 2009:372). The development of normative practice by which values are expressed is dependent upon the development of structures such as programs, staffing,
and budget priorities. The prevalence of structural practices among facilitating organizations supports the idea that sustainable agriculture organizations are taking a role in on-farm work experiences.

Four activities were practiced less by facilitators. Fewer current facilitators reported issuing guidelines or best practices for on-farm work experiences. Related to the normative dimension of organizational practice, making guidelines or best practices publicly available expresses the organization’s values and articulates the goals of on-farm work experience programming. As found in the review of literature, guidelines offer one way of formalizing an on-farm work experience that could positively impact inclusivity and contribute toward social justice. For example, contracts have been proposed for farm interns to sign, delineating working conditions, methods of evaluating work, disciplinary procedures, stipend, housing, and the host farmer’s expectations for working hours (Wood, 2013; Henderson et al., 2008). These contracts could be made available through sustainable agriculture organizations facilitating on-farm work experiences.

Additional findings suggested that organizations facilitating on-farm work experiences seek to engage disadvantaged populations more than organizations not facilitating on-farm work experiences, but fewer current facilitators reported conducting follow-up evaluations of on-farm work experiences. Operational practices such as requesting feedback and conducting evaluations are critical to measuring the effectiveness of on-farm work experience programming as a participatory practice. In turn, they inform organizational decision making and enable program adaptation in response to whether goals and objectives are being met. Given that a main criticism of
on-farm work experiences is the lack of inclusivity, attention should be paid to organizational practices such as these, which can encourage more inclusive programming. Practices that fall under the operational dimension involve processes for decision making, and the more these processes ensure that all voices are considered, the better they can encourage participation from diverse audiences in on-farm work experience programs. If the process does not ensure consideration of all voices, the organizational practices are not effective in encouraging the broad participation they reportedly seek.

These results showed evidence that sustainable agriculture organizations facilitating on-farm work experiences are encouraging participation in their efforts to connect host farmers and adults wanting to experience farming. Ideal practice to encourage participation can be developed in many ways, with some dimensions being represented more strongly than others (Kudva & Driskell, 2009). The framework developed by Kudva & Driskell (2009) lends support for the role of organizational practice as crucial in facilitating and structuring program participation. It also provides a useful tool for the analysis of the ways sustainable agriculture organizations may structure an on-farm work experience program and facilitate participation in on-farm work experiences. Participation can be encouraged or constrained by organizational practices, and the five key dimensions of practice are interrelated.

Why do organizations choose to be involved in on-farm work experiences? What are their perceived values of facilitation? Some organizations choose to be involved in on-farm work experiences because they feel it helps to lower barriers to entry for aspiring
sustainable farmers, trains new or beginning farmers, connects older farmers with potential successors for their farm, and helps to strengthen interest in environmentally friendly farming methods through hands-on learning. The highest rated perceived values were related to human, natural, financial and social capitals. Helping to build community around sustainable agriculture was the highest rated social capital item. Growing support for small and mid-sized farmers was the highest rated financial capital item. Values attached to facilitation align well with frameworks describing weaver organizations building relationships within alternative agrifood movements.

Studies thus far suggest that organizations facilitating on-farm work experiences are helping to build relationships between adults from predominately non-rural areas with little to no farming experience to experienced farmers in predominately rural areas (Pilgeram, 2011; Wood, 2013; MacAuley, 2014).

Findings suggest that facilitators perceive high human, natural, social, and financial capitals in on-farm work experience programming. They also offer context for organizational practices that build connections and relationships to grow sustainable agriculture. By encouraging connections between actors in alternative agrifood movements with different knowledges and from different backgrounds, facilitating organizations appear to be expanding the audiences participating in food system issues.

Though findings from this study suggest that current facilitators of on-farm work experiences are creating linkages between farmers and people seeking to experience farming, there is little evidence to suggest that they are creating linkages with actors that can influence changes in policy. Whereas the current connections being made may
broaden the reach and impact of on-farm work experience programs, building relationships with state and/or national government can address underlying structural causes of inequality.

As mentioned in the review of literature, Bregendahl and Flora (2012) found that political motivations were missing from the reasoning for both producers and consumers to participate in Community Supported Agriculture. This study found that political motivations were lower in comparison with other community capitals measures. While “encouraging networking amongst supporters of the alternative agrifood movement” was among the top ten highest rated values, developing relationships with sustainable agriculture advocates was not. If on-farm work experience facilitators, in their efforts to facilitate new sustainable farmers, are to respond to the problems of inequality and reproduction of the structures of conventional agriculture, connecting to higher institutional levels will be necessary.

Why do organizations choose not to be involved in on-farm work experiences? What are their perceived challenges of facilitation? Low financial and built capitals were found to be the most prevalent challenges to facilitating on-farm work experiences for sustainable agriculture organizations currently and not-currently facilitating. Specifically, some organizations may choose not to be involved in on-farm work experiences because of administrative or budgetary issues, uncertain availability of funding streams, the need for housing, transportation, or childcare for on-farm work experience participants, and the need for the means to incentivize on-farm work experiences (e.g. monetary or in-kind). The highest rated perceived challenges were
related to financial and built capitals. These results support previous studies that found the lack of incentivization of on-farm apprenticeships and internships, as well as the lack of housing, transportation, and childcare to be significant challenges to the ability of on-farm work experiences to contribute toward growing a new generation of sustainable farmers. On-farm work experiences are beneficial to host farmers as low-cost labor on small and midsize diversified, labor-intensive farms, (Ekers & Levkoe, 2016; MacAuley & Niewolny, 2016). Thus, demanding host farmers pay a fair wage for on-farm apprentices and interns would likely be a partial, and therefore unsustainable, solution to the problem. More comprehensive solutions to these prevalent challenges should be considered.

Which organizational characteristics are associated with facilitation of on-farm work experiences? Organization founding year, geographic service area and audience were organization characteristics not found to be associated with facilitation of on-farm work experiences.

Given the growth of on-farm work experiences since the early 1990’s, results were expected to support an association between newer sustainable agriculture organizations and facilitation. However, an association was not found.

Findings supporting an association between local and statewide organizations and facilitation were also expected but not found. These findings were expected because the literature has placed on-farm work experiences in the alternative agrifood movement, which emphasizes direct markets, and the results of previous studies found that host farmers participate in direct markets (MacAuley, 2014; Wood, 2013).
Given that the literature placed on-farm work experiences in the beginning farmer phenomenon, findings that the new and beginning farmer audience are not associated with facilitation were not expected.

Sourcing government funding was found to be associated with facilitation. This finding was expected, given that the USDA’s Beginning Farmer and Rancher Development Program provides funding for projects that include on-farm apprenticeships and internships. This finding also adds to studies suggesting the importance of government support in the development of new and beginning farmer programming, of which on-farm work experience programming has been used as an example (MacAuley & Niewolny, 2016).

Additional findings suggested that there was a difference in levels of sustainable agriculture activities for organizations currently facilitating on-farm work experiences and organizations not currently facilitating them. On average, organizations that facilitated were found to participate in more activities related to sustainable agriculture. This finding adds support to the literature that situates on-farm work experiences as a sustainable agriculture practice.

**Limitations of the Study**

The small response size of the survey (N=65) means that this study represents only the participants of the study and may not represent all sustainable agriculture organizations. This is largely a descriptive study, partly due to the small sample size. In addition, to the best knowledge of the primary researcher, the entire population of
sustainable agriculture organizations is unknown. The small sample also limited analyses that could be conducted with the data.

This study may involve selection bias. Given, for example, that the National Sustainable Agriculture Assistance Program, National Center for Appropriate Technology (ATTRA NCAT) website also maintains a list of sustainable agriculture apprenticeships and internships offered around the country, those organizations willing to self-report as sustainable agriculture organizations on the ATTRA NCAT website may hold a more positive opinion of on-farm apprenticeship. Organizations that facilitate on-farm work experiences may have also been more willing to complete the survey than those who do not facilitate.

The two frames chosen for this study were based on work done in the field of community development. While the Community Capitals Framework was helpful in identifying perceived values and challenges associated with facilitating on-farm work experiences, the choice of which capitals were represented by which survey items was in large part subjective. Similarly, application of the dimensions of participation framework to survey items was also subjective. In addition, not every capital and dimension was able to be measured using the survey instrument. These posed challenges in the development and interpretation of the research results. These challenges can be avoided in future studies on sustainable agriculture organizations using other frames and / or methodologies found in the fields of agriculture and food studies.

While studies thus far have applied mixed methods, this study focused on quantitative measures in an attempt to capture characteristics of sustainable agriculture
organizations and facilitation practices. Additional research will indicate whether these measures were appropriate and/or are in need of further development.

**Implications for the Study of Sustainable Agriculture**

This research was meant to contribute to the study of sustainable agriculture. On average, organizations currently facilitating on-farm work experiences tend to participate in more sustainable agriculture activities than organizations not currently facilitating. This result supports previous studies that situate on-farm work experiences in sustainable agriculture. Academics who have challenged the sustainability of current sustainable agriculture practices have pointed out that depending on unwaged workers on sustainable farms is not a sustainable practice (Ekers & Levkoe, 2016; MacAuley & Niewolny, 2016; Pilgeram, 2011). On-farm work experiences, being related to the apprenticeship model, can entail complex, often unstructured relationships. While on-farm work experiences are perceived to hold a variety of values by facilitating organizations, they also pose challenges to the movement for sustainable agriculture. These challenges should be confronted if our understanding of sustainable agriculture is to move forward.

