

The motivations, challenges and needs of small- and medium-scale beginning farmers in the midwestern United States

Keri Iles,^a Rebecca Nixon,^{b*} Zhao Ma,^c Kevin Gibson,^d and Tamara Benjamin^e
Purdue University

Submitted April 5, 2022 / Revised August 26, October 12, and December 29, 2022 /
Accepted January 1, 2023 / Published online April 27, 2023

Citation: Iles, K., Nixon, R., Ma, Z., Gibson, K., & Benjamin, T. (2023). The motivations, challenges and needs of small- and medium-scale beginning farmers in the midwestern United States. *Journal of Agriculture, Food Systems, and Community Development*, 12(3), 31–68. <https://doi.org/10.5304/jafscd.2023.123.003>

Copyright © 2023 by the Authors. Published by the Lyson Center for Civic Agriculture and Food Systems. Open access under CC BY license.

Abstract

Beginning farmers are increasingly recognized as important agricultural actors in the United States. Efforts to help interested individuals enter agriculture have increased; however, there is still a substantial knowledge gap regarding beginning farmers' characteristics, motivations to farm, challenges, and information and resource needs, particularly among those who operate small or medium-sized farms. In this research, we collected and analyzed

survey data in Indiana to gain a better understanding of small- and medium-scale beginning farmers in the midwestern United States. We found that small- and medium-scale beginning farmers were motivated by their desire for a farming lifestyle and to support local food and agroecological farming systems on a landscape dominated by commodity crops. They relied substantially on off-farm income and faced related challenges including limited access to labor and difficulty balancing their on-farm and off-farm responsibilities. Finding effective

^a Keri Iles, Graduate Research Assistant, Department of Forestry and Natural Resources, Purdue University; 195 Marsteller Street; West Lafayette, IN 47907 USA; keriiles@gmail.com

^{b*} *Corresponding author:* Rebecca Nixon, Graduate Research Assistant, Department of Forestry and Natural Resources, Purdue University.

Dr. Nixon is now Assistant Professor, Department of Geography and Spatial Sciences, University of Delaware; 216 Pearson Hall, 125 Academy Street; Newark, DE 19716 USA; nixon@udel.edu

^c Zhao Ma, Professor, Department of Forestry and Natural Resources, Purdue University; 195 Marsteller Street; West Lafayette, IN 47907 USA; zhaoma@purdue.edu

^d Kevin Gibson, Professor, Department of Botany and Plant Pathology, Purdue University; 915 West State Street; West Lafayette, IN 47907 USA; kgibson@purdue.edu

^e Tamara Benjamin, Assistant Program Leader, Cooperative Extension Services, Purdue University.

Dr. Benjamin is now Education Program Manager, Extension Center for Agriculture, Food & Natural Resources, University of Minnesota; 3 Coffey Hall, 1420 Eckles Avenue; St. Paul, MN 55108 USA; benja242@umn.edu

Funding Disclosure

This work was supported by the U.S. Department of Agriculture National Institute of Food and Agriculture (Grant BFRDA-2015-70017-22878).

marketing strategies also challenged this group of farmers, as they were not well-integrated into existing agricultural programs, and many had limited interactions with agricultural agencies and organizations. Instead, the majority of small- and medium-scale beginning farmers relied heavily on their own internet research and informal interactions with other farmers to learn and obtain help for their farms. Together, our results contribute to a better understanding of small- and medium-scale beginning farmers' characteristics, motivations, and farming practices, as well as the challenges they face and the support they need to address these challenges. Because beginning farmers often differ from their more established counterparts who operate larger farms, the results of this research can be used to inform tailored agricultural programs and technical assistance that address small- and medium-scale beginning farmers' specific needs and challenges in order to increase their likelihood of success to not only start but also sustain a small- or medium-scale farm over time.

Keywords

Diversified Agricultural Systems, Sustainable Food System, Small-Scale Farming, Beginning Farmer, Sustainability, Local Food

Introduction

The importance of beginning farmers in the United States is increasingly recognized, particularly with the current changing demographic of farmers in the country. According to the 2017 Census of Agriculture, the average age of farmers in the U.S. was 57.5 years (USDA NASS, 2020). A recent study by the American Farmland Trust reported that "including nonoperator landlords, seniors aged 65 and older own more than 40 percent of the agricultural land in the United States. This suggests an impending transfer of more than 370 million acres of farmland" (Freedgood et al., 2020, p. 18). These statistics have raised questions concerning the potential trajectory of farm succession and the subsequent implications for land use and food production (Jöhr, 2012; Lobley et al., 2010). It is possible that some of this agricultural land will be passed on to the younger family members of current landowners, who may have already been involved in the

agricultural enterprise. At the same time, some land will be acquired by beginning farmers, who have little experience farming. The U.S. Census of Agriculture shows that currently, one in four farmers in the U.S. is a beginning farmer, defined as an individual with 10 or fewer years of agricultural experience (USDA NASS, 2019). While this includes those who have grown up on or around farms but have no formal agricultural experience, many beginning farmers in the U.S., particularly younger ones, do not have any farming background (Young Farmers Coalition, 2017). As such, it is of great importance to society to understand beginning farmers' challenges and needs to develop policies and programs that support them.

Historically, provisions in the 1992 Farm Act called for special terms in loan programs for new farmers (Thilmany & Ahearn, 2013). The 2002 version of the Farm Act included additional support for beginning farms. Multiple governmental institutions have made explicit efforts to engage and assist beginning farmers, such as the USDA's Sustainable Agriculture Research and Education program and the Beginning Farmer and Rancher Development Program, administered by the USDA's National Institute of Food and Agriculture. The USDA Farm Service Agency (FSA) offers loans directed at beginning farmers. In 2020, the FSA allocated \$3.4 billion to beginning farmers through direct and guaranteed total loan assistance (USDA ERS, 2022). These institutional initiatives and efforts have evolved over time to help interested individuals enter agricultural production, improve beginning farmers' access to information and other resources, facilitate collaboration between beginning farmers and other stakeholder groups, and promote environmental sustainability practices among beginning farmers (Niewolny & Lillard, 2010; Jablonski et al., 2022; Suryanata et al., 2021).

While increasing attention has been given to issues involving beginning farmers among agricultural policymakers and practitioners, preconceptions about this population are varied and shifting (Ahearn, 2011; Iles et al., 2020; Jablonski et al., 2022). There is still much to learn about how these farmers decide to enter the farming business, how they manage their farms, and what barriers and opportunities they face throughout this process, as in-

formation about beginning farmers is relatively unknown in comparison to the more established farmer population (Ahearn & Newton, 2009).

We drew on a survey of beginning farmers in Indiana to increase our understanding of this population and to inform programming that responds to the needs of these producers. Our research focused on beginning farmers who were operating, or interested in starting, a small or medium-sized farm. Specifically, we documented their demographics (e.g., gender, education, military status) and identified the similarities and differences across different types of beginning farmers in their farming motivations, needs, and challenges. We found that most of these farmers were interested in diversified agricultural production and were particularly motivated by the idea of using their farm to support local food systems. We also discovered that most of these farmers found balancing on-farm and off-farm responsibilities, accessing labor, and identifying marketing strategies particularly challenging. Furthermore, we identified multiple differences in motivations for farming and perceived challenges between men and women and between military- and non-military-affiliated farmers. We believe insights learned from this beginning farmer population in Indiana are important for informing how policymakers, extension specialists, and other natural resource professionals can more effectively support and collaborate with a variety of beginning farmers, particularly those who operate small or medium-sized farms, for the benefit of local communities, economies, and environments.

Literature Review

The existing literature on beginning farmers in the U.S. has shown that they differ from their more established counterparts in several ways. For example, their farms tend to be small to medium-sized in both acres and production value. Specifically, the average size of new farms in the U.S. is 324 acres, much smaller than the average size of all farms (i.e., 445 acres as of 2021; USDA ERS, 2022), and more than half of the new farms (52%) are operating less than 50 acres of land (USDA NASS, 2019). The eligibility requirements of many long-established federal farming assistance programs often disqualify small-scale farms that focus on non-commodity

products (Ahearn, 2011). Thus, beginning farmers who operate a small-scale or medium-scale farm may be excluded from the existing policies and programs designed to assist more established, larger-scale farmers (Calo, 2018; Carlisle et al., 2019; Carolan, 2018; Iles et al., 2021; Katchova & Ahearn, 2016; Ngo & Brklacich, 2014).

Beginning farmers in the U.S. also tend to be more diverse than their more established counterparts with respect to age, gender, and livelihood strategies (Ahearn, 2011; Iles et al., 2020; Iles et al., 2021). Some studies have depicted beginning farmers as younger and more educated than established farmers (Ahearn, 2011; Armbruster & Ahearn, 2014). Indeed, the 2017 U.S. Census of Agriculture reported that the average age of beginning farmers in the U.S. was 46.3 (USDA NASS, 2020). While this is younger than the average of all farmers (57.5 years; USDA NASS, 2020), Bubela (2016) pointed out, “although most young farmers are beginning farmers, most beginning farmers are not young farmers” (p. 2). In addition, women farmers are more likely to be a beginning farmer than an established farmer, according to the USDA definition of beginning farmer as one having 10 years or less of farming experience (USDA NASS, 2020).

The high capital requirement to start a farm and the limited land available to buy or rent are seen as challenges for beginning farmers across a variety of contexts (Ahearn & Newton, 2009; Calo, 2018; Carlisle et al., 2019; Katchova & Ahearn, 2016). A recent study by Jablonski et al. (2022) also reaffirmed that many beginning farmers are constrained by a lack of access to credit and to federally subsidized crop insurance.

Within the literature, holding multiple jobs, or pluriactivity, has been documented as a common livelihood strategy among farmers in the U.S., particularly small-scale farmers (Bessant, 2008; Iles et al., 2021). Specifically, 58% of farmers in the U.S. hold a primary occupation other than farming (USDA NASS, 2019). Farm income is, and will remain, a volatile component of agricultural production. Therefore, off-farm jobs can offer a more consistent revenue stream, “particularly for young and beginning farmers who tend to face more variation relative to their assets than operators of larger, more established farms do” (Bubela, 2016,

p. 5). There remains an assumption that a household's engagement in pluriactivity indicates an eventual end to their reliance on agriculture (Kinsella et al., 2000; Van der Ploeg & Renting, 2000). However, it has also been argued that pluriactivity is a stable rather than transitional phenomenon (Kinsella et al., 2000). Pluriactivity is integral to maintain farm viability (Bessant, 2008; Iles et al., 2021) and support rural communities (Van der Ploeg & Renting, 2000). At the same time, it should be noted that there has been a rise in "zero-sales farmers" who do not sell their agricultural products (Rosenberg, 2017), and many beginning farmers do not intend to farm full time (Song et al., 2022). Other beginning farmers may "transition gradually to agriculture from other professions, using off-farm income as a bridge" (Thilmany & Ahearn, 2013, p. 12). These individuals may move from professional or technical backgrounds unrelated to agriculture, hoping to "transition into a new, more rural lifestyle that creates value-based linkages in their community" and use their professional or technical skills to develop business models focused on direct marketing (Meyer et al., 2011, p. 4). Such combined work strategies can contribute to their technical and financial viability; however, these strategies can also be challenging for beginning farmers, as they need to be able to balance both on-farm and off-farm work (Bubela, 2016; Iles et al., 2021). Thus, we need a better understanding of the diverse goals of beginning farmers and the role of pluriactivity in supporting their new farms in order to better inform policies and programs for supporting the beginning farmer population.

In relation to the motivations of beginning farmers to start and maintain a farming operation, scholars have suggested that for many beginning farmers, "their vision of what it means to farm is much closer to the agroecological and community paradigm of food production than the industrial commodity system of the past half century has been" (Kirschenmann, 2010, p. 87). Indeed, it has been shown that many beginning farmers are interested in agroecological production and motivated by non-monetary reasons such as the pursuit of farming as a lifestyle and the support of a sustainable food system (Ahearn & Newton, 2009; Bruce,

2019; Iles et al., 2020, 2021; Nelson & Stock, 2018). Thus, beginning farmers' production systems often center diversified, direct-to-consumer production such as fruit and vegetables rather than commodity crops (Ahrean & Newton, 2009; Jablonski et al., 2017). For example, Mariola et al. (2022) found that beginning farmers in Ohio were largely interested in beef cattle, poultry, hay, and vegetables rather than commodity row crops such as corn and soybean. The U.S. Census of Agriculture also showed that in comparison to more established farmers, beginning producers are less likely to produce oilseed and grain and more likely to produce specialty crops such as vegetables, fruits, tree nuts, berries, and greenhouse, nursery, and floriculture production (USDA NASS, 2019).

