

Michigan State University Extension Southeast Michigan Small Farm Needs Assessment 2018 – 2019



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Overview of Needs Assessment

Throughout the months of November and December of 2018, MSU Extension personnel Jae Gerhart and Marissa Schuh conducted a community needs assessment to gain deeper insight on role of the organization, topics of interest, and preferred methods of communication among small (using the USDA definition of sales under \$250,000¹) farmers across Southeast Michigan. The assessment was developed in response to both local MSU Extension personnel desire to develop relevant programming for this population as well as to expand on the data gathered through the 2015-2016 Issues Identification Process.

Purpose

Having worked in Southeast Michigan for over two years, it was a natural time for Gerhart and Schuh to assess the programmatic areas clients would find most useful in their development as small farmers. The information gathered is intended to inform future MSU Extension program development for Southeast Michigan small farmers as well as inform other Agriculture and Agribusiness Institute (AABI) and Community, Food, and Environment Institute (CFEI) educators and program instructors of the possible needs of small farms in other regions of the state.

Additionally, the Needs Assessment addresses priorities identified by the MSU Extension Issues Identification. This internal, organization-wide needs assessment highlighted that the public valued work around the food supply, small and/or urban farms, farmers markets, and vegetables^{2,3}. People who said vegetables were “very important” and lived in urban and suburban areas placed a high value on ensuring the food supply is safe and plentiful, creating and enhancing agribusiness, and conducting research and education programs. This type of respondent was clustered in Southeast Michigan (primarily Wayne and Macomb counties)⁴.

Methodology

Data was gathered through both a comprehensive survey sent out to over 200 small farmers in Southeast Michigan as well as through a focus group hosted in Washtenaw County. The survey collected both qualitative and quantitative data and included broad questions as well as commodity-specific questions solicited from relevant AABI work team educators. The focus group was chosen as a method to gather more in-depth, qualitative feedback about some of the topic areas addressed in the survey.

¹ eXtension. 2013. “USDA Small Farm Definitions.” <https://articles.extension.org:443/pages/13823/usda-small-farm-definitions>

² MSU Extension. 2015-2016. “Michigan State University AgBioResearch & Extension Partner To Sharpen Their Focus On Community Priorities Statistical Report: District 12.” Available internally in MSU Extension.

³ MSU Extension. 2015-2016. “Michigan State University AgBioResearch & Extension Partner To Sharpen Their Focus On Community Priorities Statistical Report: District 11.” Available internally in MSU Extension.

⁴ MSU Extension. 2015-2016. Michigan State University AgbioResearch & Extension Partner To Sharpen Their Focus On Community Priorities Statistical Report: Very Important For Vegetable And Urban/Suburban. Contact Marissa Schuh for report.

Survey

Using Qualtrics survey design software, Gerhart and Schuh designed the survey to address basic questions about farm size, scale, markets, and crops. Based on responses to crop type, farmers were directed to a series of commodity-specific questions. Also included were questions on their experiences and impressions of MSU Extension, preferred forms of communication, and familiarity and use of other service providers.

The survey was circulated on the Washtenaw County Local Food and Farming Newsletter, and then subsequently sent out through the networks of Will Jaquinde (Sustainable Agriculture Instructor, MSU Extension) and Kelly Wilson (Taste the Local Difference, Southeast Michigan coordinator). Additional emails were sent to any farmer who had registered for the Produce Safety Alliance Grower Safety Training courses held in the Eastern side of Michigan. The survey was included on the MSU Extension events calendar listing for the focus group, and thus circulated in the MSU Extension Vegetable Production newsletter. The MSU Student Organic Farm monthly email (a statewide list of mostly beginning farmer members) and the Socialfarmers listserv (a grassroots network of small farmers in Southeast Michigan) also publicized the survey and the focus group.

Targeted counties for distribution included Hillsdale, Ingham, Jackson, Lenawee, Livingston, Macomb, Monroe, Oakland, Washtenaw, and Wayne Counties, though responses were accepted from any Michigan county. Ninety surveys were returned, though only 75 responses, representing the nine counties of Districts 11 and 12 and Ingham County were included in the report.

See Appendix 2 – Survey Questions

Focus Group

The focus group was held on December 13 at the MSU Extension Washtenaw County Office in Ann Arbor. The focus group was advertised through the Washtenaw County Food and Farming Newsletter as well as through the MSU Extension events calendar and the MSU Extension Vegetable Production newsletter.

The focus group prompted the attendees with open-ended questions about their business goals as small farmers, reflections on the past season, expected hurdles in the next five and ten years, and useful research topics from research institutions specifically for small farmers.

See Appendix 3 – Focus Group Questions

Focus group notes were recorded by hand and re-circulated among focus group participants to assure sentiments expressed were adequately and accurately captured. Overarching themes were identified from the focus group notes and summarized. Comments were categorized based on common themes that emerged across participants.

Strengths and Limitations

The strengths of this needs assessment include attention to timing for distribution, attention to survey length, and the use of inspiring verbiage in distribution materials. Distribution of the

survey was initiated in late fall, as this is generally a time when experiences from the previous growing season, at least for plant-based agriculture, are still fresh in growers' minds. This is also typically a quieter time of year as it is too early to begin transplants and other preparations for the 2019 season. The survey was edited to only include 23 questions, many of which were structured as multiple choice, a relatively simple format. Lastly, the outreach materials all specified that the information gathered in the survey would ultimately benefit the survey takers, as it would inform the development of programming for the participants. Combined, these three factors may have helped incentivize participation.

The variety of outlets for survey distribution had the potential to illicit a sampling error, as individuals could have responded to the survey more than once. In an attempt to avoid this error, consistent verbiage was used throughout all the distribution outlets. The survey also had the potential to only reach those farmers who had access to the internet, as the survey was only circulated digitally. No phone calls or mailed surveys were distributed.