Sustainable agriculture is situated within the alternative agrifood movement, and studies have found that on-farm work experiences lack the inclusivity necessary to create transformative change in the agrifood system (MacAuley, 2014). Others note the lack of inclusivity as a primary criticism, keeping the alternative agrifood movement from being a true alternative (Allen, 2004; Guthman, 2008; Hinrichs & Eschleman, 2014; Slocum, 2007). Facilitators in this study were more likely to receive government funding than
were non-facilitators. As relationship builders, sustainable agriculture organizations facilitating on-farm work experiences may also have the capacity to build relationships with higher levels of institutions, such as government, to develop more inclusive facilitation practices. However, further studies are needed to understand whether these kinds of relationships are of the purview of sustainable agriculture organizations that facilitate on-farm work experiences.

**Implications for Future Research**

First, a qualitative study would contribute depth of understanding to these results. Interviewing directors of sustainable agriculture organizations currently facilitating on-farm work experiences, as well as coordinators of on-farm work experience programs is recommended. By interviewing members of organizations facilitating on-farm work experiences, researchers can draw a more detailed picture of the organizational goals and purposes informing this kind of organizational practice.

One study has thus far been conducted on the people who participated in on-farm work experiences (Wood, 2013) and one study has focused on the host farmers (MacAuley, 2014). Samples for both studies were limited to a few states in the eastern region of the United States. Studies taking samples from other regions of the country, or even a national sample, would be helpful in furthering an understanding of on-farm work experiences.

Second, more research is needed to understand sustainable agriculture organizations as a population. The size of this population has not yet been systematically
quantified. Findings from this study suggest that self-reporting sustainable agriculture organizations vary in size, scope, staff, and leadership. Further examination of organizational practices, leadership, missions, and programming of this population is recommended. Given that many of the organizational characteristics examined in this study were not found to be significantly associated with whether or not an organization facilitates on-farm work experiences, other organizational characteristics should be considered.

Third, measures used to examine values and challenges were based on previous research on alternative agrifood programs and can be repeated in future research to offer context to organizational as well as individual practices. Additional research would indicate whether these measures were appropriate in examining perceived values and challenges related to community capitals.

Implications for Practice

Training and support programs for beginning farmers have recently begun to receive more attention, and beginning farmers are increasingly being considered as their own population with a unique set of needs (MacAuley & Niewolny, 2016). Given that on-farm work experiences are situated within the beginning farmer experience, facilitating organizations should also consider the implications of their organizational practice on developing the next generation of sustainable farmers.

While this study found that sustainable agriculture organizations are facilitating on-farm work experiences, how they choose their facilitation activities remains unclear.
Reported financial challenges to facilitating on-farm work experience may prevent organizations from implementing important facilitation activities. The practice of program facilitation by organizations can encourage or discourage participation, and making best practices available is one way to communicate the importance of encouraging a wide range of participants to access on-farm work experiences.

Forming a network of organizations facilitating on-farm work experiences would enable information exchange and relationship building across current facilitators. For example, organizational practices and tools can be shared, such as guidelines for program structure, evaluation tools, and facilitation models. A network of organizations may also build capacity to develop relationships with higher level institutions, necessary to work toward more inclusive and socially just models of on-farm work experience programming. Extension and government entities should provide support for organizations to help overcome prevalent challenges to facilitation. Increased availability of funding for on-farm work experiences may incentivize increased organizational involvement in less represented regions such as the southeast and southwest regions.

**Conclusion**

This study sought to explore the role of sustainable agriculture organizations in connecting host farmers with adults seeking experience working on farms as apprentices, interns, or volunteers. Evidence was found to suggest that some sustainable agriculture organizations facilitate on-farm work experiences. Current facilitators perceived values in their facilitation activities that align with goals of alternative agrifood movements. By
publicizing on-farm work experiences, collaborating with other organizations to develop programming, and coordinating educational workshops, tours, social gatherings, current facilitators are encouraging participation of actors across the alternative agrifood movement to interact and build relationships.

Organizations facilitating on-farm work experiences may be in a unique position to address criticisms of on-farm work experiences pertaining to social justice and social reproduction. The findings of this study support other studies that name incentivizing on-farm work experiences and providing housing, transportation, and childcare as challenges to the ability of on-farm work experience programs to contribute toward growing a diverse new generation of sustainable farmers.

This thesis was a response to the call for greater attention to non-waged farm work (including on-farm apprenticeships, internships, and volunteer positions) in the beginning farmer experience across the fields of sociology of agriculture and food systems, community development, and geography. Unpacking questions as to how sustainable agriculture organizations are involved in connecting adults who want to experience farming with host farmers is an important step to inform the development of effective policies and programs. It also offers an opportunity for the academic community to contribute to this topic of popular interest. Results of this survey have implications for organizations wishing to support and sustain a new generation of farmers. It is also important to inform on-farm work experience practice, while allowing for future policy considerations. Extension educators and practitioners in sustainable agriculture organizations may use it to inform collaborative efforts in the development of
new farmer training programs. Policymakers and food policy council members seeking to develop effective food system and beginning farmer policies may also find this study useful.
References


National Institute of Food and Agriculture, USDA (no date) Beginning Farmer and Rancher Development Program (BFRDP). Retrieved from


Appendix A: Survey Instrument
Welcome to the On-farm Work Experience Facilitation Survey.

Thank you very much for your time and attention to this survey about the facilitation of on-farm work experiences across the United States. This is an academic research project that explores the role of sustainable agriculture organizations in on-farm work experiences.

Your answers are vital to determine what types of organizations facilitate connections between farmers and people seeking on-farm work experiences, and how organizations choose to support these connections. In the long run, your answers can help inform how organizations might best serve and support these kinds of programs to advance sustainable agriculture.

This survey should be filled out by the primary director or leader of your organization. Please read the questions carefully and answer as best as you are able. The survey should take you approximately 10 - 20 minutes to complete. Your participation in the survey is voluntary and you may decline to participate, skip questions that you do not wish to answer or exit the survey at any time. The risks associated with this survey are minimal and no greater than everyday life. Your responses will remain confidential. This survey is provided to you through a secure online survey tool to minimize risks associated with sharing information online. However, because we are using the Internet, there is a chance that someone could access your online responses without permission and may use this information to identify you. If you have any questions or concerns over the confidentiality of this survey or feel you were harmed in any way as a result, please contact the Principal Investigator Dr. Kristi Lekies (lekies.1@osu.edu; 614-688-3537).

In this survey, you will be asked basic questions about your organization and whether and/or how your organization facilitates on-farm work experiences. For the purposes of this survey, on-farm work experience may refer to an apprenticeship, internship, or on-farm volunteer position held for a specified length of time by persons 18 years of age or older, and can be paid or unpaid.

The survey data will be used for research, and this survey has been determined exempt from IRB review. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you have any questions about the study or would like a copy of the study results when they are available, please contact Stacy Haught (haught.20@osu.edu; 937-239-1224).

Thank you for your time in completing this survey.
Part 1

This part asks some basic questions about your organization. It will take about 3 minutes.

Which description best fits your organization?

- College, University, or Cooperative Extension (1)
- Community Based Organization (2)
- Government (3)
- Non-profit or Charity (4)
- Private Business (5)
- Public Private Partnership (6)
- Other: (7) ____________________

What is the network affiliation of your organization?

- National or parent office of a network, federated, or affiliated group (1)
- Local or regional chapter or branch (2)
- Not part of a formal network or system (3)
Please select the state in which your organization is located.

- Alabama (1)
- Alaska (2)
- Arizona (3)
- Arkansas (4)
- California (5)
- Colorado (6)
- Connecticut (7)
- Delaware (8)
- District of Columbia (9)
- Florida (10)
- Georgia (11)
- Hawaii (12)
- Idaho (13)
- Illinois (14)
- Indiana (15)
- Iowa (16)
- Kansas (17)
- Kentucky (18)
- Louisiana (19)
- Maine (20)
- Maryland (21)
- Massachusetts (22)
- Michigan (23)
- Minnesota (24)
- Mississippi (25)
- Missouri (26)
- Montana (27)
- Nebraska (28)
- Nevada (29)
- New Hampshire (30)
- New Jersey (31)
- New Mexico (32)
- New York (33)
- North Carolina (34)
- North Dakota (35)
- Ohio (36)
- Oklahoma (37)
- Oregon (38)
- Pennsylvania (39)
- Rhode Island (40)
- South Carolina (41)
- South Dakota (42)
- Tennessee (43)
- Texas (44)
- Utah (45)
- Vermont (46)
- Virginia (47)
- Washington (48)
- West Virginia (49)
- Wisconsin (50)
- Wyoming (51)

Which category best describes the geographic service area of your organization?

- Local area (includes City, Municipality, Town, or Village) (1)
- Statewide or regional within a state (2)
- National or regional across multiple states (3)
- International (4)

In what year was your organization founded?

- Before 1949 (1)
- 1950-1974 (2)
- 1975-1999 (3)
- 2000-2016 (4)
What is the annual operating budget of your organization?