Increasingly, scholars have recognized the social motivations of beginning farmers. In a study from Ohio, Bruce (2019) identified two types of beginning farmers engaged in alternative agriculture: "greenhorn farmers" are "first-generation farmers with no family connection to agriculture" (p. 33), and "returning farmers" have not relied on farming as their livelihood but have some agricultural background and are returning to the land to become a farmer, often later in life. Both types of beginning farmers are motivated by the idea of farming promoting the health and well-being of their families (Bruce, 2019). Several scholars have also documented that many beginning farmers started small-scale farming to fulfill personal goals of making the food systems more equitable and environmentally friendly and making themselves and their families more autonomous and less reliant on traditional food systems (Bruce, 2019; Iles et al., 2020; Nelson & Stock, 2018). However, little work has linked beginning farmers' social motivations to the unique challenges and needs of this population.

There has also been an emerging focus on engaging military veterans in farming. Specifically, the 2017 Census of Agriculture revealed that 11% of all U.S. agricultural producers had served or were serving in the U.S. military (USDA NASS, 2019). Involvement in agriculture may support mental and physical rehabilitation among military veterans (Besterman-Dahan et al., 2018) and promote their reintegration into families and communities (Donoghue et al., 2014). Governmental and non-gov-

ernmental programs have been increasing their efforts to help interested military veterans enter farming (Farmer Veteran Coalition, 2016). Little research has been done to document and discuss this movement in the academic literature; thus, further work is needed to understand veterans' involvement in agriculture and provide them with relevant support (Iles et al., 2021). For example, the 2017 U.S. Census of Agriculture revealed that the average age of agricultural producers with military service experience is 67.9, a decade older than the average of all farmers (USDA NASS, 2019), but many veteran-focused agricultural programs appear to target younger veterans from recent deployments (i.e., Armed to Farm, AgrAbility, Farmer Veteran Coalition).

Thus far, there has been a significant body of qualitative and, to a certain extent, quantitative research on beginning farmers in the U.S. The qualitative studies have illustrated the diverse motivations, values, and experiences of beginning farmers, with a particular focus on those who operate small- or medium-scale farms (e.g., Bruce, 2019; Calo, 2018; Iles et al., 2020, 2021; Ngo & Brklacich, 2014). The quantitative studies have mostly focused on the financial characteristics of beginning farmers and the associated financial and resource challenges they face to enter farming or to sustain their operation (e.g., Jablonski et al., 2017; Jablonski et al., 2022; Katchova & Ahearn, 2017). Limited work has been done to quantify the characteristics of this population beyond their financial conditions, such as their socially oriented values, needs, and challenges. Even less work has been done to focus on small- and medium-scale beginning farmers, who make up the majority of the beginning farmer population in the U.S. (USDA NASS, 2019).

In this paper, we examined the following research questions: 1) What are the characteristics of small- and medium-scale beginning farmers and their current or intended future farming systems? 2) How do small- and medium-scale beginning farmers make farming decisions and access information about farming? 3) And, what are the motivations, challenges, and needs of small- and medium-scale beginning farmers in terms of starting and sustaining a farm? We assessed these questions

across several beginning farmer socioeconomic characteristics to inform a nuanced understanding of similarities and differences across different types of beginning farmers, rather than treating them as a homogenous group. We also intentionally solicited information from beginning farmers on both the challenges (i.e., difficulties) they face and the needs they have (i.e., the support farmers would like to access in order to address the challenges they face). We believe it is important to assess both challenges and needs in order to inform future policies and programs so that not only will the specific challenges facing beginning farmers be addressed, but they will be addressed in a way that is aligned with how beginning farmers manage their farming operations and the various needs on a day-to-day and long-term basis. For instance, agricultural extension services, or other support structures could respond to the same challenge in many ways, but asking farmers to identify their needs would inform nuanced programming responses that better support this group of producers.

Methods

We collected data through a statewide survey of beginning farmers (see Appendix 1 for the survey questionnaire). Before developing the survey questionnaire, we conducted in-person, semi-structured interviews with 11 beginning farmers in Indiana to gain a preliminary understanding of their characteristics, motivations to farm, and challenges and opportunities regarding their farming business. Results from these qualitative interviews were used to inform the development of the survey, which contained 39 questions covering the following topics: (1) farming background, (2) current farming and marketing practices, (3) perceptions of farmer identity, (4) access to information and resources, (5) challenges and needs related to starting and sustaining a small-scale farm, and (6) demographic characteristics. The study was approved by Purdue University's Institutional Review Board.

Drawing a random sample from a comprehensive sampling frame of small- and medium-scale beginning farmers in Indiana was not possible due to the lack of a full list of beginning farmers in Indiana. Thus, we constructed our own database of small- and medium-scale beginning farmers in the

state that met our inclusion criteria based on our research questions (Ritchie et al. 2013). Specifically, our criteria included: (1) individuals who had been farming for 10 years or less and who were operating 250 acres of land or less in Indiana (i.e., current farmers) or (2) individuals who were planning and just about to start a small- or medium-scale farm in Indiana (i.e., prospective farmers). The 10-year limit was chosen because USDA defines a beginning farmer as an individual with 10 or fewer years of agricultural experience (USDA NASS, 2020). The 250-acre limit was chosen because the average farm size in Indiana was 255 acres in 2015 (USDA NASS, 2016).

To develop a list of potential survey participants, we used several sources: (1) the Local Harvest National Directory, an online forum for farmers to advertise their products and services; (2) contacts from the Indiana Local Growers Guild, a collaborative group of farmers and advocates of local food; (3) the Indiana Small Farm Conference registrant database; and (4) the database of participants in an USDA-funded beginning farmer extension project at Purdue University. After conducting a preliminary assessment of online information for each farm, we removed established farms (those with more than 10 years of experience; USDA NASS, 2020) and duplicate and erroneous entries. This led to a list of 465 beginning farm contacts. From May to July 2016, we administered an online survey via Qualtrics to these beginning farm contacts following the Tailored Design Method (Dillman et al., 2014). Specifically, we sent out a survey link via email with an accompanying cover letter explaining the purpose of our survey and inviting beginning farmer participation. This initial contact was followed by a total of three reminder emails.

In addition, we recruited survey participants using two other methods. First, we provided an open link to the survey to Purdue University Extension educators and invited them to share the link with beginning farmers in their county through their email listservs and social media sites. Second, we administered a paper version of the survey in multiple extension events, including the 2016 Indiana Small Farm Conference and several regional beginning farmer conferences organized by Purdue University Extension during the summer of 2016

to reach beginning farmers who might not have a strong online presence and might not have been reached through direct email invitations. From the 465 direct email invitations, we received 147 complete responses. We received 80 complete responses from the open link to the online survey shared by extension educators and 89 complete survey responses from the 2016 Indiana Small Farm Conference and the subsequent regional conferences. Of the total of 316 complete survey responses we received, 93 were removed because participants did not meet our inclusion criteria.

At the end, the total number of usable, complete survey responses included in the analysis was 223. We did not use probabilistic sampling and thus cannot report a response rate for our survey. However, our approach to recruiting survey participants and screening survey responses was comprehensive and effective, allowing us to identify and reach this specific population in the state (Corbin & Strauss, 2008; Neuman, 2010).

We focused our study on the small and medium-sized beginning farmers in Indiana using a descriptive approach because little is known about this population in the state and the broader midwestern region of the U.S. Descriptive research is particularly well-suited for topics with little known information (Knupfer & McLellan, 1996), and such research also provides the necessary foundation for further quantitative inquiries and hypothesis generation (Grimes & Schulz, 2002). In addition to univariate summary statistics, we analyzed survey data using Chi-squared and Fisher's exact tests to examine relationships between categorical variables. Specifically, we examined the relationships between five demographic characteristics of beginning farmers (i.e., age, gender, education, income, and veteran status) with their motivations to farm, needs, and challenges. Motivations, needs, and challenges were assessed using five-point Likert scale questions (e.g., 1 to 5, where 1 is "not important" and 5 is "very important") (Neuman, 2010). All were analyzed as individual variables (i.e., no indices were created). To assess age, we created two categories (those who were 35 years and younger and those who were more than 35 years) according to the USDA definition of young farmers (≤ 35 years of age; USDA NASS, 2019).

Regrouping categories is a common method for handling small counts in categorical data analysis (de Vaus, 2002). We collapsed the variable measuring respondents' levels of education into three categories (no college education, some college education, or bachelor's degree or higher) due to a small number of observations in several original categories. We also collapsed the variable measuring annual household income into two categories (i.e., \$49,999 and below; \$50,000 and above) due to a small number of observations in several original income categories and the fact that the median household income for Indiana was \$50,433 in 2016 (U.S. Census Bureau, 2016). All statistical analyses were conducted in STATA 12.0.

It is important to note that there is rarely an official start date when an individual transitions from planning to operating a small- or medium-scale farm; becoming a farmer is a process instead of a specific action at a singular point in time (Carajon, 2008; Farm Curious, 2010; Strong, 2015). Thus, we refer to both current and prospective farmers in our results and subsequent discussion to capture *all* small- and medium-scale beginning farmers who fall within the USDA classification of beginning farmers, which is an individual with 0 to 10 years of experience.

Results

Characteristics of Small- and Medium-scale Beginning Farmers and Their Farms

As shown in Table 1, 65% of our survey respondents were currently farming with 10 years or less experience (i.e., current farmers), and 35% were individuals who reported they were in the process of starting a farm in Indiana (i.e., prospective farmers). On average, our current farmer respondents had been farming for 3.5 years. The average age of survey respondents was 45 years, with prospective farmers slightly older than current farmers. Nearly half of our respondents were women. The majority of survey respondents had a bachelor's degree or higher level of education (70% for current farmers and 63% for prospective farmers), and 16% of respondents were military veterans or active-duty members (13% of current farmers and 23% of prospective farmers).

Notably, current farmer respondents reported that on average, 13% of their household income was derived from their farm, and 87% was from off-farm work. The average amount of land owned by our respondents was 25.6 acres, and the majority (51%) had purchased their land from someone they did not know, rather than inheriting land from family (10%) or leasing land (16%) from another landowner. When asked about their agricultural background or experience prior to operating their farm in Indiana, current farmer respondents reported the following (not mutually exclusive categories): 32% had grown up on a farm; 32% had family members who owned a farm that they visited while growing up; 35% had been interested in farming and learned about farming and farm life on their own; 25% had worked on a farm as a job or internship; and 19% had no farming background or experience prior to operating their current farm. Thus, it should be noted that some of our respondents grew up on a farm or had family members who farmed, which are contexts that could have shaped their motivations and challenges in different ways than a new farmer without a family farming background.

Finally, the differences between our survey respondents and the beginning farmer characteristics described in the 2017 Census of Agriculture are important to note, particularly in terms of veteran status and income. Data from the 2017 Census of Agriculture shows that the average age of beginning producers in the U.S. was 46.3 years (42.4 years in Indiana), 41% of them were women (39% in Indiana), and 8% were veterans (5% in Indiana), and that 18% of farms operated by beginning producers had an annual income of US\$50,000 or more (24% in Indiana; USDA NASS, 2019). There was no education data available for this population from the Census of Agriculture. In comparison to these statistics, our current farmer respondents were similar in age, but more likely to identify as a woman and more likely to be military veterans or active-duty members (Table 1 in the Results section). Finally, our current farmer respondents were more likely to have a higher annual household income (65% reporting US\$50,000 or more; see Table 1).

Table 1. Sociodemographic and Economic Characteristics of Current Beginning Farmers and Prospective Farmers in Indiana in This Study

	Current farmers (n=146)	Prospective farmers (n=77)
Demographics		
Average age	44 years	47 years
Women	47%	48%
Bachelor's degree	70%	63%
Military veterans or active-duty members	13%	23%
Annual household income of \$50,000 or more	65%	67%
Hispanic	2%	1%
Average % of household income from farming (self-reported)	13%	N/A
Average amount of land farmed	25.6 acres	N/A
Average length of time farming	3.5 years	N/A
Land acquisition (not mutually exclusive)		
Purchased land from someone (not an acquaintance)	51%	N/A
Leased land from another landowner	16%	N/A
Inherited land from family	10%	N/A
Purchased land from family	10%	N/A
Purchased land from acquaintance	6%	N/A
Received land as gift	1%	N/A
Agricultural production		
	Past 12 months	Planned for future
Vegetables	66%	72%
Fruit	36%	51%
Pastured poultry	35%	49%
Organic production	26%	53%
Flowers	26%	38%
Bees	21%	58%
Goats	20%	32%
Permaculture	19%	28%
Corn and soybean	14%	8%
Pastured pigs	14%	22%
Grass-fed beef	13%	26%
Value-added products	12%	27%
Legumes other than soybean	9%	9%
Aquaponics	5%	14%
Grains	4%	12%
Dairy	4%	7%
Hydroponics	3%	18%
Labor (including respondent)		
	Mean (range; std.dev)	
Total number of people working on the farm	1.5 (1-12; 2.16)	N/A
Full-time people working on the farm	0.5 (0-7; 1.29)	N/A
From household	0.6 (0-3; 0.73)	N/A
Outside household	0.2 (0-6;0.72)	N/A
Part-time people working on the farm	1.0 (0-7;1.75)	N/A
From household	1.2 (0-6; 1.20)	N/A
Outside household	0.7 (0-9; 1.82)	N/A

Note: N/A indicates that the particular question was not asked to prospective farmers because it was not yet applicable.