Next Steps

Results from this needs assessment will help guide program prioritization in the immediate future as well as broad program area development in both MSU Extension AABI and CFEI. Results have been compiled and will be distributed to AABI and CFEI educators and program instructors throughout the state.

Participation

Survey

Seventy-four percent of the survey respondents are beginning farmers⁵ with less than 10 years of farming experience (Table 1), and 61% are farming on 10 acres or less. Surprisingly, 31% of the farmers surveyed are farming on two acres or less (Table 2).

Table 1. Years of farming of respondents to Southeast Michigan Small Farm survey.

Years Farming	Respondents	Percent of Respondents
Less than 1	1	1.4%
1-5	31	41.9%
6-10	23	31.1%
11-15	5	6.7%
16 or more	14	19.0%
Total Responses	74	100.0%

⁵ USDA. 2010. "Limited Resource Farmer/Rancher - Beginning Farmer Definition." https://lrftool.sc.egov.usda.gov/BFRP_Definition.aspx

Table 2. Farm size of respondents to the Southeast Michigan Small Farm Survey.

Acres Farmed	Respondents	Percent of Respondents
0-2	23	31.1%
3-5	12	16.22%
6-10	10	13.51%
11-20	7	9.46%
21-50	11	14.9%
51+	11	14.9%
Grand Total	74	100.0%

All respondents were asked what they produced on their farm. Farms could also check if their farm included an agritourism component. Respondents were able to choose multiple categories (Table 3). The majority of the farms produce vegetables, with meat, fruit/orchard, and floriculture production also popular. Fourteen respondents currently engage in Agritourism activities on their farm.

Table 3. Types of production represented by Southeast Michigan Small Farm Survey.

What Produced on Farm	Number of Responses	Percent of Respondents
Vegetable Production	54	70.1%
Meat Production	21	27%
Fruit/Orchard	19	24%
Floriculture	16	20.8%
Agritourism activities	14	18.2%
Field Crops	7	9.1%
Dairy	4	5.2%
Hay/Forage ⁶	4	5.2%
Other	4	5.2%
Eggs ⁶	3	3.9%
Honey ⁶	3	3.9%
Fibers	2	2.6%
Total	77	

Common themes from the “Other” category include hops, education, seeds, and value-added processing.

Focus Group

Eighteen participants attended, including growers from six counties as well as representatives from the Washtenaw County Conservation District office, Growing Hope, Tollgate Farm and an incoming Washtenaw County commissioner (Table 4). Self-reported demographic information was as follows: 12 participants reported as white/Caucasian, one participant reported as Hispanic or Latino, one participant reported as Black or African American, and one participant chose not to report.

⁶ These categories are pulled from common responses in the “other” category.

Table 4. Home county of attendees of the Small Farm Focus Group.

County	Attendees
Washtenaw	11
Oakland	2
Ingham	1
Lenawee	1
Branch	1
Jackson	1

Key Findings

Familiarity with MSU Extension

Most respondents (77%) reported having utilized MSU Extension resources at least once. A variety of other service providers were also identified by use and include federal agencies, Michigan Agricultural Environmental Assessment Program (MAEAP), and other non-profits (Table 5).

Table 5. Service organizations utilized by respondents of the online survey.

Organization	Percent Respondents
Michigan State University Extension	78.3%
USDA Farm Service Agency	32.4%
USDA Natural Resources Conservation Service	31.1%
Michigan Agricultural Environmental Assessment Program (MAEAP)	24.3%
Taste the Local Difference	24.3%
Michigan Food and Farming Systems (MIFFS)	17.6%
Farm Bureau	13.5%
Greenstone Farm Credit Technical Assistance/Education	12.2%
Eastern Market Corporation	12.2%
A Land Conservation Organization	9.5%
Local Food Policy Council	5.4%
Property Development Rights (PDR) Consultants	5.4%
Total Respondents	66

What MSU Extension is Doing Well

Survey data combined with focus group responses indicate that MSU Extension is the most proficient at providing education and networking experiences for small farmers. Participants value classes and technical assistance offered by MSU Extension as well as opportunities MSU Extension has facilitated for networking with each other and with buyers.

When asked about recent participation in MSU Extension programming, 59% said they had participated in MSU Extension programming in the last two years. Respondents reported that the most impactful influence MSU Extension programs had on their businesses were:

- Helped increase their skills, knowledge, or expertise
- Helped connect with buyers along the supply chain
- Helped increase production efficiency

For a full breakdown, see Appendix 1, Table 1.

What MSU Extension can Improve Going Forward

Areas for improvement highlighted by respondents can be broadly categorized as education and resource curation. Respondents generally wanted more events held in Southeast Michigan, especially events around grazing and pasture management. Educational events were requested to be hands-on and applicable to small farms producing sustainably or organically.

Participants also wanted MSU Extension to act as content curators. Growers requested contact and resource lists that could be used to find services and technical assistance. Utility of MSU Extension’s website and current resources were described as unhelpful in this regard. One focus group attendee described MSU Extension's hops resources and Beginning Farmer Webinar archive as useful, while others said the website was unhelpful.

For more information on desired educational topics, see the commodity-specific breakdowns.

Communication and Resources

Modes of Contact

A large majority of respondents prefer that MSU Extension personnel contact them via email (Table 6). This finding was similar for both the summer season (the busy season for plant-based agriculture) and winter (the slower season for plant-based agriculture). Texting was also a desired method of communication across seasons. As would be expected, farm visits were more desired in the summer than the winter.

Table 6. Preferred method of contact by small farmers in Southeast Michigan.

Mode of Contact	Summer	Winter
Email	80.6%	87.1%
Text	58.3%	55.7%
In person - visits to farm	45.8%	31.4%
Phone call	38.9%	47.1%
Monthly newsletter	31.9%	35.7%
In person - at Farmers Market	18.1%	8.6%
Through social media (Facebook, Instagram, Twitter)	15.3%	11.4%
Through established listserves	1.4%	1.4%
Don't contact me	0.0%	0.0%
Total Respondents	72	70

Social Media

Of the social media platforms identified by respondents, Facebook was the most common followed by Instagram. Instagram was also mentioned in the focus group as a platform where attendees learned about farming. Specific handles mentioned were [@neversinkfarm](#) and [@bearcreekorganic](#). Other social media platforms (e.g. Twitter) did not appear in responses.