- Less than $50,000 (1)
- $50,000 to $100,000 (2)
- $100,000 to $500,000 (3)
- $500,000 to $1 million (4)
- More than $1 million (5)

Does your organization have an advisory board, steering committee, or similar governing body?

- Yes (1)
- No (0)

Does your organization offer membership for a fee?

- Yes (1)
- No (0)

Part 2

We would like to know how involved your organization is with on-farm work experiences. This part will take about 3 minutes.

On-farm work experience may refer to an apprenticeship, internship, or on-farm volunteer position held for a specified length of time by persons 18 years of age or older, and can be paid or unpaid.

Organizations may facilitate on-farm work experiences by engaging in activities that help to connect farmers and persons seeking on-farm apprenticeships, internships, or volunteer positions.
Does your organization currently offer any services or programs to facilitate on-farm work experiences?

☐ Yes (1)
☐ No (0)

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected

Does your organization refer inquiries about on-farm work experiences to an other organization?

☐ Yes (1)
☐ No (0)

Display This Question:
If Does your organization refer inquiries about on-farm work experiences to an other organization? Yes Is Selected
To which organization/s do you most often refer inquiries about on-farm work experience? Please enter organization names in the blanks below.

☐ 1. (1) ________________
☐ 2 (2) ________________
☐ 3 (3) ________________

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected

Did your organization offer any services or programs to facilitate on-farm work experiences in the past?

☐ Yes (1)
☐ No (0)
Display This Question:
If Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
How did your organization facilitate on-farm work experiences? (Choose all that apply.)

☐ Publicized available on-farm work experiences (1)
☐ Issued guidelines or best practices for on-farm work experiences (2)
☐ Attained funding to support on-farm work experiences (3)
☐ Collaborated or partnered with other organizations to develop or implement on-farm work experience programming (4)
☐ Coordinated educational workshops, tours, social gatherings, or other related events for participants (5)
☐ Provided an orientation or other hands-on training and support services to participants (6)
☐ Established a dedicated staff member position to manage facilitation activities (7)
☐ Arranged placement of apprentices, interns, or volunteers on farms (8)
☐ Conducted follow-up evaluations of on-farm work experiences (9)
☐ Operated a farm utilizing on-farm apprentices, interns, or volunteers (10)

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future?
☐ Yes (1)
☐ No (0)
Display This Question:
If Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? Yes Is Selected
How does your organization want to facilitate on-farm work experiences? (Choose all that apply.)
- Publicize available on-farm work experiences (1)
- Issue guidelines or best practices for on-farm work experiences (2)
- Attain funding to support on-farm work experiences (3)
- Collaborate or partner with other organizations to develop or implement on-farm work experience programming (4)
- Coordinate educational workshops, tours, social gatherings, or other related events for participants (5)
- Provide an orientation or other hands-on training and support services to participants (6)
- Establish a dedicated staff member position to manage facilitation activities (7)
- Arrange placement of apprentices, interns, or volunteers on farms (8)
- Conduct follow-up evaluations of on-farm work experiences (9)
- Operate a farm utilizing on-farm apprentices, interns, or volunteers (10)

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected
How does your organization currently facilitate on-farm work experiences? (Choose all that apply.)
- Publicize available on-farm work experiences (1)
- Issue guidelines or best practices for on-farm work experiences (2)
- Attain funding to support on-farm work experiences (3)
- Collaborate or partner with other organizations to develop or implement on-farm work experience programming (4)
- Coordinate educational workshops, tours, social gatherings, or other related events for participants (5)
- Provide an orientation or other hands-on training and support services to participants (6)
- Establish a dedicated staff member position to manage facilitation activities (7)
- Arrange placement of apprentices, interns, or volunteers on farms (8)
- Conduct follow-up evaluations of on-farm work experiences (9)
- Operate a farm utilizing on-farm apprentices, interns, or volunteers (10)
Part 3

Please tell us more about your organization. Part 3 will take about 5 minutes.

Is your organization involved in any of the following types of sustainable agriculture activities? (Choose all that apply.)

- Education (1)
- Research (2)
- Cooperative Farming (3)
- Demonstration Farm (4)
- Community Gardens (5)
- Policy/Advocacy (6)
- Farmers Markets (7)
- Community Supported Agriculture (8)
- Organic Farming (9)
- Permaculture (10)
- Biodynamic Farming (11)
- Organic Certification (12)
- Urban Agriculture (13)
- Heritage Animal Breeds and Heirloom Crop Varieties (14)
- New or Beginning Farmer and Rancher Training (15)
- Values-Based Supply Chains (16)
What are your organization’s primary motivations for engaging in sustainable agriculture? (Choose all that apply.)
- Community Building (1)
- Education (2)
- Food Quality (3)
- Small and Mid-Size Farm Viability (4)
- Food Security (5)
- Environmental Conservation (6)
- Farmland Preservation (7)
- Public Health (8)
- Food Justice (9)
- Rural Development (10)
- Social Justice (11)
- Food Sovereignty (12)
- Ecological Restoration (13)
- Job Training (14)
- Development of Local and Regional Food Systems (15)
- Income/ Profitability (16)
- Faith-Based (17)
- Farm and Food Policy (18)

Has your organization changed or modified the focus of its sustainable agriculture activities in response to particular funding opportunities?
- Yes (1)
- No (0)
Does your organization primarily seek to engage with any of these populations? (Choose all that apply.)

- Disadvantaged populations (e.g., older adults, lower-income, minority, refugees, ethnic groups, and minority religious groups) (1)
- Military Veterans (2)
- New or Beginning Farmers and Ranchers (3)
- Organic Farmers and Gardeners (4)
- Students (5)
- None of the above (0)

Does your organization cooperate, partner, or network with any of these types of organizations?

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>Yes (4)</th>
<th>No (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleges, Universities, or Cooperative Extension</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Community Based Organizations</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Non-profits</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Private Businesses</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Trade Schools</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Does your organization derive revenue from any of these sources?

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Yes (1)</th>
<th>No (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Fees for Services or Products</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Government Funding</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Individual Donations</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Private Foundations</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Over the past 12 months, how many of the following employment types did your organization utilize?

<table>
<thead>
<tr>
<th></th>
<th>None (0)</th>
<th>1-5 (1)</th>
<th>6-10 (2)</th>
<th>11-25 (3)</th>
<th>Over 50 (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time Paid Staff Positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Part-Time Paid Staff Positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Volunteer Positions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Display This Question:
If Does your organization have an advisory board, steering committee, or similar governing body? Yes Is Selected

In Part 1, you shared that your organization has an advisory board, steering committee, or similar governing body. How many governing body members does your organization currently have?
● Less than 5 (1)
● 5 to 10 (2)
● 11 to 15 (3)
● 16 to 20 (4)
● More than 20 (5)

Display This Question:
If Does your organization offer membership? Yes Is Selected

In Part 1, you shared that your organization offers membership for a fee. How many fee-paying members does your organization currently have?
● Less than 50 (1)
● 50 to 250 (2)
● 251 to 500 (3)
● 501 to 1,000 (4)
● More than 1,000 (5)
This is the final part of the survey.

You indicated that your organization currently facilitates on-farm work experiences.

We have 10 remaining questions for you.

What year did your organization begin offering services or programs to facilitate on-farm work experiences?
- Before 1975 (1)
- 1975-1990 (2)
- 1991-2000 (3)
- 2001-2010 (4)
- 2011-2016 (5)

How many on-farm work experiences did your organization facilitate in 2015?
- Less than 12 (1)
- 13 - 25 (2)
- 26 - 50 (3)
- 51 - 100 (4)
- More than 100 (5)
Do your organization’s on-farm work experience activities currently rely on any of the following sources of funding?

<table>
<thead>
<tr>
<th>Source</th>
<th>Yes (1)</th>
<th>No (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporations</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Fees for Services or Products</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Government Funding</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Individual Donations</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Private Foundations</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected

Has your organization changed or modified the focus of your on-farm work experience activities in response to particular funding opportunities?
☐ Yes (1)
☐ No (0)

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected

Have your organization’s on-farm work experience activities been hindered by any government policies (municipal, county, state, and/or federal)?
☐ Yes (1)
☐ No (0)
Of the farms that have participated in on-farm work experiences facilitated by your organization, do most produce any of the following commercially?

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Yes (1)</th>
<th>No (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables, melons, potatoes and sweet potatoes</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Fruits, tree nuts, and berries</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Poultry and eggs</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Corn or wheat for grain</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Livestock (e.g., Cattle and calves, Hogs and pigs, Sheep, Goats, and their products)</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Grains, oilseeds, dry beans, and dry peas</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Milk and other dairy products from cows</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Nursery, greenhouse, floriculture, and sod</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Of the farms that have participated in on-farm work experiences facilitated by your organization, do most sell through any of the following markets?

