Local Food Report
&
Needs Assessment

It is all about local food.

In 2015, Minnesota farmers reported $139,354,000 in sales of edible goods sold through direct market channels. This information comes from the United States Department of Agriculture's historic Local Food Marketing Practices Survey, conducted for the first time in 2015 in response to the growing prevalence of direct marketing food farms, such as Community Supported Agriculture. Acknowledging the clear need to support this emerging sector, Region Nine Development Commission applied for and received an Americorps VISTA service person to build organizational capacity to assist those working in local food.

Region Nine has defined local food as food grown within the region for human consumption and with the potential to be sold in regional markets. Regional is defined as the nine-county service area of Region Nine.

This document outlines three key projects completed during the VISTA term of service that give insight on the needs of local food businesses:

- A producer profile project
- Interviews with growers
- Surveys sent to local units of government, food buyers and school districts

Additional insights gained from working with partners in the food space and extensive researching and networking by the VISTA are included in the final discussion section.

Table of Contents

Producer Profile Survey **2**

Summary of Findings 3

Producer Interview **6**

Participants 6

Interview Format 7

Summary of Findings 8

Stakeholder Surveys **11**

Food Buyers 11

Local Government 15

School Districts 16

Appendix I: Producer Interview Questions 18

Appendix II: School District Survey Results 18

Appendix III: Comments 19

Appendix IV: Data Management Methodology 22

Appendix V: Local Foods in South Central Minnesota 23

Local foods is food grown within the region for human consumption and with the potential to be sold in regional markets.

Producer Profile Survey

This project was undertaken to better understand the impacts of local food producing businesses on the communities in which they are located. Region Nine compiled lists of business emails using online directories such as Minnesota Grown, Agrilicious and Local Harvest and drafted survey questions. University of Minnesota Extension provided support in designing the project and analyzing the data collected. The goal of the project was to create baseline data on area farm businesses and investigate any possible community benefits associated with their operation.

The unit of analysis was the farm site itself. The questions related to who lived/worked on the farm, structures on site, land management practices used and future plans for the farm. Potential benefits created by farms might include a local farm operator that holds a second job, which creates positive impacts in the local economy. Farmers may employ land management practices that improve water quality locally, which increase the recreational value of area lakes and streams. They may have a unique developmental effect by creating long-term rural homesteads. These are the types of benefits Region Nine wanted to catalogue with this project.

Social media and emails were used to distribute the online survey. Roughly 57 producers received emails and 775 people were reached through social media. Twenty businesses responded, 18 of which had operated as local food producers in the last five years. These are the respondents considered for the following information.

Note: While the conclusions represent 20 businesses surveyed, further research or long-term invovlement is need to validate these findings.

Goal:

Create baseline data on area farm businesses and investigate any possible community benefits associated with their operation.

Summary of Findings

Farmers

The average local food farmer is 50 years old with some higher education. There is a 50 percent chance they hold a Bachelor's degree or higher. There is a one in two chance they work off farm, and if they do it's more likely full time.

The farmer most likely has a spouse who is better educated than they are and works off farm. The pair of them likely earn over three quarters of their household income from off-farm jobs.

They have likely been in operation for around ten years and plan to farm for at least ten more. There is a 30 percent chance they plan to farm for 40 years or more. During those years, it is likely they are planning to expand their products offered, the size of their business or the markets they serve.

Their farm sits on 80 acres or less, which they own. The farmer probably grows mixed vegetables as well as raise chickens for eggs. On the property, there is a house, a chicken coop, a small barn or pole shed and a packing shed. They might rent some extra land, but if they do, it's less acreage than they own.

Management Practices

Most farmers incorporate cover crops in some way, either as fertilizer or as a weed suppressor or both. Cover crops were the most common fertilizer practice, followed by raw manure and compost applications. Four producers reported using chemical fertilizers. A single practice was seldom used alone. Most operations incorporated two to four fertilizer strategies.

Pest control practices were reported in similar patterns. The majority of farmers avoid inorganic pesticides and instead opt for organic, bio-control or biodynamic methods of pest management. Some apply inorganic pesticides, but as part of an integrated pest management system. Most operators utilized multiple practices on their farm.

The majority of producers use some form of mechanical weed control, ranging from hand pulling to cultivation. Cover crops and mulch were the next most common weed control method. Five respondents report use of chemical herbicides, and again, most producers employed multiple practices.

Seven producers reported livestock on their farm and almost all of them rotate their stock across paddocks, with a few incorporating multiple stock and or crops into the succession.

Most use vegetative buffers (no till, grassland, treeline etc.) if they have water bodies on their productive properties.

Summary of Findings *(con't)*

This information suggests several things worth considering. First, there is a clear need present. Responses related to household income suggest that supportive programing from local government would create a benefit for producers. A large majority report needing significant off-farm income to maintain a reasonable quality of life. A local program that improves area marketing potential, reduces cost of acquiring land or any other creative support method could help to reduce the stress of operating by making it more profitable. From a community perspective, such a program could be a solid long-term investment since producers plan to stay and expand within their communities for decades.

From this survey, there is a reasonable prediction of just how long these farmers plan to operate. Reports from businesses that have already been in operation for 10 years, as well as planning to operate for multiple decades more, are promising for greater Minnesota communities struggling to retain community members. This benefit is compounded by the fact that a large majority of these farmers and their spouses are well educated and contributing to workforce supply off the farm, a boon to areas struggling with workforce shortages. From a community perspective, efforts to make the area more attractive to local food farmers could create a synergistic effect of starting and expanding small farm businesses as well as anchoring capable workers in the region.

Additionally, responses detailing land management practices hint at environmental benefits of local food farms. The relatively small portion of farmers reporting use of chemical inputs and high numbers utilizing various crop/livestock rotations, cover crops and buffer strips suggests that these farmers are early adopters of best management practices. Many of the practices reported have positive impacts such as reducing non-point source pollution and improving soil health. The exact benefits however, depend on a myriad of on-farm factors and decisions and it is beyond the scope of this report. More work or subject matter expert support is needed.

Producer Interview

The intent of this project was to capture the challenges food producers face, the key resources that have made them successful and their long-term business goals. The interview process has already helped launch the South Central Minnesota Grower's Network, a business development group for area producers.

Participants

The interview process began with identification of potential participants. Lists of potential local food producers were generated using information obtained from the online directories, Minnesota Grown, Local Harvest and Agrilicious, as well as word of mouth referrals. Eighty-one potential businesses were identified, eight of which were wineries and therefore excluded. The rest were contacted by phone or email. Twelve businesses declined to participate, thirteen had false contact information and 34 did not return correspondence. Fourteen businesses agreed to provide feedback, either in a semi-structured interview or in written responses to a list of interview questions sent by email.

Due to the quality of data available, some of the businesses who gave feedback were no longer in operation. All participants, however, had been in business within the last five years, which were considered recent enough to offer relevant insight. Interviews were conducted in person or by phone and were recorded for later transcription. Interviews were conducted under the assumption of anonymity, so names of individuals and businesses have been left out of this report. Engaged businesses produced a wide variety of food products, including: apples, mixed vegetables, chickens, eggs, turkeys, buffalo, beef, honey, baked goods and more.

Interview Format

The interviews followed a semi-structured format consisting of one-on-one conversations with primary operators, and in some cases their spouse or operating partner. The interviewer, Region Nine's VISTA service person, guided conversation using a list of 10 prepared questions that every interviewee was asked (Appendix I). The interviewer encouraged unstructured conversation in the hope of capturing detailed and specific insights. Additional follow up questions were asked during each interview and these varied as different topics came up in conversation. This was a strategic decision due to the diverse businesses participating. Most interviews were conducted in person, though a few were by phone.

At the end of each interview the facilitator offered some insight on professional networking opportunities as an added value for participants. Similar instances of unplanned professional networking and sharing of information occurred throughout interviews. These portions of conversation have been edited out of transcriptions to ensure focus on the experience of each business to date within this project.

Summary of Findings

12 out of 14 businesses experienced some challenge with wholesale marketing. All non-direct to consumer markets were considered wholesale for this analysis. As a result, many of the comments on whole sale marketing are directed at everything from restaurants to schools to grocery stores. Producers report thin margins selling to grocery stores, high cost of distribution to restaurants and extreme price sensitivity from schools as some of the challenges.

10 out of 14 businesses experienced some challenge with labor. Producers report difficulty affording labor as well as finding and keeping skilled workers. Scale of operation was a primary consideration for those struggling to pay for labor due to reported thin margins on products. Challenges in finding skilled workers were more varied as diverse jobs needed to be filled. Some difficulties include finding full-time help, having to train and retrain seasonal help and finding people with specific skills, such as the ability to operate a cultivator.

10 out of 14 businesses described their physical assets. Each producer was asked about the physical assets of their business. Reports on what equipment is owned and what that equipment is used for offers more insight. For example, multiple businesses reported delivering product with a flatbed truck or personal vehicle. Coupled with the reported difficulty in profitably distributing to restaurants, this information begins to tell a story about distribution infrastructure available in greater Minnesota. This would be an ideal area for further investigation.

8 out of 14 businesses report a challenge with farming skills. This includes difficulty finding information about pests and diseases, poor experiences with local farming resources as well as difficulty with weather. Some of these insights may be reflective of the disparate nature of services tailored to small scale agriculture production business. Producers reported gaining key knowledge to farm from informal mentors, internet publications, ag-centric non-profits and regional and national conferences, almost none of which were located within Region Nine.

8 out of 14 businesses report a challenge with retail sales. All direct to consumer markets were considered retail sales for this analysis. Producers report an aversion to farmer's markets as a profitable market, at least locally, observations of unreliable demand in the area surfaced, as well as difficulty getting enough product to stronger markets, such as Minneapolis and St. Paul, where demand is greater. Several producers also mentioned a dislike for the Consumer Supported Agriculture (CSA) model of marketing, due to discomfort with advance payments. This unique finding might illustrate the conservative financial culture of the area more than anything specific to farming.

8 out of 14 businesses report a challenge with physical assets. The most surprising finding here was difficulties with tax classification. Either the use of the land the business was located on was not considered agricultural or essential infrastructure for the business was classified commercial instead of agricultural. Both situations resulted in increased tax burdens that greatly reduced the profitability of the operation. Additional challenges include justifying the expense of new equipment and managing scale appropriately.

8 out of 14 businesses report plans to increase their physical assets. These include experimental ventures such as building deep winter greenhouses, as well as more standard expansions, such as making investments in buildings and equipment for value added products.