When asked in the focus group about Facebook usage, respondents were mixed in their Facebook usage. The group discussed the Facebook group [Washtenaw County Farmers](#), where participants can ask questions to other farmers in a closed group forum. Topics of discussion listed on this platform include the sale of tools and supplies and resource sharing. Focus group participants noted how uneven activity on this site can be a frustration.

Conferences

The conferences respondents had attended and would attend again include the Northern Michigan Small Farm Conference, the Washtenaw County Local Food Summit, and the Michigan Family Farms Conference. Of MSU Extension's offerings, 27.1% of respondents mentioned Great Lakes EXPO and others mentioned the Beginning Farmer Webinar (Table 7).

Table 7. Conferences respondents reported having attended and would attend again.

Conference	Percent Respondents
Northern Michigan Small Farm Conference	47.9%
Washtenaw County Local Food Summit	43.8%
Michigan Family Farm Conference (MIFFS)	41.7%
Great Lake Fruit, Vegetable and Farm Market Expo (GLEXP0)	27.1%
Upper Midwest Organic Conference (MOSES)	25.0%
Ohio Ecological Food and Farm Alliance Conference (OEFFA)	14.6%
ACRES USA ⁷	4.2%
MSUE Beginning Farmer Webinar series ⁷	2.1%
Michigan Good Food Summit ⁷	2.1%
Making it in Michigan ⁷	2.1%
Total Responses	48

Other Educational Resources Used

When asked about other resources utilized for continued learning, focus group attendees highlighted information from other growers within their social network. Other resources discussed included:

- Books from Chelsea Green Publishing (the publisher of the popular *The New Organic Grower* and *The Lean Farm*)
- Videos by YouTuber and urban farmer Curtis Stone
- The Farmer to Farmer podcast

⁷ These responses are pulled from the "Other" category

- Instagram accounts of other small farms (@neversinkfarm and @bearcreekorganicfarm).

Focus Group Themes

Education

The most common theme reiterated in the focus group was the desire for a resource list for small farmers looking for supplies, educational materials, technical assistance, available markets, etc.

Topics related to farmer education included:

- 1) Soil building and soil management
- 2) Greenhouse production
- 3) Post-harvest handling and storage
- 4) Food safety and GAP - determining what's right for their business
- 5) Resource for animal ag located in-state (*current resources, it was mentioned, are located out of state*).
- 6) Economic models for successful small farms
- 7) Perennial plant production
- 8) Cut flower production
- 9) Succession planting
- 10) Planning and zoning related to GAAMPS and the laws and regulations for diversifying their farm to include agritourism activities.
- 11) Resilience in the face of climate change
- 12) Economic models for sustainable small farms
- 13) Navigating USDA services

Participants also highlighted the types of education they were seeking for their farm. They generally sought educators with more hands-on experience who have personal experience with the nuances of small farming. They seek more curated information, facilitated discussions, and farm visit or twilight meeting type education. One participant noted that a commute longer than 1.5 hours would be make it infeasible for attending an education session.

A desire for increased consumer education was also a salient theme within the topic of education. Participants particularly craved consumer education related to prices and seasonality. They mentioned that their prices were often higher than typical grocery store prices and wanted consumers to understand the reasons why this was the case. In working with chefs, they were frustrated about the lack of knowledge for the time required and seasonality of crop production.

The research desired for focus group participants included topics on the efficiency of cooperative farming efforts, and how to facilitate research with farmer peers in a grassroots manner. The desired topics for research from research institutions that would help small farms include:

- 1) Organic solutions for weed management and pest control
- 2) Advanced level hoophouse planting schedules and succession planting
- 3) Economic models beyond the farmers market sales channels

4) Carbon sequestration in relation to organic farming/grazing practices

Food Systems/Collaboration

Participants mentioned multiple times the desire for increased collaboration among farmers as well as with other food system stakeholders. This was often presented as a survival technique for overcoming the challenges of small-scale farming. A desire for opportunities for informal and formal networking and skills sharing was highlighted. One participant brought forth the fact that competition for small farms is against a larger system, not against each other, but the reality of the present market is that direct-to-consumer sales are saturated. A strong farmer network creates a safety net.

Participants spent a decent part of the conversation discussing the racial and economic inequities of the food system. It was identified that there is privilege inherent in who can start farms and who can afford to buy locally-produced food. One participant stated, “I couldn’t afford the food I grow if I wasn’t growing it.” Participants stated that a full community shift was needed in order to build a more equitable food system.

In terms of infrastructure, it was identified that necessary infrastructure for quality meat processing is missing and small-animal producers are unable to get their animals processed in a feasible way and with the quality necessary for their direct to consumer market base.

Concerns over the effects of climate change on farming surfaced in the conversation. Specific concerns included more difficult weed management due to rain cycles, increased intensity of droughts and floods, and new pests and diseases.

Business Strategies

Many of the comments that surfaced on this topic dealt with the intersection of small farmers’ values, the energy and lifestyle required for their chosen farming profession, and the lack of profit acquired. There was general agreement about “burnout” during the growing season.