<table>
<thead>
<tr>
<th>Market</th>
<th>Yes (1)</th>
<th>No (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Supported Agriculture</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Farmers’ markets</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Restaurants</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Retail stores</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Commodity markets</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Wholesale</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Institutional sales (e.g., farm-to-school, farm-to-hospital, farm-to-prison)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>U-pick</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization is valuable because it helps us to…”

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the past?; No Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? No Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences would be valuable because it helps organizations to…”
Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
   And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? No Is Selected
   And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? Yes Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization will be valuable because it will help us to…”

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
   And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
   And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? No Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization was valuable because it helped us to…”

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
   And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
   And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future?&nbsp; Yes Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization is valuable because it helps us to…”
<table>
<thead>
<tr>
<th>Grow support for small and mid-sized farmers</th>
<th>Strongly disagree (1)</th>
<th>Somewhat disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Somewhat agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build community around sustainable agriculture</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Encourage networking amongst supporters of the alternative agrifood movement</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Inspire trust among farmers and eaters</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Make up for a lack of availability of formal educational programs for sustainable farm operation</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Help farmers participate in direct agricultural markets</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Reduce or share risks associated with farming</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Create or save local jobs</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Train new or beginning farmers and ranchers</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Strengthen interest in environmentally friendly farming methods through hands-on learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Support the farming tradition in the area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immerse citizen-eaters in the realities of agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect older farmers with potential successors for their farms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase access to organically grown or raised farm products</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Make the knowledge of more experienced producers more accessible to producers who have less experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counteract the effects of industrialized agriculture</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Develop relationships with sustainable agriculture advocates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower barriers to entry for aspiring sustainable farmers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization is challenging because of…”

Display This Question:
If Does your organization currently offer any services or programs to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the... No Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm w... No Is Selected

This is the final part of this survey.

You indicated that your organization has never facilitated on-farm work experiences and does not plan to.

We have 2 remaining questions for you.

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? No Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? No Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization would be challenging because of…”
This is the final part of this survey.

You indicated that your organization has never facilitated on-farm work experiences, but has interest in facilitating in the future.

We have 2 remaining questions for you.

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization will be challenging because of…”
This is the final part of this survey.

You indicated that your organization has facilitated on-farm work experiences in the past but does not plan to again.

We have 2 remaining questions for you.

Display This Question:
If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? No Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization was challenging because of…”
Display This Question:

If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? Yes Is Selected

This is the final part of this survey.

You indicated that your organization has facilitated in the past, and has interest in facilitating in the future, but does not currently facilitate on-farm work experiences.

We have 2 remaining questions for you.

Display This Question:

If Does your organization currently offer any services or programming to facilitate on-farm work experiences? No Is Selected
And Did your organization offer any services or programs to facilitate on-farm work experiences in the past? Yes Is Selected
And Does your organization have interest in offering any services or programs to facilitate on-farm work experiences in the future? Yes Is Selected

How much do you agree or disagree with the following statements? “Facilitating on-farm work experiences as an organization is challenging because of…”
<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree (1)</th>
<th>Somewhat disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Somewhat agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflicts with our organizational mission</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Administrative or budgetary issues</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lack of access to information about applicable laws, best practices, or liability issues</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Uncertain availability of funding streams</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Unreliable collaboration partners</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lack of evidence that on-farm interns, apprentices, volunteers become farmers</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Unreliable availability of on-farm interns, apprentices, volunteers</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lack of local and diverse community participation</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Unreliable skillset of on-farm interns, apprentices, volunteers</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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</tr>
<tr>
<td>Need for housing, transportation, or childcare for on-farm work</td>
<td></td>
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<tr>
<td>experience participants</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Lack of interest from our constituents</td>
<td></td>
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<tr>
<td>Need for the means to incentivize on-farm work experiences</td>
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<tr>
<td>(e.g. monetary or in-kind)</td>
<td></td>
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</tr>
</tbody>
</table>

Display This Question: If Does your organization currently offer any services or programming to facilitate on-farm work experiences? Yes Is Selected

How much do you agree or disagree with the following statements? “Ideally, my organization’s facilitation of on-farm work experiences would include…”
<table>
<thead>
<tr>
<th>Activity</th>
<th>Strongly disagree (1)</th>
<th>Somewhat disagree (2)</th>
<th>Neither agree nor disagree (3)</th>
<th>Somewhat agree (4)</th>
<th>Strongly agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publicizing available on-farm work experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issuing guidelines or best practices for on-farm work experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attaining funding to support on-farm work experiences</td>
<td></td>
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</tr>
<tr>
<td>Collaborating or partnering with other organizations to develop or implement on-farm work experience programming</td>
<td></td>
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<tr>
<td>Coordinating educational workshops, tours, social gatherings, or other related events for participants</td>
<td></td>
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<tr>
<td>Providing an orientation or other hands-on training and support services to participants</td>
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</tr>
<tr>
<td>Establishing a dedicated staff member position to manage facilitation activities</td>
<td></td>
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</tr>
<tr>
<td>Activity</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>----------</td>
<td></td>
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</tr>
<tr>
<td>Arranging placement of apprentices, interns, or volunteers on farms</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Conducting follow-up evaluations of on-farm work experiences</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Operating a farm utilizing on-farm apprentices, interns, or volunteers</td>
<td></td>
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</tr>
</tbody>
</table>

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Appendix B: Terminology
Terminology

Below are current working definitions for important terms used in this research.

Alternative Food Initiative (AFI)

In his study of social movement organizations in Canada, Levkoe (2014) calls for examination of the roles of SMOs in alternative agriculture movements (AAMs) and alternative food initiatives (AFIs). He contends that AFIs are led by organizations acting in response to “increasing concerns about the ecological, socio-political and economic implications of the corporate led industrial food system” (Levkoe, 2014: 174).

Alternative Agrifood Movement (AFM)

According to Allen (2008), alternative agrifood movement is a body of theories, practices, and movements that challenge the dominant agrifood institutions. Guthman et al. (2006) notes that AFMs may have a blurry theoretical focus, but is mainly focused on issues of localism and justice in the food system. AFM is a concept related to sustainable agriculture. More specifically, they have overlapping values, beliefs, practices, and theories.

Apprenticeship

Apprenticeship has been historically defined as a long-term program of training, whereby a student works under a master (or expert) in a particular craft or trade. The apprenticeship may or may not result in certification. MacAuley (2014:14) defines an
apprentice as “an adult learner, who is a novice, who learns on the job and receives
direction from a master”. This concept is often used interchangeably with ‘interns’
experiencing ‘internship’. For the purposes of this thesis, given that studies thus far
apply the terms ‘internship’, ‘apprenticeship’, and ‘volunteer positions’ on farms to the
same concept, I developed and use the term “on-farm work experience” to encompass all
three, and disclosing this interchangeability in the sustainable agriculture discourse (see

Beginning Farmer/Rancher

The USDA defines beginning farmers/ranchers as farmers/ranchers who have
been in operation for ten years or less (Ahearn, 2013). This definition has been criticized
because it does not include individuals actively planning their own farm enterprise, or
exploring farming as an occupation, who are neither farm owners nor operators
(MacAuley, 2014).

Non-Waged Work

Pointing out a commonality between on-farm internship and volunteer positions,
Ekers and Levkoe (2016) developed this term to refer to either internships and volunteer
positions on farms. Apprenticeships can also be non-waged work. While the term “non-
waged work” focuses on labor and is useful in an examination of the economic role of
apprenticeships, internships, volunteer positions, this thesis also used the term “on-farm
work experience”, which focuses on a major social function of apprenticeships, internships, and volunteer positions: to provide experience on a working farm.

On-Farm Work Experience

Based on the definition MacAuley (2014) used in her surveys of farmers and interns, an on-farm work experience was defined to be an on-farm apprenticeship, internship, or volunteer position held for a specified length of time by persons 18 years of age or older, and can be paid or unpaid. For the purposes of this thesis, given that studies thus far apply the terms ‘internship’, ‘apprenticeship’, and ‘volunteer positions’ on farms to the same concept, I developed and used the term “on-farm work experience” to encompass all three terms, disclosing this interchangeability in the discourse on sustainable agriculture (see Levkoe, 2016; MacAuley, 2014, Wood, 2013, Terry, 2013).

Social Movement Organization (SMO)

McCarthy and Zald (1977:1218) described an SMO as a “a complex, or formal, organization which identifies its goals with the preferences of a social movement or a countermovement and attempts to implement those goals”. Zald and Ash (1966) were among the first academics to distinguish between traditional non-profit organizations and SMOs, being that the former provided a service while the latter sought to mobilize individuals and organizations toward action (Levkoe, 2015).
Sustainable Agriculture

On its website, the National Sustainable Agriculture Coalition (2017) states:

“She sustainable agriculture as legally defined in U.S. Code Title 7, Section 3103 means an integrated system of plant and animal production practices having a site-specific application that will over the long term:

○ Satisfy human food and fiber needs.

○ Enhance environmental quality and the natural resource base upon which the agricultural economy depends.

○ Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls.

○ Sustain the economic viability of farm operations.

○ Enhance the quality of life for farmers and society as a whole.

The basic goals of sustainable agriculture are environmental health, economic profitability, and social and economic equity (sometimes referred to as the “three legs” of the sustainability stool).”

Allen (2004) pointed out that the literature on sustainable agriculture in large part has focused on the environmental impact of production or a set of farm practices, leaving no space for key social aspects needed to develop the ideology. Lyson (2004) noted that when describing sustainable agriculture, many authors associate the term with farms that are small in scale, diversified, and have flexible marketing strategies. In her review of the literature, MacAuley (2014) found several studies focusing on sustainable
agriculture included a section on on-farm apprenticeships and internships (see, for example, Barnett 2012; Endres & Armstrong, 2013; Hamilton, 2011; Maxey, 2006; Pilgeram, 2011). In their studies focused on analysis of on-farm work experiences, MacAuley (2014), Wood (2013) and Levkoe (2016) found that farms considered to be sustainable or ecologically-oriented are sites for on-farm apprenticeships, internships, and volunteer positions.