8 out of 14 businesses report consumer education as a significant barrier to market. The type of consumer education needed varied widely. Producers reported lack of understanding of seasonality, cost of production, potential health benefits and other misinformation. However, a striking trend emerged where multiple businesses are actively educating through public speaking events and at least one long-time producer reported observed positive changes in consumer attitudes in their lifetime.

7 out of 14 businesses reported growing mixed vegetables. This shows the most common product of local farm businesses as well as indicates what land use practices are likely employed on-site. This is corroborated by an additional survey of producers conducted by Region Nine that found approximately 65 percent of respondents produced mixed vegetables.

Summary of Findings *(con't)*

There were 129 terms used to describe aspects of these businesses, six of the nine most frequently used indicated specific challenges local producers face. Capturing challenges was an explicit goal of the project, but so was learning about resources that have helped create success. This finding may indicate that there is still a lot of room for improvement and efficiency within this sector. This is illustrated by the sheer diversity of challenges present in the region.

Individual challenges show that regional efforts, such as food hubs and local food events, are aimed at the right targets and have room for expansion. The top challenge of whole sale marketing underlines the need/importance of infrastructure. This is evident when coupled with challenges around equipment, particularly transportation.

The presence of challenges and goals related to property, plant and equipment is likely reflective of the capital-intensive nature of farm business. When working on property problems or planning investments for expansion, financing is a primary concern. Grants were mentioned by eight of the 14 producers, loans by seven producers and self-financing by 11 producers. In total, challenges with these three funding types were reported by 10 producers. These numbers tell a story, suggesting that financing is difficult for these businesses and, as a result, self-financing strategies are used to start up, expand and maintain daily operations. Further research is needed to determine the effect this has on these businesses' ability to expand.

Stakeholder Surveys

This project was meant to get a general sense of wider regional interaction and interest in local food. Food buyers, local units of government and school districts were asked roughly 10 questions each about their experience with and support of local food. Food buyers were chosen as a way to judge demand regionally. Local units of government were chosen as a means of ascertaining public support/programing for local food. School districts were chosen as an institutional market as a means of exploring challenges unique to such buyers. Schools, however, are not identical to all other institutional markets, which should be kept in mind.

Similar to the producer profile, these surveys all had small number of respondents and therefore small sample sizes. As an example, a graph showing 10 percent of businesses using a given practice may mean two businesses reported about that practice. Additional work is needed to validate all findings that follow.

Food Buyers

Reference USA was used to generate a list of area businesses that sold food, such as grocery stores, restaurants and bars, convenience stores, wineries and co-ops. An additional list of food and beverage licenses pulled by Roots, Shoots and Boots (Mankato area food network) members was used as well. Both of these lists were combined to identify the approximate number of buyer businesses in the region. This list contained some emails for survey distribution. Additional emails were found by searching business names online and looking for contact information. Buyers whose contact information could easily be accessed and were likely to be in control of store level purchasing decisions were prioritized during this subjective search for emails.

In total, a list of 114 emails for distribution was generated. These businesses were emailed a link to the survey on May 24, 2017. Region Nine's social media platforms were also used to distribute the survey link. Some respondents were not target buyer businesses and were therefore eliminated from results. The final number of respondents considered in this report was 14.

A wide variety of businesses responded to the survey, but the most responsive business type were restaurants (Figure 1). This is fitting since a large portion of emails were sent to non-chain restaurants as they fit the criteria of making on-site, in-store purchasing decisions.

Figure 1: Buyer Type

Businesses were located throughout the region, with a large majority located in Mankato (Figure 2). This is not surprising, as Mankato is the largest city in Region Nine and has a large number of restaurant and bar businesses.

A majority of respondents reported sourcing locally, a unique finding (Figure 3). This is not the case for the entire population of food buying businesses in the region, and is therefore likely a result of our sample selection. By targeting businesses with the ability to buy local, it created a pool more likely to buy local. Additionally, the language in the outreach emails may have attracted businesses already interested in local foods and encouraged them to participate. A more robust effort to reach out to more buyer businesses would likely yield different results on this and other questions on the survey.

The most common place businesses reported buying locally produced food was from farmers themselves. The next most common place was at farmer's markets. When these two are taken together they account for 63 percent of purchasing decisions (Figure 4). This should not be confused with volume purchased. Alternatively, producers have reported these forms of selling are relatively inefficient from their perspective.

Only two of the businesses currently sourcing locally are located in Mankato, but they are not buying through the Mankato Food Hub. The local food hub is a purchasing option most similar to a major distributor. A business is likely to use and enjoy the economies of scale necessary to distribute product efficiently. Additional research investigating the lack of food hub usage is needed.

Figure 2: Buyer's Location

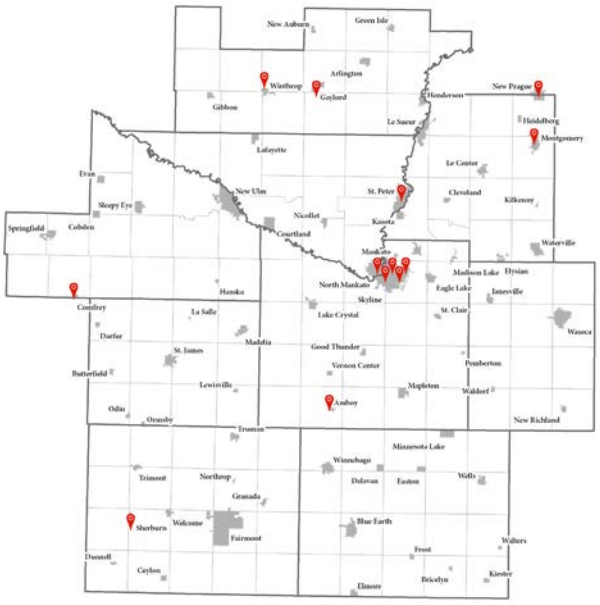


Figure 3: Do you currently source locally?

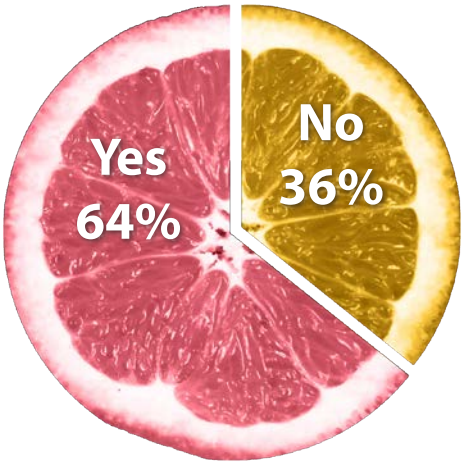
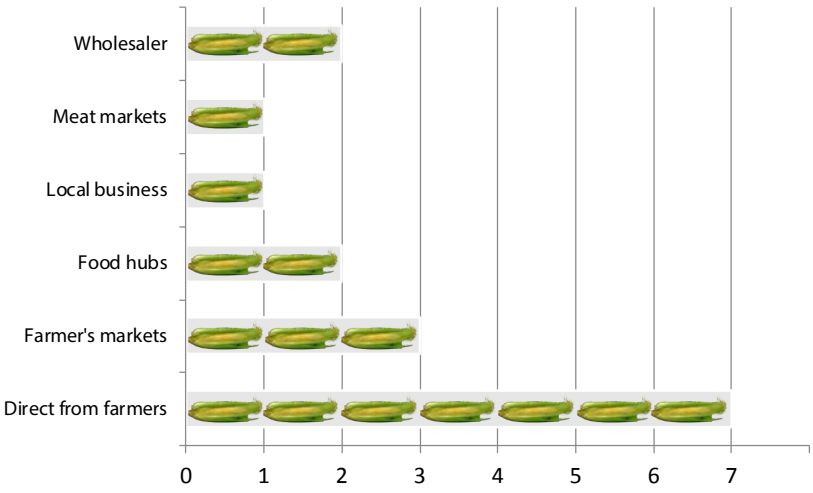


Figure 4: Where do you source local?



The top three barriers to sourcing locally in descending order are consistent availability, quantity available and price (see below). The first two are closely related to seasonality, which dictates how much of what crop will be available at any given time. This is particularly challenging in Minnesota with the limited growing season. Quantity available might be related to the markets where businesses report buying product. Operating as an aggregator, Mankato's food hub can sell larger quantities of a crop more consistently than an individual farmer or farmer's market, but only 12 percent of businesses that source locally source from them. Efforts to connect buyers and the Food Hub may result in more sustained purchasing of local food.

Price is a more difficult consideration. Several producers in the interview project mentioned challenges selling profitably when working directly with a restaurant or selling at a farmer's market. Yet selling in this manner instead of through a food hub may allow them to capture more of the premium dollar they need. Since both buyer and seller are reporting difficulty with price, this is a red flag for service organizations looking to create programing that support local food: find a way to reduce costs for both parties. Perhaps there is an opportunity for a creative business to meet this need.

Barriers to Sourcing Local (responses)

Consistent availability (9)

Quantity available (6)

Price (5)

Limited on-site storage (2)

Lack of demand (2)

Limited on-site processing (1)

Shelf life (1)

Limited preparation knowledge (1)

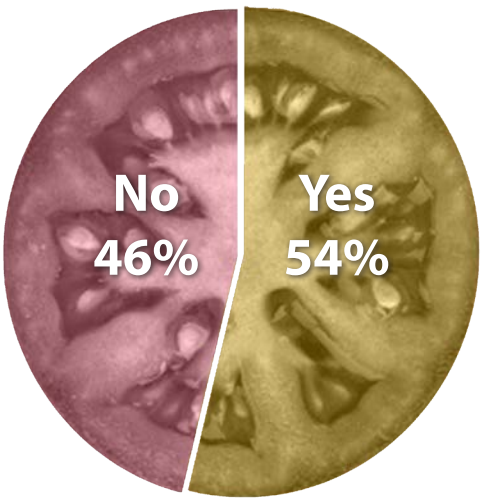
Consistent quality (1)

Ease of delivery (1)

Seven businesses report asking their customers about their interests in local food (Figure 5). One said demand was inconsistent, two reported strong demand but some price sensitivity, one had demand and less price sensitivity and one said customers wanted more organic options.