Focus group participants mentioned the following topics related to their businesses (in no particular order):

- 1) Challenges of managing cashflow
- 2) Managing the grant cycle in conjunction with the farming cycle
- 3) Managing labor and other human resources needs
- 4) Challenges related to land ownership
- 5) Determining pricing for their products
- 6) Desired resources related to succession planning

Policy

Changes in policy desired from focus group participants include:

- 1) Carbon credits to incentivize climate change mitigation

- 2) Similar to current financial incentives for mitigating phosphorus run-off, a financial incentive to build soil organic matter
- 3) GAAMPS expanded to include urban farmers
- 4) Shorter turnaround time for USDA loans/grants
- 5) More transparency between growers who either produce their own or resell products at farmers markets
- 6) Changes to the MDARD website to make it more user-friendly

Summary by Commodity

Vegetables

Type of Growers

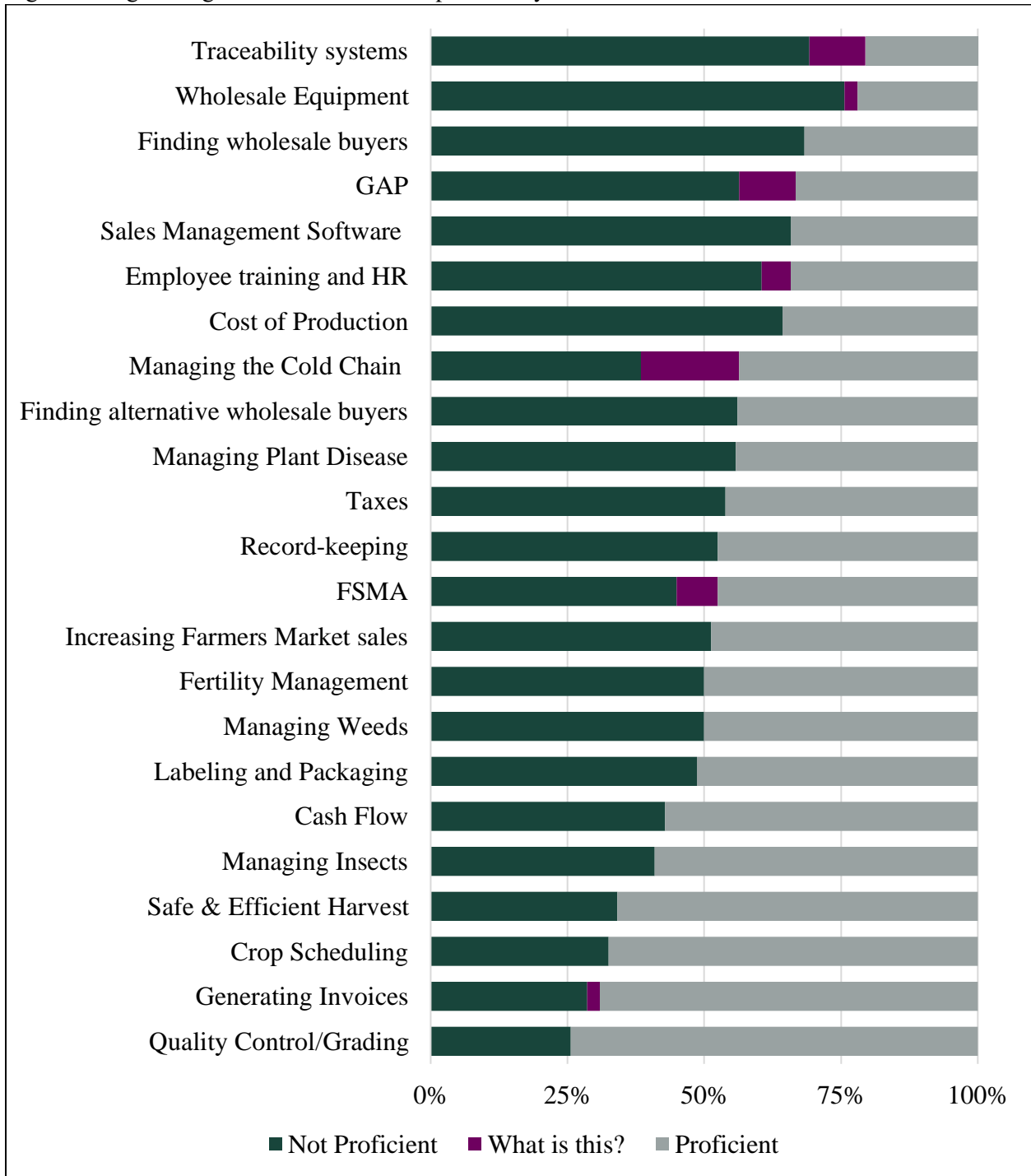
Vegetable growers were the most represented group in the survey (likely a reflection of the utilized distribution lists), with 58 respondents reporting they produced vegetables on their farm. A majority (76.5%) of the vegetable growers surveyed were beginning farmers. Many were growing on small acreages, with 35.3% growing on less than two acres, and an additional 31.4% percent growing on 3-10 acres, meaning 2/3 of vegetable respondents were growing on less than 10 acres.

For small farm vegetable growers, the diversity of crop production beyond vegetable production was not common. Twenty-six percent of respondents growing vegetables reported producing some fruit and 10% reported raising meat animals. Other categories were represented at lower numbers.

Educational Needs

When vegetable growers were asked to rank their proficiencies, respondents reported having the greatest proficiency around post-harvest handling (quality control/grading), generating invoices, crop scheduling, and harvest systems that are food safe and efficient (Figure 1). The variation in responses and the lack of clustering of proficiencies by type (e.g. business management, production, or post-harvest handling) indicates that farmer proficiencies are quite varied.

Figure 1. Vegetable growers' self-identified proficiency levels.



Respondents felt the least comfortable in creating traceability systems, knowledge about wholesale equipment, and connecting to wholesale buyers (Figure 1).

Interestingly, some of the topics that respondents self-reported as proficient contrasted to what respondents reported wanting information on (Table 8). Most notably this occurred with the topics of traceability (ranked low on proficiency *and* low on wanting information on it) and

managing weeds (ranked high on proficiency *and* wanted information on it). Generally, though, topics that ranked low on proficiency ranked high in desire for educational opportunities.

Table 8. Information vegetable growers want.

