

University of Arkansas, Fayetteville

**ScholarWorks@UARK**

---

Horticulture Undergraduate Honors Theses

Horticulture

---

5-2018

## Barriers to Local Food Producers in Arkansas

Courtney Cooper

*University of Arkansas, Fayetteville*

Zola Moon

Follow this and additional works at: <https://scholarworks.uark.edu/hortuht>



Part of the [Agriculture Commons](#), [Food Studies Commons](#), and the [Rural Sociology Commons](#)

---

### Citation

Cooper, C., & Moon, Z. (2018). Barriers to Local Food Producers in Arkansas. *Horticulture Undergraduate Honors Theses* Retrieved from <https://scholarworks.uark.edu/hortuht/6>

This Thesis is brought to you for free and open access by the Horticulture at ScholarWorks@UARK. It has been accepted for inclusion in Horticulture Undergraduate Honors Theses by an authorized administrator of ScholarWorks@UARK. For more information, please contact [scholar@uark.edu](mailto:scholar@uark.edu), [uarepos@uark.edu](mailto:uarepos@uark.edu).

# Barriers to Local Food Producers in Arkansas

Courtney Cooper and Dr. Zola Moon

University of Arkansas



---

## Table of Contents

---

Abstract	4
Introduction	5
Literature Review	6
Definitions	6
Previous Studies	7
Materials and Methods	8
Purpose	8
Design of the Study	8
Participants and Sampling	9
Instrumentation	9
Data Collection	10
Proposed analysis	10
Data and Findings	10
Conclusion	16
Bibliography	18
Appendix	19

## Abstract

The purpose of this study is to identify and describe the barriers that prevent local food producers from selling their food in a local and regional market. This study utilized both qualitative and quantitative analysis through a mixed-methods survey. Information collected through the study had a two-fold focus: barriers that producers face (or that they are providing assistance for) and what are consumers looking for in products that these producers are supplying. The major barriers found for local food producers in Arkansas were lack of capital and obtaining infrastructure for packaging, processing, and storing products. Qualitative analysis of textual interviews was done to establish more detailed information about the most common barriers and gather specific needs. The main barriers found were access to capital and marketing infrastructure.

## Introduction

In the United States, there are roughly 2.1 million farms (USDA ERS, 2013). This statistic is significantly lower than what it was in the mid-20th century, when total farms peaked at 6.8 million in 1935, then fell drastically until hitting a plateau in the 1970s. However, even with this large decrease in total farms, the total acreage under cultivation has stayed the same, meaning the average acres per farm skyrocketed from 155 acres in 1935 to 430 acres in 2012. This growth in acreage per farm has not been evenly distributed to all farms, as there has been exponential growth in production from large-scale farms, but not as much growth in the number of these farms. While only 3% of farms are large-scale family farms (making a revenue of \$1,000,000 or more), those farms make up 42% of production. Family farms are defined by the USDA as “any farm where the majority of the business is owned by the operator and relatives of the operator” (USDA ERS, 2013). Non-family farms make up 1% of the share of total farms, but make up 10.6% of production. In contrast, small family farms (defined as a revenue between \$0-\$350,000) are more than 90% of total farm share but only account for 24% of production.

In Arkansas, this national trend has played out on a local level. The average farm size in Arkansas was 306 acres in 2013 (US Census, 2013). However, 50% of farms are less than 100 acres, meaning many farms in Arkansas are significantly larger than the average of 306 acres.

The size of larger farms has had a negative impact on the majority of the smaller farms. These smaller farmers cannot access many of the resources in place to help farms grow their businesses, as these programs are often aimed towards larger farms with more capital. These include loan programs, processing infrastructures, marketing resources, etc. Many farmers can overcome the small barriers to starting their own farm, but are unable to enter the market in a more competitive level. In agriculture, two types of food systems exist side by side. The food system that dominates the majority of the agricultural sector is composed of large-scale family (as defined above as farms with revenue of \$1,000,000+) and non-family farms, corporations,

and chain grocery stores which have seen massive growth in recent decades. 90% of farms that make up the majority of total farms in the US typically fall into the smaller food system that includes more informal markets such as roadside stands, farmers markets, and trading of goods. While some of these farms do sell to chain grocery stores, most do not have the technical, financial, or educational resources that are available to larger farms with consequently larger incomes.

The purpose of this study is to identify and describe the barriers that prevent local food producers from selling their food in local or regional markets. The study focused on individuals from each step of the food system, from producers to distributors. By gathering qualitative data from individuals working in various food sectors, we can better understand how our society and legal barriers are preventing us from creating a more inclusive and accessible food system for everyone, and to potentially alleviate food insecurity or food desert situations.

## Literature Review

### ***Definitions***

It is important to note the definition for a food system, which can be defined as “a system encompassing all activities and resources that go into producing, distributing, and consuming food, the drivers and outcomes of those processes, and all relationships and feedback loops associated with them” (US Food System, 2014). Another key definition is the concept of local as in “local food systems” or LFS. While many publications choose to define local as a mileage distance or informally as a cultural region, this study defined local as the boundaries of Arkansas due to the extension infrastructure in place. The survey that this study used for data collection was designed and administered by extension. Finally, the last term to note is “organic,” which is referred to in many questions throughout the survey and the following analysis. This study allows the participants to define organic for themselves.

### ***Previous Studies***

While much research has been done on the benefits of local food systems, very little research has been conducted to investigate the barriers to local food producers. In one pilot project by Louisiana State University, researchers attempted to implement more local food in school lunch programs to study barriers for the food service directors. The top barriers as stated by the food service directors included: difficulties finding farmers to purchase from directly, liabilities from difficulties in complying with food safety regulations, and timing of deliveries (logistics). Many also stated that finding producers with enough product for the school system was difficult (Baumgartner, 2011).

In a collection of case studies conducted by Michigan State University, four different community governments were profiled in their implementation of local food systems. Each community had a different motive, ranging from increasing economic well-being to improving community health. After implementation, staff at the city of Decatur, GA stated that increasing their local food system helps keep residents healthy, attracts new residents, and acts as a public safety net in cases of disaster or crisis. “Gardens create a small amount of security, should a disaster strike and food supplies be cut off...Fresh food and the act of gardening feed into goals of fostering an active, healthy community” (Goddeeris, et al., 2015). This security alleviates stress on both the community members and community leaders, making everyone feel safer and more connected.

Much research points to a gap between the need for a LFS, and the ability to implement the infrastructure needed to fully sustain one. An article by Mount (2011), asserts that the only way for LFS to be sustainable moving forward, and to keep up with the growing demand for food with fewer food miles will be to scale up. This scaling up can happen and be beneficial to the groups of consumers who need it the most, such as those living in food deserts with little to no nutritious food nearby, or communities such as Decatur, GA who are looking for a way to



sustainably grow their community. However, previous research points to regulations as the key barrier (Baumgartner, 2011).

Some experts have suggested developing or expanding local and sustainable food markets as a way to solve these issues. In a concept described as the “good food gap” in a series of papers by Dunn (2013), it is noted that while local farmers struggle to find a market with enough demand to maintain profit margins and continue their livelihoods, nearly 10% of people do not have access to the right foods or enough food at all to survive (Dunn 2013).

