

Research Report:

Local Sourcing for Food Manufacturing in Minnesota

Prepared by:

Renewing the Countryside

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Authors and Acknowledgments

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About Renewing the Countryside:

Renewing the Countryside has worked in a variety of ways to promote and facilitate the use of local and regional farm products throughout the supply chain. Specific areas of work have included farmer to chef, farm to school, and farm to institution “speed dating” or networking events, assisting farm to early care and farm to school programs in procuring local products, and leading the efforts to produce the FEAST! Local Foods Marketplace food show that is, at its core, intended to build markets for regional farmers.

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Executive Summary

Small to mid-sized food manufacturers represent a growing sector within the food industry, and as such have the potential to provide new market channels for Minnesota's agricultural producers.¹ With the state's interest in increasing markets for Minnesota agricultural products, it's attractive to envision synergy that could elevate both farms and food manufacturers: farms could sell their product to these businesses, thus increasing sales and diversifying their market channels, while manufacturers could source ingredients from Minnesota with the advantage of having closer relationships with their suppliers, shortening their supply chains, and adding to Minnesota's economy. For a growing number of food manufacturers, this sourcing model aligns with their values, their customers' values, and their business strategy.

While this idea sounds enticing, the feasibility of food manufacturers sourcing Minnesota-grown ingredients is often complex and based on a wide range of factors. The purpose of this study is to better understand these factors and to discover best practices and successful strategies that food manufacturers have implemented in order to be able to source locally. It also sought to understand challenges and identify gaps that deter local sourcing and gather ideas for solutions from those participating in the research.

The research focused on small and mid-sized food manufacturers who are using Minnesota-grown products from different sectors (dairy, meat, fruit and vegetable, and grain) to either differentiate their products or because doing so aligns with their values. Our reasoning was that these manufacturers are early adopters, and as such would have the most to tell us. We found these businesses through AURI, the Minnesota Department of Agriculture, and the FEAST! Local Foods Network. Data collection methods included focus groups, an online survey, and interviews with food manufacturers.

The highlights from the research as summarized here include 1) challenges to sourcing locally, including factors manufacturers and suppliers should consider; and 2) recommendations for increasing local sourcing, including infrastructure and resource needs.

Challenges to Sourcing Locally

While there is growing interest in sourcing locally, there are multiple challenges. Some of these are insurmountable while others could be addressed. Sixty-percent of surveyed respondents cited seasonality as a challenge; other challenges included, in order of frequency were: price, availability/finding growers, consistency/reliability/quality, quantities available, distribution, copacker constraints, food safety, lack of processors, and labor for processing raw ingredients.

¹ <https://www.forbes.com/sites/neilstern/2019/06/07/small-is-the-new-big-specialty-food-growth-outpaces-the-market/#12f829052748> (visited on 4/29/2020)

Supply challenges: seasonality, availability, limited supply

Seasonality and impacts of weather limit some local products, especially produce. Some processors are willing and able to work within these limitations—either processing when products are available or processing year-round but substituting with non-local products the rest of the year. For other manufacturers, seasonal availability is a deal breaker; being able to access consistent quality of products, on schedules they set, and in quantities they need drives them to tap into global food systems so they can pull on products from many different farmers and regions.

Cost and ease

Establishing local, multiple and short supply chain sourcing takes time, adds logistical hurdles, and can add costs associated with purchasing from multiple, less-automated suppliers or working with ingredients that aren't uniform or require additional processing and handling.

Required specifications

Some manufacturers have recipe formulations that require ingredients to meet certain specifications such as amount of protein in grains, fat levels, or flavor attributes. Many have certifications for claims such as organic, Halal, gluten-free, etc. These requirements limit sourcing options.

Connecting

It can be difficult to find farmers who produce the ingredients manufacturers want and who can also meet specifications, pricing, consistency, etc. Convenience and ease of transactions are important both in keeping costs down and in simplifying operations. In some cases, this works best when a manufacturer is working directly with a farmer or farmers; in other cases, working with knowledgeable, values-aligned co-packers, aggregators and distributors can be a better option.

Scaling up

Very small food manufacturers, most of who sell direct to consumer, have an easier time sourcing locally because they only need a limited amount of product and have more flexibility. As companies scale-up and start to sell wholesale to retailers, distributors, and food service, local sourcing becomes more challenging for a variety of reasons.