Farming, Marketing, and Farm Management Practices

Current farmer respondents reported producing a wide range of products and engagement in various agricultural production practices in the past 12 months (Table 1). Specifically, 66% of current farmers engaged in vegetable production, 36% in fruit production, and 35% in pastured poultry production. The least popular practice was hydroponics (3%), followed by dairy (4%) and grain (4%) production. Relatedly, we asked prospective farmers what they would like to grow or work on in their farm in Indiana (Table 1). The top three products/practices they were interested in were vegetable production (72%), beekeeping (58%), and, more broadly, organic production (53%). Prospective farmers showed more interest in hydroponics (18%) than current farmers but were similarly uninterested in dairy (7%) and grain (12%) production. Both current (14%) and prospective (8%) farmers had little interest in corn and soybean production.

The three marketing strategies our current farmer respondents utilized most often were establishing personal contact with potential customers directly (58%); selling on farm (48%); and selling in a farmers' market (46%). Fewer respondents had sold through a community-supported agriculture (CSA) program (15%), on the side of the road (13%), or by sending flyers and mailers to potential customers to market or sell their products (7%).

In terms of labor, we asked current farmer respondents to report the number of people working on their farm in Indiana (including themselves). We also asked them to indicate whether these people were full-time or part-time and from their household or outside of their household. Overall, respondents reported an average of 1.5 persons working on the farm; however, many relied solely on part-time labor, with an average of 0.5 full-time persons and an average of 1 part-time person working on the farm. It should be noted that we did not ask about the portion of the year each person worked on the farm; that is, some reported labor may work for a few months during the growing season rather than all year.

Decision-making and Information Sources

We also asked current farmer respondents to indi-

cate who makes decisions about their farm operations (not mutually exclusive categories). Overall, 94% of respondents reported themselves as the sole decision-maker or one of the decision-makers about their farming practices and farm operation. Seventy-four percent of current farmer respondents reported making decisions jointly (50% with their spouse, 6% with their children, 4% with their parents, 6% with another family member, and 8% with a business partner who was not a family member).

Survey respondents also identified sources of information about starting, operating, or sustaining a small-scale farm. The most commonly identified sources for all respondents were through their own research on the internet (86%), extension educators in their county or nearby counties (71%), an extension website (70%), farmers they know who started and are operating a small-scale farm (67%), and Indiana Small Farm Conferences or other conferences (67%).

Finally, survey respondents reported the frequency with which they had interacted with or received information from different agencies and organizations since they became a farmer or started planning their farm (Figure 1). Our results show that extension educators were the group with the most contact with beginning farmers (50% of respondents reported contact at least several times a year). This was followed by local, state, or national nonprofit organizations or farmer associations and groups (34% reported contact at least several times a year) and Natural Resources Conservation Service professionals (17% reported contact at least several times a year).

Motivations to Start Farming

Survey respondents were asked to indicate the importance of potential motivations in their decision or consideration to start a farm in Indiana. As shown in Figure 2, the top three motivating factors identified by current farmers were to (1) pursue farming as a lifestyle (88% of current farmer respondents rated it as very important or important); (2) promote environmentally friendly agricultural practices (87%); and (3) support a sustainable food system (86%). As shown in Figure 3, the top motivating factors identified by prospective farmers

Figure 1. Frequency of Beginning Farmer Interactions with Governmental Agencies, Extension Educators, and Private Organizations

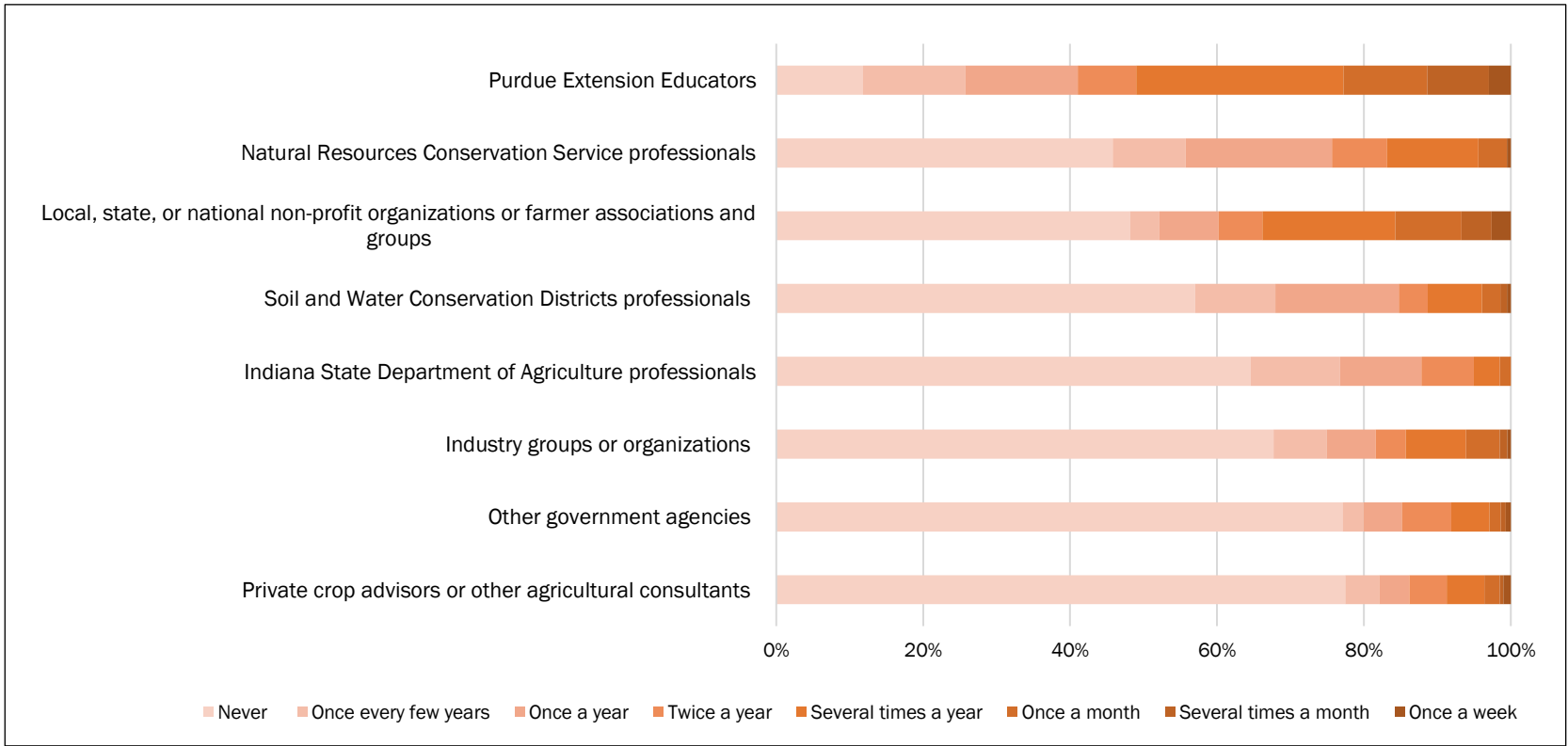


Figure 2. Factors That Motivated Current Farmer Respondents to Start Farming in Indiana, Based on a Survey Question Using a Five-Point Scale

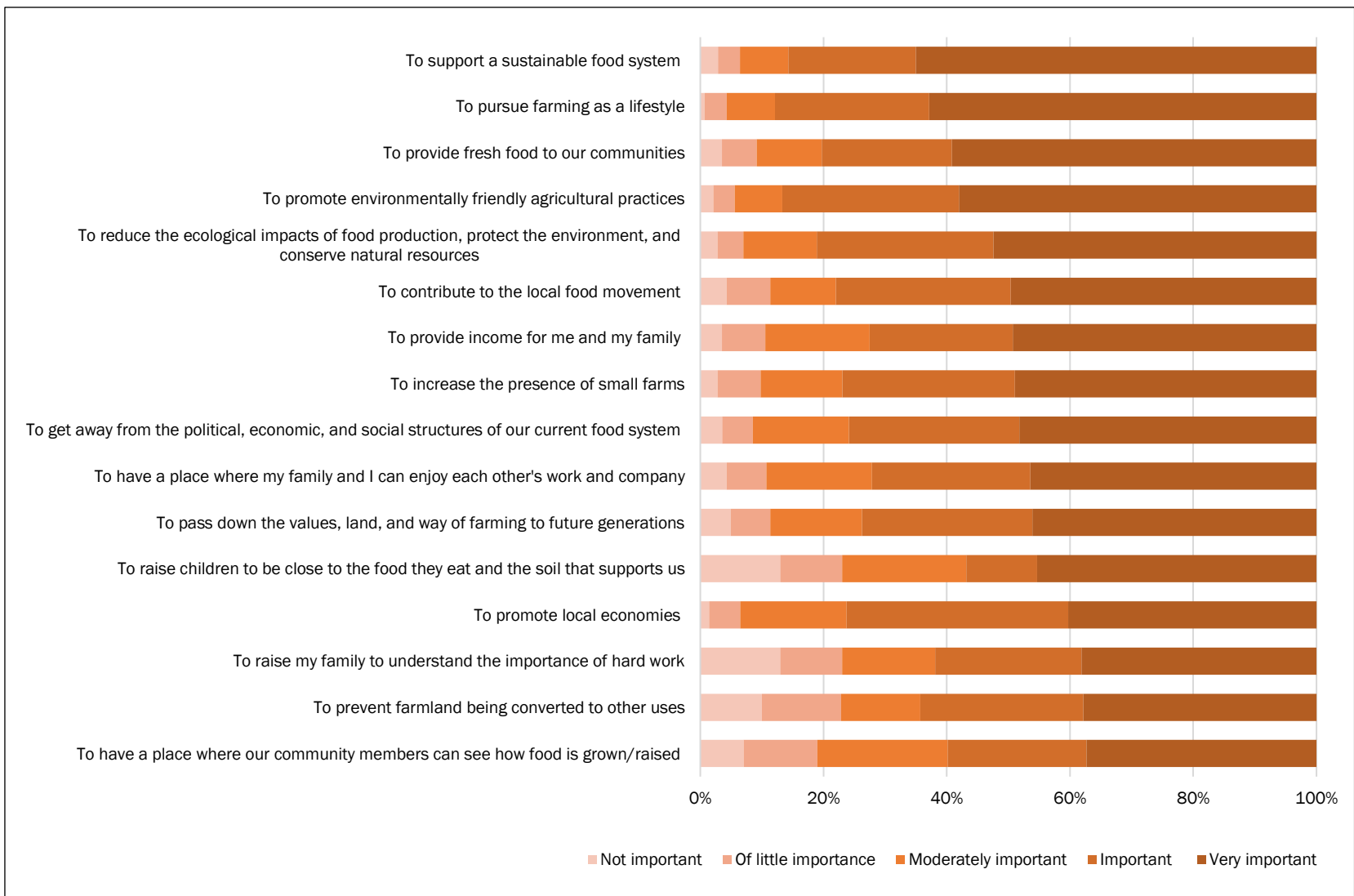
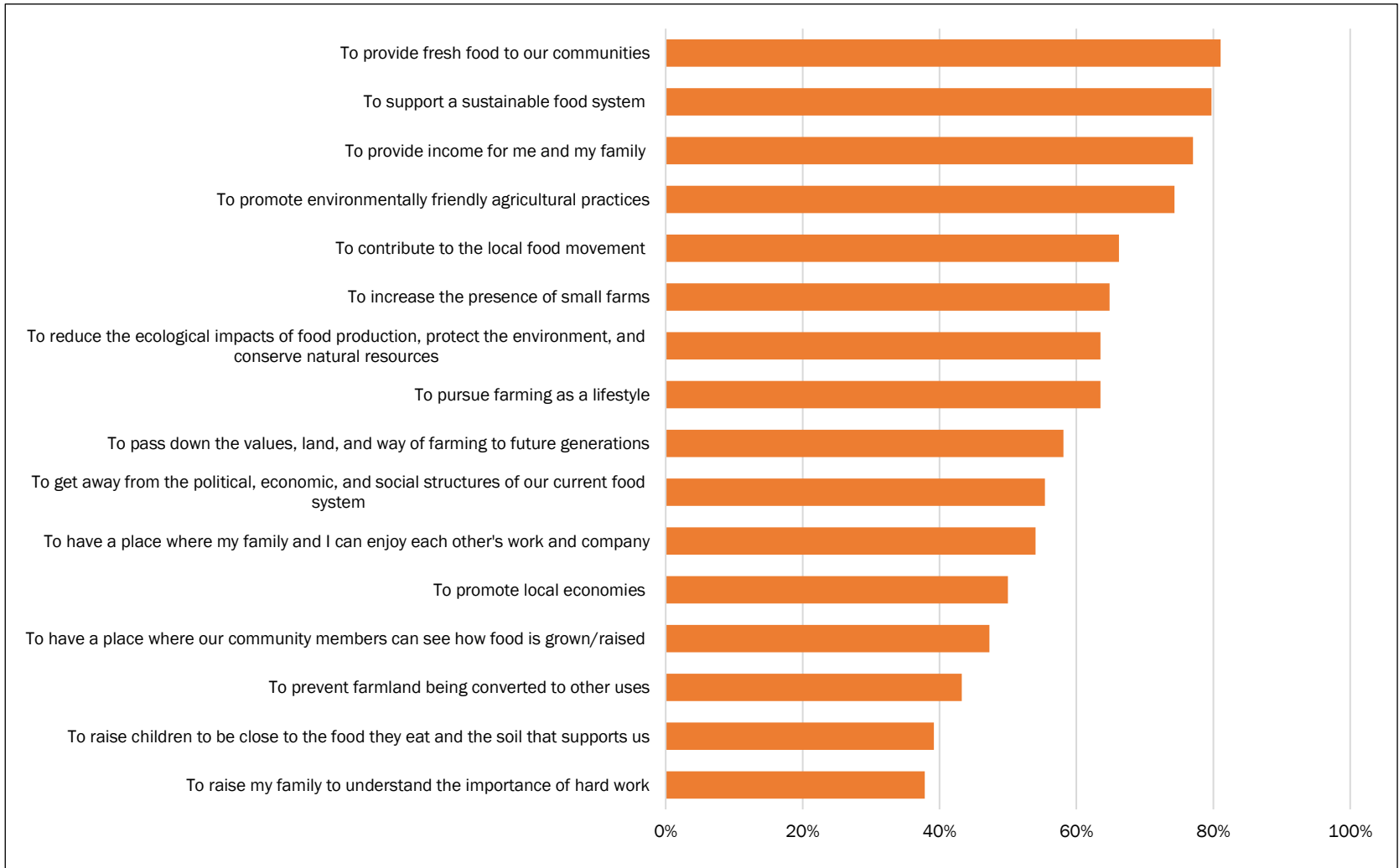