## Materials and Methods

### ***Purpose***

The purpose of the study was to identify and describe the barriers that prevent local food producers from selling their food in a local and regional market within the state of Arkansas.

### ***Design of the Study***

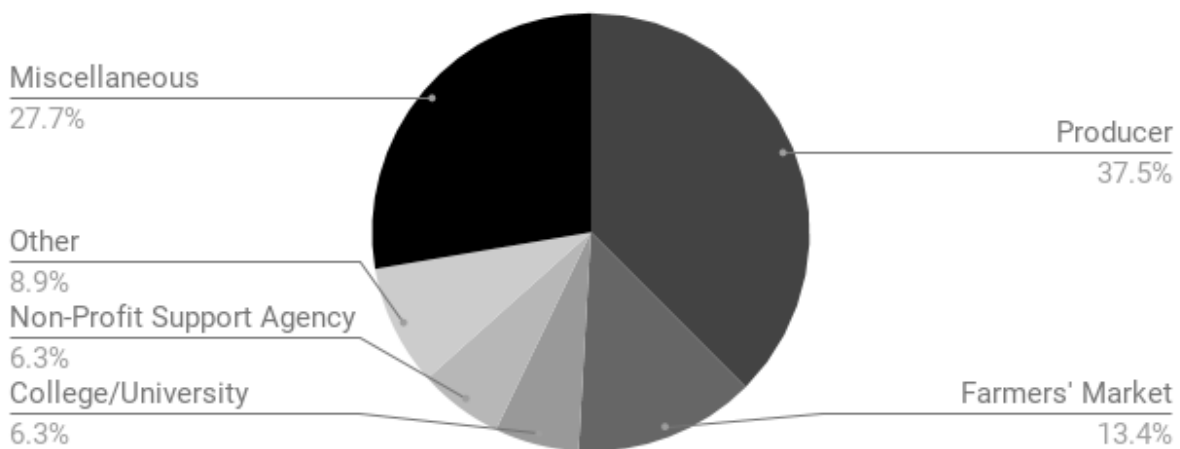
This study utilized both qualitative and quantitative analysis through a mixed-methods survey. Mixed methods research can be defined as “an approach to research in the social, behavioral, and health sciences in which the investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two, then draws interpretations based on the combined strengths of both sets of data” (Creswell, 2015). It is especially applicable to this specific study because both generalizations about the population as well as specific problems were needed. Creswell states mixed methods are key when “using only one method may be insufficient because of the inherent weaknesses of each approach. Quantitative research does not adequately investigate personal stories and meanings...Qualitative research does not enable us to generalize from a small group of people to a large population” (Cresswell, 2015). Here, general quantitative statistics gathered about the most common barriers only painted half the picture, while open response questions allowed details to be obtained.

This study was designed by Stacey McCullough and Amanda Perez of the University of Arkansas - Cooperative Extension Service as a needs assessment as outreach to small producers in local food systems. This study is a portion of the larger survey. The questions used for data collection for this study can be found in Appendix B.

### ***Participants and Sampling***

The data was collected by Stacey McCullough and Amanda Perez, both with the University of Arkansas - Cooperative Extension Service, utilizing a convenience sampling method. The survey was shared through multiple channels including an online listserv, County Extension Agents, social media, and at local food events. The identified population was members of the local food system in Arkansas, and the sample surveyed was accessed through multiple channels. While this can have limitations to the types of participants, this study was best administered through these channels due to the number of members in the identified population and difficulties in accessing and identifying qualified participants. As can be seen in Figure 1, producers were the largest group, comprising 37.5% of participants.

### **Study Participants**



***Figure 1***

### ***Instrumentation***

Information collected through the study had a two-fold focus: barriers that producers face (or that they are providing assistance for) and what consumers looking for in products that these producers are supplying. Barriers were sorted into two general categories, production planning (technical) and marketing. Respondents then answered these questions by marking smaller categories they faced and then describing the barriers they faced in that category. For each category of barriers, respondents also answered matching questions on any support they were providing. Validity and reliability tests were not conducted, and are not needed in this survey due to the self-reporting nature of the survey.

### ***Data Collection***

The survey was distributed through multiple channels including online listserv, County Extension Agents, social media, and at local food events. Qualtrics was used to distribute the survey through online channels, and paper copies were brought to local food events and by County Extension Agents on site visits.

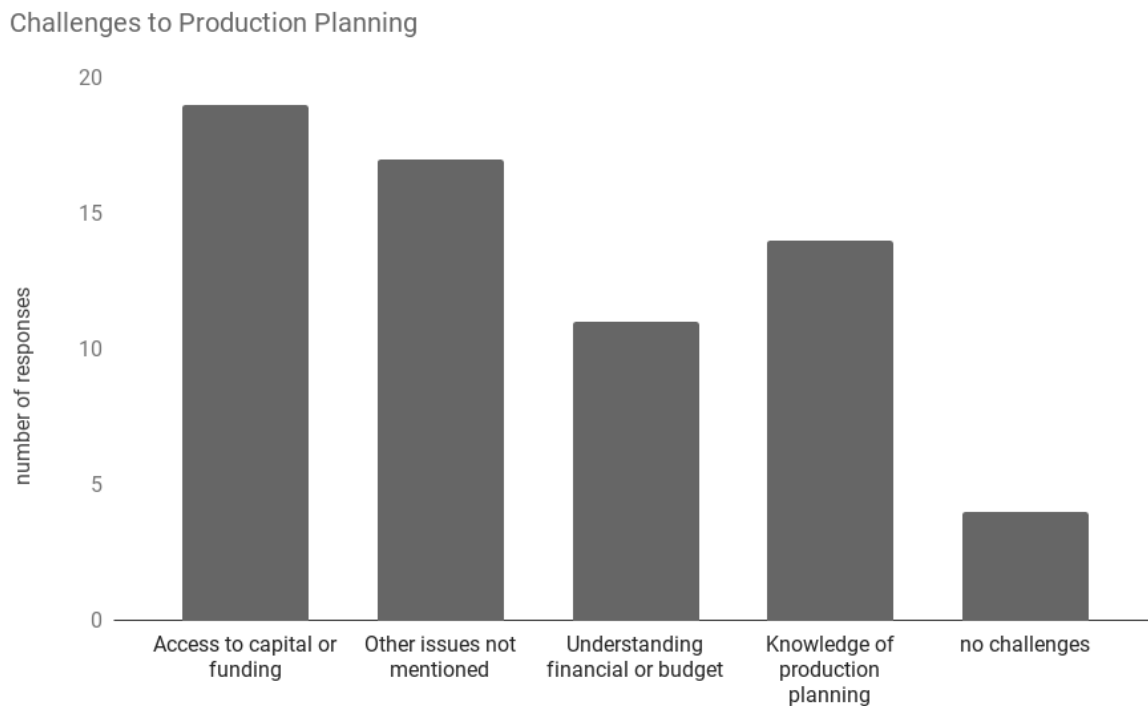
### ***Proposed analysis***

This data was analyzed in multiple ways, including both a quantitative analysis using univariate descriptives and qualitative analysis through coded analysis of textual data on the interviews. A simple analysis was done on the quantitative data through graphs. A qualitative analysis was also conducted on the interviews, using coding to develop patterns of barriers and understanding of those barriers. Differences of expression of the codes were noted.