Sustainable Agriculture Organization

According to the list of Sustainable Agriculture Organizations and Publications on the ATTRA NCAT (2017) website, these may be groups, nonprofits, or agencies participating in and/or supporting sustainable agriculture.
Appendix C: Review of Sustainable Agriculture Literature
**Review of Sustainable Agriculture Literature**

Sustainable agriculture has become embedded in the alternative agrifood movement (AAM), but this has not always been the case. For instance, some organizations that are considered to be part of the alternative agrifood movement and support sustainable agriculture were encouraging the use of alternative agriculture methods several decades before the term sustainable agriculture was widely accepted. The alternative agriculture movement found its origins in farm environmental issues. Rachel Carson’s publication of *Silent Spring* in 1962 is referenced by some academics as a catalyst for the environmental movement and more specifically the emergence of a movement for agricultural sustainability in the 1970’s (Kloppenburg, 2000). The farm crisis of the 1980’s is also considered to be among the catalysts for the new found broader acceptance of sustainable agriculture in the late 1980’s (Allen, 1993). Focused on the social and environmental externalities of modern agricultural technologies, the beginnings of the movement toward an alternative structure of agriculture encouraged a bifurcated frame for conceptualizing agriculture among academics and practitioners in the United States. Contributing to this frame, Beus and Dunlap (1990) developed an analytical framework to distinguish between the competing paradigms of “conventional” and “alternative” agricultures by extracting their elements from the writings of influential commentators.

Allen (1993) noted that popular alternative agriculture spokespersons Wes Jackson and Eliot Coleman began to include the term sustainable agriculture in their writings. Other terms introduced as more acceptable to the conventional farmer, policy,
and scientific communities included biological, ecological, eco-agriculture, and practical farming. The term sustainable may have persisted because the goals of this term are ambiguous, and therefore more acceptable to critics. In Congress, for example, Youngberg et al. (1993) observed that sustainable agriculture proponents concerned with the environment argued that the national goal should be to reduce the amount of fertilizers and pesticides used in agricultural systems, while the sustainable agriculture proponents concerned with the economy argued that the national goal should be efficient use of fertilizers and pesticides. One side of the sustainability camp would interpret it as simply adapting the current systems of agriculture, while another side of the sustainability camp would interpret it as transformative, developing whole new systems of agriculture.

Along with this rhetorical shift in language, Hassanein (1999) sighted the increase in lobbying activity around agricultural issues by national organizations and grassroots groups as leading to further policy gains. For instance, this influenced the creation and subsequent funding of LISA (Low-Input Sustainable Agriculture) in the late 1980’s, what we now know of as the Sustainable Agriculture Research and Education program (SARE). Not long after, the Appropriate Technology Transfer for Rural Areas (ATTRA) program was established and would respond to “over one hundred thousand requests from farmers, county extension agents, and others seeking free information and technical assistance on low-input and sustainable agricultural practices” (Hassanein, 1999:24). Sustainable agriculture organizations remained politically active.
As noted previously, a database of sustainable agriculture organizations as well as a database of available internships and apprenticeships in sustainable farming is publicly available on the ATTRA website. Highlighting the legitimation process of sustainable agriculture, Youngberg et al. (1993) also pointed out a variety of sustainable agriculture centers and programs within the U.S. land grant university system proliferated quickly in the 1990’s. While sustainability might appear to be a common goal at the rhetorical level, some actors pursue sustainability by expanding markets and technologies while others pursue sustainability by finding alternatives to these practices (Kloppenburg, 2000). The lack of clear indicators for sustainable agriculture may have expedited acceptance for the term, but likely also weakened the ability of organizations within the movement to affect real systems change.

By the turn of the century, Kloppenburg (2000) suggested the frame for goals had changed from focusing on the growth of sustainable agriculture to working to develop a sustainable food system. As he put it, “study and activism around food issues have generally come now to encompass the larger concerns of social justice and environmental interests in addition to traditional agricultural problematics” (Kloppenburg 2000:179). While this broader approach appeared more encompassing, it received criticism for often failing to adequately address issues of social inequality involving class, gender, and access to food (Allen and Sachs, 1991). Also, while nomenclature varies, and references may be made to a “local food system”; “regenerative food systems”; “community food system” (similarly comparable to terms for “sustainable agriculture”; “regenerative
agriculture”; “agroecological agriculture”), formulations of these proposed systems share important attributes.

In a study exploring how a diverse set of sustainable food system advocates frame food system sustainability, Kloppenburg (2000) found evidence to support a suggestion originally made by Chiappe and Flora (1998) that sustainability embodies three imperatives: environmental, economic, and social. Acting on the observation that frameworks for understanding the meaning of sustainable food systems are predominately created by academic researchers, Kloppenburg examined attributes of a sustainable food system as understood by 125 activists, farmers, small-business people, and citizen-eaters. Attributes identified by researchers had been: environmentally sustainable; proximate; economically sustaining; just; participatory; healthful; diverse. In addition to these seven academically-concluded attributes, the practitioners offered seven more attributes: knowledgeable/communicative; sustainably regulated; sacred; culturally nourishing; seasonal/temporal; value-oriented (associative) economics; and relational.

Kloppenburg suggested that the more expansive meaning of sustainable food system offered by the practitioners reflects their diverse demographics, backgrounds and experiences. For example, Beus and Dunlap’s academic comparison of “conventional agriculture” and “alternative agriculture” failed to capture the full range of attributes for sustainable agriculture because the content analysis was restricted to the writings of men. Similarly, Chiappe’s and Flora’s responding study only captured the frames of farm women. Kloppenburg’s study captured not only a range of attributes, but also began to uncover the complexity of meanings attached to these attributes by sustainable food
system advocates of many types. Similarly, organizations working toward sustainable food systems also vary in mission, structure, and meanings they attach to their programs.
Appendix D: On-Farm Work Experience: Historical and Contemporary Perspectives
On-Farm Work Experience:  
Historical and Contemporary Perspectives

To develop an understanding of how on-farm work experiences are being practiced today, literature was reviewed to compare historical apprenticeship models with current observations of on-farm apprenticeship. As Wood (2013:17) put it, “The practice of training people while they perform work with a knowledgeable practitioner is not new.” For example, written records of apprenticeship have been taken from as far back as the Code of Hamurabi of Babylon (Gamst 1986). The formal apprenticeship model has been common in Europe where it originated in the Middle Ages. The apprenticeship model, however, has been less common in the United States. While popularity of on-farm apprenticeship has grown since the 1990’s, there is little historical context, and what is known about on-farm work experiences, including apprenticeships, internships, and volunteer positions “comes from organizations that serve farmers who host interns” (Wood, 2013:17). The roots of vocational learning and labor programs in the informal sector provides comparative models to three modern on-farm work experiences.
**Historical Overview of On-Farm Work Experiences**

Apprenticeship has deep historic importance as a vector in work and societal relations across the globe. In colonial America, the apprenticeship model served as the practice of job training before a formal system of education had been developed. Apprenticeship was also a mechanism by which children could model themselves on adults, guiding the moral development of their trainees via the mentor-apprentice relationship (Wood, 2013).

Development of the apprenticeship model in the US diverged from that of Europe. In the 13th century, apprenticeship experienced a rebirth across Europe with three occupational statuses: master, journeyman, and apprentice (Gamst, 1986). Merchant and craft guilds controlled participation in apprenticeships and evaluated progress. In fact, it was common to prohibit the practice of many trades to those who had not completed an apprenticeship. This kind of labor regulation and certification process created competition in the labor market, keeping wages higher for tradesmen (Rorabaugh, 1986). Forms of this regulation and certification process remained beneficial for a few European nations over the centuries. For instance, apprenticeship was institutionalized in Germany, providing skilled labor to employers and certifying youth for hundreds of career paths. Tradesmen in the US, however, took another path with apprenticeship.

While tradesmen in Europe established a system of guilds in the Middle Ages, tradesmen in the U.S. never did. In the absence of guilds, a regulatory system to oversee apprenticeship participation was not developed. There was a federal registry program that required an employer to disclose whether they had an apprentice, but there was no
process of vetting those claiming to be a master artisan on the registry (Elbaum, 1989). In his examination of the decline of apprenticeships in the US and survival in Great Britain, Elbaum (1989) noted that American firms partnered with trade unions to hire apprentices in the early twentieth century. Their collective regulations were enforced by the trade unions, which meant that completing an apprenticeship gave the participant access to the national union. However, these partnerships remained rare, lacking formal standards, oversight and investment (Wood, 2013:19).

Informal apprenticeships, such as those historically found in the US, have been criticized. Cited as common in apprenticeships are long working hours, unsafe working conditions, low or no wages, little or no social protection in case of illness or injury, and strong gender imbalances (Rorabaugh, 1986). Apprentices were assigned to the lowest socioeconomic class in colonial America; that class included slaves, indentured servants, hired servants and unskilled labor. In a review of historical records, Rorabaugh (1986) found no evidence of female craft apprentices in the colonial America. Apprenticeship in medieval Europe as well as pre-Industrial America was a male institution, excluding women from learning trade professions. Apprentices were held at the edge of poverty.