Figure 3. Factors That Are Motivating Prospective Farmer Respondents to Start Farming in Indiana, Based on a “Check All That Apply” Question



were to (1) provide fresh food to their communities (81%); (2) support a sustainable food system (80%); and (3) provide income for themselves and their family (77%). In comparing these motivations across respondent demographics (Table 2), we found that women were more likely than men to be motivated “to support a sustainable food system” (Fisher’s exact test $p=0.04$). In addition, as shown in Table 2, survey respondents with an income of \$49,999 or below were more likely to be motivated “to provide fresh food for their communities” (Fisher’s exact test $p=0.04$).

Challenges Perceived by Small- and Medium-scale Beginning Farmers

Survey respondents identified the challenges they had faced personally in starting, operating, and sustaining a farm in Indiana. Overall, the top three challenges identified by all respondents were having enough time/labor to do what is needed for the farm (65% identified it as a challenge or great challenge); having to balance farming and other jobs for income (55%); and identifying effective marketing strategies (51%). For current farmers, two of these top three challenges were identified, with slightly different percentages of respondents rating each as a challenge or great challenge. Specifically, having enough time/labor to do what is needed for the farm was identified it as a challenge or great challenge by 73% of current farmers, and having to balance farming and other jobs they do for income was identified by 57% of current farmers. In addition, 49% of current farmers also identified obtaining financial resources needed to farm as a challenge or significant challenge. Prospective farmers were challenged by different aspects of starting a farm: 56% reported that identifying effective marketing strategies was a challenge; 54% reported understanding and dealing with zoning regulations and other local and state policies as a challenge; and 53% percent said having to balance farming and other jobs they do for income was a challenge. The least challenging aspects of starting, operating, and sustaining a farm for both current and prospective farmers were getting along with other farmers in their area (9% for both) and understanding the environmental impacts of their farming practices

(11% for current and 14% for prospective farmers).

When comparing challenges across demographics, we found that women were more likely than men to perceive “having enough time/labor to do what is needed for the farm” as a challenge or great challenge for starting, operating and sustaining a farm in Indiana (Fisher’s exact test $p=0.05$). At the same time, men were more likely than women to perceive “identifying effective marketing strategies” as a challenge or great challenge (Fisher’s exact test $p=0.04$). In addition, veterans and active-duty members were less likely than others to perceive “having enough time/labor to do what is needed for the farm” as a challenge or great challenge ($\chi^2=6.991$; $p=0.01$). Education level was also a differentiating factor regarding beginning farmers’ perceiving “balancing farming and other jobs they do for income” as a major challenge. Specifically, those with a bachelor’s degree or higher education were more likely to view it as a challenge than did those without a bachelor’s degree ($\chi^2=6.039$; $p=0.04$).

In the comparison of current and prospective farmers, prospective farmers were more likely to identify “understanding and dealing with zoning regulations and other local and state policies” as a challenge than current farmers ($\chi^2=9.047$; $p<0.01$). Current farmers were more likely than prospective farmers to perceive “having enough time and labor to do what is needed on the farm” as a challenge ($\chi^2=9.613$; $p<0.01$).

Needs Identified by Small- and Medium-scale Beginning Farmers

Survey respondents also identified factors that were important to help them start, operate, and sustain a farm in Indiana (Figure 4). Overall, the top three factors identified by all respondents as important or very important were feeling supported by (potential) customers (88% rated it as important or very important); being able to access pertinent technical and informational resources (86%); and being able to talk to and learn from other farmers (85%). It is worth noting that current farmers identified the same top three factors as prospective farmers, with slightly different percentages (87%, 84%, and 82%, respectively). Similarly,

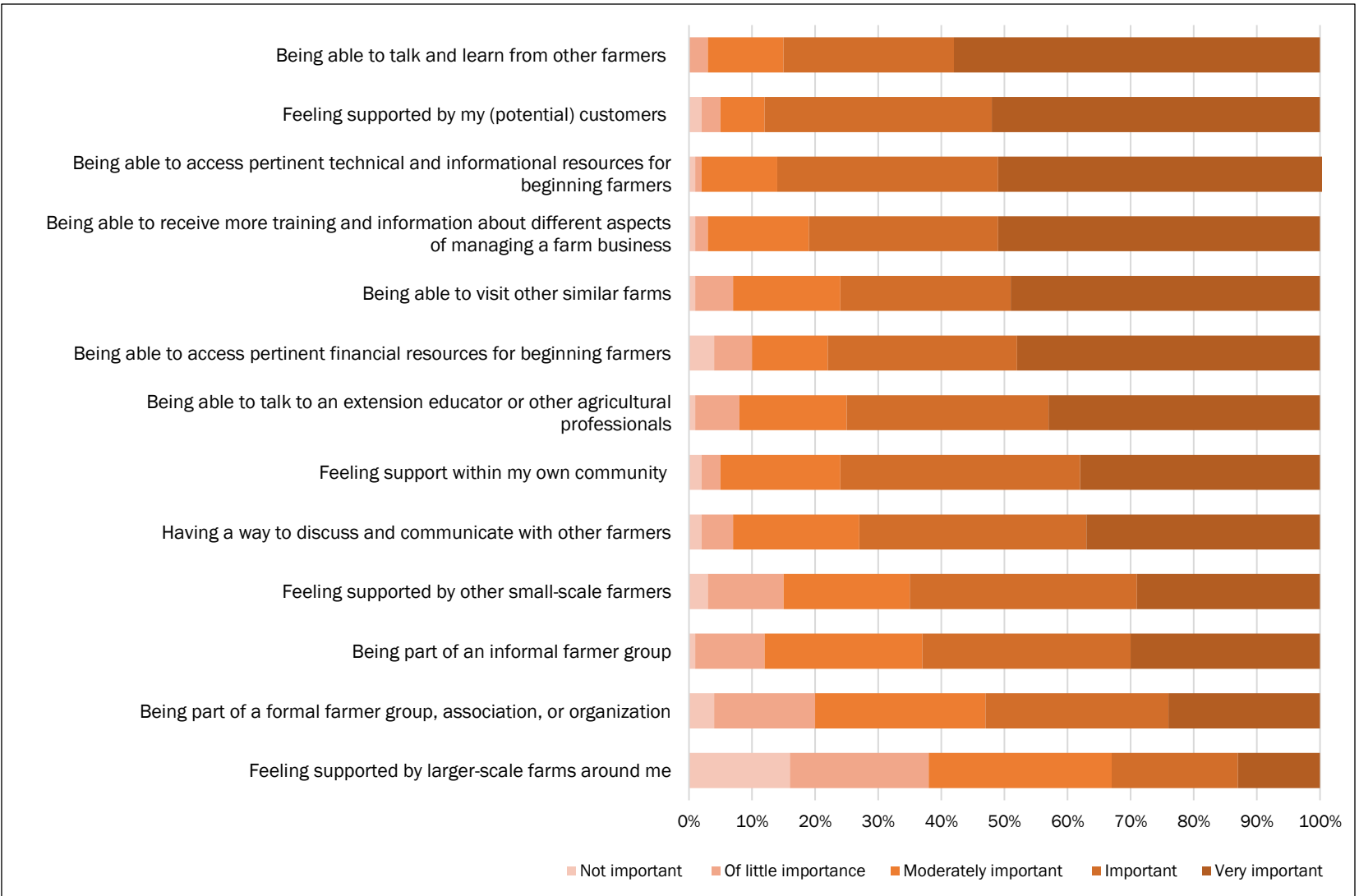
Table 2. Relationships Between New and Beginning Farmer Characteristics and their Motivations, Needs, and Challenges

	Age		Gender		Education			Income		Military status		Farming status	
	35 years & younger	36 years & older	Men	Women	No college	Some college	Bachelor's or higher	US\$49,999 & below	US\$50,000 & above	Veteran / active duty	None	Prospective	Current
Top motivations identified by current farmers													
Pursue farming as a lifestyle	65%	56%	57%	61%	58%	50%	63%	59%	59%	41%	62%	NA	NA
Promote environmentally friendly agricultural practices	65%	54%	59%	62%	58%	54%	63%	63%	59%	47%	62%	NA	NA
Support a sustainable food system	69%	56%	59%*	77%*	50%	54%	60%	63%	54%	50%	58%	NA	NA
Provide fresh food for their communities	79%	88%	87%	80%	63%	76%	86%	93%*	78%*	94%	80%	NA	NA
Top challenges identified by all new and beginning farmers													
Having enough time and labor to do what is needed for the farm	83%	89%	63%*	71%*	83%	80%	88%	88%	83%	45%*	70%*	51%**	73%**
Identifying effective marketing strategies	81%	78%	55%*	46%*	83%	76%*	81%*	81%	78%	58%	49%	56%	47%
Balancing farming and other jobs they do for income	76%	74%	74%	77%	75%	67%*	79%*	76%	75%	42%	59%	53%	57%
Understanding and dealing with zoning regulations and other local and state policies	41%	35%	42%	36%	25%	32%	43%	50%	35%	37%	48%	54%**	32%**
Obtaining financial resources needed to farm	50%	48%	51%	47%	33%	56%	48%	54%	49%	52%	47%	48%	49%
Top needs identified by all new and beginning farmers													
Feeling supported by their (potential) customers	86%	95%	88%	88%	75%	85%	91%	95%	86%	87%	89%	91%	87%
Being able to access pertinent technical and informational resources for beginning farmers	85%	87%	83%	87%	75%	83%	89%	87%	86%	84%	86%	89%	84%
Being able to talk to and learn from other farmers	78%*	95%*	79%	88%	67%	85%	86%	89%	81%	78%	85%	88%	82%
Being able to receive more training and information about different aspects of managing a farm business	80%	84%	87%	75%	83%	73%	84%	83%	81%	81%	81%	85%	78%

* $p < 0.05$ ** $p < 0.001$ **Fisher's exact test (bold)****Chi-squared test (bold italics)**

Note: We compared the top three motivations, needs, and challenges identified by all our beginning farmer respondents, as well as the ones identified as the top three motivations, needs, and challenges by only the current or prospective farmer respondents. Most of these items did overlap, but some did not. As such, this table includes more than three motivations, needs, and challenges.