## **Data and Findings**

Overall, 115 respondents completed the majority of questions in the survey. As mentioned above, the study included both quantitative and qualitative analysis. Quantitative analysis was done to identify and understand the most common barriers and to contrast those barriers with areas in which producers are already performing successfully or with which they do not

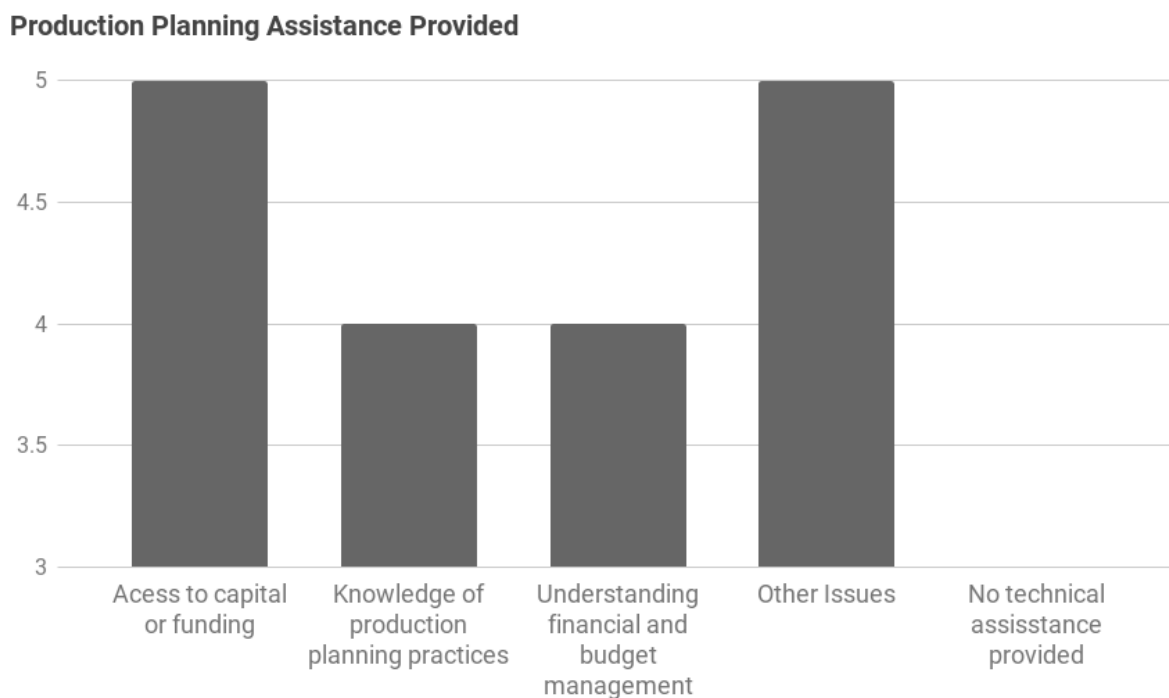
need further assistance. The second section of quantitative analysis was done on questions regarding producers' understanding of consumer demand for products with value-added practices such as certified USDA organic, Good Agricultural Practices (GAP), and locally produced, among others. The second section of analysis, and the only section with qualitative analysis, was done to the questions in the survey regarding specific barriers within two main categories: technical/production and marketing (defined as the process of actually preparing and taking goods to market). Respondents were given the option to explain in greater detail their own experiences within these categories. These details were then coded to identify patterns to the issues and reveal possible solutions. For each question, including the questions on challenges and barriers, respondents could have multiple answers.



**Figure 2**

The potential barriers listed were divided into two categories: technical (production) and marketing-related. The choices provided in the technical barrier section included access to capital, financial and budget management, knowledge of production planning, and

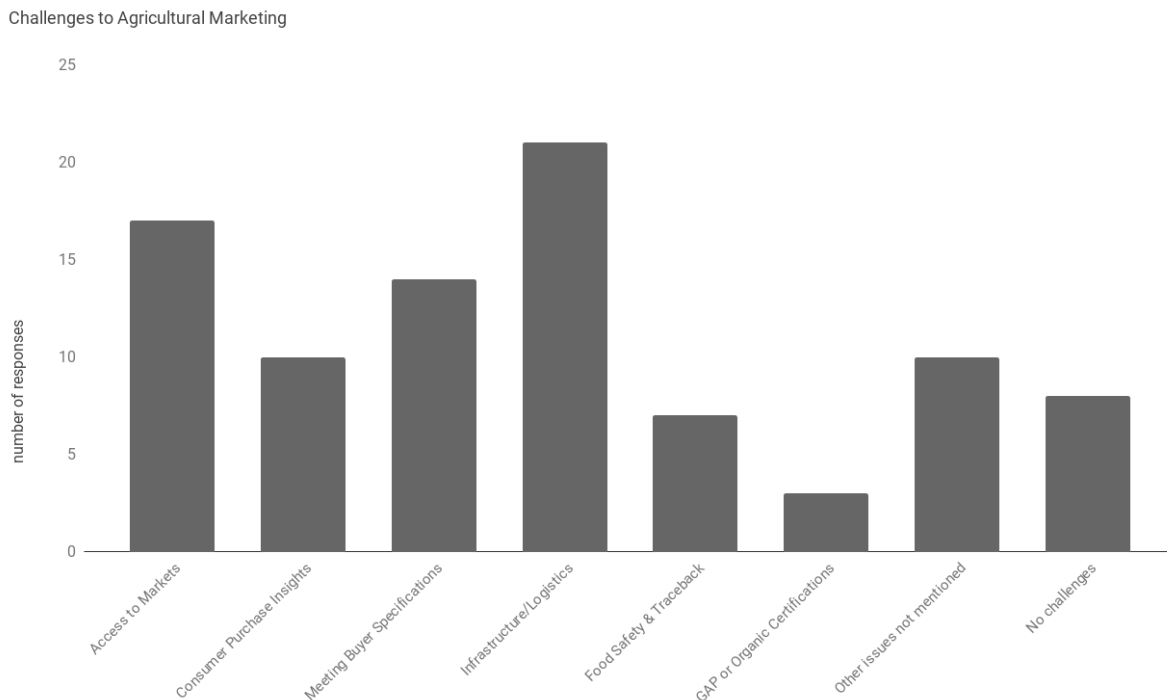
other challenges not listed. The most commonly selected barrier was access to capital or funding, with 19 respondents, as seen in Figure 2. Of those answering this question, 90% or more were producers. Respondents were also asked about any assistance they were currently providing to other members of the food system in these areas of potential barriers. Figure 3 shows the results for assistance provided for production planning barriers.



**Figure 3**

The choices provided in the marketing barrier section included access to markets, consumer purchase insights, meeting buyer specifications, infrastructure/logistics, food safety, GAP/Organic certifications, and other challenges not mentioned. The most commonly answered barrier was infrastructure and logistics, and the second most common was access to markets. Figure 4 shows this analysis.