*Contemporary Overview of On-Farm Work Experiences*

Wood (2013) presented one of the first academic documentations of the development of on-farm work experience in sustainable agriculture. In their manual about farm internships, the New England Small Farms Institute suggested that farm internships began during the back to the land movement of the 1970s (Wood, 2013 citing Smith, 2005). New farmers with little farming experience were willing to share what
they had learned in exchange for help with the intensive labor required to operate a small-scale, low- or no-chemical operation. Drawing from current literature from sustainable agriculture organizations, Wood (2013:20) described three common tenants of farm internships in the U.S.: the labor exchange, farmer training, and the “centrality of interpersonal relationships to the practice.” From these tenants, she developed an idea of how internships are structured, practiced, and the outcomes that make participation meaningful for host farmers and farm interns. While more recent studies have made contributions toward furthering an examination of structure, practices, and outcomes, Wood’s tenants provide a useful organization for discussion.

**Labor Exchange**

Simply put, participants in on-farm apprenticeships, internships, and volunteer positions engage in exchanging their labor for an on-farm learning experience. Thus, ideally, this exchange offers benefits for both the farmer and the apprentice. Reflective of that exchange, recent studies of farm apprenticeships and internships have shown that while primary motivations for apprentices and interns are likely to include starting a farm operation, motivations for host farmers are likely to include low-cost labor (Niewolny & MacAuley, 2015). Farm apprentices, interns, and volunteers learn by doing, and farm apprenticeships and internships have been conceptualized as an experiential form of agricultural training (Jones 1999, Wood 2013). At the same time, they have also been identified as a critical source of inexpensive labor for small, labor-intensive, sustainability-oriented farms (Hamilton, 2011; Pilgeram, 2011; Powell, 2007; Kalyuzhny, 2012). The host farmer or farm manager expects interns to be a reliable laborer during
key times of the growing season, and time off is dependent on the number of workers on the farm as well as its production needs (Jones, 1999, Powell, 2007, Wood, 2013). The farm intern expects to be exposed to a variety of farm tasks, to learn the various components of agricultural production, instead of being given repetitive tasks to increase the efficiency of production (Wood 2013:20).

Farm education is a key reward promised interns for their work (Wood 2013: 20). Farm interns typically receive a small living stipend, room and board on the farm, and access to the food grown on the farm. The low- or no-pay model for the tenured duration of apprenticeship, however, has been problematized by MacAuley and Niewolny (2016) and others (Ekers & Levkoe, 2016; Wood, 2013). Specifically, it likely contributes to structural barriers to entry for members of socioeconomic groups historically underrepresented in farmer populations. Non-inclusivity is a major criticism of on-farm work experiences, as well as alternative agrifood movements (Slocum, 2007). Contracts have been proposed for farm interns to sign, delineating working conditions, methods of evaluating work, disciplinary procedures, stipend, housing, and the host farmer’s expectations for working hours (Wood, 2013; Henderson et al., 2008). These contracts are a response to the need for social justice standards for sustainable agriculture.

Efforts, led by the nonprofit sector and focused on small and alternative agriculture, have been made to inform farmers about the legal distinction between interns and employees (NESFI, 2008; Witmer, 2013). These guides inform farmers of federal regulations requiring that farm internships focus on providing vocational training through organized instruction. Though education, room and board are acceptable forms of
remuneration, interns are technically employees when the services they provide contribute toward the profitability of the farm (NESFI, 2008, Wood, 2013). Though interns are willing to regard themselves as students and accept little to no pay for their labor, the farms that rely on interns to meet labor demands violate federal labor laws when they do not pay interns minimum wage, or when the training component is substituted for continuous labor (Wood, 2013:21).

It is important to note here that the terms “apprentice” and “intern” are used interchangeably, both describing practices that offer training for work performed on farms. Essential to apprenticeship, according to the International Labor Organization (2012), are the following: that it is based in the workplace and supervised by an employer; that it is intended for young people; its fundamental aim is learning a trade, acquiring skills; training is systematic and follows a predefined plan; and the arrangement is governed by a contract between apprentice and employer (Wood, 2013:21). The criteria above are very similar to the definition of a legal internship, offered by the U.S. Department of Labor. In order to call a program a formal apprenticeship, U.S. employers are required to register an apprenticeship program and complete an approval process with the appropriate federal regulatory agencies. Wood (2013:22) pointed out that internships and apprenticeships on farms are difficult to distinguish and the terms are often used interchangeably. The sustainable agriculture movement has applied informal definitions to internship and apprenticeship, and federal oversight is lacking. Given that reality, this thesis referred to apprenticeships, internships, or volunteer positions on farms as “on-farm work experiences.”
Learning Exchange

Keeping in mind that participants in on-farm apprenticeships, internships, and volunteer positions exchange their labor for an on-farm learning experience, Wood (2013) pointed out that internships are built around the idea that currently practicing farmers are the best trainers for future farmers. Where the intern takes on the role of student, the host farmer takes on the role of teacher. This social contract requires a level of commitment beyond a purely economic worker-manager relationship. Barnett (2012) suggested that the informal, in-situ model of training a new generation of farmers reflects grassroots support of an alternative food system. In sustainable agriculture, the farm internship is framed as a training and educational mechanism, meant to increase the number of farmers trained in alternative methods as well as providing a path to farm ownership via preparation in operation and production (Powell, 2007). Wood (2013:22) explained that the sustainable agriculture and occupational literatures describe the farm environment as ideal for “making agricultural training practical for women and men who will transition from workers to farm owners.” By working alongside host farmers and other workers, interns learn how to endure the challenge of manual labor, receive instruction on operating equipment safely, and learn skills related to food production (Smith, 2005).

Wood’s (2013) and MacAuley and Niewolny (2016) referred to informal and formal farm internships. Formal programs in the US are those aiming to train new farmers in sustainable agriculture, often associated with colleges, universities, or nonprofit organizations that operate a farm. Currently there are a number of colleges
offering students the opportunity to work on a farm in exchange for instruction provided during the labor process, mentorship, classes, and workshops to supplement their experience. These programs may be student-led or overseen by a farm manager and supporting staff.

Informal on-farm work experiences are more common than formal programs, and the arrangement may be made directly between the host farmer and individuals seeking on-farm work experience, or via a broker such as a sustainable agriculture organization. An individual seeking on-farm work experience may find contact information for a host farm via the ATTRA list of sustainable agriculture opportunities, or she might choose to share her contact information with a sustainable agriculture organization that posts host farms and individuals seeking experience to its website. The informal farm internship may include in-the-field instruction, informal discussions on farm topics, and off-farm events such as field days and workshops. It is important to keep in mind that there is no standard organizational framework regarding the amount of time spent in educational instruction during an on-farm work experience, and the factors that together make an on-farm work experience are likely to vary for participants. Powell (2007) suggests there are more informal than formal on-farm work experiences because there are more farmers looking for seasonal labor than there are institutions and organizations that manage sustainable farms.

It is also important to note that participation in an on-farm work experience does not inherently lead one to become a farmer. Wood (2013) and Jones (1999) reported that some people who participated in on-farm work experiences took jobs in related sectors
such as food and agricultural policy, environmental stewardship and community
development. Rather than considering farming as a career, some participants want to
experience growing their own food, learn how to produce food in an environmentally
responsible way, or experience rural living. These participants may be teachers,
community organizers, health care practitioners, AmeriCorps Volunteers, etc. (Jones,
1999:3). The knowledge exchange tenant of on-farm work experience requires the host
farmer to assume a much greater obligation as teacher/mentor than one would otherwise
find in a more traditional employer-employee arrangement.

**Relationship Exchange**

Given that the literature emphasizes that on-farm learning should be structured,
and an intern’s work should be supervised and feedback provided, one key to the success
of this on-farm mentorship process is the relationship between host farmer and farm
intern (Wood, 2013). As previously indicated, host farmers take on a variety of roles in
the on-farm work experience: teacher, trainer, manager and mentor. Host farmers are
expected to provide farming skills to their interns by interacting during field time and
interns are expected to be motivated and committed students as well as workers (Wood,
2013).

For Jones (1999), on-farm work experiences are likely found on smaller farms
because operators of larger farms cannot give interns the necessary attention to fulfill the
mentor/teacher role during the labor process. It follows, then, that this commitment to an
in-field mentor/teacher role may affect a farmer’s likelihood to participate in on-farm
work experiences. For example, if a farmer primarily wishes to encourage and train new

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farmers, she is likely to be more willing to “break the flow of production and teach an intern something new” (Wood, 2013:25). If a farmer primarily seeks to obtain cheap labor, she is less likely to take that time. Wood (2013) found that guides for farmers on how to host successful on-farm work experiences encourage them to cultivate personal behaviors helpful in coaching and teaching. Interpersonal relationships between host farmer and farm intern are viewed as foundational to the mentor-student relationship.