Respondents were currently sourcing cabbage, carrots, corn, onion, potato, pork, eggs, beef, tomatoes or squash locally. Most often they are buying these by the pound on a weekly basis. Businesses also said they are interested in a source for broccoli, blueberries, cabbage, carrots, corn, cucumber, herbs, lettuce, onion, potatoes, raspberries, spinach, strawberries, tomatoes, beef, chicken, lamb, pork and eggs and would like to buy by the case or by the pound on a weekly basis. Six businesses provided contact information to be connected with local food producers.

Figure 5: Have you ever researched your customer base to determine demand for local foods?



Local Government

Region Nine contacted 187 local government (city, county, township) representatives through email for survey distribution. The survey was distributed on March 24, 2017, and 21 responses were received.

Seven respondents were employees of a city and two were employees of a county. Of those respondents, over half stated they were neither city nor county employees (12). This is likely due to a limitation with survey design. Respondents could self-identify as city staff, county staff or neither. No option for township staff or other write in box was provided.

Local food being a community priority was identified by 38 percent of respondents (Figure 6). Most respondents reported having no formal structure for dealing with food related issues, such as a food policy council or working group (Figure 7). Those that did report structures all identified food shelves (3) as the structure they were referencing. This may indicate an opportunity for education on broader local food concepts and goals among regional local government units.

Only one government unit reported having a policy in place, preferential purchasing, that was designed to support local food. One city reported leasing land to local food farmers on a different survey question, but did not elaborate on how their leasing decisions were targeted to support these businesses. No government reported operating a farmland retention program.

Heart of New Ulm project was mentioned as a program outside of the government offering support for local foods, as were two Statewide Health Improvement Partnership programs. Community gardens and farmer's markets were mentioned as well, along with a backpack food program for school-aged children.

Farmer's markets were also mentioned as an example of community wide efforts to support local food. No respondents described their community's food shed or were familiar with Minnesota Food Charter food supportive strategies.

Figure 6: Is access to locally sourced food a pirority in your community?

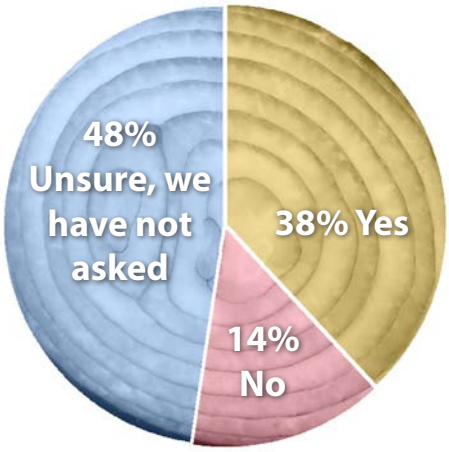
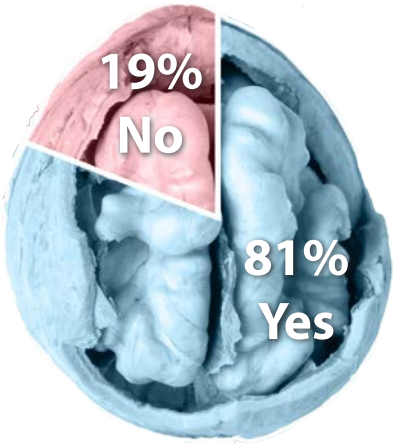


Figure 7: Does your community have a formal structure for dealing with food related issues?



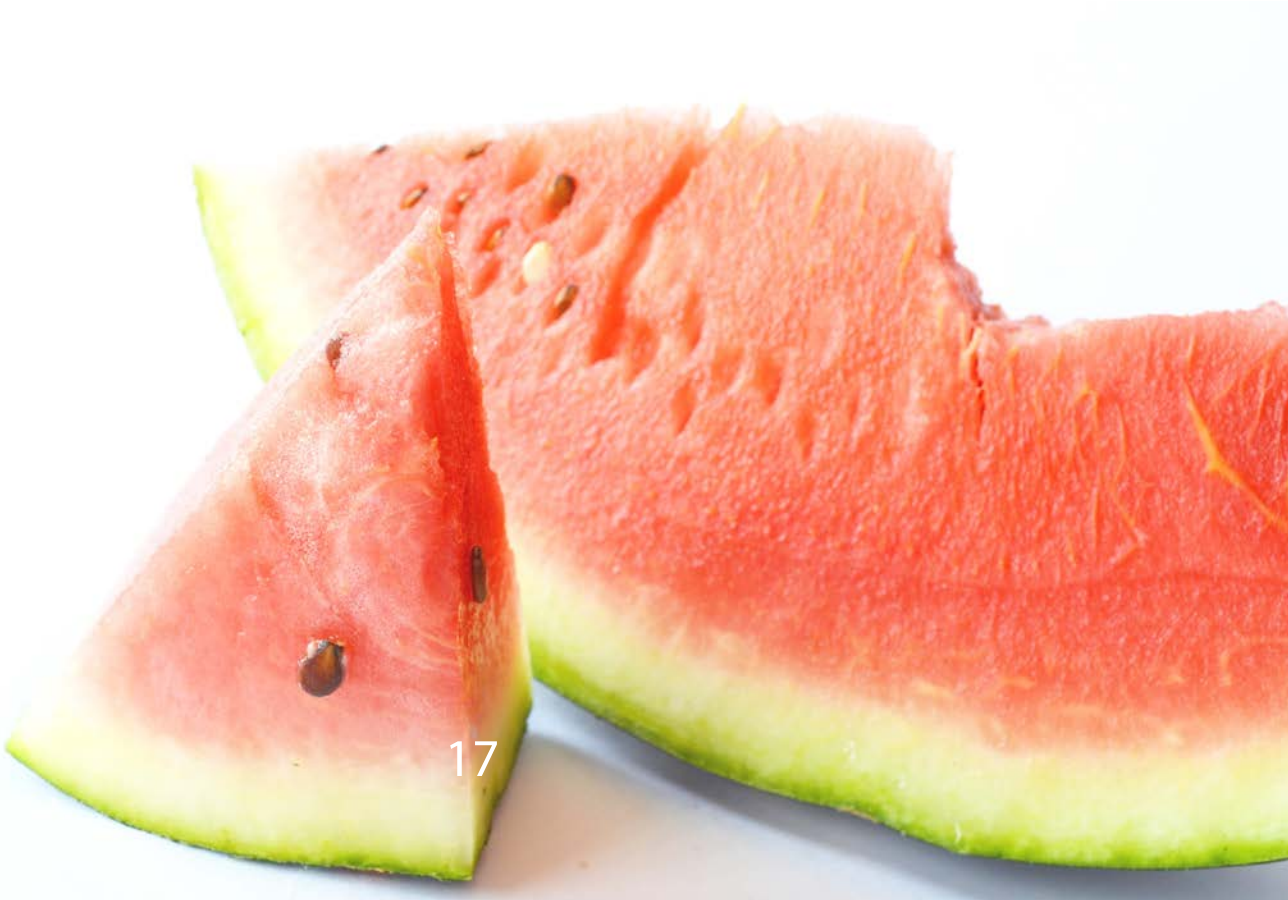
School Districts

Region Nine utilized an existing email list for school districts that contained 31 emails for survey distribution. A link to the survey was sent out on March 30, 2017.

Only five school districts responded to our survey and only a few questions received multiple responses, see Appendix III. This is not enough information to make any inferences about school districts.

Appendix

Appendix I: Producer Interview Questions 18
Appendix II: School District Survey Results 18
Appendix III: Comments 19
Appendix IV: Data Management Methodology 22
Appendix V: Local Foods in South Central Minnesota: A Producer Profile 23



Appendix I: Producer Interview Questions

1. What has worked/is working well in terms of doing business in the local foods arena/in the region?
2. What have been/are the hurdles you've had to overcome?
3. Can you anticipate hurdles to come in the next five years?
4. Who/what has been, or would be, helpful?
5. Who/what hasn't been helpful?
6. What do you need to: be more profitable? Grow your business? Be a stronger business?
7. Would you like to or do you have plans to expand your operation?
8. If yes, how? What is holding you back?
9. What would help the southern region be a stronger force in the local foods arena?
10. Can you provide a summary of your: products, number of employees, sales numbers, main revenue sources?
11. Can you comment on: Inputs (financial, human, raw materials), logistics (storage, transportation), markets, services, seasonal patterns?

Appendix II: School District Survey Results

Q: Is sourcing locally a priority in your community?

A: Yes-2 No-3

Q: Have you participated in Farm to School activities?

A: Yes-2 No-3

Q: Do you currently source locally?

A: Yes-2 No-3

Appendix III: Comments

This appendix does not contain all comments for a specific topic gathered throughout this project. Those included here are meant to be concise examples of themes expressed by multiple farmers.

Challenges with Wholesale: 10/14

- "…the problem with co-ops is that they basically take all of your profit away…They wanted us to cut our retail prices and sell for under what we felt we needed and then they would just tack on their profit which actually wound up making the meat more expensive through them than if people had come directly to us and so we were losing and they were gaining and we didn't think that worked."
- "The schools have budgets and they can't break out of the cheap food budgets, nursing homes too for keeping their food costs down so it's like a spiraling thing."
- "A big challenge is food distribution. We have restaurant accounts but they will order $30-50 and that is not a sustainable model. We can't just run and make a bunch of deliveries for $50 because by the time I've gotten that order together and delivered it, I'm not making anything from it."

Challenges with Labor: 10/14

- "Well, labor is an issue for us. It's been difficult finding people to help run the shop because we all have full time jobs. We have some good people that help us out but some don't find it important to work. So now opening up the kitchen will be hard to find someone to do the baking."
- "We would need to get 4 times bigger to afford workman's comp."
- "Can't afford it. I did hire a young man from there high school here for a while when I was working and I have an addition here and I have gotten people who are homeless who are willing to work for board and room and I have done that I haven't done a lot of it because I have only been retired a couple years here but my son is here with me and he does tilling and a lot of work so and my husband can do limited amounts of things. So yes, labor is an issue, but I can't even think labor until I make money and I don't have money to put into labor."
- "You asked about labor. Labor's problem. Apples have very little margin to them. So when you look across, it's about 27$ a bushel I have to get to break even on my apples. And what that means is I'm breaking even on all my common apples, my Harrelson's, my Firesides and I'm making money on my Honey Crisps, my Sweet Tangos and those things cause we can charge more for (them)."
- "We did try to use some migrant labor and we might do more of that because the weeding and the harvesting gets old in the middle of summer and the crew just gets tired of doing that kind of stuff, and we still need to be able to put people in cultivation equipment and do the higher skilled jobs that I'll have to train every time someone comes on the farm."