A second section of quantitative analysis included questions focused on consumer demand of production practices. In terms of understanding what consumers want, producers overwhelmingly answered that there was consumer demand for locally produced food and for USDA

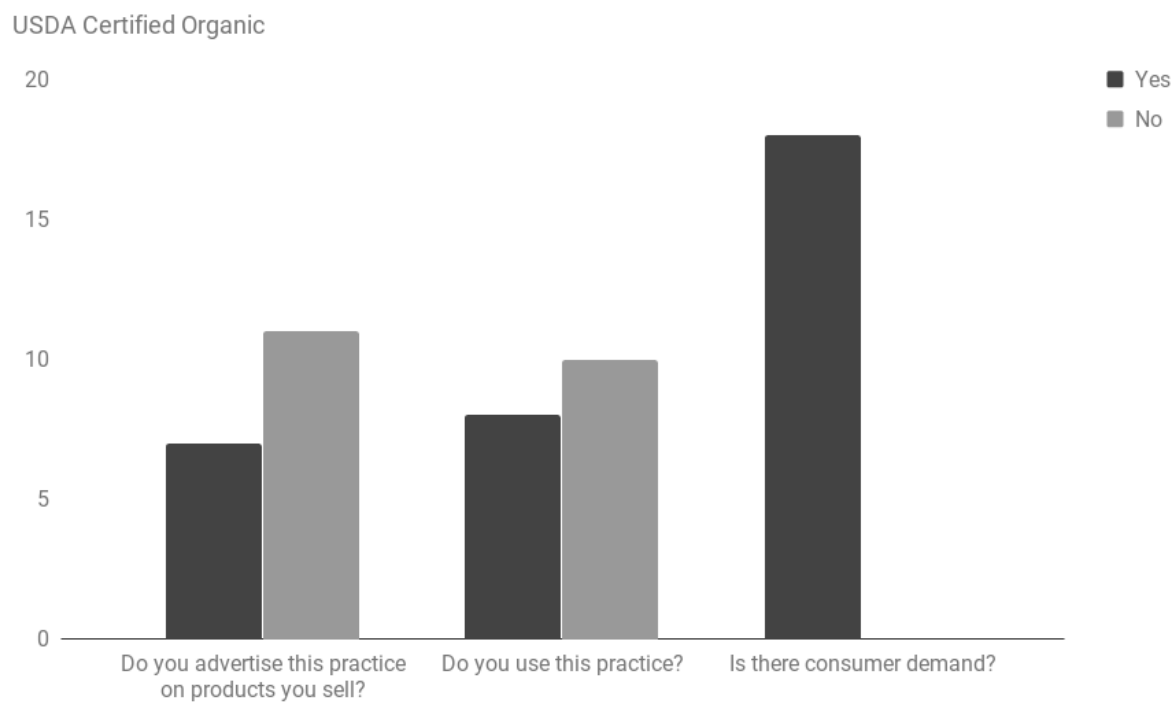


**Figure 4**

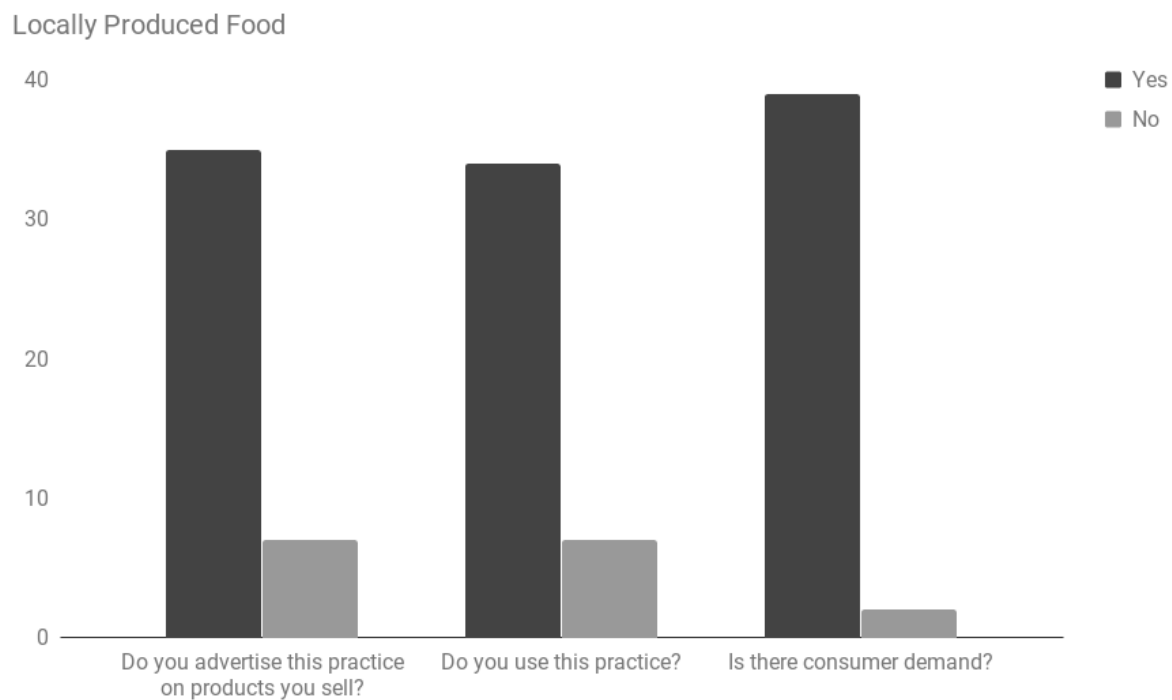
certified organic products, with 39 and 18 respondents respectively as shown in Figure 6 and 7.

While many of these same producers also advertise as being local (35), very few of the producers responding use and advertise USDA certified organic practices (6). A small number of producers also use other practices such as Animal Welfare Certification, Third Party Certifications, and Good Agricultural Practices, although very few noted a consumer demand for these same practices.

Just as the quantitative data questions were created to give a generalized idea of the challenges faced by the survey respondents, the qualitative analysis was done to gather more detailed and personal accounts behind the graphs. The first category of responses included barriers related to technical assistance or production planning. The most commonly expressed concern was difficulty identifying USDA loans or other funding sources applicable to them as smaller producers or specialty vegetable growers. Many stated they didn't know where to begin looking, let alone start the process of applying, and they didn't know where to turn for assistance with the process.



**Figure 6**



**Figure 7**

One specifically stated “FSA loan officers not familiar or have experience given [sic] micro loans to vegetable farmers. While I was finally approved for a operating loan, the process was not streamlined and required a marketing plan, a detailed farm budget/analysis and a detailed info regarding my background and farming experience.” Overall, the most common theme in this category was a lack of capital; “We are not aware of financial help that is out there. We both work other jobs to help the farm survive.” While the majority of responses relating to finance concerned identifying potential funding sources, many growers also conveyed a need for budgeting assistance, specifically profitability analysis, as well as creating overall business plans, including planning for hiring, training, and managing employees.

Other responses in this category were grouped together under a theme of knowledge needed for production planning, with emphasis on specific techniques such as organics, sustainability, hydroponics, no-till, and cover cropping. Some growers requested more hands-on training rather than Extension Service bulletins, while others wanted more clear information about which educational tools and sources were trustworthy. Specifically, one grower stated that county-level support for specialty growers would greatly help their success. “We don’t have family that have been growers for years so we are learning from scratch...We have struggled with fertilizing and disease management.”