Co-packers

While co-packers – also known as contract manufacturers - can be a great option when scaling up, processors may lose control over sourcing or experience limitations in what they are able to source because of their internal protocols and specifications.

Infrastructure

Lack of scale-appropriate infrastructure can mean that processors cannot get locally grown ingredients in the form they require. These are some of the needs mentioned in the research:

- Grains – regional and accessible cleaning, milling, and storage options
- Meat - small and mid-sized plants with desired certifications (organic, halal, etc.)
- Fruits and vegetables - freezing, drying, cutting/slicing infrastructure
- Storage (e.g. dry warehouse, freezer space, cold storage, and cross-docking capabilities)
- Distribution/delivery systems that cater to mid-size manufacturers, producers and retailers

Communicating value propositions of local sourcing to consumers

Food businesses don't commonly include local sourcing in their value proposition, partly due to supply chain uncertainty, but also because they don't often understand how consumers and the marketplace values local sourcing and how to reflect that in their pricing.

Recommendations for Increasing Local Sourcing

This research data suggests that manufacturers would select more Minnesota-produced ingredients if there were a one-stop-shop for finding and ordering ingredients and that assistance with distribution and financial incentives would also increase the practice.

It is important to encourage networking opportunities that bring together manufacturers and farmers as well as services allowing manufacturers to advertise wanted ingredients. This could potentially influence what farmers choose to grow and provide. Other services the state provides, such as educating growers on food safety and business practices, and cost share for trade shows, are beneficial and should be continued. Below are some recommendations that are specific to farmers, suppliers and manufacturers. Additional details available on recommendations for increasing local sourcing, including infrastructure and resources needed, are provided in the Recommendations Section of the report.

Farmer-specific Recommendations

- There is a trade-off between selling wholesale and selling direct to consumer. Consider that, while price may be lower in the wholesale market, it can mean selling larger quantities and decreasing marketing time.
- Realize that wholesale can show lower margins but result in increased net income.
- Meat producers benefit from help in finding buyers for whole animals, or setting standards for balancing out sales of high-demand cuts.
- Allow for longer planning timelines must be managed to ensure “just-in-time” deliveries to the manufacturer.
- Communicate frequently on expected quantities, quality, and characteristics of planned deliveries.

Manufacturer-specific Recommendations

- Plan time to establish local supply chain sourcing, and creative solutions for logistical hurdles and costs.
- In searching for ingredient sources, include farmers markets, news clippings, referrals from network, local food hubs, and the Minnesota Grown Wholesale Online Directory

- Allow time for relationship development that includes specs/pricing/consistency
- Draw up written agreements—contracts or MOU's (Memorandum of Understanding)—that clearly spell out expectations, timelines, and consider shared risk to the satisfaction of both parties and can help prevent miscommunications.
- Have back-up plans. Realize that there is a lot of risk in farming. Weather, pests, etc. can result in crop failure. Manufacturers need to have backup sources in case a crop fails.
- Seek out producers who can scale along with you to provide future stable local supply chains.
- Communicate your value proposition as a mission-driven company to customers, including farmer relationships, environmental impact, and the economic return to the community.
- Seek out aggregators and co-packers that can work with locally sourced ingredients.

Introduction

Small to mid-sized specialty food manufacturers represent a growing sector within the food industry, and as such have the potential to provide new market channels for Minnesota's agricultural producers.² With the state's interest in increasing markets for Minnesota agricultural products, it's attractive to envision synergies that could elevate both farms and food manufacturers: farms could sell their product to these businesses, thus increasing sales and diversifying their market channels, while manufacturers could source ingredients from Minnesota with the advantage of having closer relationships with their suppliers, shortening their supply chains, and adding to Minnesota's economy. For a growing number of food manufacturers, this sourcing model aligns with their values, their customers' values, and their business strategy.