Property, Plant and Equipment Owned: 10/14

- "Flat – I have a flatbed truck but I have the vehicles, the cars too can put it in the trunk, in the back seat, in the front seat. You can get in quite a bit of stuff if you stack it up ya know."

- "Right now, I am delivering out of my pick-up truck."
- "And we have two tractors with tillers that go behind them which are different sizes. The different sizes help us different things."
- "(The) first year we had a roto tiller. Someone gave us a walking tractor at the end that we had to fix. A red old veggie tractor but that is all we had but once we had that, it helped a lot because we could keep the weeds underground. We were hand weeding before that and it was really hard work."

Challenges Farming: 8/14

- "We do have issues with colony collapse because no one really knows what it is. People are starting to think it's just a multitude of different things and I kind of agree… Bees are an indicator species, so they are the first to go along with amphibians."
- "I guess the other concern is being organic because of weed control and I am learning more and more about how we have to do cover croppings and things like that but there is no time to do that. Like, how do you get that in?"
- "We realized that as a CSA farmer, you have to know 25 different vegetables and everything about them…"
- "We didn't know about the pests and diseases. When that would happen it's hard to diagnose what something is and how to fix it sustainably."
- "The Extension office in Blue Earth didn't have a lot of organic methods."

Challenges with Retail: 8/14

- "So farmers' market I did not want to do because think it's too labor intensive for what you get out of it."
- "If we could figure out how to get more of our crops up towards the cities (Farmer's Markets), we could get a lot more money for them. If we could market up there. But we are just a small farm, we can't spend that kind of time."
- "So when you do a CSA, you have their money. And the people who sign up for CSA's know the risks because you talk to them about it. There is no guarantee that the person will get 10 cucumbers so maybe we'll have to make it up with more tomatoes. There was so much stress about the vegetables especially doing it organically. You can't count on the weather or bugs and you never know how many of your crops will fail. The constant stress about not knowing if you will be able to fill up the boxes was terrible."

Challenges with Property, Plant and Equipment: 8/14

- "This scale is interesting because we're profitable and whatnot and it's manageable but it's kind of the in between like people either get bigger and they have to get a lot bigger to cover it or you just kinda stay like this but a lot of people get bigger."
- "Having affordable land to either own or rent. We own about 30 acres here and a 30 acre piece down around the corner… and then we rent another farmland for pasturing the animals and that little piece for crops. And it's only been in the last couple years that we have had the ability to do

that… so land access is kind of our biggest limiting factor as to how big we can be and how much we can do."

- "Our taxes went up 105% again this year."
- "Equipment would make it easier but that comes at a cost… we need a drill, preferably something that would fit our row width so we can do one row at a time. That would be ideal, but that is a $4000-$5000 piece of equipment."
- "We can only sell (beef) off the farm in Minnesota. I used to take meat to a restaurant in Odom, but to do that we need a USDA butcher shop in Southern Minnesota. We can't truck beef to the current facilities."

Expansion Plans for Property Plant and Equipment: 8/14

- "Food safety and packing-shed, post-harvest stuff is something we tend to look at cause we'll be building a new packing facility for our apples."
- "So we're one of the five farms that got selected for the grant process to build a deep winter greenhouse next year.'
- "We need to make a barn for the chickens."
- "We are adding onto the building too and changing some things… upgrades like kitchen equipment, the building and equipment for the building. If we have some leftover funding, we want to put in a storage shed too."
- "Now we are going to be leasing the Harris Honey Company facility until we start building our own, which once we close on the property we are buying, we can start the process of building…"

Challenges with Consumer Education: 8/14

- "It is probably my biggest irritancy when people complain about the prices of our healthy and good food. It's everyone's job to educate the consumer. Most consumers have no idea what is in season."
- "Basically, consumer education is the biggest (challenge). That is what we need. Farmers will grow whatever the consumer wants."
- "The majority of people in our area don't know what an heirloom tomato is."
- "We need to educate people about it and get people more involved in it. I have watched it start to change over the past couple of years. They need to know the amount of work that goes into it to get the food out to the local people. Five years ago I started to see a change in people's attitudes and that is where it needs to start, their attitudes."

Mixed Vegetable Production: 7/14

- "We grow half an acre of certified organic vegetables."
- "So I currently grow 60 varieties of heirloom tomatoes. I also grow 30 varieties of peppers."
- "Probably about 60% of our business is CSA and we do vegetables, meats and eggs."

Appendix IV: Data Management Methodology

All recorded material was transcribed either by Region Nine consultants or the VISTA service person. Transcriptions were loaded into Provalis's Qualitative Data Analysis LTE (QDA) software, a program that enables text to be coded and then searched based on those codes. All codes referenced in this report and their definitions are attached (Appendix II) along with comments from producers falling under each code. Codes were organized in a thematic structure called a Coding Tree in which tags are the broadest theme, followed by categories with codes being the most specific means of classifying comments. This is illustrated below:

Tag: letter preceding a category title indicating the broadest level of association for the codes contained within.

Category: title that gives more specific criteria for codes listed underneath.

Code: specific classification for information contained in a comment. Codes are not mutually exclusive and text segments may receive multiple codes if appropriate.

Tags always precede the name of a category (e.g. M: Wholesale). This is due to limitations within the LTE version of the software that only allow for two levels of association. Tags are attached to category titles to signify the broader grouping a category falls under. These labels appear as headings in Table 1. Additional headings are defined here:

Count: number of text segments given a specific code

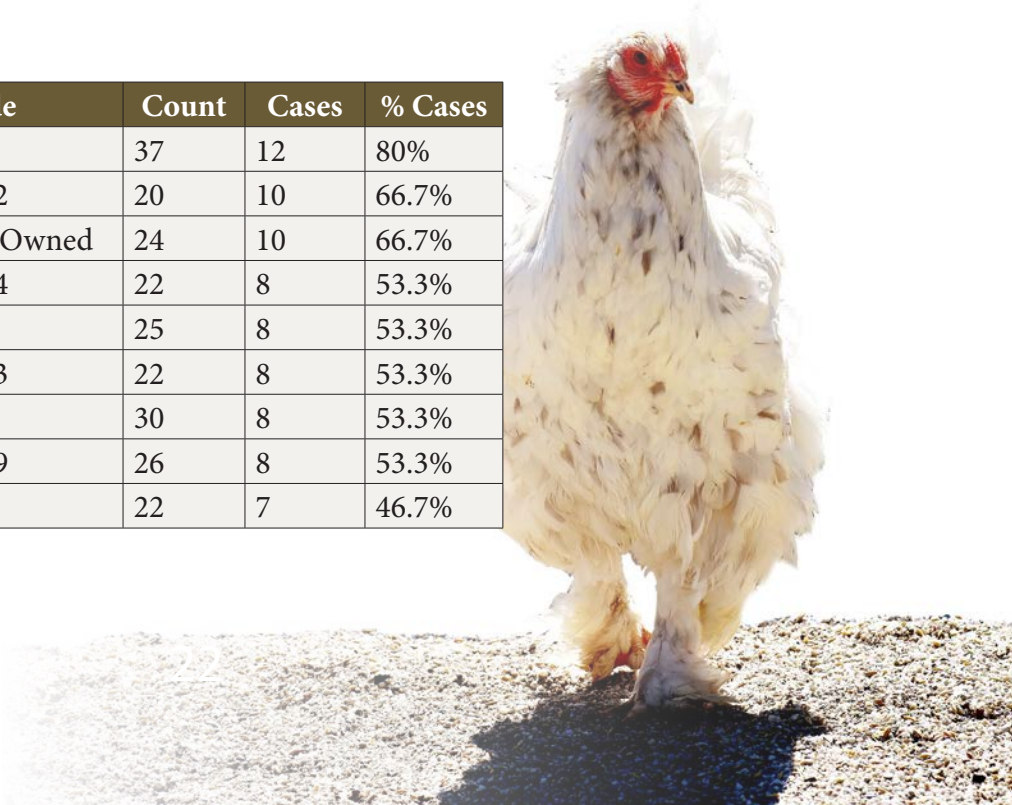
Cases: number of individual interview transcriptions loaded into the larger project within QDA containing a specific code

% Cases: percent of total cases containing text with a specific code.

For this report, the codes used more than 20 times across all interviews were included. These indicate comments that describe the business, highlight challenges ad outline goals. By examining these high frequency codes, topics that naturally rose to the top during the interview process, across all participants are highlighted. The results from the software itself are contained in Table 1.

Table 1: Codes with Frequency > 20

Tag	Category	Code	Count	Cases	% Cases
M	Whole Sale	Challenge	37	12	80%
S	Labor	Challenge12	20	10	66.7%
S	PPE	Equipment Owned	24	10	66.7%
I	Farming Skills	Challenge14	22	8	53.3%
M	Retail Sales	Challenge1	25	8	53.3%
S	PPE	Challenge13	22	8	53.3%
G	Expansion	PPE	30	8	53.3%
None	Education	Challenge19	26	8	53.3%
P	Crops	Vegetables	22	7	46.7%



Appendix V: Local Foods in South Central Minnesota: A Producer Profile

University of Minnesota | Extension Region Nine Development Commission

EXECUTIVE SUMMARY

In Spring 2017, Region Nine Development Commission, in partnership with University of Minnesota Extension, conducted a survey of local food producers in south central Minnesota. A total of 20 producers responded to the survey. **Of those, 18 reported owning a farm that sold local foods within the past five years.** These responses are the basis for the following summary.

- The average local food farmer is 50 years old with some higher education. There is a 50 percent chance the owner holds a Bachelors degree or above. There is a one in two chance the owner works off farm, and if so, it is probably full-time.
- The owner most likely has a spouse who is better educated and works off-farm. The household likely receives over ¾ of their household income from off-farm activities.
- The owner has likely been in operation for around ten years and plans to farm for a minimum of ten more. There is a 30 percent chance the owner plans to farm for 40 years or more. During those years, they are planning to expand their products offered, the size of their business, or the markets they serve.
- The farm sits on 80 acres or less, which the operator owns. The operation probably grows mixed vegetables, as well as raises chickens for eggs. On the property, there is a house, a chicken coop, a small barn or pole shed and a packing shed. The operation might rent additional land, but if so, it is less acreage than they own.
- Most operations incorporate cover crops in some way, either as fertilizer or as a weed suppressor, or both. Cover crops were the most common fertilizer practice, followed by raw manure and compost applications. Four producers reported using chemical fertilizers. A single practice was seldom used alone. Most operations incorporated two to four fertilizer strategies.
- Pest control strategies were reported in similar patterns. The majority of farmers shy away from inorganic pesticides and instead opt for organic, bio-control, or biodynamic methods of pest management. Some apply inorganic pesticides, but as part of an integrated pest management system. Again, most operators utilized multiple practices on their farm.
- The majority of operations use some form of mechanical weed control, ranging from hand pulling to cultivation. Cover crops and mulch were the next most common weed control method. Five respondents report use of chemical herbicides, and again, most producers employed multiple practices.
- Seven producers reported livestock on their farm and almost all of them rotate their stock across paddocks, with a few incorporating multiple stock and or crops into the succession.