The development of interpersonal relationships is predicated on expectations that host farmers and on-farm interns will spend a great deal of time together. When an on-farm intern commits to staying beyond the main growing season, she may become part of the host farmer’s team, or even part of the farm family (Wood, 2013:25). Many farm interns, however, do not stay that long, preferring instead to work over a summer break from college or seek training for a specific skill. In the case of on-farm volunteers participating in the WWOOF program, their stay may be limited to a few weeks. The expected relationship between host farmer and farm intern can lead to a unique learning situation, but it can also be very difficult and wrought with challenges. The degree to which farm interns feel supported is related to the degree of trust and commitment developed with the host farmer. Interpersonal issues are likely to arise in this environment, and handling them has been reported as one of the biggest challenges in on-farm work experience participation (Wood, 2013).

Learning is also not a politically neutral act (MacAuley & Niewolny, 2016: 199). The act of learning involves cultural politics, and carries with it the ability to “enact hegemonic narratives and validate dominant knowledge regimes, at the expense of
marginalizing less visible ways of knowing” (MacAuley & Niewolny, 2016: 199). From this perspective, the relationship dependent, in-situ act of learning exchange taking place in the form of on-farm work experiences can lead to reproduction of social norms. MacAuley and Niewolny (2016: 199) point out that on-farm work experiences are situated in a particular social system, with possibilities for race or class-based inequities, and they have the potential to contribute to the replication of inequality. These are important considerations that emphasize the necessity of examining whether on-farm work experience programming holds potential for social change and agrifood systems transformation, or whether it is more likely to reproduce inequitable relationships found in current systems of food and agriculture.

Future Farmer Programs

Since on-farm work apprenticeship and internships are seen as tools to encourage the growth of new kinds of farmers, these experiences are included in programs to develop future farmers. Noting a growing social response to a concern about the aforementioned steady decline in the total number of farmers as well as new farmers, Niewolny (2010) offered that the nonprofit sector has developed several farm entry programs for women, immigrant, and other minority populations. One way, the author suggested, that food and farming advocates are framing the issue is by recognizing that “not all paths to farm ownership and success are the same” (Niewolny, 201:69). Growing concerns have led to emphasizing ways in which the new farmer path can be more adaptive to changing environmental, social, cultural, and economic needs over time.
Food and agricultural development practitioners contend that the current social infrastructure to support beginning farmers does not fully address these needs.

Beginning farmers are increasingly recognized as a distinct group with different programming needs (MacAuley & Niewolny, 2016: 196). For example, similar barriers to successful farm startup are experienced by a majority of beginning farmers. These barriers involve lacking access to the necessary capital for the advanced technology and management practices required to be competitive in the globalized economy (Niewolny, 2010). The argument has been made by a number of academics that the flow of knowledge, educational opportunities, and resources relevant to agricultural production, distribution, and marketing are influenced by our current industrialized agriculture and food system so that access to them is restricted to those who are able to follow this relatively narrow path (Hassanein, 1999; Kloppenburg, 1991; Lyson, 2004; Niewolny, 2010). New kinds of farmers that did not grow up in this agricultural system are faced with challenges to acquire much needed institutional and local support in order to exchange knowledge and build capacity (Niewolny, 2010). This knowledge and capacity would enable new farmers to access appropriate markets, capital, hands-on training, land, and education necessary to develop and sustain food and farming.

The 1990’s saw broadened support for new and beginning farmers. According to Niewolny (2010), the Sustainable Agriculture Research and Education (SARE) program and other sustainable agriculture movement activity led to the public visibility of sustainable agriculture research, education, and outreach. For example, policy initiated in the 1990 farm bill “provided the foundation for several new state, federal, and local
partnerships to form in a number of ways as a means to facilitate new programs and services for the next generation of farmers” (Niewolny, 2010:70). These collaborations between universities and colleges, Cooperative Extension, state and federal agencies and community-based organizations signify an important shift in the design, purpose, and dissemination of adult agricultural education. MacAuley and Niewolny (2016) positioned on-farm work experience as one aspect within the beginning farmer experience.

**Contemporary Studies of On-Farm Work Experiences**

While the findings may not be generalizable to the larger population of on-farm work experience participants, Wood (2013) and MacAuley (2014) provided foundational studies of current models of farm apprenticeship and internship in Virginia and the northeast region. They used mixed-methods approaches to answer questions pertaining to what kinds of on-farm apprenticeships are available, to whom, and in what ways. Their research findings gathered information about the practices, structures, and institutional activity surrounding on-farm work experiences. They also reported the first demographic characteristics for host farmers and on-farm apprentices and interns, shedding light on some of the realities and challenges and raising important questions as to where on-farm work experience is located in sustainable agriculture and alternative agrifood movements.

While on-farm work experiences today appear to be subject to a high degree of variation, studies thus far have found that the characteristics of participants in on-farm work experiences are lacking in variation. First, both Wood (2013) and MacAuley (2014) found that host farmers and farm interns participating in on-farm work
experiences were predominantly white. This reflects the cultural whiteness found of alternative agrifood movements (Slocum, 2007). Both studies also found that a majority of host farmers and farm interns were highly educated. Discussions central to alternative agrifood movements emphasize systems change, including support for viable agrarian communities and social justice aims, but these are difficult goals to accomplish within a non-inclusive or inaccessible structure. If on-farm work experiences are to offer a sustainable way to produce new farmers, given the goals of equality and inclusivity inherent in the movement, these experiences should be accessible to everyone wanting to pursue farming. Currently, studies suggest they are not.

Both Wood’s (2013) and MacAuley’s (2014) study also found that the majority of farm interns had grown up in urban areas and had little to no previous farming experience. The majority of farm apprentices were in their mid-twenties, slightly more female, and described themselves as having low access to farmland. The majority of host farmers in MacAuley’s (2014) study made less than $100,000 in annual sales on less than 50 acres of farmland, participating in direct marketing of diversified, labor-intensive products including vegetables, poultry and eggs, and fruits. Very few host farmers grew commodities like soy, corn, or wheat. Interesting to note, a third of host farmers had experienced farm apprenticeship themselves. MacAuley’s (2014) host farmers and farm apprentices connected to each other via the Internet.

Of note, more than half of the farm interns interviewed in Wood’s (2013) study had participated in more than one farm internship. Over half of the farm interns also expressed the desire to pursue farming as a vocation, the majority pursuing agricultural
skills and farmer training via their farm internship experience. Most of them expected a structured program providing deliberate education and mentorship in return for their work.

MacAuley’s (2014) thesis sought to explore how on-farm apprenticeships provide learning opportunities for beginning farmers in Virginia. Comprising data from a survey of Virginia farmers who host apprentices, and interviews with farmers and on-farm apprentices, her findings described host farmer characteristics and suggested that apprentices develop expert identities through this form of situated learning with farmers. Through the lens of situated learning (or situated cognition), the study explored how farms function as sites where learning happens within a relationship between the intern’s mind and the farm environment, and host farmers participate as educators.

MacAuley’s (2014) study also found that on-farm apprenticeships are embedded in alternative agrifood movements. Wood’s (2013) findings agreed, concluding that farm interns sought hands-on experience with farming methods used to grow food in the alternative food movement in reaction to the social and economic consequences of conventional agriculture. For Wood (2013), these responses suggested that farm interns had interest in learning how they could contribute toward changing the structure of agriculture and food systems. Many farm interns described being inspired by popular media about local and sustainable food and expressed attaching high social value to food grown in a sustainable way. Nearly a quarter of the farm interns interviewed expressed choosing a particular host farm based on its goal to increase community food access or to educate eaters. None of the farm interns expressed a desire to pursue jobs in
conventional agriculture, and most shared a preference for small-scale producers selling directly to customers.

Results of both foundational studies suggest the opportunity to experience different aspects of farm production is a key factor distinguishing farm interns from hired farm labor. The majority of farm interns in Wood’s (2013) research worked in vegetable crops, and nearly all farm interns experienced hand-weeding, transplanting, post-harvest handling, and seeding. Many farm interns also perceived value in the opportunity to connect with nature through working outside. Nearly a third of farm interns in Wood’s (2013) study shared that they sought the experience out of a desire to access local foods and experience farm life, while none of the farm interns mentioned money as a motivating factor. About half of the farm interns worked six months to a year on a host farm and estimated that work weeks ranged from forty-one to fifty-nine hours. Most received food as compensation for labor, along with functional housing either on-site or near the farm. Challenges arose from working and living in close proximity to the farmer, the farmer’s family, and/ or the farm crew.

Wood’s (2013) thesis asked how farm internships meet the objectives of enabling inexperienced women and men to acquire farm skills and learn sustainable farm practices. She explored how farm internships function as both a learning and a labor process, and the meaning assigned to the experience by farm interns. The value of farm internship was assessed by analyzing the motivations and perceived benefits assigned to the experience by farm interns. Agrarian political economy guided her theoretical approach to offer insight into the structure of on-farm apprenticeship in Pennsylvania and

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the Northeast region of the United States. The study concluded that farm internships are informal work arranged according to the labor organization of sustainable farms. The study also concluded that farm internships function as a “learn-by-doing” model of vocational training. Finally, Wood’s study suggested that the informal farm apprenticeship model does not encourage just treatment for farm labor.