While the focus of this project is identifying opportunities to increase use of Minnesota grown ingredients by Minnesota food manufacturers, it is important to note that local sourcing is not uncommon in food manufacturing. For instance, milk, because it is very perishable, often comes from processors who source from nearby dairy farms. In Minnesota, milk in the grocery store or in schools likely comes from Minnesota, Wisconsin, or perhaps Iowa farms. Companies in other product categories like meat (e.g., Hormel), frozen or canned vegetables (e.g., Seneca), and grains (e.g., General Mills) definitely source agricultural ingredients from Minnesota, but also include ingredients from national, and in some cases, international sources. Rarely do these companies differentiate that a product's ingredients come from Minnesota, and that is because ingredients are often co-mingled, and until recently, no one really cared. This global food system has economic benefits for Minnesota agriculture as the state's farmers and food companies are able to sell their products across the nation and the world. But with growing interest in transparency within the food system, in where our food comes from, and in how it is grown, the question arises - could there be new markets for Minnesota-grown products?

We focused our exploration on small and mid-sized food manufacturers who are using Minnesota-grown products from different ingredient sectors to either differentiate their products or because doing so aligns with their value proposition. Through this research funded by the Agricultural Innovation Partnership (AIP) Program, and made possible by the Agricultural Utilization Research Institute (AURI) and the Minnesota Department of Agriculture (MDA), we set out to understand strategies and best practices used by Minnesota food manufacturers to source ingredients, and to identify the variables and nuances involved. As data collection progressed, the research uncovered the challenges and barriers to sourcing Minnesota products—and sought input from manufacturers about potential changes that might alleviate or overcome those barriers.

² <https://www.forbes.com/sites/neilstern/2019/06/07/small-is-the-new-big-specialty-food-growth-outpaces-the-market/#12f829052748> (visited on 4/29/2020)

Methods

To better understand the opportunities for increasing the use of Minnesota grown products by food manufacturers, we turned to Minnesota-based small and mid-sized food manufacturers who had intentionally³ sourced Minnesota ingredients for their products, or had expressed an interest in doing so.

We identified food manufacturers through three main channels:

- a list of clients provided by AURI, who they had supported during the past two years;
- Minnesota-based, past exhibitors of the FEAST! Local Foods Marketplace and Tradeshow who had been vetted for the show because they sourced locally;
- Minnesota participants in the Beyond Fresh and Direct research project conducted by researchers at University of Minnesota, Oregon State University, the University of California-Davis, and Renewing the Countryside.

Because the scope of this project focused on gathering strategies for successful local sourcing, there was not an attempt to capture a random sample of food manufacturers in Minnesota.

Once a pool of businesses was identified, we were able to gather data related to our research goals through several methods, including gleaning information from panel discussions conducted at workshops, focus group discussions, online survey responses, and one-on-one interviews.

Focus groups

The initial phase of data collection had a goal of better understanding the issues and opportunities for local sourcing by food manufacturers through conversations among businesses who worked within distinct sectors. We used the same breakdown as the Beyond Fresh and Direct research - who grouped manufacturers by the main or key ingredient they sourced locally: meat, fruit and vegetables, dairy, or grain. The goal was to talk with manufacturers who regularly purchase local ingredients for their processed products (not vertically integrated).

Researchers contacted ten to 15 businesses within each sector group and invited to participate, with an incentive of a \$75 stipend. Despite the stipend, some self-selection bias was unavoidable; those most interested in local sourcing were intrinsically motivated to participate.

³ We indicate 'intentionally' to differentiate from businesses mentioned that have always sourced local product, like dairies, and those who may have local product co-mingled in ingredients that comes from many sources, e.g., grain that comes from across the plains states and Canada, that ends up in cereal, for instance.

Next came the development of focus group questions, shown in [Appendix A](#). The plan was to conduct in-person focus groups with 5 to 8 representatives from each of the four sectors. Each focus group would last 2.5 hours.

The meat focus group occurred in St. Paul, Minn., on Feb. 28, 2019, with six participants. Scheduling attempts with the other three groups were not as successful due to participants' work demands and the travel distances involved. Project staff decided to offer a video-conference option. That led to a second focus group held via video conference on April 12, 2019 with five participants who source fruits and vegetables for their products. Due to the shorter focus group duration of one and a half hours, and no travel, the project offered a smaller stipend of \$50.

Researchers planned a third focus group alongside a convening that Renewing the Countryside helped produce in Chanhassen on March 20, 2019. Many stakeholders involved in the grain supply chain were present for this event, and two panels discussed topics and questions similar to those used in the focus groups. Panelists included two farmers, two millers, a food entrepreneur, an agronomist, a brewer, a distiller, and two service providers that work with these supply chains. A recording was made of the sessions in order to analyze the information shared.