Figure 4. Needs Identified by All Farmers to Help Them Start, Operate, and Sustain a Farm in Indiana, Based on a Survey Question Using a Five-Point Scale



89% of prospective farmers identified being able to access pertinent technical and informational resources for beginning farmers as a top factor, and 91% identified feeling supported by their (potential) customers. In addition, being able to receive more training and information about different aspects of managing a farm business was also considered important or very important by 85% of prospective farmer respondents. The least important factors for both current and prospective farmers were being part of a formal farmer group, association, or organization (55% and 41% respectively) and feeling supported by larger-scale farmers around them (35% and 26% respectively). The only differentiating factor in the needs identified by beginning farmers was the age of the respondents. Specifically, those who were 36 years or older were more likely to identify “being able to talk to and learn from other farmers” as an important need for starting, operating, and sustaining a farm relative to younger farmers (Fisher’s exact test $p=0.01$).

Discussion

Production Interests and Motivations for Farming

Previous studies have suggested that many beginning farmers are interested in agroecological production and motivated by nonmonetary reasons (Ahearn & Newton, 2009; Bessant, 2008; Bruce, 2019; Iles et al., 2020; Iles et al., 2021; Isleib, 2013; Nelson & Stock, 2018). Indeed, in our study, corn and soybean, the two crops that make up 36% and 40%, respectively, of farmed acres in Indiana (USDA NASS, 2019), were the least commonly produced among current beginning farmers in our system. Likewise, prospective farmers showed little interest in these crops. Instead, beginning farmers in our study were most interested in vegetable and fruit production. This is consistent with what is grown by more established small- or medium-scale farmers in Indiana and in the U.S. more broadly. Relatedly, the most important motivation for current farmers to start, operate, and maintain a farm in Indiana was to pursue farming as a lifestyle, followed by supporting a sustainable food system and promoting environmentally friendly agricultural practices, which are very much aligned with the

agroecological production paradigm (Bruce, 2019; Iles et al., 2020; Iles et al., 2021; Kirschenmann, 2010).

Reliance on Pluriactivity

Our study also highlights small- and medium-scale beginning farmers’ reliance on pluriactivity, or holding multiple jobs, to sustain their farming operations and the constant challenges they face in balancing farming and other jobs. This reliance on pluriactivity and the associated challenges are not unique to beginning farmers in Indiana but affirm trends found elsewhere in North America (e.g., Bessant, 2008; Bruce, 2019), as well as well-documented livelihood diversification prevalent in the process of repeasantization (Nelson & Stock, 2018). Previous literature has argued that the need for pluriactivity may decrease as farming operations grow (Thilmany & Ahearn, 2013). Thus, “industry participants must not overlook the importance of off-farm income in transitioning a young and beginning farmer’s operation” (Bubela, 2016, p. 6). Whether pluriactivity truly decreases over time is a topic for further research. However, it cannot be assumed that reliance on pluriactivity is transitional. Anecdotally, several beginning farmers told our research team that they or their spouse maintain an off-farm job to not only supplement their income but also gain access to health insurance. This echoes findings from Inwood et al. (2017) and Becot (2020) that showed that farmers were similarly motivated to keep off-farm employment to maintain access to health insurance. This further demonstrates the ongoing importance of pluriactivity in supporting small- and medium-scale beginning farmers even as their farms become more established over time. Pluriactivity may also help account for our respondents’ higher overall incomes. Additionally, it is important to note that some beginning farmers may not want to farm full-time without other employment. Rather, previous research has shown that a portion of beginning farmers aim to remain part-time and, in some cases, do not seek to make a profit from their production (Song et al., 2022; Sutherland et al., 2019). Thus, agricultural extension services and other support infrastructure should consider how to support begin-

ning farmers with a variety of profit and employment goals.

Pluriactivity is also connected with another important challenge facing beginning farmers in our study and more broadly—farm labor. Over a third of our respondents relied on full-time or part-time farm labor from outside their household. At the same time, many of these farmers had off-farm jobs. This is a conundrum facing many beginning farmers—working off-farm offers crucial opportunities to manage risks associated with transitioning into agriculture (Bubela, 2016); yet it also equates to less time available for farming-related work (Suryanata et al., 2021). As noted above, full-time farming may not be the goal for all beginning farmers. Nevertheless, the lack of sufficient time to invest in on-farm labor as well as the direct marketing work that is necessary for generating sufficient sales was a repeated challenge for many beginning farmers (Iles et al., 2021). Beginning farmers often pursue diversified agricultural production and environmentally friendly farming practices that may require higher labor inputs (Kremen et al., 2012). This diversity in production systems, coupled with their relatively small farm sizes, may require more manual labor (and consequently time), as technology commonly used on larger monoculture farms may not be appropriate for these beginning farmers (Bruce & Castellano, 2017; Kremen et al., 2012). This is exacerbated by the documented challenge of finding and affording reliable labor for small-scale farmers more broadly (Brown & Miller, 2008; Bruce & Castellano, 2017; MacAuley & Niewolny, 2015). In short, labor- and time-intensive production systems coupled with off-farm job responsibilities can pose significant challenges for small- and medium-scale beginning farmers to maintain their operations.

Differentiated Perceptions of Time Constraints

Interestingly, time constraints were perceived differently by groups of beginning farmers in our study. For example, in our study, women were more likely to perceive the challenge of time and labor than men. Indeed, it has been shown that women are more likely to retain domestic responsibilities in addition to on-farm labor (Allen & Sachs, 2007; Sachs et al., 2016) and that balancing these

demanding responsibilities is a major stress for women farmers (Shisler & Sbicca, 2019). Currently, close to half of the beginning farmers in the U.S. are women (Fremstad & Paul, 2020; USDA NASS, 2019). Our findings point to the need for targeted support that mitigates time-related challenges and further research to better understand the reasons women farmers were challenged by time constraints.

At the same time, women in our study were less likely than men to identify challenges related to marketing and were more likely to be motivated to support a sustainable food system. This echoes previous work showing that women oftentimes think of farming as a way to nourish themselves and care for their community (Jarosz, 2011) and tend to perform predominately feminine-coded work, including customer support (Shisler & Sbicca, 2019). While many studies have been conducted in the Global South to look at the role of women and men within farming households, relatively limited knowledge exists in the Global North about women's domestic, productive, and community labor responsibilities (Ball, 2020; Brandth, 2002; Meares, 1997; Trauger et al., 2010). Our study points out the need to further examine gendered intra-farm dynamics in the U.S., where the number of women who farm continues to grow (Fremstad & Paul, 2020; USDA NASS, 2019).

Veterans or active-duty members in our study also perceived time constraints differently. Specifically, military beginning farmers were less likely to view time as a significant challenge than their non-military counterparts. This could be an extension of the gendered difference, as a large majority of the military beginning farmers were men. However, it has also been suggested that veterans' skills may be particularly suited to agriculture (Donoghue et al., 2014), so they may perceive challenges differently than non-military beginning farmers. Furthermore, military beginning farmers may have a pension from their service that supplements their agricultural income and access to some healthcare services, which could reduce their need for off-farm employment. So far, little research has been done to understand how beginning farmers with military backgrounds engage in agriculture. More

information is needed, especially as federal and state programs for beginning farmers continue to target veterans (Donoghue et al., 2014; Fleming, 2015).

Finally, beginning farmers with higher education were also more likely to identify time constraints as a challenge. This could potentially be attributed to the prevalence of off-farm work among those with advanced degrees. Other research has shown that farmers with higher levels of education were more likely to farm part-time than those with lower levels of education, in part due to their access to higher-paying off-farm work (Jansuwan & Zander, 2022). As such, full-time on-farm work would have a higher opportunity cost for those with advanced degrees than those without. Further research is needed to better understand this dynamic related to the challenges of time and risk management across different segments of small- and medium-scale beginning farmers.

Land Access

In addition to time constraints, land access has been touted as a critical barrier to entering agriculture for new farmers (Ahearn, 2011; Calo & De Master, 2016; Horst & Gwin, 2018; Katchova & Ahearn, 2016). However, in our study, land access was not ranked among the top challenges faced by small- and medium-scale beginning farmers in Indiana. In fact, less than 20% of our respondents leased land to farm from other landowners, while the rest were the primary owners of their farmland. The land they owned had most often been purchased from someone they did not know (rather than a family member or friend), suggesting our respondents' ability to acquire land with their financial rather than social capital. While this phenomenon requires additional research, it may be explained by the fact that our respondents had relatively high incomes, supported by their reliance on pluriactivity and higher education level, and were operating small- and medium-scale farms. Moreover, the majority of beginning farmers in our study were over the age of 35, and many were veterans or active-duty members. Thus, these individuals may have resources that younger farmers do not have to help them access land.

Access to Information and Social Support

Previous research has demonstrated that the social aspects of farming, such as connecting with peers and feeling supported by customers, have important implications for long-term farm sustainability and farmer decision-making (Iles et al., 2020; Jarosz, 2012; Källström & Ljung, 2009). While small- and medium-scale beginning farmers in our study emphasized the need for social support and relationships, connecting to other farmers was not a primary challenge, and these respondents were reluctant to engage in a formal farmer group, association, or organization. This is unsurprising because our results also revealed that small- and medium-scale beginning farmers tended to research information about starting, operating, or sustaining a small-scale farm on the internet. This may reflect the time constraints many beginning farmers face, as finding information online may be considered more efficient than participating in a formal group. With a majority of small- and medium-scale beginning farmers mostly relying on their own research on the Internet, efforts are needed to ensure that scientifically based information and professional advice are easily searchable, readily accessible (in terms of understandability), and engaging for small- and medium-scale beginning farmers.

Beginning farmers in our study also placed a high importance on the technical and informational resources that are pertinent for addressing their needs and challenges. As argued in many previous studies, current agricultural extension and education programs in the U.S. have been primarily developed to assist larger-scale commodity agriculture and are often ill-suited to address the needs and challenges of small- or medium-scale farmers (Iles et al., 2020; Meyer et al., 2011). Many extension educators may lack the capacity to assist beginning farmers, who tend to engage in diversified, small- or medium-scale agricultural systems. Beginning farmers' technical needs and the challenges of their production practices, business management, and marketing can be quite different from those of the traditional extension clientele of larger-scale commodity producers (Iles et al., 2021). For example, identifying effective direct-marketing strategies was ranked as one of the top challenges facing beginning farmers in our study. However, intrapersonal

communication, relationship-building, and the application of these skills to direct marketing are seldom the focus of extension-led agricultural outreach programs.

Furthermore, there has been some evidence suggesting that younger generations of small- and medium-scale farmers may have less trust in formal institutions such as extension programs than their older counterparts (Feola et al., 2015; Iles et al., 2020). Although attending extension workshops or events may still be important in the foreseeable future, many small- or medium-scale beginning farmers in our study expressed the desire for independent learning. Nevertheless, interactions with other farmers and visiting farms like theirs were key sources of information to beginning farmers in our study. Thus, Extension and other outreach programs should consider ways to target support systems that match small- or medium-scale beginning farmers' ways of acquiring information. It should be noted that the majority of beginning farmers in our study did interact with extension programs to some degree. This may be due in part to the recruiting efforts we used in this study; however, further research could target beginning farmers who have had less exposure to extension programs or examine the beginning farmers' perceptions toward their past and ongoing interactions with extension offices and agents. For instance, Purdue Extension in Indiana has multiple programs dedicated to beginning farmers. It would be beneficial to assess how beginning farmers perceive this programming to better understand how to improve current support systems to address the challenges and needs of this population.

Further Research and Limitations

Some researchers have cautioned against depicting beginning farmers as "young, well-educated individuals, operating smaller farms with a positive value of farm production, perhaps with access to farmland through relatives," as in the 2009 USDA Agricultural Resource Management Survey (Ahearn, 2011). However, beginning farmers in our study were indeed younger and more educated than the established farmer population, and most of them had purchased land from someone they did not know. These demographics may be due to

changes in the beginning farmer population over the last decade, but it also suggests there is still a lot to be learned about the 27% of agricultural producers in the U.S. who have been classified as beginning producers (USDA NASS, 2019).

Finally, we want to note that our sampling frame for the survey was limited by the lack of a complete database of beginning farmers in the state. Although our comprehensive recruitment efforts reduced such limitation, we observed two potential biases. First, there was an overrepresentation of veteran respondents in our survey. One of our four sources for contacts that we used to construct our sampling frame was a database of participants in a USDA-funded beginning farmer extension project, which has an outreach component targeting veterans who want to start a farm. Second, our sampling strategy made it easier to include farmers with a stronger online presence or those who attended the conference at which we sampled. As such, our study highlights a need to identify more effective strategies to reach and engage with beginning farmers without an online presence or those who are less integrated into existing extension programming.