The second category of responses included barriers related to actually bringing goods to a market, access to markets, knowledge of what buyers want, meeting buyer specifications, infrastructure for packaging, and food safety requirements. The variety of issues brought up for marketing barriers was much larger than for production barriers. Many issues can be grouped as relating to understanding markets, both wholesale and retail. Some respondents stated that they struggle to understand the needs of the consumer, specifically that they lack the resources to analyze what products sell best and when, and how to be more competitive to the consumer at different markets. Concerns for wholesale markets were much more common, with respondents indi-



cating that they needed information on how to understand the wholesale markets, how to produce at larger and more specific volumes, and ways to affordably package larger quantities.

Other issues could be grouped under the logistics side of marketing, with concerns regarding identifying processors, transportation and refrigeration, and education for packaging and food safety requirements. One producer specifically mentioned the limitations processors have put on their production: “Access to USDA approved processors is very limited and takes a long time (over two months) to book. [Regulations] are too tough on small producers and favor the big ag processors and producers.”

While many of the issues outlined in the quantitative analysis seemed insurmountable, the survey also revealed many respondents are currently providing or able to provide support in some of the same areas of concern. These responses were organized in the same way as the previous questions about the barriers themselves, with the first section regarding technical concerns (production planning) and the second section covering marketing. For the section covering technical concerns, several respondents stated that they currently offer one-on-one business counseling to other producers. The offerings include many of the barriers mentioned by other respondents, such as business plans, budgeting, and locating funding. These respondents also stated that they currently work directly with banks to serve as liaisons between growers and lenders to locate sources of cash. Other respondents stated that they have the skills or knowledge required to provide assistance on knowledge of production information, the second subcategory within technical support. Specific areas mentioned by respondents included soil conservation, nutrient management, high tunnels, and planting.

However, while many respondents were currently providing or able to provide support in areas related to production, only five respondents answered that they provided support for actual challenges of taking goods to market. Almost all of these five were able to offer support in areas regarding food safety, but no other areas.

## Conclusion

While the individual barriers uncovered in this survey are numerous, they were easily grouped into categories with clear solutions available for implementation. Many respondents either gave extremely detailed barriers, or even direct answers for what kind of help they needed from extension or other parts of the food system. In terms of decreasing challenges to production planning and technical knowledge, compiling a database for funding sources and USDA loans specific to specialty vegetable growers would help ease concerns regarding lack of funding. This could be supplemented by the Extension office with trainings on business plans, budgets, profitability, and employee management. Some respondents stated that they currently offer one-on-one business counseling, including these issues and help work directly between banks and growers to locate sources of capital. Support for financial issues of production planning can also be increased through a database of lenders who specialize in agricultural loans and local financial resources on a county basis.

For the barriers related to knowledge about production planning and growing practices, improving the database of factsheets released by extension on these specific areas, partnered with an increase in hands-on training by extension agents, both of these issues could be resolved. It is also important to note that there are many knowledgeable growers throughout the state who can offer or are currently offering technical support in these areas, and creating a database of local growers knowledgeable in certain topics could foster a network and improve the community of growers across the state.

While the survey revealed that very few people are currently providing marketing support, this is an area that extension can increase involvement with growers through added education on economic development strategies on the value and benefits to local food and by helping producers identify appropriate markets depending on their production system.

## Bibliography

Baumgartner, W. W. (2011). A Pilot Project to Study the Barriers to Establishing Linkages between Agricultural Producers and School Lunch Programs. USDA ERS. Retrieved September 3, 2017.

Creswell, J. W. (2015). A Concise introduction to mixed methods research. Thousand Oaks, CA: SAGE.

Goddeeris, L., Rybnicek, A. and Takai, K. 2015. Growing Local Food Systems: A case study series on the role of local governments. International City/County Management Association.

Hoppe, R. A., & Macdonald, J. M. (2013). Updating the ERS Farm Typology. *SSRN Electronic Journal*. doi:10.2139/ssrn.2267293

Neff, Roni, ed. 2014. *Introduction to the US Food System: Public Health, Environment, and Equity*. Somerset: John Wiley & Sons, Incorporated. Accessed September 3, 2017. ProQuest Ebook Central.

United States Census Bureau. "Summary File." 2007 – 2011 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2013. Web. Accessed September 3, 2017.