Initially there was a fourth focus group was planned for the dairy sector, however a sufficient number of participants could not be scheduled. Instead, we turned to our recording and transcription of the 2018 FEAST! tradeshow panel discussion on local sourcing, which consisted of two farmers, two entrepreneurs, and two service providers that work with farmers and food makers.

Survey

Project researchers developed a 20-question survey (shown in [Appendix B](#)) specifically for businesses that identified as sourcing Minnesota-grown ingredients or who we thought might be interested in doing so. The survey included with input from AURI, RTC, and the Minnesota Institute for Sustainable Agriculture. The questions used in the Beyond Fresh and Local projects multi-state manufacturer survey focused on sourcing from small and mid-sized farmers also provided insight for this project.

It was important to identify a sample of food manufacturers consisting of past exhibitors of the FEAST! event, clients of AURI from the past two years, and a curated group of participants from the Beyond Fresh and Direct research project. The majority of those surveyed were Minnesota businesses, while six were from neighboring Wisconsin and two from Iowa. To incentivize participation, the invitation offered a \$50 stipend to 10 randomly selected respondents for completing the survey. The survey went out to 493 email addresses with a response rate of 26 percent (128). Among those, 65 were filtered out: 35 indicated that they did not purchase ingredients and 30 were incomplete. That left the number of complete responses with useful data at 63 (13%). Analysis of the data from the survey is provided in the next section.

Interviews

From the list of focus group invitees, we sent invitations to 14 businesses who had not participated in a focus group, asking if they would be willing to participate in an interview and offering a \$50 stipend for their participation. After some repeated invitation phases, interviews occurred with nine food manufacturers, one of whom was part of the grains panel discussion used for focus group data collection. A service provider who is working to connect farmers to buyers also participated in an interview. All interviews were conducted by phone, lasting from 30-60 minutes, using questions as shown in [Appendix D](#). The next section provides analysis of the data from the interviews.

Case Studies

To provide a deeper understanding of local ingredient sourcing, we developed three case studies of Minnesota food manufacturers that stood out as leaders in local sourcing, having it as a key part of their business plan. A number of those we connected with are taking additional steps to change systems in order to ensure that they can continue to utilize local sources as they scale up. They serve as examples of businesses working to grow a more resilient agricultural community and local food economy in Minnesota and the region.

Data

Focus Groups

The qualitative data from focus groups and panel discussions was rich and included a great deal of agreement among participants across the issues discussed. In addition, there was an element of information sharing that was conducive to problem-solving. Researchers noted this in both the in-person focus group among the meat and animal products sector as well as the virtual focus group among the fruit and vegetable products sector. The data collected from the panel discussions was similar in terms of information sharing and accord, but little one-on-one discussion.

Below are some key themes and quotes from each sector group.

Local sourcing panel at FEAST! Local Foods Marketplace, Nov. 30, 2018

Key themes: relationships and communication, quality/attributes of the product, quantities, cost

The largest overarching theme in this discussion was relationships. There were other significant factors in sourcing, such as cost, quality of the produce, quantities, and even how clean the product was on delivery. As a business grows and sells to larger and larger retail stores, it is working under serious demands. Running out of stock is not an option, so having backup sources is necessary. For example, if your primary product is pickles, you need to make sure you bring in the number of cucumbers you need to make enough pickles; in the case of a bad cucumber crop, the business will turn to a distributor for a reliable supply.

Suggestions included encouraging manufacturers to have grower meetings earlier, to allow for thorough discussions for quantities needed, agreeing on a price, and discovering other considerations important to each party. For example, a garlic grower explained her experience discovering that her buyer didn't need for her to spend time cleaning the garlic, and would rather pay a lower price for dirtier bulbs. The communication that allowed for this discovery fostered a lasting purchasing relationship. The grain farmer on the panel had spent a lot of time building relationships with bakers who use his flour and helping them adjust to the variability that occurs with weather fluctuations, such as protein content.