Conclusion

In Indiana and other places in the midwestern U.S., the farmer population mostly consists of experienced yet aging individuals operating large-scale commodity cropping systems (USDA NASS, 2019). Changes in the current agricultural systems, coupled with a growing public interest in local and sustainable food systems, have contributed to a growing population of beginning farmers (Hinrichs, 2000; Iles et al., 2021; Trauger et al., 2010). Our study shows that small- and medium-scale beginning farmers in Indiana were primarily operating, or interested in operating, diversified agriculture and were motivated to support local, environmentally friendly, sustainable food systems. They relied heavily on pluriactivity and were challenged to balance on-farm and off-farm responsibilities, access labor, and identify marketing strategies. In addition, these beginning farmers were more interested in connecting with other farmers and visiting similar farms than being part of formal farmer organizations. These results contribute to a

greater understanding of small- and medium-scale beginning farmers' motivations, challenges, and needs associated with starting and sustaining a farm. These results can also be used to inform agricultural professionals and organizations in their efforts to tailor technical assistance, outreach, and other programming to better align with beginning farmers' motivations and to address their unique needs and challenges.

Our study also highlights additional areas of research. For example, future studies could assess the gendered division of labor in terms of day-to-day farming activities, caregiving responsibilities, and the navigation of multiple jobs (Ball, 2020). Our study also suggests a need to assess existing extension programming for small- and medium-scale beginning farmers to better understand what type of support structures promote interactions between agricultural extension and this group of producers, particularly in comparison to what has been provided to their larger-scale counterparts. Finally, it is important to note that while there have been programming and policy efforts to support beginning farmers from historically excluded groups, disparities in land ownership, profit, and

access to resources persist (Ball, 2020; Suryanata et al., 2021). Thus, additional work is needed to identify the unique challenges faced by, for example, non-white beginning farmers, to create more equitable agricultural programming and support their role in the social-environmental landscape. Ultimately, it is important to not treat beginning farmers as a homogenous group. Instead, our study has provided important insights on how to develop targeted infrastructure to support small- and medium-scale beginning farmers' livelihoods and address their unique challenges as they start and sustain their farms.

Acknowledgments

We are grateful for all the beginning farmers who participated in our study. Without their help, this study would have not been possible. We also thank Dr. Linda Prokopy and various Purdue University Extension educators and specialists for their valuable insights. We would also like to thank two anonymous reviewers for their input. Finally, we would like to express our gratitude to the Local Growers Guild and Indiana Small Farm Conference for their support and interest in this study.

References

- Ahearn, M. (2011). Potential challenges for beginning farmers and ranchers. *Choices*, 2. <https://www.choicesmagazine.org/choices-magazine/theme-articles/innovations-to-support-beginning-farmers-and-ranchers/potential-challenges-for-beginning-farmers-and-ranchers>
- Ahearn, M., & Newton, D. (2009). *Beginning farmers and ranchers* (Economic Information Bulletin No. 53). USDA Economic Research Service. https://www.ers.usda.gov/webdocs/publications/44395/9417_eib53_1_.pdf
- Allen, P., & Sachs, C. (2007). Women and food chains: The gendered politics of food. *The International Journal of Sociology of Agriculture and Food*, 15(1), 1–23. <https://doi.org/10.48416/ijfaf.v15i1.424>
- Armbruster, W. J., & Ahearn, M. C. (2014). Changing structure and organization of US agriculture. In N. K. Van Alfen (Ed.), *Encyclopedia of Agriculture and Food Systems* (pp. 201–219). Academic Press.
- Ball, J. A. (2020). Women farmers in developed countries: A literature review. *Agriculture and Human Values*, 37, 147–160. <https://doi.org/10.1007/s10460-019-09978-3>
- Bessant, K. (2008). A farm household conception of pluriactivity in Canadian agriculture: Motivation, diversification, and livelihood. *Canadian Review of Sociology*, 43(1), 51–72. <https://doi.org/10.1111/j.1755-618X.2006.tb00854.x>
- Besterman-Dahan, K., Chavez, M., & Njoh, E. (2018). Rooted in the community: Assessing the reintegration effects of agriculture on rural veterans. *Archives of Physical Medicine and Rehabilitation*, 99(2), S72–S78. <https://doi.org/10.1016/j.apmr.2017.06.035>
- Brandth, B. (2002). Gender identity in European family farming: A literature review. *Sociologia Ruralis*, 42(3), 181–200. <https://doi.org/10.1111/1467-9523.00210>

- Brown, C., & Miller, S. (2008). The impacts of local markets: A review of research on farmers markets and community supported agriculture (CSA). *American Journal of Agricultural Economics*, 90(5), 1298–1302.
<https://doi.org/10.1111/j.1467-8276.2008.01220.x>
- Bruce, A. B. (2019). Farm entry and persistence: Three pathways into alternative agriculture in southern Ohio. *Journal of Rural Studies*, 69, 30–40. <https://doi.org/10.1016/j.jrurstud.2019.04.007>
- Bruce, A., & Castellano, R. S. (2017). Labor and alternative food networks: Challenges for farmers and consumers. *Renewable Agriculture and Food Systems*, 32(5), 403–416. <https://doi.org/10.1017/S174217051600034X>
- Bubela, H. J. (2016). Off-farm income: Managing risk in young and beginning farmer households. *Choices*, 31(3), 1–8.
https://www.choicesmagazine.org/UserFiles/file/cmsarticle_523.pdf
- Calo, A. (2018). How knowledge deficit interventions fail to resolve beginning farmer challenges. *Agriculture and Human Values*, 35, 367–381. <https://doi.org/10.1007/s10460-017-9832-6>
- Calo, A., & De Master, K. T. (2016). After the incubator: Factors impeding land access along the path from farmworker to proprietor. *Journal of Agriculture, Food Systems, and Community Development*, 6(2), 111–127.
<https://doi.org/10.5304/jafscd.2016.062.018>
- Carajon. (2008). *When do you have a farm?* [Online forum post]. Houzz.
<https://www.houzz.com/discussions/1428663/when-do-you-have-a-farm>
- Carolan, M. (2018). Lands changing hands: Experiences of succession and farm (knowledge) acquisition among first-generation, multigenerational, and aspiring farmers. *Land Use Policy*, 79, 179–189.
<https://doi.org/10.1016/j.landusepol.2018.08.011>
- Carlisle, L., de Wit, M. M., DeLonge, M. S., Calo, A., Getz, C., Ory, J., Munden-Dixon, K., Galt, R., Melone, B., Knox, R., Iles, A., & Press, D. (2019). Securing the future of US agriculture: The case for investing in new entry sustainable farmers. *Elementa: Science of the Anthropocene*, 7, 17. <https://doi.org/10.1525/elementa.356>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Sage Publications.
- de Vaus, D. (2002). *Analyzing social science data: 50 key problems in data analysis*. Sage.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, mail, and mixed-mode surveys: The tailored design method* (4th ed.). John Wiley & Sons.
- Donoghue, D. J., Goodwin, H. L., Mays, A. R., Arsi, K., Hale, M., Spencer, T., O’Gorman, M., Jose, S., Gekara, O. J., Burke, J. M., & Donoghue, A. M. (2014). Armed to farm: Developing training programs for military veterans in agriculture. *Journal of Rural Social Sciences*, 29(2), Article 5. <https://egrove.olemiss.edu/jrss/vol29/iss2/5>
- Farm Curious. (2010, November 3). *So you call yourself a farmer?*
<https://www.farmcurious.com/blogs/farmcurious/17598724-so-you-call-yourself-a-farmer>
- Farmer Veteran Coalition. (2016). *2016 annual report*.
<https://www.farmvetco.org/wp-content/uploads/2017/06/FVC-2016-Annual-Report.pdf>
- Feola, G., Lerner, A. M., Jain, M., Montefrio, M. J. F., & Nicholas, K. A. (2015). Researching farmer behaviour in climate change adaptation and sustainable agriculture: Lessons learned from five case studies. *Journal of Rural Studies*, 39, 74–84. <https://doi.org/10.1016/j.jrurstud.2015.03.009>
- Fleming, L. L. (2015). Veteran to farmer programs: An emerging nature-based programming trend. *Journal of Therapeutic Horticulture*, 25(1), 27–48. <https://www.jstor.org/stable/24865257>
- Freedgood, J., Hunger, M., Dempsey, J., & Sorensen, A. (2020). *Farms under threat: The state of the States*. American Farmland Trust. <https://farmlandinfo.org/publications/farms-under-threat-the-state-of-the-states/>
- Fremstad, A., & Paul, M. (2020). Opening the farm gate to women? The gender gap in U.S. agriculture. *Journal of Economic Issues*, 54(1), 124–141. <https://doi.org/10.1080/00213624.2020.1720569>
- Grimes, D. A., & Schulz, K. F. (2002). Descriptive studies: What they can and cannot do. *Lancet*, 359(9301), 145–149.
[https://doi.org/10.1016/S0140-6736\(02\)07373-7](https://doi.org/10.1016/S0140-6736(02)07373-7)
- Hinrichs, C. C. (2000). Embeddedness and local food systems: Notes on two types of direct agricultural market. *Journal of Rural Studies*, 16(3), 295–303. [https://doi.org/10.1016/S0743-0167\(99\)00063-7](https://doi.org/10.1016/S0743-0167(99)00063-7)

- Horst, M., & Gwin, L. (2018). Land access for direct market food farmers in Oregon, USA. *Land Use Policy*, 75, 594–611. <https://doi.org/10.1016/j.landusepol.2018.01.018>
- Iles, K., Ma, Z., & Erwin, A. (2020). Identifying the common ground: Small-scale farmer identity and community. *Journal of Rural Studies*, 78, 25–35. <https://doi.org/10.1016/j.jrurstud.2020.06.018>
- Iles, K., Ma, Z., & Nixon, R. (2021). Multi-dimensional motivations and experiences of small-scale farmers. *Society and Natural Resources*, 34(3), 352–372. <https://doi.org/10.1080/08941920.2020.1823540>
- Isleib, J. (2013, July 31). *What motivates beginning farmers?* Michigan State University Extension. https://www.canr.msu.edu/news/what_motivates_beginning_farmers.
- Jablonski, B. B. R., Key, N., Hadrich, J., Bauman, A., Campbell, S., Thilmany, D., & Sullins, M. (2022). Opportunities to support beginning farmers and ranchers in the 2023 Farm Bill. *Applied Economic Perspectives and Policy*, 44(3), 1177–1194. <https://doi.org/10.1002/aep.13256>
- Jablonski, B. B. R., Thilmany McFadden, D., Sullins, M., & Curtis, K. R. (2017). Determinants of effective beginning farmer programming and implications for future programs. *Journal of Agricultural and Resource Economics*, 42(3), 427–438. <https://www.jstor.org/stable/44840965>
- Jansuwan, P., & Zander, K. K. (2022). Multifunctional farming as successful pathway for the next generation of Thai farmers. *PLoS ONE*, 17(4), Article e0267351. <https://doi.org/10.1371/journal.pone.0267351>
- Jarosz, L. (2011). Nourishing women: Toward a feminist political ecology of community supported agriculture in the United States. *Gender, Place & Culture*, 18(3), 307–326. <https://doi.org/10.1080/0966369X.2011.565871>
- Jarosz, L. (2012). Understanding agri-food networks as social relations. *Agriculture and Human Values*, 17, 279–283. <https://doi.org/10.1023/A:1007692303118>
- Jöhr, H. (2012). Where are the future farmers to grow our food? *International Food and Agribusiness Management Review*, 15(A), 9–11. <https://ageconsearch.umn.edu/record/129168/>
- Källström, H. N., & Ljung, M. (2009). Social sustainability and collaborative learning. *Ambio*, 34(4), 376–382. <https://doi.org/10.1579/0044-7447-34.4.376>
- Katchova, A. L., & Ahearn, M. C. (2016). Dynamics of farmland ownership and leasing: implications for young and beginning farmers. *Applied Economic Perspectives and Policy*, 38(2), 334–350. <https://www.jstor.org/stable/44788092>
- Katchova, A. L., & Ahearn, M. C. (2017). Farm entry and exit from US agriculture. *Agricultural Finance Review*, 77(1), 50–63. <https://doi.org/10.1108/AFR-03-2016-0021>
- Kinsella, J., Wilson, S., De Jong, F., & Renting, H. (2000). Pluriactivity as a livelihood strategy in Irish farm households and its role in rural development. *Sociologia Ruralis*, 40(4), 481–496. <https://doi.org/10.1111/1467-9523.00162>
- Kirschenmann, F. (2010). Alternative agriculture in an energy- and resource-depleting future. *Renewable Agriculture and Food Systems*, 25(2), 85–89. <https://doi.org/10.1017/S1742170510000141>
- Knupfer, N. N., & McLellan, H. (1996). Descriptive research for educational communications and technology. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 1196–1212). Routledge.
- Kremen, C., Iles, A., & Bacon, C. (2012). Diversified farming systems: An agroecological, systems-based alternative to modern industrial agriculture. *Ecology and Society*, 17(4), Article 44. <https://doi.org/10.5751/ES-05103-170444>
- Lobley, M., Baker, J. R., & Whitehead, I. (2010). Farm succession and retirement: Some international comparisons. *Journal of Agriculture, Food Systems, and Community Development*, 1(1), 49–64. <https://doi.org/10.5304/jafscd.2010.011.009>
- MacAuley, L. E., & Niewolny, K. L. (2015). Situating on-farm apprenticeships within the alternative agrifood movement: Labor and social justice implications. *Journal of Agriculture, Food, Systems, and Community Development*, 6(2), 195–223. <https://doi.org/10.5304/jafscd.2016.062.024>
- Mariola, M. J., Schwieterman, A., & Desonier-Lewis, G. (2022). What do local foods consumers want? Lessons from ten years at a local foods market. *Journal of Agriculture, Food Systems, and Community Development*, 11(3), 211–227. <https://doi.org/10.5304/jafscd.2022.113.011>