- Most operations use vegetative buffers (no till, grassland, treeline, etc), if they have water bodies on their productive properties.

These results represent the 18 operations responding to this survey. Given the relatively small sample size, care should be taken in applying these results to the general population of local food farms.

PROJECT BACKGROUND

"After twenty years of steady even exponential market growth, local and regional foods are more than a passing trend". ~ United States Department of Agriculture

In 2015, USDA conducted the first-ever local food marketing practices survey. The survey was in response to the growing prevalence and importance of direct marketing food programs, such as Community Supported Agriculture (CSA) and farm-to-school sales. The goal was to deepen the understanding around these types of farms. The study found that in 2015 Minnesota farmers reported $139.4 million in sales of edible goods sold through direct market channels[1].

Despite the increasing awareness and market demand, little is known about local food producers in South Central Minnesota. To fill this knowledge gap, the Region Nine Development Commission (Region Nine) and University of Minnesota Extension (Extension) collaborated to survey local food producers in the region. The goal of the survey was twofold. One, to develop a profile of the local food producers – the types of foods they produce, their size, and the characteristics of owners. Two, to explore the positive externalities generated by local food operations. Positive externalities, in economic terms, are the benefits generated above and beyond the direct effects of the operation that are enjoyed by the community as a whole. For example, a local farm operator might also hold a second job, which creates positive impacts in the community. Or a local farm operator may employ land management practices that improve water quality locally, which in turn, improves the recreational value of area lakes and streams. These are the types of benefits we were looking to catalogue with this project.

This report will summarize the results of the local food producer survey and provide a profile of local food production in South Central Minnesota. It will also explore possible positive externalities generated by local food producers in the region. Given the relatively low number of survey respondents, the results here are presented as a summary. Care should be taken in interpretation, as results may not be representative of all local food operations in the region.

The South Central region in this report includes the nine counties served by Region Nine. They are Blue Earth, Brown, Faribault, Le Sueur, Martin, Nicollet, Sibley, Waseca, and Watonwan counties.

SURVEY METHODS

To develop a local food producer profile, Region Nine conducted a survey. The online survey instrument was desgined in collaboration with Extension. On March 14, 2017, Region Nine sent an email invitation to 57 producers. The producer list was generated by Region Nine through interviews with key local food stakeholders and oline directories, such as the Minnesota Grown, Agrilicious, and Local Harvest. Multiple periodic reminders (approximately every two weeks), were

[1] Local Food Marketing Practices Survey, USDA, Census of Agriculture. https://www.agcensus.usda.gov/Publications/Local_Food/

sent to the producer emails list, as well as deployed via Region Nine's social media accounts. The surveys were available for slightly more than a month.

A total of 20 producers responded to the survey. This is a response rate of 35 percent. **Of those, 18 reported owning a farm that sold local foods within the past five years,** bringing the effective response rate to 31.5 percent**.** These responses are the basis for the following analysis.

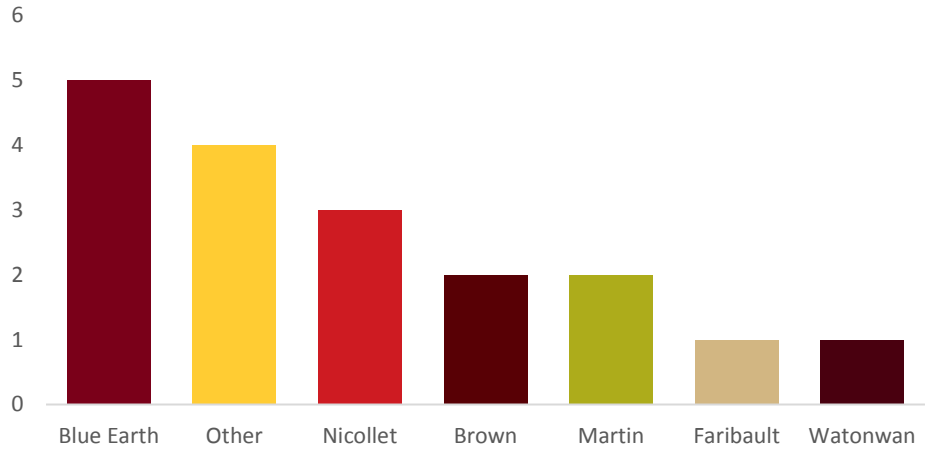
It is important to keep in mind the sample size for this project. While a 31.5 percent response is strong, it is still only 18 respondents, with many being disqualified from specific questions throughout the survey. Additionally, most questions were skipped by at least one respondent, meaning some of the most robustly answered questions have 17 or fewer responses. Charts that indicate a high percentage of producers have a given characteristic should be taken with a grain of salt. Therefore, the first insight gleaned from this project is that more documentation of producer businesses and their practices is needed to validate tentative findings in this report.

RESPONDENT CHARACTERISTICS

Of the 18 respondents who operated a local foods farm within the last five years, five were from Blue Earth County and four from counties outside the region (Chart 1). Although the goal was to learn more about local food producers in the region, the survey received a fair number of responses from operations in counties outside the region. The responses include both currently and previously active growers.

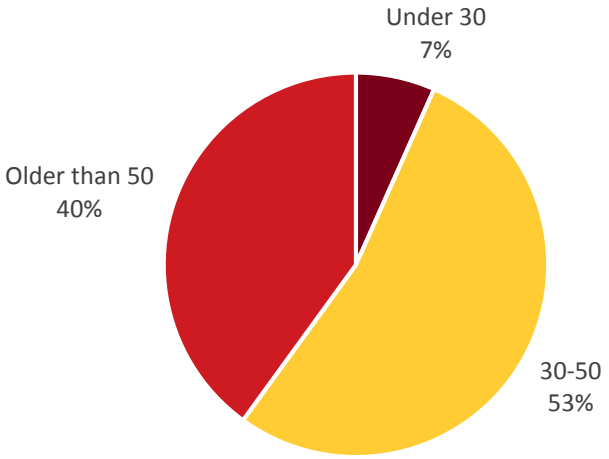
Given the limited number of responses, we are choosing to include these responses in the following analysis.

Chart 1: Number of Responses by County, Number of Responses = 18



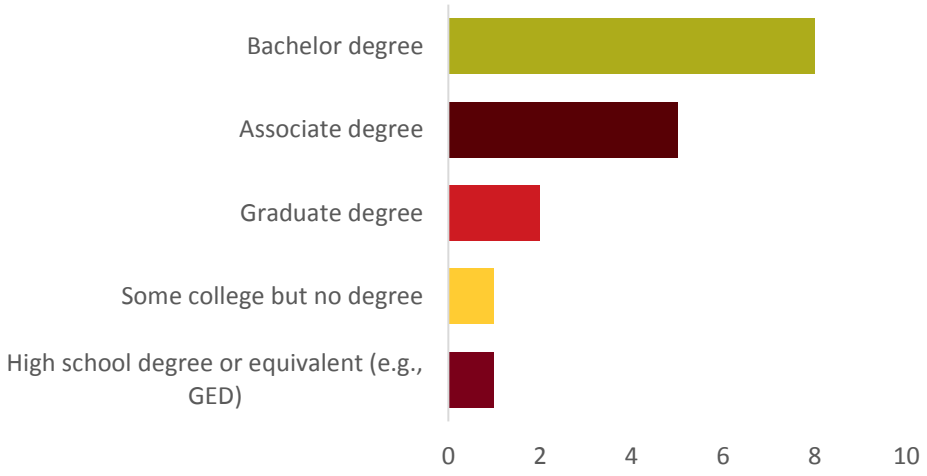
The average age of survey respondents is 50. Roughly half the respondents reported being between the ages of 30 and 50 (Chart 2).

Chart 2: Operator Age, Number of Responses = 15



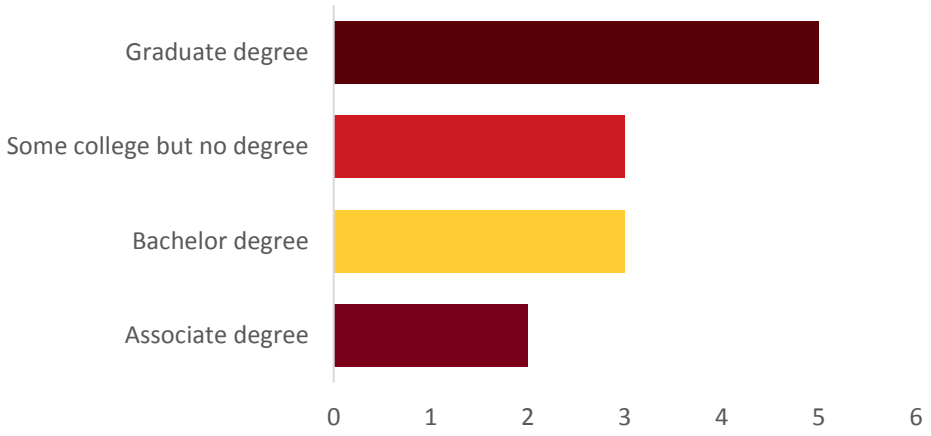
The survey respondents, overall, are fairly well educated. Eighty-eight percent hold a post-high school degree (Chart 3). Roughly half (8) have a bachelor's degree.