## Study Participants

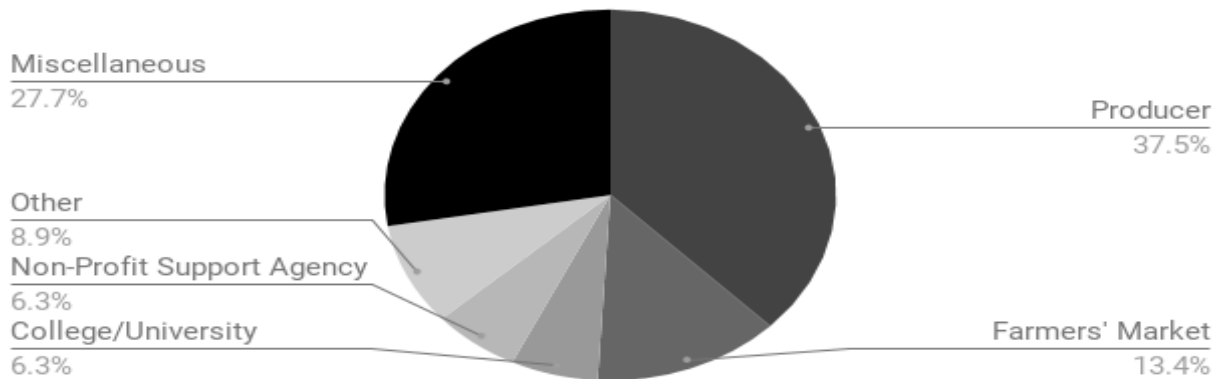


Figure 1

## Challenges to Production Planning

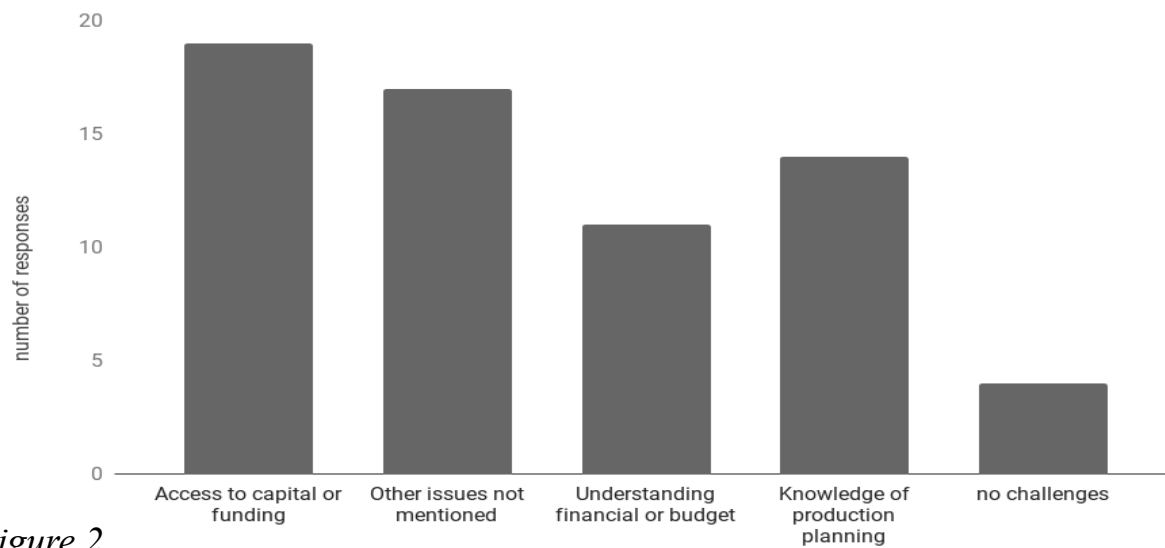


Figure 2

## Production Planning Assistance Provided

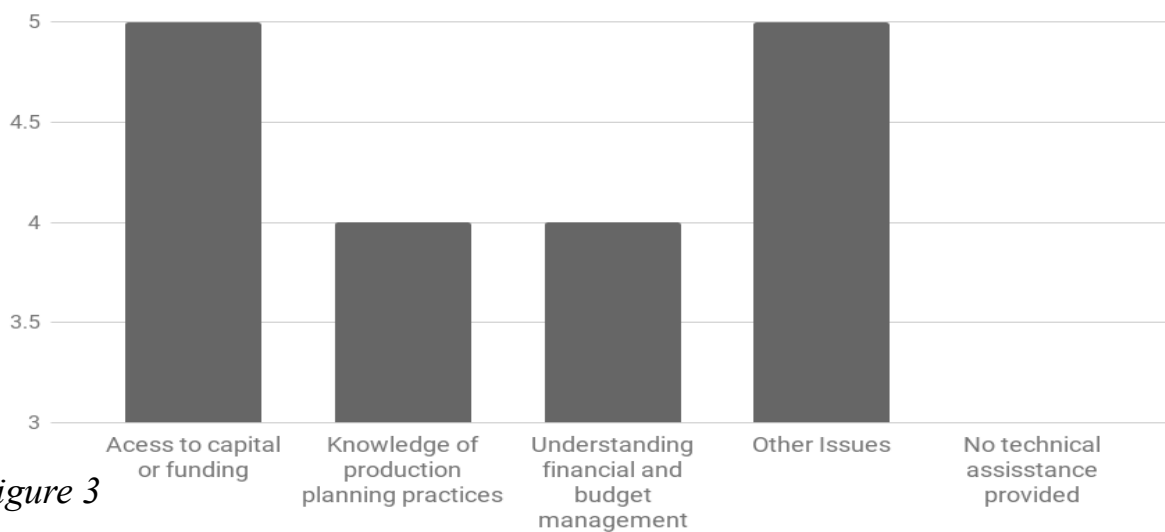
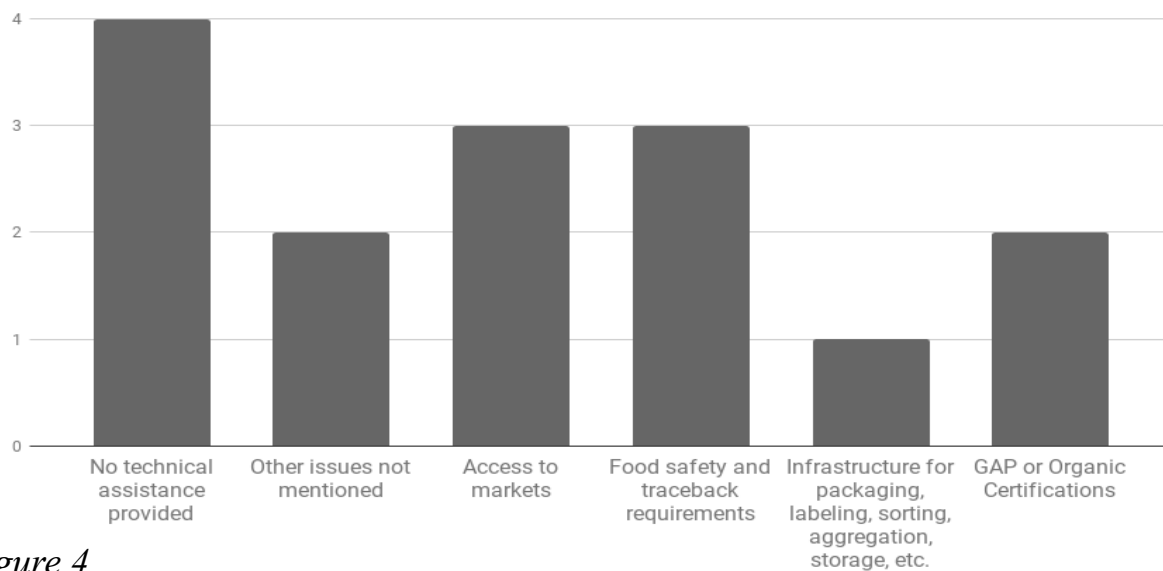