- Meares, A. C. (1997). Making the transition from conventional to sustainable agriculture: Gender, social movement participation, and quality of life on the family farm. *Rural Sociology*, 62(1), 21–47. <https://doi.org/10.1111/j.1549-0831.1997.tb00643.x>
- Meyer, L., Hunter, J., Katchova, A., Lovett, S., Thilmany, D., Sullins, M., & Card, A. (2011). Approaching beginning farmers as a new stakeholder for Extension. *Choices: The Magazine of Food, Farm, and Resource Issues*, 26(2). <https://www.choicesmagazine.org/choices-magazine/theme-articles/innovations-to-support-beginning-farmers-and-ranchers/approaching-beginning-farmers-as-a-new-stakeholder-for-extension>
- Nelson, J., & Stock, P. (2018). Repeasantisation in the United States. *Sociologia Ruralis*, 58(1), 83–103. <https://doi.org/10.1111/soru.12132>
- Neuman, W. L. (2010). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Pearson.
- Ngo, M., & Brklacich, M. (2014). New farmers' efforts to create a sense of place in rural communities: Insights from southern Ontario, Canada. *Agriculture and Human Values*, 31, 53–67. <https://doi.org/10.1007/s10460-013-9447-5>
- Niewolny, K. L., & Lillard, P. T. (2010). Expanding the boundaries of beginning farmer training and program development: A review of contemporary initiatives to cultivate a new generation of American farmers. *Journal of Agriculture, Food Systems, and Community Development*, 1(1), 65–88. <https://doi.org/10.5304/jafscd.2010.011.010>
- Ritchie, J., Lewis, J., Nicholls, C.M., Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers* (2nd ed.). Sage Publications.
- Rosenberg, N. A. (2017). Farmers who don't farm: The curious rise of the zero-sales farmer. *Journal of Agriculture, Food Systems, and Community Development*, 7(4), 149–157. <https://doi.org/10.5304/jafscd.2017.074.005>
- Sachs, C. E., Barbercheck, M. E., Braiser, K. J., Kiernan, N. E., & Terman, A. R. (2016). *The rise of women farmers and sustainable agriculture*. University of Iowa Press. <https://doi.org/10.2307/j.ctt20p57gr>
- Shisler, R. C., & Sbicca, J. (2019). Agriculture as carework: The contradictions of performing femininity in a male-dominated occupation. *Society & Natural Resources*, 32(8), 875–892. <https://doi.org/10.1080/08941920.2019.1597234>
- Song, B., Robinson, G. M., & Bardsley, D. K. (2022). Hobby and part-time farmers in a multifunctional landscape: Environmentalism, lifestyles, and amenity. *Geographical Research*, 60(3), 480–497. <https://doi.org/10.1111/1745-5871.12541>
- Strong, L. (2015, December 31). *Who has the right to call themselves a farmer?* Clover Hill Diaries. <https://chdairiesdiary.wordpress.com/2015/12/31/who-has-the-right-to-call-themselves-a-farmer/>
- Suryanata, K., Mostafanezhad, M., & Milne, N. (2021). Becoming a new farmer: Agrarianism and the contradictions of diverse economies. *Rural Sociology*, 86(1), 139–164. <https://doi.org/10.1111/ruso.12355>
- Sutherland, L.-A., Barlagne, C., & Barnes, A. P. (2019). Beyond 'hobby farming': Towards a typology of non-commercial farming. *Agriculture and Human Values*, 36, 475–493. <https://doi.org/10.1007/s10460-019-09930-5>
- Thilmany, D., & Ahearn, M. (2013, March 2013). Beginning farmers and local food systems. *Communities and Banking*, 11–13. <https://www.bostonfed.org/publications/communities-and-banking/2013/spring/beginning-farmers-and-local-food-systems.aspx>
- Trauger, A., Sachs, C., Barbercheck, M., Brasier, K., & Kiernan, N. E. (2010). “Our market is our community”: Women farmers and civic agriculture in Pennsylvania, USA. *Agriculture and Human Values*, 27, 43–55. <https://doi.org/10.1007/s10460-008-9190-5>
- U.S. Census Bureau. (2016). 2012–2016: *ACS 5-Year Estimates Data Profile – Selected Economic Characteristics*. <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2016/>
- U.S. Department of Agriculture Economic Research Service [USDA ERS]. (2022). *Farming and farm income*. <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/farming-and-farm-income/>
- USDA National Agricultural Statistical Service [USDA NASS]. (2016). *Indiana agricultural statistics 2015–2016*. https://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/1516/IN1516Bulletin.pdf
- USDA NASS. (2019). *2017 census of agriculture*. <https://www.nass.usda.gov/Publications/AgCensus/2017/index.php>

USDA NASS. (2020). *2017 Census – New and beginning producers*.

<https://www.nass.usda.gov/Publications/Highlights/index.php>

Van Der Ploeg, J. D., & Renting, H. (2000). Impact and potential: A comparative review of European rural development practices. *Sociologia Ruralis*, 40(4), 529–543. <https://doi.org/10.1111/1467-9523.00165>

Young Farmers Coalition (2017). *Building a future with farmers II: Results and recommendations from the National Young Farmer Survey*. <https://www.youngfarmers.org/resource/building-a-future-with-farmers-ii/>

Appendix A. Survey Instrument
(following pages)

Survey of Beginning Farmers in Indiana



Illustration: Dorling Kindersley, from <https://foodfreedom.wordpress.com/>

Background and instructions

This survey is part of a research and extension project conducted by Purdue University titled “Infrastructure, access, community: a plan to support beginning farmers in Indiana.” The objective of this survey is to learn about what motivates beginning farmers to start a farm, what challenges they face in starting, operating and sustaining their farm, and what information and resource needs they may have.

- ✓ For the purpose of this survey, please use the following definitions:
- Beginning farmers are considered as (1) anyone who has been farming 10 years or less, or (2) anyone who is interested in starting a farm.
 - Small-scale farmers are considered as farmers who operate 250 acres of land or less.
 - Veteran farmers are considered as farmers who served or are serving in the U.S. Military.

Your farm and/or interest in farming

1. Do you currently farm or operate a farm? *Check only one*

- Yes → If yes, please turn to the next page and start with Question 2. We would greatly appreciate if you could answer the remainder of the survey.
- No → If no, please answer the sub-questions below (1a-1f), and then turn to Page 4 and start with Questions 19. We would greatly appreciate if you could answer the remainder of the survey.

1a. Are you interested in starting a farm in Indiana in the future? *Check only one*

- Yes No → If no, please turn to Page 10 to only answer Questions 32-39.

1b. What makes you want to start a farm in Indiana? *Check all that apply*

- To pursue farming as a lifestyle
- To have a place where my family and I can enjoy each other's work and company
- To raise children to be close to the food they eat and the soil that supports us
- To raise my family to understand the importance of hard work
- To pass down the values, land, and way of farming to future generations
- To prevent farmland being converted to other uses
- To increase the presence of small farms
- To provide fresh food to our communities
- To contribute to the local food movement
- To have a place where our community members can see how food is grown/raised
- To promote environmentally friendly agricultural practices
- To support a sustainable food system
- To reduce the ecological impacts of food production, protect the environment, and conserve natural resources
- To get away from the political, economic, and social structures of our current food system
- To provide income for me and my family
- To promote local economies
- Other, please specify: _____
- Other, please specify: _____

1c. Which of the following best describes your current knowledge of starting a farm in Indiana?
Check only one

- No knowledge Limited knowledge Moderate knowledge Substantial knowledge

1d. What is your level of confidence in your ability to start a farm in Indiana? *Check only one*

- Not confident Minimally confident Moderately confident Very confident

1e. Which of the following would you like to grow or do on your future farm in Indiana? *Check all that apply*

- | | | | |
|---|---|--|-------------------------------------|
| <input type="checkbox"/> Corn and soybean | <input type="checkbox"/> Legumes other than soybean | <input type="checkbox"/> Fruit | <input type="checkbox"/> Flowers |
| <input type="checkbox"/> Grains | <input type="checkbox"/> Vegetables | <input type="checkbox"/> Grass-fed beef | <input type="checkbox"/> Goats |
| <input type="checkbox"/> Pastured poultry | <input type="checkbox"/> Pastured pigs | <input type="checkbox"/> Hydroponics | <input type="checkbox"/> Aquaponics |
| <input type="checkbox"/> Bees | <input type="checkbox"/> Dairy | <input type="checkbox"/> Value-added products (e.g., salsa, popcorn) | |
| <input type="checkbox"/> Organic production | <input type="checkbox"/> Permaculture | | |
| <input type="checkbox"/> Other, please specify: _____ | | | |

1f. Generally speaking, which of the following topics related to starting, operating and sustaining a farm would you like to learn about? *Check all that apply*

- | | |
|--|--|
| <input type="checkbox"/> Land acquisition | <input type="checkbox"/> Access to financial resources |
| <input type="checkbox"/> Access to additional labor (e.g., hiring and working with interns) | <input type="checkbox"/> Access to farm equipment |
| <input type="checkbox"/> Business management practices | <input type="checkbox"/> Marketing strategies |
| <input type="checkbox"/> Environmentally sustainable farming practices | <input type="checkbox"/> Farming with disability |
| <input type="checkbox"/> Local and state regulations and rules about farming | <input type="checkbox"/> Beginning farmer networks |
| <input type="checkbox"/> Local, state, federal programs that assist beginning farmers to start, operate and sustain a farm | |
| <input type="checkbox"/> Local, state, federal programs that assist military Veterans to start, operate and sustain a farm | |
| <input type="checkbox"/> Other, please specify: _____ | |
| <input type="checkbox"/> Other, please specify: _____ | |

2. Which of the following describes your background or experience related to farming prior to operating your current farm in Indiana? *Check all that apply*

- I grew up on a farm, which allowed me to experience the farm life.
- I had family members who owned a farm and I visited when I was growing up.
- I worked on a farm as a job or internship.
- I have been interested in farming and learned about farming and farm life on my own.
- I had no farming background or experience prior to operating my current farm.
- Other, please specify: _____

3. In which year did you, personally, first start operating your current farm in Indiana? _____

4. Which of the following have you grown or done on your farm in the past 12 months? *Check all that apply*

- | | | |
|---|--|---|
| <input type="checkbox"/> Corn and soybean | <input type="checkbox"/> Legumes other than soybean | <input type="checkbox"/> Grains |
| <input type="checkbox"/> Vegetables | <input type="checkbox"/> Fruit | <input type="checkbox"/> Flowers |
| <input type="checkbox"/> Pastured poultry | <input type="checkbox"/> Pastured pigs | <input type="checkbox"/> Grass-fed beef |
| <input type="checkbox"/> Goats | <input type="checkbox"/> Bees | <input type="checkbox"/> Dairy |
| <input type="checkbox"/> Hydroponics | <input type="checkbox"/> Aquaponics | <input type="checkbox"/> Organic production |
| <input type="checkbox"/> Permaculture | <input type="checkbox"/> Value-added products (e.g., salsa, popcorn) | |
| <input type="checkbox"/> Other, please specify: _____ | | |

5. How many acres of land do you farm? _____ acres

6. How did you acquire the land you farm? *Check all that apply*

- I lease the land from others.
- I inherited the land from a family member.
- I bought the land from someone outside of my family but I knew that person before.
- I bought the land from someone outside of my family who I didn't know before.
- Others, please specify: _____
- I received the land as a gift.
- I bought the land from a family member.

7. Is your home on or immediately next to the land where you farm in Indiana? *Check only one*

- Yes No → **If no, how far is your home from your farm?** _____ miles

8. How many people work on your farm in Indiana, either full-time or part-time, either from your household or outside of your household, including yourself?