The panel included a farmer-food maker pair, growing ginger and making kimchi, respectively. This pair related the story of how the food makers built trust initially by helping out at the farm in exchange for the ginger they needed. As a result, when discussing pricing now, they have an understanding as well as a comfort level where they can be honest and explain their limits. In addition, the grower is setting up quantity and price agreements earlier to help her planning. The relationship led to an arrangement where the food maker pays ahead for its ginger, like the CSA model, which helps both with cash flow. The grower went on to say,

"I was selling a lot at farmers market, but I love selling 100 pounds of ginger at once, and not piece by piece at farmers market, even though I'm selling it for less per pound. This year I went into more wholesale and less farmers market, and my ability to make money went much higher because I'm spending a lot less time marketing."

The food entrepreneurs recounted finding growers in a wide variety of ways: a newspaper article, introductions from a grocery store produce manager, and from a food hub.

Meat sector focus group, February 28, 2019

Key themes: relationships and communication, quality/attributes of the product, quantities, certifications, cost

There was agreement in the group that quality trumps geography, customers expect consistency in supply so backup suppliers are essential, and that certifications greatly influence the pool of credible suppliers. Through this, trust and communication between grower/supplier and buyer/processor are very important for navigating fluctuations in supply and demand. While certifications may help them in the marketplace, it also represents additional costs on multiple levels: in addition to certification fees, there is also the cost of the labor to manage the certification efforts and administration. On top of that, the grower/supplier with the desired certifications might also come at a higher cost. Animal-related certifications are especially abundant and confusing, so choosing which ones are worth the effort can be a challenge. *"So many customers may ask for different certifications. One week it's this and the next week it's that. We're not afraid of the audit, but the sheer cost of it."*

In addition, some experience frustration that the third-party standards may not represent their own standards well; that in fact, certification standards may be more lenient and therefore be more of a marketing tool used by large commercial farms. For example, certifications like “organic” could mean a much larger carbon footprint if the organic feed only obtainable from overseas. One processor expressed, *“It’s hard communicating that (values over certifications) to the end consumer.”*

Utilization of the whole animal was also a matter of discussion, given that there are different buyer interests and it’s important to find that balance—selling all the parts—which may involve finding targeted buyers or arranging with buyers that they need to buy a blend of cuts. Again, it was reiterated that making stipulations like that for buyers is something that depends on establishing a relationship and level of trust.

There was also a discussion of co-packer dynamics, as a reduction of control over sourcing is possible, and that especially for small producers of meat, it can be tricky finding a processing facility. There was praise for Co-op Partners Warehouse as a resource for finding suppliers with proper inspection, and that learning of suppliers by word of mouth carries an additional burden of determining whether conducting the slaughter step with USDA or “equal to” oversight.

Finding suppliers was a greater topic of concern for the newer operations, who expressed interest in a easily usable and searchable database with the certainty that information was up to date and exhaustive. The Minnesota Grown Directory was mentioned as being limited in terms of accuracy and completeness. There was a suggestion that county extension offices could be consulted for information about who’s producing what products, and that new farmers would also be able to reference that type of information to determine potential market gaps and opportunities. There was an endorsement for the meat and poultry inspection directory app housed by the USDA Food Safety and Inspection Service as an efficient and frequently updated complete listing that is updated frequently. For more on that directory, see page 25 and Figure 12.

Supply chain panel at Minnesota Grains Gathering, March 20, 2019

Key themes: scale, infrastructure, quality, certifications, consumer education

Scale is a challenge, because small producers may not have enough to supply food businesses as they grow, and the larger suppliers may not be local. Quality is an issue because there are wide variations in the protein and starch content of the grains affecting functionality in different applications. Growers are working to educate their buyers on protein content of the flour from different crops. Crops vary from year to year based on weather, so this is a challenge that requires adaptation because the variability is a constant.

Certifications are an issue, and in particular, the presence of glyphosate in tested food samples is an increasingly significant problem. A miller present stated that they require glyphosate tests on

all grain that they bring in, even if it's certified organic. The need for the milling is an additional step in most cases in order to utilize local grain, with variability due to the type of mill. Also, with grains, there is a learning curve in terms of marketing, because most consumers don't think of grains when they think of local foods, and may not be willing to pay more than the standard commodity price for flour. Part of that is because grains aren't thought of as something that's fresh and colorful, but also because there isn't an appreciation for the flavors. As one of the millers said, *"People might pay a lot for special mushrooms, but for flour they expect it to be cheap; you can make a pretty decent loaf of bread with cheap flour."*