Chart 3: Level of Education, Number of Responses = 17



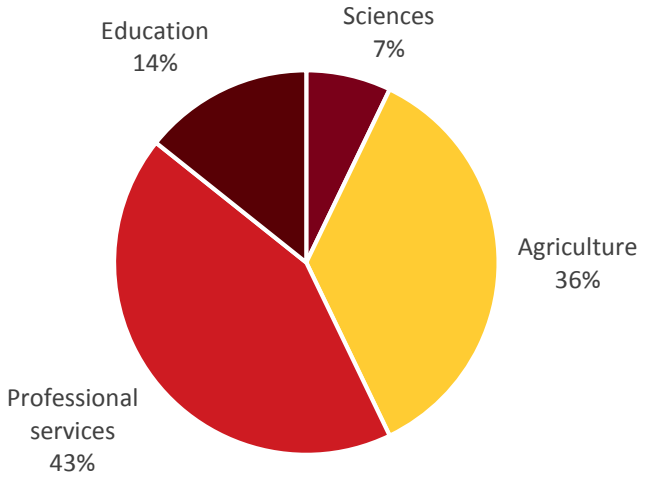
Local food producers' spouses are also well-educated. Most (82 percent) of the respondents reported having a spouse. Of those, all had post-high school education. Five had graduate degrees (Chart 4).

Chart 4: Spousal Level of Education, Number of Responses = 13



The majority of respondents (94 percent) reported being employed prior to beginning their local foods operation. More than one-third (36 percent) were previously in an agriculture-related field (Chart 5). More than 40 percent were in a professional service-related field (including careers in areas like financial services, human resources, and public relations).

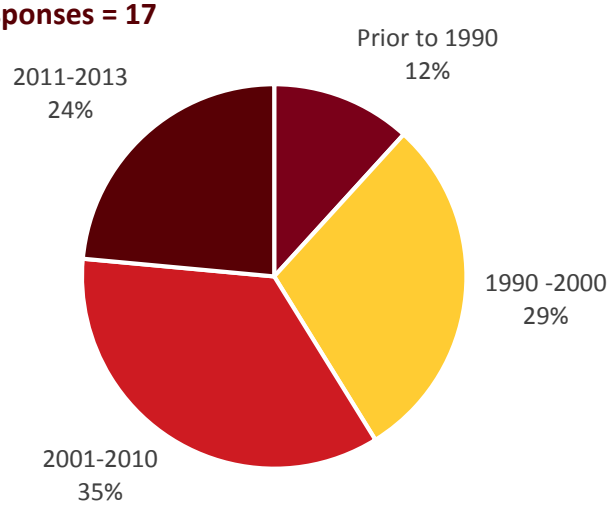
Chart 5: Profession Prior to Operating Farm, Number of Responses = 14



FARMING OPERATION CHARACTERISTICS

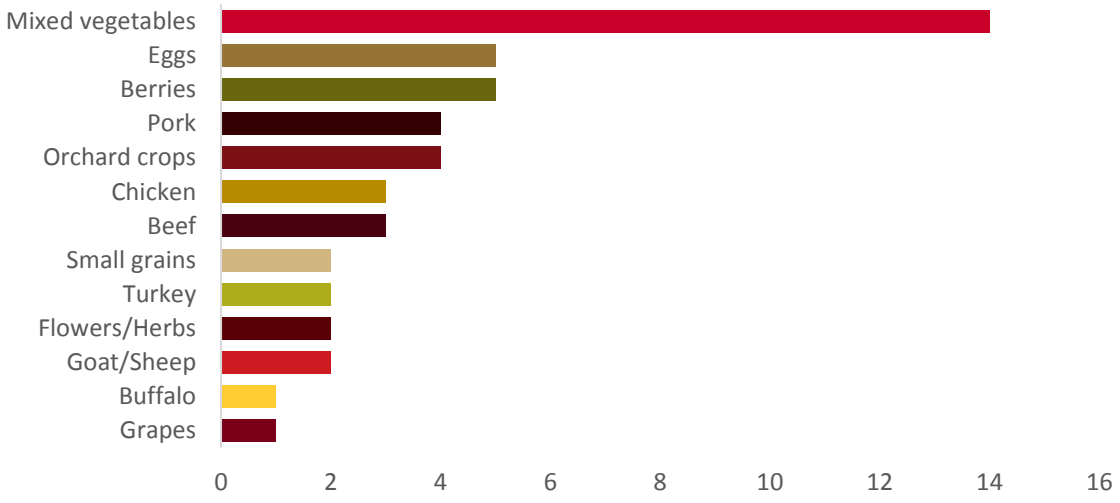
The median year of operation founding for the respondents is 2002. Over half (59 percent) of the local food operations started after 2000 (Chart 6). Nearly one-quarter of operations were founded within the last 5 years, making them relatively young.

Chart 6: Year of Operation Founding, Number of Responses = 17



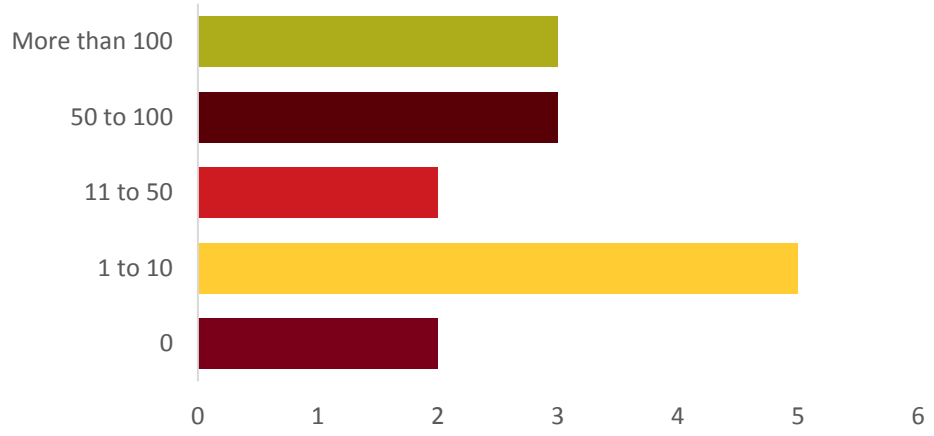
The primary food produced by respondents is mixed vegetables, with 14 operations growing them (Chart 7). Other commonly produced foods include eggs, berries, and pork. Operations could select as many options as apply to their situation. Only two operations (13 percent) indicated they produced one item only. Most operations grew two to three of the products, with mixed vegetables and berries being the most common combination.

Chart 7: Operation Production (select all that apply), Number of Responses = 16



On average, each local food operator owns 86 acres for farming. Nearly 30 percent (5 operators) own 1 to 10 acres for farming (Chart 8). Two operators (12 percent) do not own any of their farming property.

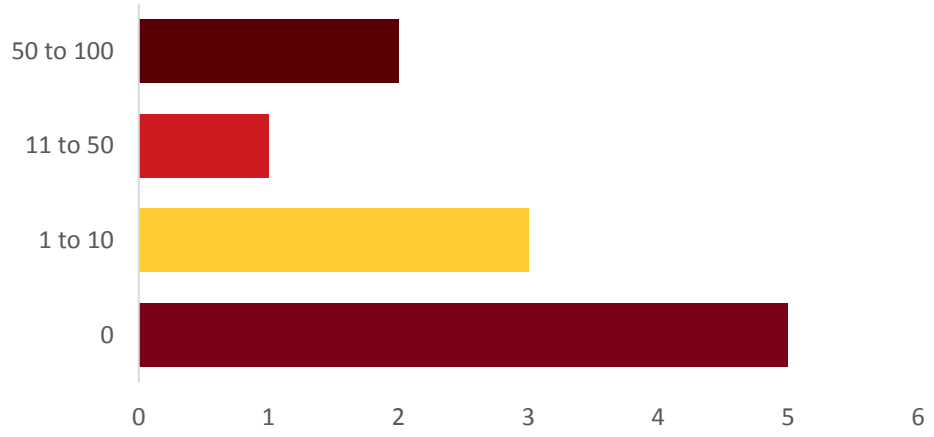
Chart 8: Acres Owned for Farming, Number of Responses = 13



The survey results show three of the respondents own more than 100 acres for farming. Many may perceive that local farm food producers are typically smaller in size. The average farm size in Region 9 is 360 acres, so the average 86 acres is smaller than average in the region. With the small sample size, there are no discernable differences between the farms of over 100 acres and those under 100 acres.

On average, each local food operator rents 18 acres for farming. Five operators have no rented acreage (Chart 9).[2]

Chart 9: Acres Rented for Farming, Number of Responses = 6



The most commonly used production practices by local food operators are crop rotation, paddock rotation, and minimal tillage (Chart 9). Despite there being 14 operations growing mixed vegetables, only four operations have hoophouses and three have a greenhouse.

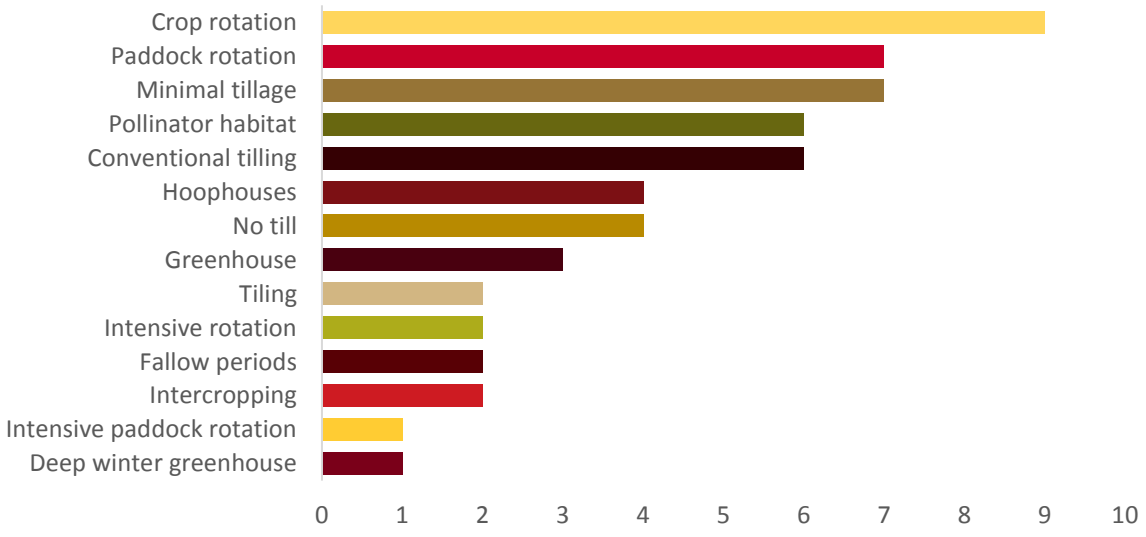
[2] One response was dropped as an outlier. The responses was outside of the plus or minus three standard deviation range.