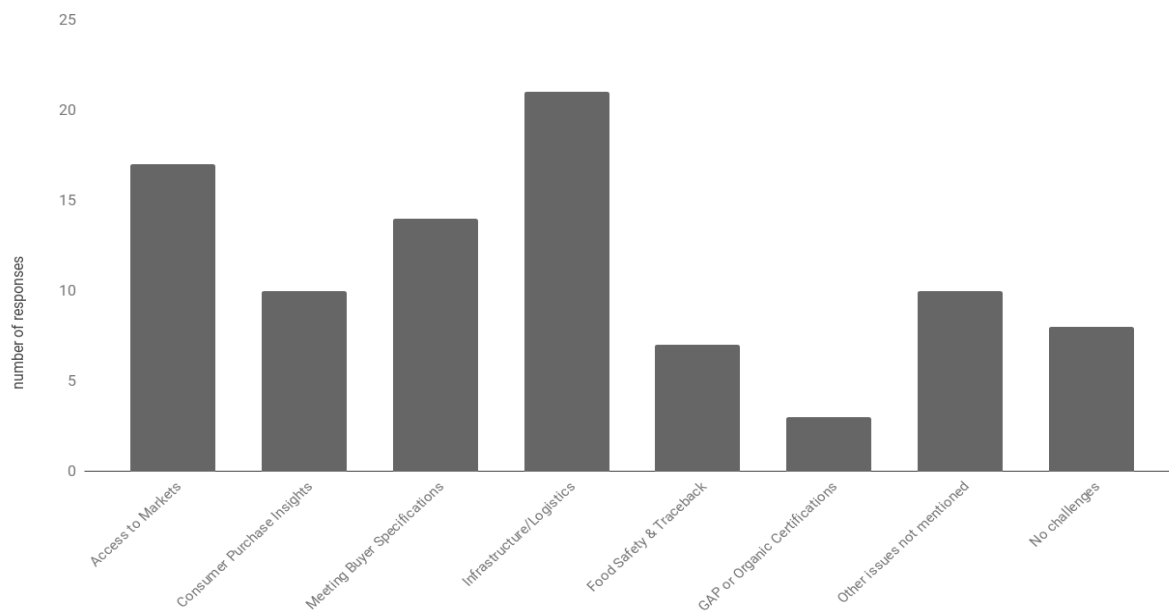
Figure 3

**Marketing Assistance Provided**



*Figure 4*

**Challenges to Agricultural Marketing**



*Figure 5*

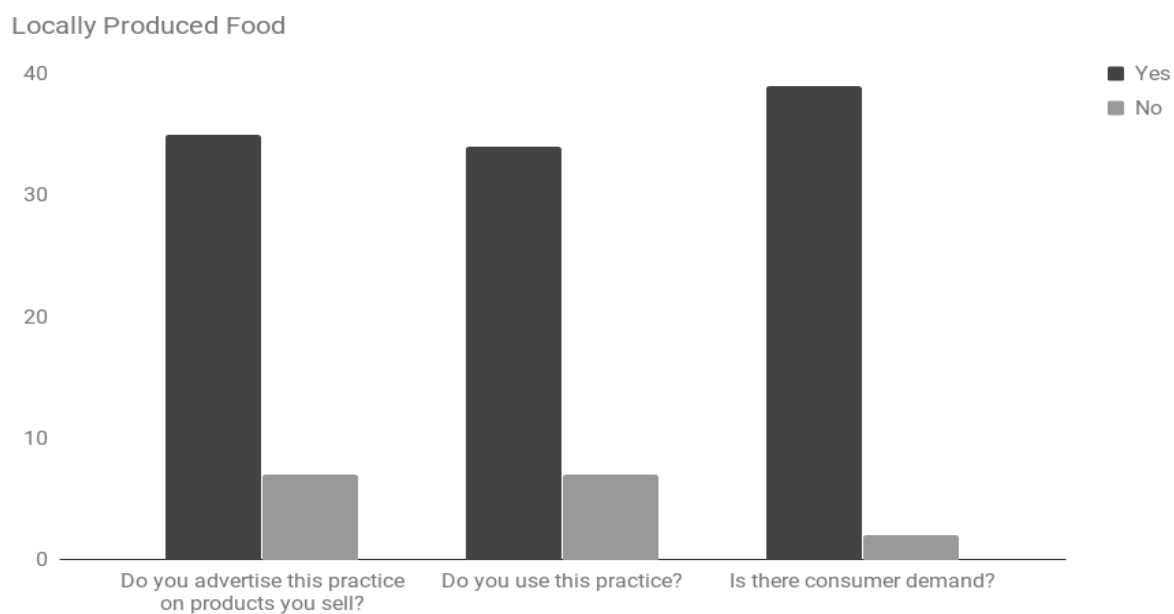


Figure 6

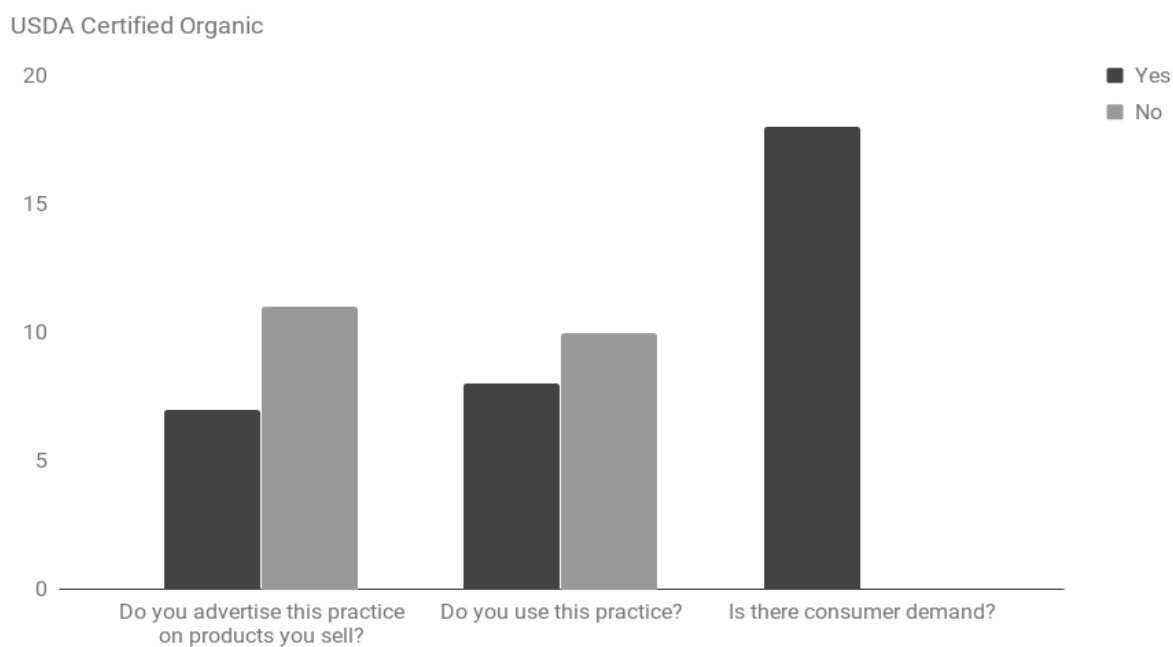


Figure 7

Good Agricultural Practices (GAP) / Group GAP Certification

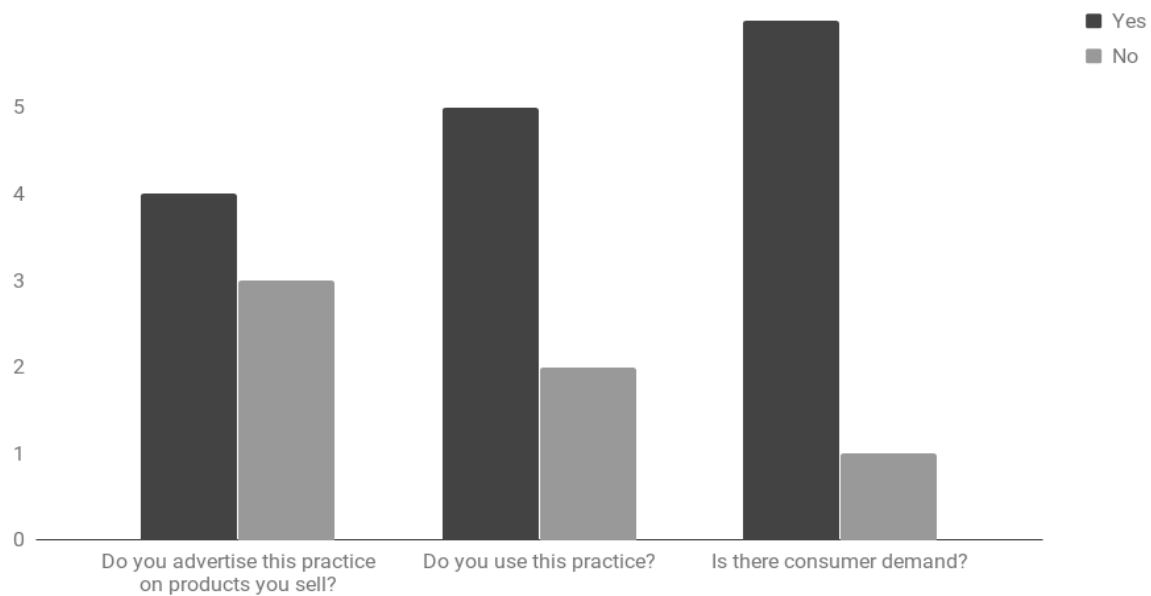


Figure 8

Grass-Fed or Pasture-Raised

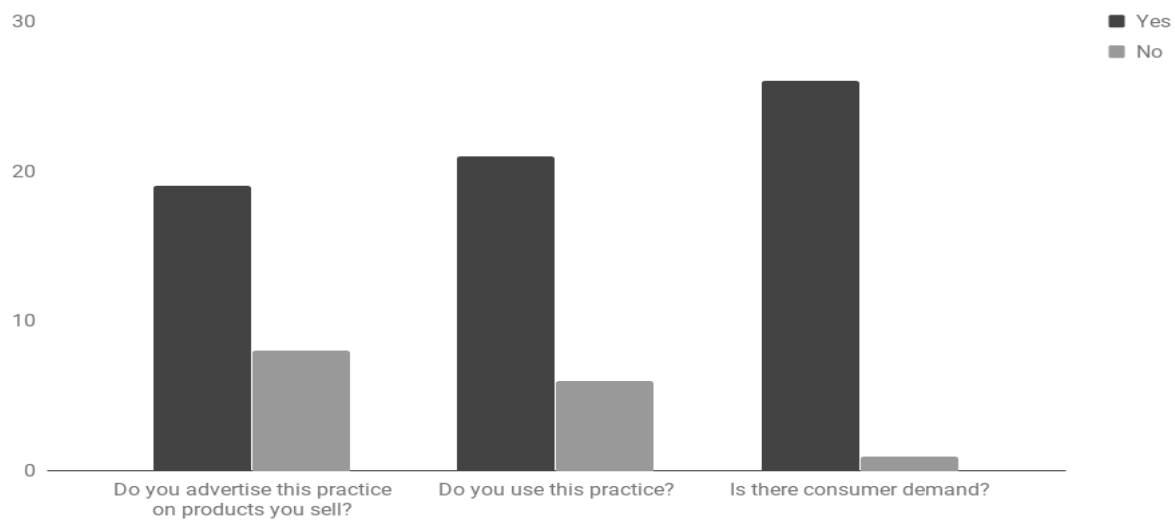


Figure 9

## *Appendix B*

### *Question List*

Listed below are generally perceived challenges to production planning for agricultural products to be sold into local or regional markets. Please indicate if you have had challenges in these areas and if so, please describe the challenge in the space provided.

- ☐ Access to capital or funding for agricultural or livestock production needs? (loans, grants, matching funds, etc.) Describe any challenges below. (1) \_\_\_\_\_
- ☐ Knowledge of production planning practices such as securing inputs (seeds, fertilizer, etc.), planning schedules, fertilization/feeding practices, varieties/breeds, irrigation/water access, conservation or best management practices or other issues. Describe any challenges below. (2) \_\_\_\_\_
- ☐ Understanding financial and budget management such as input costs, pricing, income projection, cash flow, etc. Describe any challenges below. (3) \_\_\_\_\_
- ☐ Other issues not mentioned above that could include labor, equipment, regional access to inputs – amendments, cover crop seed, organic seed. Describe any challenges below. (4) \_\_\_\_\_
- ☐ No challenges (5)

Listed below are generally perceived challenges to production planning for agricultural products to be sold into local or regional markets. Please indicate if you are providing any technical assistance for these areas of production planning. If so, please describe the the technical assistance in the space provided.

- ☐ Access to capital or funding for agricultural or livestock production needs? (loans, grants, matching funds, etc.) Describe any technical assistance below. (1) \_\_\_\_\_
- ☐ Knowledge of production planning practices such as securing inputs (seeds, fertilizer, etc.), planning schedules, fertilization/feeding practices, varieties/breeds, irrigation/water access, conservation or best management practices or other issues. Describe any technical assistance below. (2) \_\_\_\_\_
- ☐ Understanding financial and budget management such as input costs, pricing, income projection, cash flow, etc. Describe any technical assistance below. (3) \_\_\_\_\_
- ☐ Other issues not mentioned above that could include labor, equipment, regional access to inputs – amendments, cover crop seed, organic seed. Describe any technical assistance below. (4) \_\_\_\_\_
- ☐ No technical assistance provided (5)