Topic	Percent of Respondents
Managing Plant Disease	47.5%
Fertility Management Practices (cover cropping, amendments, crop rotations, nutrient management)	42.4%
Connecting to alternative wholesale buyers (aggregated CSAs, farm-to-table restaurants, food hubs, etc.)	39.0%
Managing Weeds	37.3%
Managing Insects	37.3%
Determining sales price based on cost of production	37.3%
General requirements of FSMA	35.6%
Harvest systems	35.6%
Record-keeping	28.8%
Creating a Traceability system	27.1%
General criteria for GAP	27.1%
Connecting to wholesale buyers	25.4%
Total Respondents	42

The medium for which vegetable growers wanted to receive information was similar to that of the entire population. Most prefer contact via email, followed by texting.

The desired formats for education were clustered into the following categories:

- Written publication: topics related to post-harvest handling (managing the cold chain, grading products, labeling products, food safety).
- Class/workshop: topics related to business management (e.g. sales management software, employee training/HR, traceability, taxes, and generating invoices)
- On-farm, in-person assistance: topics related to production (e.g. managing insects, plant disease, and weeds).

See Appendix 1, Table 2 for a breakdown of how vegetable growers would like to receive information on each topic.

Fruit

Type of Growers

The 19 fruit growers in this survey were spread evenly between Washtenaw, Oakland, and Wayne counties, with a low number of respondents from the other counties in this survey.

According to the survey data, small farmers who produce fruit crops are likely to produce vegetables. Interestingly, 22% of fruit growers in this survey claimed to farm 51 or more acres. While the respondents could have misread this question as acres owned as opposed to acres farmed, it is also likely the diversity indicated for small-scale fruit farms leads to the greater acreage requirements.

Half of the small-scale fruit producers surveyed identified as beginning farmers while the other half identified as having farmed for more than ten years.

Educational Needs

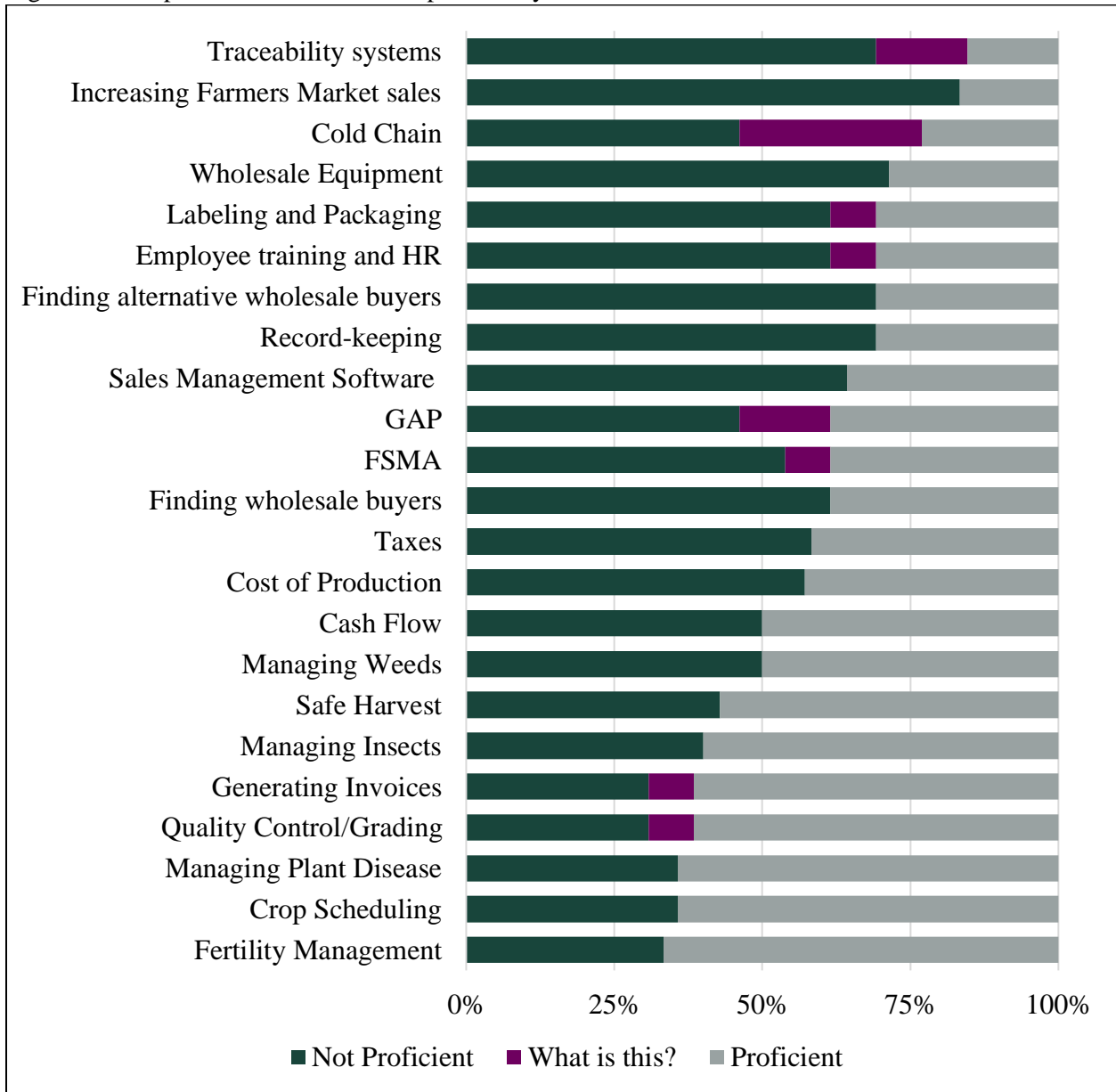
Fruit producers claim they are most proficient in managing fertility, crop scheduling, and managing disease, quality control/grading. Topics where respondents reported less proficiency included creating traceability system, farmers market sales, managing the cold chain, and equipment specifically for wholesale production (Figure 2).