Prior to Wood’s (2013) and MacAuley’s (2014) studies, Pilgeram’s (2011) study of sustainable farming operations in the Pacific Northwest observed the use practice of on-farm work experiences. Pilgeram’s study analyzed the complex ways that class privileges and labor practices impact the social sustainability of sustainable agriculture. Via an ethnographic approach with interviews and participant observation, this study explored negotiations between farmers’ social ideals and the actual practice of sustainable agriculture in a capitalist system. Most of the farmers in this study had obtained college degrees and earned income off the farm. While expressing the desire to make their goods accessible, they focused marketing efforts toward upper- middle-class consumers. Pilgeram’s study brought to light challenging realities of social inequalities reproduced in the practice of sustainable farming, including class, race and gender and how on-farm work experience may function to support that social reproduction. It raised the idea that who owns and farms sustainably managed land has the power to affect who has access to the food produced; in this case highly-educated, white sustainable farmers marketed to highly educated, white consumers. It also pointed to the idea that since sustainable agriculture exists in an economic framework that privileges conventional agriculture, the ongoing conventionalization of sustainable agriculture must be examined.
For instance, none of the farmers paid themselves a fair wage for their own difficult labor, and most routinely hired interns and WWOOFers (volunteers) for a low wage. Several of the farmers had experienced interning on farms themselves and justified the low wage by expressing the value of a hands-on learning experience. In this study, Pilgeram found that sustainable farmers not only exploited their own labor in the effort to keep prices lower for consumers, but they also exploited the labor of interns and volunteers. The ability of sustainable agriculture to provide an alternative to conventional agriculture relies on the ability to address social injustices and privileges observed in conventional agriculture. Pilgeram’s study, however, found that social injustices and privileges observed in sustainable agriculture are not being addressed. Pilgeram (2011:392) suggested that encouraging conversations between consumers and farmers about access and inclusion would be a reasonable place start in an effort to bring these issues to the fore.

After MacAuley’s (2014) and Wood’s (2013) theses, several journal articles have been published focusing on on-farm work experiences. For example, Ekers and Levkoe’s (2015) study examined the relationship between non-waged farm work and the survival of small- and medium- size ecologically oriented farms in Ontario, Canada. They related the decline in family labor in the broader agriculture sector with the emergence of on-farm apprentices, interns, and volunteer work. Dimensions of knowledge exchange occurring in this new form of non-waged farm work as well as the gendering of non-waged work were analyzed. Questions were raised that challenge the politics and sustainability of farmers’ dependency on on-farm apprentices, interns, and volunteers.
Ekers et al. (2015) situated their analysis of agricultural interns, apprentices, and volunteers on Canadian farms within debates on the agrarian question. Through quantitative and qualitative analysis of farmers’ responses to two surveys, relationships between non-waged agricultural work and the economic circumstances of small- to medium-size farms and the non-economic ambitions of farm operators were examined. The importance of examining both the economic and non-economic dimensions of new forms of what they called “non-waged work” on farms was a focus. They argued that many farms are now managing to persist through the use of intern, apprentice, and volunteer labor in addition to relying on off-farm incomes and self-exploitation. Also suggested was that the growth of non-waged work on farms is being driven by non-economic relationships focused on non-institutional farmer training, the pursuit of sustainability, and social movement building. This generated questions as to the politics, ethics, and sustainability of non-waged work as well as ecologically oriented farming.

The most recent article provided a follow-up to MacAuley’s (2014) thesis. In it MacAuley and Neiwolny (2016) situated on-farm apprenticeships within the alternative agrifood movement as well as the beginning farmer phenomenon. Their analysis sought to answer the questions: what kinds of on-farm apprenticeships are available, to whom, and in what ways? Offering that apprenticeship opportunities can be found in the formal as well as informal institutions as an increasingly important educational and social tool for beginning farmers, this study illustrated on-farm apprenticeship learning from a critical perspective to describe and understand it as a form of beginning farmer education. Their findings were derived from MacAuley’s study of on-farm apprenticeships in
Virgimia, and focused on practices, structures, and institutional activity that inform these experiences.

The research that has been done thus far to explore on-farm work experiences found that while they are upheld for encouraging mentorship in sustainable agriculture, they can also be a cheap supply of labor for farmers who cannot afford to employ experienced farm workers (Ekers & Levkoe, 2016; MacAuley, 2014; Niewolny & MacAuley, 2015; Wood, 2013). On-farm apprentices and interns often work for very little pay and rationalize the lack of compensation by emphasizing the opportunity for an immersive educational experience, as well as enjoyment of a bounty of free fresh produce they grew with their own hands. In fact, MacAuley (2014) and Wood (2013) both concluded from their studies that farm interns and apprentices believe education and mentorship to be an important aspect of their on-farm work experiences, whether or not this turns out to be realized in practice. From one perspective, on-farm work experiences appear to be a form of exchange of work for experiential education. From another angle, the current structure of on-farm work experiences reflects a major challenges for alternative agrifood movements: 1) they are not experiences that everyone can access, 2) they may be reproducing existing inequalities, and 3) current models do not appear to be sustainable (Allen, 2004; Alkon and Agyemon, 2011, Slocum, 2007). For this reason, both the studies by MacAuley (2014) and Wood (2013) exploring on-farm work experiences found the demographics of on-farm apprentices and interns to more closely reflect that of the majority of customers found at farmers markets than the general
population. It is unclear whether the current model of informal on-farm work experience contributes to the sustainability of sustainable agriculture.

**Worldwide Opportunities on Organic Farms (WWOOF)**

For this thesis, on-farm work experience was defined as apprenticeships, internships, or volunteer positions on a farm. WWOOF represents an organization facilitating on-farm volunteer positions. Created in England in 1971, WWOOF offered urbanites a way to spend time in the countryside while supporting a growing organic farming movement. Offered independently in each of more than 100 countries, the organization’s goals remain consistent; giving organic farmers access to inexpensive labor from tourists in exchange for room and board on their farms (Terry, 2014). While the acronym has not changed, the formal title has evolved from “Working Weekends on Organic Farms” at the start, to “Willing Workers on Organic Farms,” to “World Wide Opportunities on Organic Farms” as of the year 2000. Per Terry (2014) the current title reflects conflicts with the legal connotation of “work” in some host countries (p.95). In response to rapid growth of host farmers and volunteers in recent years, the Federation of WWOOF Organizations was established in 2013.

Per the WWOOF USA website, WWOOF is “a worldwide effort to link visitors with organic farmers, promote an educational exchange, and build a global community conscious of ecological farming practices” (https://wwoofusa.org). Farm stay opportunities via WWOOF USA give the visitor, or “WWOOFer”, a chance to learn about sustainable agriculture and experience “the heart of American agrarian culture” (https://wwoofusa.org). The WWOOFer receives room and board, but no money is
exchanged between the visitor and host farmer. Since 2003, the number of on-farm volunteer workers participating in the program across the United States have increased from 400 to 19,500, while in that same time the number of host farms has increased steadily from 200 to 2,030. Table 2.2 and Figure 2.2 show increases in host farms and volunteer workers between 2002 and 2015.

WOOF-USA operates by offering a Host Farm Directory listing organic farms (not necessarily USDA certified) and gardens in all 50 states. WWOOFers pay to access this list and host farmers pay to list their farm work stay. The WWOOF-USA organization advises participants to do their own background and reference checks on WWOOFers and hosts prior to agreeing on a work stay, but refrains from further facilitation of the on-farm work experience. A volunteer may stay for a day or several months depending on the agreement.

Academic research thus far has views WWOOF as a form of agritourism, examining potential effects on community development in the surrounding area (Daisaku, 2014; Deville, 2016; Terry, 2014). There is no evidence to suggest that WWOOFers visit farms because they want to be farmers, nor is there evidence to suggest that visitors become sustainable agriculturalists.

Though on-farm work experience may be used as a tool to educate those who want to farm, issues of potential liability in an opaque regulatory environment may prevent organizations from devoting resources to facilitation of on-farm work experiences. Barriers also exist that prevent beginning farmers from becoming established farmers, including college debt, high start-up costs, and limited access to land.
(Wood, 2013; MacAuley & Niewolny, 2016). In a non-academic survey of 1,000 young and beginning farmers conducted by the Young Farmers Coalition (2011), findings suggested the largest obstacles for beginning farmers are access to capital, access to land and health insurance. At the same time, they reported that 74% of responding farmers ranked apprenticeships as among the most valuable programs for beginning farmers (Lusher Shute, 2011). Publicly available information like this suggests that farm work experiences are a valuable mechanism with which to build a new generation of farmers. Federal beginning farmer development funding is being made available for on-farm work experience programming. Nonprofit organizations and educational institutions are collaborating to strengthen and spread on-farm work experiences and to contribute toward beginning farmer programs. This is all evidence that a more rigorous knowledge is pertinent of the organizations facilitating on-farm work experiences and facilitation practices.
Table. WWOOF Hosts and Volunteers, 2002-2015

<table>
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<tr>
<th>Year</th>
<th>Hosts</th>
<th>WWOOFers</th>
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</thead>
<tbody>
<tr>
<td>2002</td>
<td>N/A</td>
<td>30</td>
</tr>
<tr>
<td>2003</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>2004</td>
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</tr>
<tr>
<td>2015</td>
<td>2030</td>
<td>19500</td>
</tr>
</tbody>
</table>

Source: WWOOF, March 2016

Figure. Host Farms and WWOOFers 2002 - 2015