Listed below are generally perceived challenges for marketing agricultural products to be sold into direct, wholesale, intermediary local or regional markets. Please indicate if you have had challenges in these areas and if so, please describe the challenge in the space provided. Direct: Farmers markets, CSAs, farm and roadside stands (excluding sales to restaurants and retailers) Wholesale: Restaurant contracts, institutional buyers, processors and manufacturers Intermediary: Using a broker, distributor, food hub or other intermediary to aggregate and/or distribute goods to retailers, restaurants and commercial/ institutional food service

☐ Access to markets (direct, wholesale, intermediary). Describe any challenges below. (1) \_\_\_\_\_

☐ Knowledge of what buyers want to purchase (direct, wholesale, intermediary). Describe any challenges below. (2) \_\_\_\_\_

☐ Meeting buyer specifications in terms of volume, availability, quality characteristics, varieties, packaging, palletization, and other specific characteristics. Describe any challenges below. (3) \_\_\_\_\_

☐ Infrastructure for packaging, labeling, sorting, aggregation, storage, cooling, processing, or short haul transportation or other supports. Describe any challenges below. (4) \_\_\_\_\_

☐ Food safety and traceback requirements. Describe any challenges below. (5) \_\_\_\_\_

☐ Good Agriculture Practices (GAP) or Organic Certifications. Describe any challenges below. (6) \_\_\_\_\_

☐ Other issues not mentioned above. Describe any challenges below. (7) \_\_\_\_\_

☐ No challenges (8) \_\_\_\_\_

Listed below are generally perceived challenges for marketing agricultural products to be sold into direct, wholesale, intermediary local or regional markets. Please indicate if you are providing any technical assistance for these areas of marketing. If so, please describe the the technical assistance in the space provided. Direct: Farmers markets, CSAs, farm and roadside stands (excluding sales to restaurants and retailers) Wholesale: Restaurant contracts, institutional buyers, processors and manufacturers Intermediary: Using a broker, distributor, food hub or other intermediary to aggregate and/or distribute goods to retailers, restaurants and commercial/ institutional food service

☐ Access to markets (direct, wholesale, intermediary). Describe any technical assistance below. (1) \_\_\_\_\_

☐ Knowledge of what buyers want to purchase (direct, wholesale, intermediary). Describe any technical assistance below. (2) \_\_\_\_\_

☐ Meeting buyer specifications in terms of volume, availability, quality characteristics, varieties, packaging, palletization, and other specific characteristics. Describe any technical assistance below. (3) \_\_\_\_\_

☐ Infrastructure for packaging, labeling, sorting, aggregation, storage, cooling, processing, or short haul transportation or other supports. Describe any technical assistance below. (4) \_\_\_\_\_

☐ Food safety and traceback requirements. Describe any technical assistance below. (5)

☐ Good Agriculture Practices (GAP) or Organic Certifications. Describe any technical assistance below. (6) \_\_\_\_\_

☐ Other issues not mentioned above. Describe any technical assistance below. (7)

☐ No technical assistance provided (8)