Most fruit growers want to receive information on production techniques: managing plant diseases (75%), insects (50%), and weeds (50%).

Fruit growers want educational information in the following forms:

- Written publication: topics related to business management (recording-keeping, taxes, determining sales price based on cost of production) and topics related to post-harvest handling (labelling and packaging, managing the cold chain, and grading)
- Classes and workshops: topics varied from sales management software, generating invoices, increasing sales at farmers markets, and connecting to alternatives to wholesale buyers.
- In-person, on-farm visits: topics relating to insects, weeds, and plant disease management.

Figure 2. Fruit producers self-identified proficiency levels.



Animal Agriculture

Of the 24 farms with an animal component on the farm, the most common livestock were chickens (77%), followed by beef cattle (59%), swine (50%), and small ruminants (45%). Horses and dairy cattle were represented in small numbers (13% and 9% respectively). Eggs were commonly mentioned when a farm said they had “other” Ag operation on their farm.

One issue of concern highlighted in both the online survey and the focus group meeting was the lack of accessible local processing and slaughterhouse facilities for small farmers. Sixty-six percent of farmers chose this as an area for desired education in the survey.

Somewhat related are concerns about licensing and regulation, which came up in both the online survey (54%) and in-person meeting. In the in-person meeting, a participant highlighted difficulties with the consistency of expectations in meat inspectors.

Table 9. Topics with which animal agriculture respondents want information or assistance.

Topic	Percent Respondents
Pasture management	71.4%
Local processing/slaughterhouse options	66.7%
Direct-to-consumer marketing	61.9%
Licensing and regulation	57.1%
Organic-specific management practices	52.4%
Manure management	52.4%
Connecting to alternative wholesale buyers (CSAs, farm-to-table restaurants, food hubs, etc.)	52.4%
Daily management practices	47.6%
Determining sales price based on cost of production	47.6%
Nutrition	47.6%
Herd/flock health	42.9%
State licensing and regulation	42.9%
Connecting to wholesale buyers	38.1%
Sales management software (QuickBooks, etc.)	33.3%
Transportation	33.3%
Taxes	28.6%
Genetics and selection of animals	23.8%
Managing cash-flow	23.8%
Improving sales at farmers market	19.0%
Total Respondents	21

Two umbrella topics that farmers selected for more education and assistance were production management practices (pasture, manure, and organic practices) and marketing and sales (local processing options, direct-to-consumer marketing, licensing and regulation, connecting to alternative wholesale buyers).

Animal agriculture respondents selected that they were interested in programming around energy demand and management. Fifty-seven percent were very interested, while 42% were potentially interested in this type of program. None reported utilizing energy optimization programs.

Finally, many of the producers reported also having vegetables on the farm, highlighting a potential need for food safety education.

Floriculture

Floriculture likely represents a mix of cut flower production and traditional floriculture. Of the 16 floriculture respondents, 61.5% had been farming under 10 years. Forty-six percent were located in Washtenaw County. Generally, these respondents were producing on ten acres or less and 69% had vegetables on the farm. One in-depth comment from a survey taker:

Give us a true floriculture (not nursery production only) cut flower expert. Respect that that is an extremely lucrative business. Look to Oregon State, Florida State, and many others for modeling.

Field Crops

Seven respondents reported having field crops on their operation. This is likely a reflection of our distribution lists. Of the seven responses four were growing on more than 51 acres, and they represent a wide range of years farming, from 1-5 years (4 responses) to 16 or more years (3 responses). Areas that field crops growers in the survey wanted to receive information on included cover crops, managing weeds and managing insects.

Agritourism

Fourteen respondents reported the integration of agritourism activities on their farms. Activities included u-pick (50%), school tours (40%), farm dinners (30%), hay rides (30%) (Appendix 1, Table 35). The variation of agritourism activities integrated on farms could suggest difficulty in creating one-size-fits-all programming around the issue. Agritourism operations reported having vegetables, fruit, and meat production on their farms.

In the last year, zoning issues on farms with an agritourism element have been in the news. Of those reporting having agritourism on their farm, 38% reported having concerns about their local zoning regulations.

Appendices

Appendix 1. Additional Tables

Appendix 1. Table 1. Respondents reporting type of impact from MSU Extension services.

Impact	Percent Respondents	Number of Respondents
Helped me increase SKILLS, knowledge, or expertise	88.2%	45
Helped me CONNECT with buyers along the supply-chain (distributors, retail, institutions, etc.)	27.5%	14
Helped me increase production EFFICIENCY	19.6%	10
Helped me EXPAND my farm or food business	17.6%	9
Helped me MANAGE production risk	17.6%	9
Helped me increase SALES this season	13.7%	7
Helped me START a farm or food business	5.9%	3
Helped me increase EMPLOYMENT (jobs)	2%	1
Total Responses		51

Appendix 1, Table 2. How vegetable growers in Southeast Michigan want to receive information on different topics (n=47).

Topic	Written Publication	Class/ Workshop	In-person on-farm visit
Managing Plant Disease	38.46%	30.77%	30.77%
Managing Insects	38.46%	26.92%	34.62%
Weed Management	38.00%	34.00%	28.00%
Fertility Management Practices: cover cropping, amendments, crop rotations, nutrient management	42.00%	34.00%	24.00%
Crop Scheduling: succession planning, estimating harvest windows, days to harvest	56.82%	25.00%	18.18%
Harvest: efficient and food safe systems	48.78%	29.27%	21.95%
General requirements of FSMA	51.22%	39.02%	9.76%
Connecting to alternative wholesale buyers (aggregated CSAs, farm-to-table restaurants, food hubs, etc.)	36.59%	39.02%	24.39%
General criteria for GAP	51.28%	33.33%	15.38%
Connecting to wholesale buyers	43.59%	38.46%	17.95%
Determining sales price based on cost of production	43.59%	38.46%	17.95%
Creating a Traceability system	42.11%	42.11%	15.79%
Uniformity, consistency, quality control, grading	58.33%	25.00%	16.67%
Record-keeping	52.94%	35.29%	11.76%
Managing the cold chain	61.76%	23.53%	14.71%
Increasing sales at Farmers Markets	46.88%	37.50%	15.63%
Equipment specifically for wholesale production	43.75%	31.25%	25.00%
Employee training and HR	40.63%	46.88%	12.50%
Labeling and Packaging	58.06%	25.81%	16.13%
Managing cash flow	48.39%	35.48%	16.13%
Taxes	44.83%	41.38%	13.79%
Sales Management Software (QuickBooks or other)	37.93%	51.72%	10.34%
Generating Invoices	48.15%	40.74%	11.11%