No. of full-time from my household: _____ No. of full-time from outside of my household: _____
 No. of part-time from my household: _____ No. of part-time from outside of my household: _____

9. Who made/makes decisions about farming practices and the operation of your farm in Indiana?

Check all that apply

- Me
- Another family member
- Other, please specify: _____
- My spouse
- My business partner
- My children
- My landlord
- My parents

10. How important are the following as reasons for why you started farming in Indiana?

Check only one for each row item

	Very important	Important	Moderately important	Of little importance	Not important
To pursue farming as a lifestyle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To have a place where my family and I can enjoy each other's work and company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To raise children to be close to the food they eat and the soil that supports us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Very important	Important	Moderately important	Of little importance	Not important
To raise my family to understand the importance of hard work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To pass down the values, land, and way of farming to future generations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To prevent farmland being converted to other uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To increase the presence of small farms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To provide fresh food to our communities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To contribute to the local food movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To have a place where our community members can see how food is grown/raised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To promote environmentally friendly agricultural practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To support a sustainable food system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To reduce the ecological impacts of food production, protect the environment, and conserve natural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To get away from the political, economic, and social structures of our current food system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To provide income for me and my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To promote local economies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Current knowledge and farming practices

11. Generally speaking, what is your current level of knowledge regarding operating and sustaining a farm? Check only one

- No knowledge
 Limited knowledge
 Moderate knowledge
 Substantial knowledge

12. Which of the following describes your current familiarity with the following topics related to starting, operating, and sustaining a farm? Check only one for each row item

	Very familiar	Familiar	Moderately familiar	Of little familiarity	Not familiar
Land acquisition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to farm equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to additional labor (e.g., hiring and working with interns)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business management practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local and state regulations and rules about farming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmentally friendly agricultural practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farming with disability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beginning farmer networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local, state, federal programs that assist beginning farmers to start, operate and sustain a farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local, state, federal programs that assist military Veterans to start, operate and sustain a farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Generally speaking, what is your level of confidence in your ability to operate and sustain your farm in Indiana? *Check only one*

- Not confident Minimally confident Moderately confident Very confident

14. Do you think you have the necessary information and knowledge needed to operate and sustain your farm? *Check only one*

- Yes No I don't know

15. Do you think you have the necessary resources (non-informational) needed to operate and sustain your farm? *Check only one*

- Yes No I don't know

16. Which of the following have occurred in the past 12 months? *Check all that apply*

- I sought financial assistance from a local, state or federal program to help me with my farm.
- I took a loan to help me with my farm.
- I sought technical assistance from an agricultural or natural resource professional to help me with farming decision and practices.
- I obtained information about sustainable farming practices.
- I participated in workshops, conferences, or information sessions about farming.
- I searched for information about farming on the Internet.
- I read about farming in magazines, books, and other publications.
- I talked to my family about farming and my farm.
- I talked to my neighboring farmers about farming and my farm.
- I talked to other farmers who is not my neighbor about farming and my farm.
- Other, please specify: _____
- None of the above

17. Do you have a business management plan for your farm in Indiana?

- Yes → **If yes, do you find your business management plan useful?**
 Yes No I don't know
- No → **If no, do you plan to develop a business management plan?**
 Yes No I don't know

18. How do you market and sell your products? *Check all that apply*

- Sell on farm
- Sell on the side of the road
- Sell to restaurants
- Sell in a farmers' market
- Other, please specify: _____
- Have a website to sell via the Internet
- Send flyers and mailers to potential customers
- Establish personal contact with potential customers directly
- Sell through a CSA (community-supported agriculture) program

Challenges and needs

19. In terms of starting, operating and sustaining a farm in Indiana, how challenging has the following been for you personally? *Check only one for each row item*

	Great challenge	Moderate challenge	Little challenge	Not a challenge
Secure the land needed to farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secure the equipment needed to farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decide what to grow/raise on my farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decide what farming techniques and practices to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtain information to answer questions about my farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Great challenge	Challenge	Moderate challenge	Little challenge	Not a challenge
Sift through different sources of information to find what I need to know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understand and deal with zoning regulations and other local and state policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deal with local and state politics related to operating a farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Know who to contact when I have a question about my farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obtain financial resources needed to farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have enough time/labor to do what is needed for the farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understand the environmental impacts of my farming practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Get along with other farmers in my area (town/county)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Find emotional and other support from peer farmers or people who are interested in farming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understand the business side of operating a farm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identify effective marketing strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have to balance farming and other jobs I do for income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deal with family issues (e.g., stress from farming, lack of time spent with family, lack of understanding from family)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. In terms of helping you start, operate and sustain a farm, how important would you rate the following items? Check only one for each row item

	Very important	Important	Moderately important	Of little importance	Not important
Being able to visit other similar farms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to talk to and learn from other farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to talk to an Extension educator or other agricultural professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being part of a formal farmer group, association or organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being part of an informal farmer group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling supported by other small-scale farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling supported by larger-scale farms around me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling supported by my (potential) customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling supported within my own community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having a way to discuss and communicate with other farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to receive more training and information about different aspects of managing a farm business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to access pertinent technical and informational resources for beginning farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to access pertinent financial resources for beginning farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Communication and information sources

21. If you are searching for information about starting, operating, or sustaining a small-scale farm, where would you go or who would you ask? *Check all that apply*

- Purdue Extension educators in my county or nearby counties
- Purdue Extension website
- Sustainable Agriculture Research and Education Program (SARE)
- Natural Resources Conservation Service (NRCS)
- Soil and Water Conservation Districts (SWCD)
- Farm Service Agency
- Indiana State Department of Agriculture
- Indiana Small Farm Conferences or other conferences
- Farmer associations and groups (e.g., Local Growers' Guild)
- Farmer Veteran Coalition
- AgrAbility
- Industry groups or organizations, such as the Indiana Farm Bureau
- Farm Credit Services
- Academic research papers
- My own research on the Internet
- Farmers I know who started and are operating a small-scale farm
- Farmers who started and/or operating big farms
- Private crop advisors or other types of agricultural consultants
- Other, please specify: _____

22. What do you prefer in terms of searching for or receiving information about farming?

Check all that apply

- Mobile texting Facebook Twitter Blogs Websites
- Local newspapers Radio programs TV programs Phone calls Emails
- Agricultural professionals pay a personal visit to my farm Word of mouth
- Direct mailing of hard-copy flyers, brochures, newsletters and other publications
- Face-to-face workshops, training, and other informational events
- Online workshops, webinars, training, and other informational events
- Other, please specify: _____

23. On average, how often have you interacted with and/or received information from the following individuals and entities since you became a farmer or interested in farming?

Check only one for each row item

	Once a week	Several times a month	Once a month	Several times a year	Twice a year	Once a year	Once every few years	Never
Purdue Extension educators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural Resources Conservation Service professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil and Water Conservation Districts professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indiana State Department of Agriculture professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other government agencies, such as: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local, state or national non-profit organizations or farmer associations and groups (e.g., Local Growers' Guild, Farmer Veteran Coalition, Indiana Young Farmers' Association, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry groups or organizations (e.g., Indiana Farm Bureau, Indiana Beef Cattlemen's Association, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private crop advisors or other agricultural consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. What was your aforementioned interaction with agricultural or natural resource professionals about? Check all that apply

I had questions, received information, or obtained assistance about:

- Land acquisition
- Access to additional labor (e.g., hiring and working with interns)
- Business management practices
- Environmentally sustainable farming practices
- Local and state regulations and rules about farming
- Local, state, federal programs that assist beginning farmers to start, operate and sustain a farm
- Local, state, federal programs that assist military Veterans to start, operate and sustain a farm
- Having an Extension educator visit their farm
- Attending an Extension workshop or event
- Visiting a demonstration site or other small-scale farms
- Other, please specify: _____
- Not applicable, because I have not interacted with any agricultural and natural resource professionals about my farm.
- Access to financial resources
- Access to farm equipment
- Marketing strategies
- Farming with disability
- Beginning farmer networks

Your farming community and support

25. Do you know any of the following types of individuals in Indiana personally?

Check only one for each row item

	Yes	No	Don't know
Individuals who are interested in starting a farm but have not yet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beginner farmers (less than 10 years of experience)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Experienced farmers (10 years or more experience)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small-scale farmers (those who tend to grow or produce a variety of crops or livestock products on smaller tracts of land)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers (those who tend to grow mostly corn and soybean on larger tracts of land)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. On average, how often have you interacted with any of the following types of individuals in Indiana since you became a farmer or interested in farming? Check only one for each row item

	Once a week	Several times a month	Once a month	Several times a year	Twice a year	Once a year	Once every few years	Never
Individuals who are interested in starting a farm but have not yet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. Since you became a farmer or interested in farming, have you worked with, helped, or been helped by any of the following types of individuals in Indiana for farming-related reasons?

Check only one for each row item

	Yes	No	Don't know
Individuals who are interested in starting a farm but have not yet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Where do your interactions with other farmers or individuals who are interested in starting a farm occur? Check all that apply

- At the farmers' markets
- On my or other people's farms when we visit each other
- In my town community center
- In my local stores
- Via workshops, conferences, or information sessions organized by Purdue Extension
- Via workshops, conferences, or information sessions organized by a government agency, such as NRCS, SWCD, ISDA
- Via workshops, conferences, or information sessions organized by an industry group or organization, such as Indiana Farm Bureau and Indiana Beef Cattlemen's Association
- Via a non-profit organization or farmer association, such as Local Growers' Guild, Farmer Veteran Coalition, and Indiana Young Farmers' Association
- Through an internet-based tool, such as Facebook, blog, or a farmer organization chatroom
- Other, please specify: _____
- Other, please specify: _____

29. Generally speaking, where do you feel support for you and your farm come from?

Check only one for each row item

	Strong support	Support	Moderate support	Of little support	No support
Other individuals who are interested in starting a farm but have not yet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in the state of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers outside of Indiana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Various farmers' markets I go to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Various CSAs that I am connected to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My spouse/partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My family beyond my spouse/partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strong support	Support	Moderate support	Of little support	No support
Other individuals who are interested in starting a farm but have not yet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Larger-scale farmers in my town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small-scale farmers in my county	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My non-farming friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My farming friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extension educators or other agricultural professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The farmer group, association or organization I am part of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The social media that I am connected to (e.g., Facebook friends, twitter followers, blogs, chatrooms, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. Are you a member of a formal or informal farmer group, association or organization?

No

Yes → **If yes, what is the name of your group, association or organization?** _____

If yes, how is your farmer/producer/grower group, association or organization beneficial to you? Check all that apply

- My group, association or organization operates a website that I can use to market my farm products.
- My group, association or organization sends out event notifications.
- My group, association or organization keeps me informed about state and federal regulations.
- I see my group, association or organization as a source of support, advice, or help.
- I meet and network with other farmers/producers/growers through my group, association or organization.
- Other, please specify: _____

31. How much do you agree with the following statements describing what you consider as your community regarding farming? Check only one for each row item

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
How I think about my community is tied to where I live and farm (e.g., my town, my county, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I consider the customers of my farm products part of my community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I consider other small-scale farmers in my town or county part of my community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I consider other larger-scale farmers in my town or county part of my community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farmers are farmers, and there is no big difference between small-scale and larger-scale farming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have an "inner circle" of people who do not farm that I rely on for support, advice, or help regarding my farm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have an "inner circle" of people who farm that I rely on for support, advice, or help regarding my farm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is an overlap between my circle of peer farmers and my social circle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
Small-scale farming is a hard job that can only be understood by other small-scale farmers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small-scale farming can be an isolating endeavor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small-scale farming is not easy work, but I find its benefits to me, my family, and my community outweigh the difficulties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I sometimes just want to talk to someone about what I am going through as a small-scale farmer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The idea of small-scale farmers supporting and helping each other is great but hard to make it reality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't care what others are saying about my farming practices as long as I can make a good living.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As part of a small-scale farming community, I care about what others think about my farming practices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being part of a small-scale farmer community is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me that I have the ability to provide support, advice, or help to other small-scale farmers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me that other small-scale farmers would provide support, advice, or help to me when needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Demographics

32. Are you a military veteran or active duty member? *Check only one*

- No Yes

33. What is your ethnicity? *Check only one*

- Hispanic Non-Hispanic

34. What is your age? I am _____ years old.

35. What is your gender? *Check only one*

- Male Female Other Prefer not to answer

36. What is the highest degree or level of school you have completed? *Check only one*

- Less than high school/GED High school/GED Some college
 Associate's degree Bachelor's degree Graduate degree

37. What is your household's annual income? *Check only one*

- Less than \$25,000 \$25,000 to \$49,999 \$50,000 to \$99,999
 \$100,000 to \$149,999 \$150,000 to \$199,999 \$200,000 or more

38. On average, what percentage of your household's annual income is derived from your farm?

_____ percent

39. On average, what percentage of your household's annual income is derived from off-farm sources?

_____ percent

If there are any additional comments about information and/or resources you may need to help you start, operate and sustain your farm or concerns that you would like to share, please write them below.

**Thank you for participating in this survey!
Please return your completed questionnaire in the self-addressed, postage-paid envelope provided.**

If you would like a copy of the summary results of this survey, please print your name and address on the back of the return envelope.