Responding operators could select all types of production practices used in their farming. Of the nine operations using crop rotation, six also reported using conventional tilling. Four of those further reported using minimal till. These results point to the complex nature of local food operations. The survey results indicate some traditional farms have local food as a complimentary operation. A corn for grain farmer, for example, growing a plot of sweet corn to sell at the local farmer's market, perhaps as an opportunity for their children to earn summer money.

Production practices are one area in which local food producers can generate positive externalities. Using practices that preserve and develop pollinator habitat, for example, can be beneficial for all farming and gardening operations.

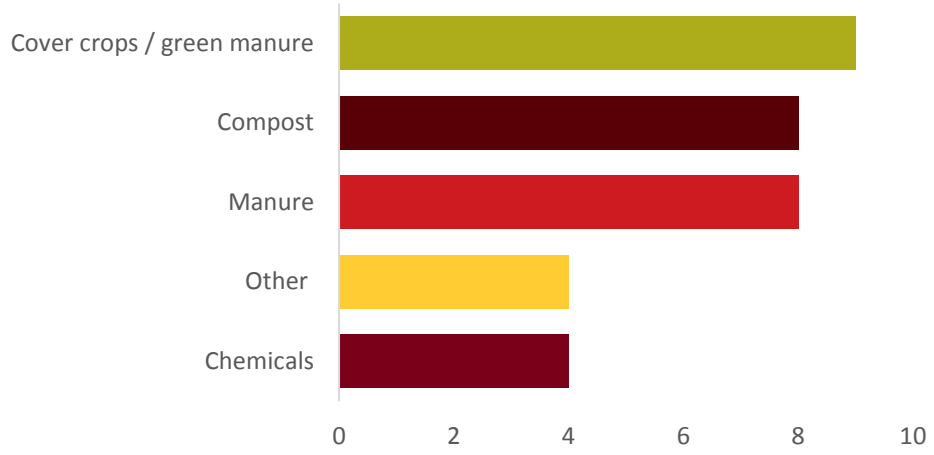
According to the United States Department of Agriculture, one third of agricultural output in the country depends on pollinators (The importance of pollinators). In 2012, farmers in Region 9 counties produced $3.5 billion dollars of agricultural output. Given this, pollinators helped in 2012 to generate more than an estimated $1 billion dollars of output. Without those pollinators, this output could be in jeopardy.

Chart 10: Production Practices (select all that apply), Number of Responses = 15



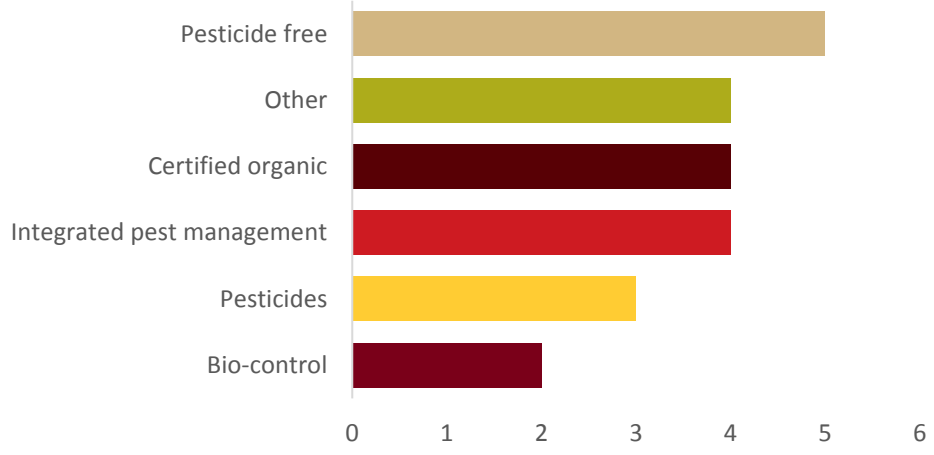
Local food producers report using cover crops, compost, and manure as their primary fertilizers (Chart 11).

Chart 11: Use of Fertilizers (select all that apply), Number of Responses = 16



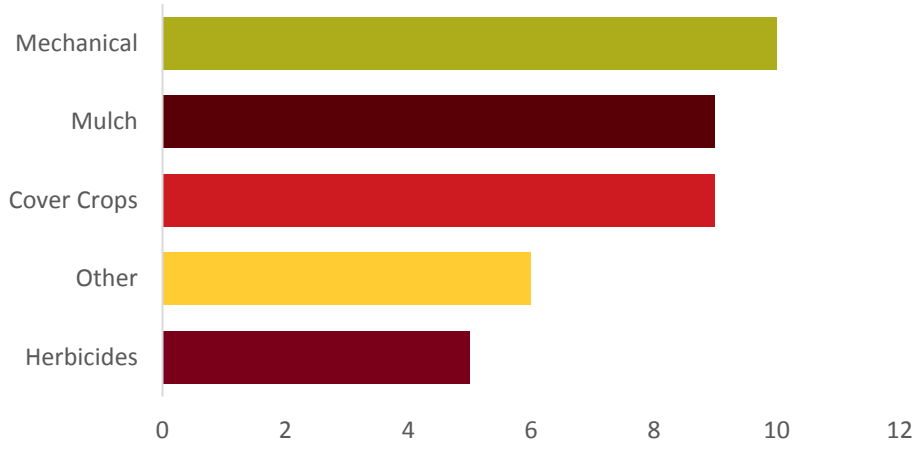
Five of the 17 respondents (29 percent) report being pesticide free. Common pest control options include being certified organic, integrated pest management, and bio-control (Chart 12). Respondents could check all options that apply to their situation, so those certified organic, for example, are also pesticide free. "Other" options include responses such as biodynamic preparations and organic pesticides. It appears there is a spectrum of pest control choices and operators are working to meet the need of consumers while controlling pests.

Chart 12: Pest Control (select all that apply), Number of Responses = 16



More than half (59 percent) of respondents report using mechanical options to control weeds (Chart 13). Mulch and cover crops are also commonly used. Only five reported using herbicides.

Chart 13: Weed Control (select all that apply), Number of Responses = 16



The majority (93 percent) of farm operators report living on their farm. On average, each farm site has one home (Table 1). Each operator has an average of two livestock buildings and one processing and/or storage facilities.

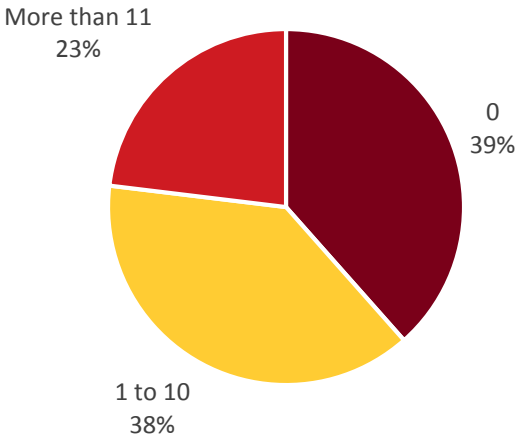
Table 1: Farm Buildings

	Average	Minimum	Maximum
Houses/homes	1	1	2
Livestock buildings	2	0	5
Processing/storage facilities	1	0	2

These results also have important implications for externalities. The average farm size in Region 9 is 360 acres. The average size for the local food producers is 86 owned acres. Assuming one house or home per farm, smaller farm sizes could lead to additional residents in the region.

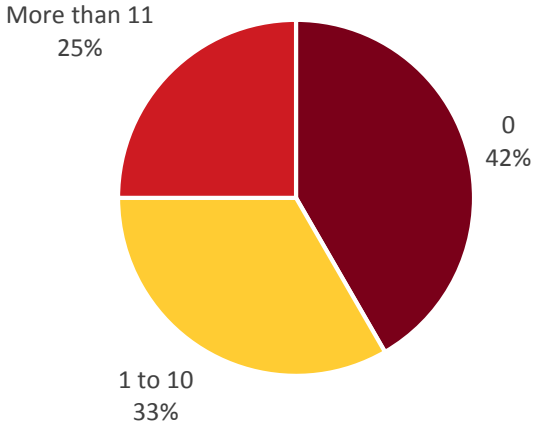
On average, each responding local food producer has 12 acres covered with forest. These acres are not being used for growing as part of the operation. Nearly 40 percent of the respondents had no acres covered with forest (Chart 14).

Chart 14: Acreage in Forested (Non-Productive Use), Number of Responses = 13



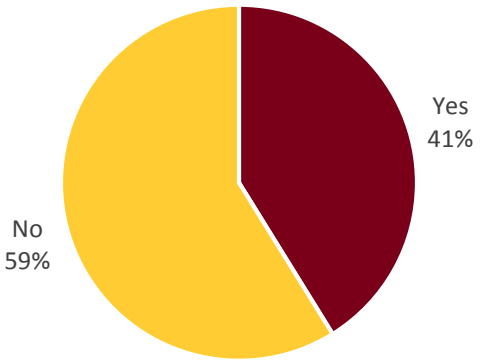
On average, each responding local food producer has 8 acres planted in long-term perennials not being used for food production. Like the forested acres, these acres are not being used for growing as part of the operation. More than 40 percent of the respondents had no acres covered with long-term, non-productive perennials (Chart 15).

Chart 15: Acreage Planted in Long-Term Perennials (Non-Productive), Number of Responses = 12



Of the responding operations, 41 percent reported having some of their productive acres border a water body (pond, stream, river, or lake). See Chart 16. On average, each operation has 9 acres bordering on water. To protect water sources, 5 operations report using a version of buffer strip, varying from no till to grassland to trees.

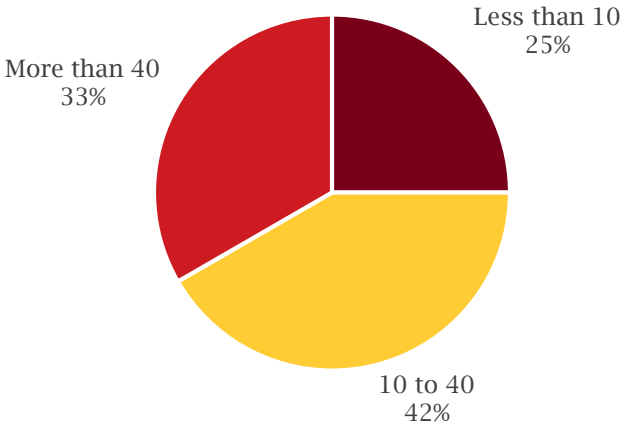
Chart 16: Productive Acres Border Water Body, Number of Responses = 13



FUTURE PLANS

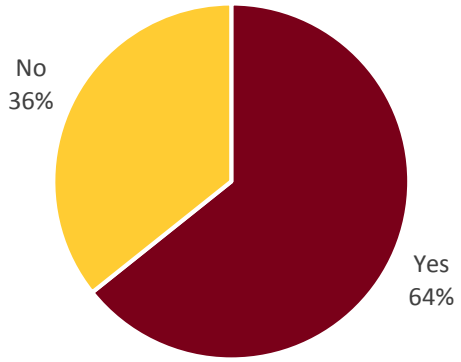
In general, the local food producers appear to be planning to remain involved in farming. On average, each respondent plans to farm at the current location for 30 years. One-quarter plan to continue operations for less than 10 years (Chart 17). Given that 40 percent of operators are over the age of 50, this might not be surprising.