Appendix 2 – Survey Questions

General Questions

- 1) What Michigan County do *you* farm in?
 - a) Hillsdale
 - b) Ingham
 - c) Jackson
 - d) Lenawee
 - e) Livingston
 - f) Macomb
 - g) Monroe
 - h) Oakland
 - i) Washtenaw
 - j) Wayne
 - k) Other
- 2) How many years have you been farming?
 - a) Less than 1
 - b) 1-5
 - c) 6-10
 - d) 11-15
 - e) 16+
- 3) How many acres do you farm?
 - a) 0-2
 - b) 3-5
 - c) 6-10
 - d) 11-20
 - e) 21-50
 - f) 51+
- 4) Type of farming operation (select all that apply):
 - a) Agritourism activities
 - b) Dairy
 - c) Fibers
 - d) Field Crops
 - e) Floriculture
 - f) Fruit/Orchard
 - g) Meat Production
 - h) Vegetable Production
 - i) Other (please describe)
- 5) Which service providers have you utilized to further your business goals? (select all that apply)
 - a) A Land Conservation Organization
 - b) Eastern Market Corporation (Grow Eastern Market, Baskets to Pallets)
 - c) Farm Bureau
 - d) Greenstone Farm Credit Technical Assistance/Education

- e) Local Food Policy Council
 - f) Michigan Agricultural Environmental Assessment Program (MAEAP)
 - g) MIFFS (Michigan Food and Farming Systems)
 - h) Michigan State University Extension
 - i) Property Development Rights (PDR) Consultants
 - j) Taste the Local Difference
 - k) USDA Farm Service Agency
 - l) USDA Natural Resources Conservation Service (NRCS)
 - m) Other (please list)
- 6) Have you participated in MSU Extension programming sometime in the past two years?
- a) Yes
 - b) No
 - c) I'm not sure
- 7) MSU Extension programming did the following: (check all that apply)
- a) Helped me EXPAND my farm or food business
 - b) Helped me START a farm or food business
 - c) Helped me increase SKILLS, knowledge, or expertise
 - d) Helped me MANAGE production risk
 - e) Helped me increase production EFFICIENCY
 - f) Helped me CONNECT with buyers along the supply-chain (distributors, retail, institutions, etc.)
 - g) Helped me increase SALES this season
 - h) Helped me increase EMPLOYMENT (jobs)
- 8) In what ways has MSU Extension served you best?
- 9) In what ways could MSU Extension IMPROVE in serving you?
- 10) Identify the best ways MSU Extension can contact you DURING THE SUMMER:
- a) Phone call
 - b) Text
 - c) Email
 - d) Monthly newsletter
 - e) In person - visits to farm
 - f) In person - at Farmers Market
 - g) Through social media (Facebook, Instagram, Twitter) - please identify which:
 - h) Through established listserves -please identify which
 - i) Don't contact me
- 11) Identify the best ways MSU Extension can contact you DURING THE WINTER:
- a) Phone call
 - b) Text
 - c) Email
 - d) Monthly newsletter
 - e) In person - visits to farm
 - f) In person - at Farmer Market
 - g) Through social media (Facebook, Instagram, Twitter) - please identify which

- h) Through established listserves -please identify which
 - i) Don't contact me
- 12) What conferences have you attended in the past that you would attend again?
- a) Great Lake Fruit, Vegetable and Farm Market Expo (GLEXPO)
 - b) Michigan Family Farm Conference (MIFFS)
 - c) Northern Michigan Small Farm Conference
 - d) Ohio Ecological Food and Farm Alliance Conference (OEFFA)
 - e) Upper Midwest Organic Conference (MOSES)
 - f) Washtenaw County Local Food Summit
 - g) Other (please list)

Commodity Specific Questions

Produce (Fruit and Vegetable)

Display This Question:

If Type of farming operation (select all that apply): = Vegetable production

If Type of farming operation (select all that apply): = Fruit/Orchard

Rate your proficiency in each of the following skills areas:

- a. Crop Scheduling (succession planning, estimating harvest windows, days to harvest)
- b. Managing insects
- c. Managing plant disease
- d. Managing weeds
- e. Fertility management practices (cover cropping, amendments, crop rotations, nutrient mgmt)
- f. Harvest: efficient and food safe systems
- g. Equipment specifically for wholesale production
- h. Uniformity, consistency, quality control, grading
- i. Managing the cold chain
- j. Labeling and packaging
- k. Record keeping
- l. Determining sales price based on cost of production
- m. Managing cash flow
- n. Sales management software (Quickbooks or other)
- o. Generating Invoices
- p. Taxes
- q. Connecting to wholesale buyers
- r. Connecting to alternative wholesale buyers (aggregated CSA's farm-to-table restaurants, food hubs, etc.)
- s. Increasing sales at farmers market
- t. General requirements of FSMA
- u. General requirements of GAP
- v. Employee training and HR
- w. Creating traceability systems

Which of the following is **MOST IMPORTANT** for you to receive information on (check all that apply):

- a. Crop Scheduling (succession planning, estimating harvest windows, days to harvest)
- b. Managing insects
- c. Managing plant disease
- d. Managing weeds
- e. Fertility management practices (cover cropping, amendments, crop rotations, nutrient mgmt)
- f. Harvest: efficient and food safe systems
- g. Equipment specifically for wholesale production
- h. Uniformity, consistency, quality control, grading
- i. Managing the cold chain
- j. Labeling and packaging
- k. Record keeping
- l. Determining sales price based on cost of production
- m. Managing cash flow
- n. Sales management software (Quickbooks or other)
- o. Generating Invoices
- p. Taxes
- q. Connecting to wholesale buyers
- r. Connecting to alternative wholesale buyers (aggregated CSA's farm-to-table restaurants, food hubs, etc.)
- s. Increasing sales at farmers market
- t. General requirements of FSMA
- u. General requirements of GAP
- v. Employee training and HR
- w. Creating traceability systems

How do you want to receive information on the following:

- a. Crop Scheduling (succession planning, estimating harvest windows, days to harvest)
- b. Managing insects
- c. Managing plant disease
- d. Managing weeds
- e. Fertility management practices (cover cropping, amendments, crop rotations, nutrient mgmt)
- f. Harvest: efficient and food safe systems
- g. Equipment specifically for wholesale production
- h. Uniformity, consistency, quality control, grading
- i. Managing the cold chain
- j. Labeling and packaging

- k. Record keeping
- l. Determining sales price based on cost of production
- m. Managing cash flow
- n. Sales management software (Quickbooks or other)
- o. Generating Invoices
- p. Taxes
- q. Connecting to wholesale buyers
- r. Connecting to alternative wholesale buyers (aggregated CSA's farm-to-table restaurants, food hubs, etc.)
- s. Increasing sales at farmers market
- t. General requirements of FSMA
- u. General requirements of GAP
- v. Employee training and HR
- w. Creating traceability systems

Animal Agriculture

Display This Question:

If Type of farming operation (select all that apply): = Meat animals

If Type of farming operation (select all that apply): = Dairy

If Type of farming operation (select all that apply): = Fiber

What species of livestock do you currently raise (check all that apply)

- a. Swine
- b. Beef Cattle
- c. Dairy Cattle
- d. Poultry
- e. Small Ruminants
- f. Horses
- g. Other

What areas of management do you NEED INFORMATION or assistance on? (check all that apply)

- a. Nutrition
- b. Genetics and selection of animals
- c. Pasture management
- d. Manure management
- e. Herd/flock health
- f. Daily management practices
- g. Organic-specific management practices
- h. Local processing/slaughterhouse options
- i. Licensing and regulation
- j. Transportation

- k. Managing cash-flow
- l. Determining sales price based on cost of production
- m. Sales management software (quickbooks, etc)
- n. Taxes
- o. Direct-to-consumer marketing
- p. Improving sales at farmers market
- q. Connecting to alternative wholesale buyers (CSA's, farm-to-table restaurants, food hubs, etc.)
- r. Connecting to wholesale buyers
- s. State licensing and regulation
- t. Other

Have you ever utilized one of the following energy service providers to further your business goals? (select all that apply)

- a. An energy optimization program through a utility or electric co-op
- b. Michigan Farm Energy Program

Are you interested in technical assistance around the area of energy demand and management?

- 1) Yes
- 2) Maybe
- 3) No
- 4) Not sure

Field Crops

Display This Question:

If Type of farming operation (select all that apply): = Field Crops

Which of the following is MOST IMPORTANT for you to receive information on? (check all that apply)

- a. Crop Scheduling
- b. Managing Insects
- c. Managing Plant Disease
- d. Managing Weeds
- e. Nutrient Management
- f. Cover Crops
- g. Record Keeping
- h. Managing cash flow
- i. Sales Management Software (quickbooks or other)
- j. Taxes
- k. Other

Agritourism

Display This Question:

If Type of farming operation (select all that apply): = Agritourism activities

What type of agritourism activities do you operate as a commercial venture on your farm? (select all that apply)

- a. Cider mill
- b. Corn maze
- c. Farm dinners
- d. Farm market/roadside stand
- e. Hay rides or tractor rides
- f. Horseback riding
- g. Mediation/yoga classes
- h. Overnight farm stay
- i. Petting farm
- j. Public education
- k. School tours
- l. U-pick
- m. Weddings
- n. Winery/tasting room
- o. Other

Do you struggle with zoning-related issues? If so, please describe:

Appendix 3 – In-Person Focus Group Questions

1. Intros: Name, Farm, what you grow, where you sell it,
 - a. What makes you unique/brand/differentiate (max 3 phrases)
2. What is your overall goal for your farm (income, volume, types of markets served, etc.)?
 - a. *Ask for specifics*

Reflections on the season

3. What were some of the greatest challenges this season?
 - a. *For things that have opportunities for improvement through management*
4. What were some things that worked well?

Expected hurdles

5. What do you see as your biggest hurdle in the next year?
 - a. In the next 5 years?

Specifics from the survey

6. The top topics identified by veg producers and animal producers for increased technical assistance were (point to board). If you can, please speak to what is challenging about those topics to you.

Produce Farmers	Animal Ag
Soil Fertility (cover crops, soil amendments, etc)	Pasture management
Harvest (safe/efficient)	Local slaughterhouse/processing info
FSMA	Direct to consumer markets
Managing plant disease	Licensing and regulation
Sales price and cost of production	Organic specific info
Alternative to wholesale buyers	Connecting to alternative markets
Weed management	

7. What do you want to see more research in?
 - a. *Get info to compare with what exists*
8. Who do you look to or what resources do you read for continued learning?
9. When diagnosing a problem, what do you do? Who do you turn to?
10. “Collaboration” is a popular term used in sustainable food system development. In what ways do you envision collaboration working for you and your farm? What collaborations do you want to see happen?
11. The top conferences noted in the survey were the NMSFC, Local Food Summit, and MIFFS conference. What about those conferences appeal to you?