Chart 17: Years Planning to Farm at Current Location, Number of Responses = 12



Local food producers seem optimistic about growth. Two-thirds of farmers plan to expand their acreage, herd, flock, markets or product mix within the next 10 years (Chart 18). This has important implications for growth of the industry in the region.

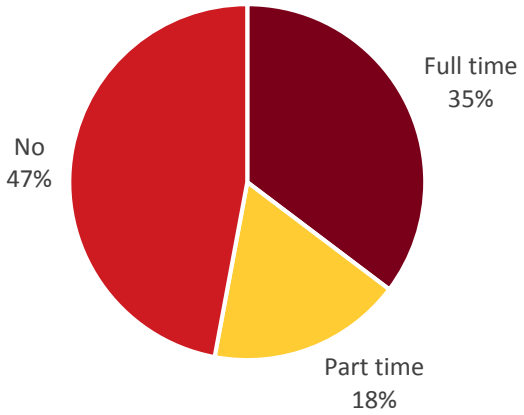
Chart 18: Plans for Expansion in the Next Ten Years, Number of Responses = 14



OFF FARM EMPLOYMENT AND INCOME

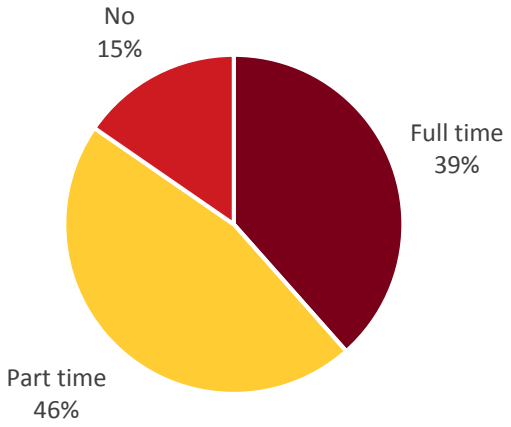
Off farm employment is important to local food producers. Only two of the respondents reported no off farm employment. The other 15 reported either working off farm themselves or having a spouse who works off farm. For primary operators, 35 percent are employed full time off farm and 18 percent employed part time off farm (Chart 19).

Chart 19: Primary Operator Employed Off Farm, Number of Responses = 17



Spouses are more likely to be employed off farm. While 47 percent of the primary operators are not employed off farm, only 15 percent of spouses are not employed off farm (Chart 20). Spouses are also more likely to be employed part time off farm (46 percent).

Chart 20: Spouse Employed Off Farm, Number of Responses = 13

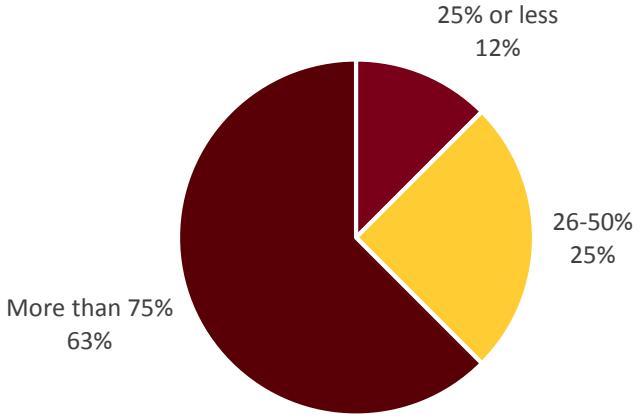


Off farm employment is another potential source of positive externalities. Farm families, both the primary operator and spouse, are potential workforce for local businesses. Minnesota is currently experiencing a workforce shortage. The unemployment rate in Minnesota was 3.8 percent in March of 2016. Mankato's unemployment rate was 3.3 percent. North Mankato's was 2.8 percent. Local food producers working off farm is critical to the success of local businesses.

Off farm income is also important to the household income for local food producers. On average, each responding operation reported 72 percent of their household income from off-farm sources.

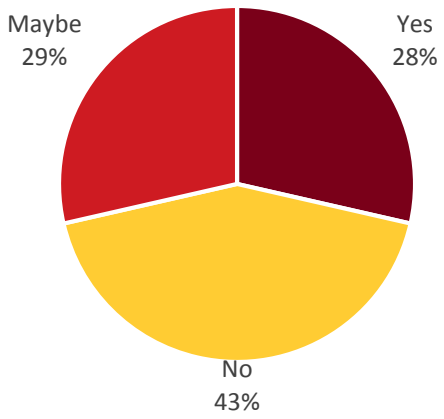
For nearly two-thirds of respondents, off farm employment generated more than 75 percent of the household's income (Chart 21). Only 12 percent get less than 25 percent from off farm sources. No one responded household income from off farm sources in the range of 50 to 75 percent.

Chart 21: Percent of Household Income from Off Farm Sources, Number of Responses = 8



Slightly more than one-quarter of operators are planning to transition to farming full time (Chart 22). A similar percentage are considering the transition.

Chart 22: Plan to Transition to Full-Time Farming, Number of Responses = 7

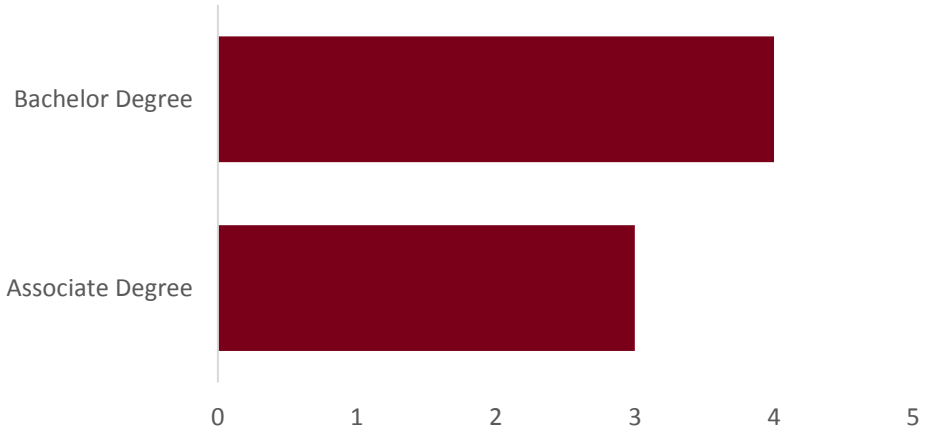


YOUNG FARMERS

The average age of farmers in Minnesota is 56 years.[3] The average age of local food producers in this survey was 50, with 60 percent of respondents being under the age of 50. It is of interest to explore survey results for this younger population. There were seven respondents in this category. The average age is 38.

All of the respondents under the age of 50 reported having received a higher education degree (Chart 23). Three respondents have an associate degree and four have a bachelor degree.

Chart 23: Level of Education, Respondents Under 50 Years Old, Number of Responses = 7



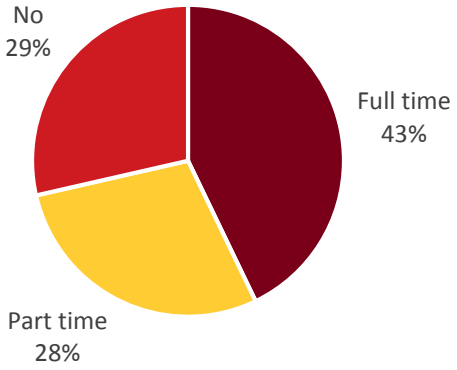
Off farm employment and income is also critical for the younger farmers. In this sample, younger farmers reported higher levels of off farm employment as compared to the group as a whole.

[3] United States Department of Agriculture, National Agricultural Statistics Service, 2012 Census of Agriculture

Among all survey participants, 53 percent reported the primary operator working off farm. Among younger farmers, 71 percent worked off farm (Chart 24).

In terms of off farm income, farmers younger than 50 reported an average of 80 percent of their household income being derived from off farm activities. For the survey respondents at a whole, the percent is 72 percent.

Chart 24: Primary Operator Employed Off Farm, Respondents Under 50 Years Old, Number of Responses = 7

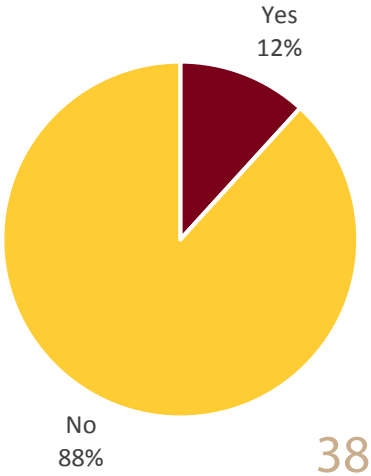


Younger farmers in this survey are more likely than their peers to expand in the next 10 years. While two-thirds of the whole survey population plan to expand in the next ten years, all of the farmers under the age of 50 plan to expand.

ADDITIONAL BUSINESS OPERATIONS

Two of the 17 respondents reported owning another business in addition to their farming operation (Chart 26).

Chart 26: Owner/Partner in Another Business, Number of Responses = 17



PREPARED BY

Brigid Tuck, Senior Economic Impact Analyst, Center for Community Vitality

Jesse Womack, AmeriCorps/Vista, Region 9 Development Commission

WORKS CITED

The Importance of Pollinators.
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pa/plantsanimals/?cid=nrcs142p2_018171

© 2017 Regents of the University of Minnesota. All rights reserved. University of Minnesota Extension is an equal opportunity educator and employer. In accordance with the Americans with Disabilities Act, this material is available in alternative formats upon request. Direct requests to 612-625-8233.
Printed on recycled and recyclable paper with at least 10 percent postconsumer waste material.

Region Nine Development Commission

(507) 387-5643 | www.rndc.org

July 2017