There's still a reality where most consumers still look to buy and use white flour, and may not realize how to use and appreciate artisan, whole-grain flour. One of the farmers offered that there's more work to be done communicating about flavor, *"just as wine and coffee are appreciated for their specific origin."*

In terms of sourcing something like oats for a packaged product, there was some observation that while there might be local oats available at a small scale, *"and some good things happening at the large scale, but it's in the middle that we need to increase the capacity."*

With breweries and distilleries, there's a challenge with transparency; by encouraging consumers to learn about the products and ask about the sources, those who can cite the farm origin for their grains will have an advantage. There's an effort to think of supply chain clusters for optimal collaboration. Another way to think of clusters is supply chain linkages. For example, growers—> millers or maltsters—> brewers or distillers. Clusters are identified across all sectors as a way of pooling stakeholders to achieve goals through synergy. The thinking is to reduce or limit redundancies, or make use of underutilized infrastructure, such as small rural grocery stores with empty freezer space or delivery trucks traveling empty on return trips.

As the brewer said, *"surviving might mean remaining small for some of us, focusing mainly on the taproom and a little bit of distribution."* He has observed that the resurgence of taprooms is helping with marketing, identity and loyalty: *"We now have the opportunity for brewers to consider themselves a community brewer."*

Fruit/vegetable sector virtual focus group, April 12, 2019

Key themes: ingredient quality and consistency, crop risk and contracts, volume/scale, cost, consumer/buyer expectations, food safety

The five business participants in this group represented a dramatic range, with a jam maker in her first year of business at one end, and at the other end, an IQF (individually quick frozen) fruit and vegetable facility owner, in business for 75 years. This group also included a vertically-integrated business, growing hops and processing them to pellets for sale to brewers.

Quality and consistency were issues that kept one business from sourcing local tomatoes, in addition to the fact that intermediate processing of the tomatoes was necessary before use. That business owner relayed that processing the fresh tomatoes into paste was not a lucrative venture; the Wisconsin processor didn't make much money selling him the paste, so he didn't

feel there were likely other local options for the tomato paste ingredient. The additional handling step meant that there were little to no margins for that intermediate processor, making much less per tomato compared to the fresh market. However, during peak tomato season, supply may outstrip demand, so this kind of intermediate processing can still serve an important role in preserving local produce for off-peak season use. *"I couldn't make the economics work out," he said. There were problems with consistency that led to "customers asking, 'why are there blobs of tomato in my sauce,' ...so the barrier was finding somebody in a facility that could actually do this processing in a way that I could completely depend upon the outcome, no matter what the cost might be...I'm just concerned about the quality or consistency of the puree. If I knew that it was right on and someone produced that from Minnesota or in our region, that would be great. I would do it again."*

There was some discussion of grower contracts, with the older business offering to share an example contract with a younger, growing business that has had challenges with quality, quantities and price for local crops they've sourced in the past. The younger business, producing pickles as one of their main products, relies on processing a lot of cucumbers. In a recent agricultural season, difficult conditions resulted in crop losses that cut off local sources after five weeks of harvesting. This caused problems because the business needed to be in pickle production for at least 10 weeks to ensure sufficient stock for their buyer expectations. *"Now I'm in the situation of having to buy cucumbers from elsewhere or I wouldn't have product on the shelves."*

More than one manufacturer expressed that they're always looking for new and interesting ingredients (which represents an opportunity to find a local supplier). A sauce business recounted that he has developed specific product lines that utilize specialty ingredients sourced locally (though, not from in-state) such as black garlic and bourbon whiskey. He was, at the time, in development of a line that would involve Minnesota-grown soybeans and wheat. In business for over six years at the time, he was gaining skill at developing relationships and estimating production volume. Meanwhile, the jam maker in her first year said that because her volume needs were small, she hesitated to establish relationships with farmers. Instead, to accommodate fluctuating needs and to avoid the constraints of seasonality, she made purchases on demand from Costco. While 50% of her ingredients are tropical, she is interested in finding local sources for the ingredients. At the same time, she acknowledged that purchasing IQF fruit represented labor and time savings over a raw, locally grown ingredient.

Cost of local ingredients was a factor for everyone, though in different ways. The pickle maker said that while growers don't like to hear her draw a hard line on what she can pay, *"I don't want to pay retail prices, but I will buy everything."*

Meanwhile, the frozen processor expressed that the price he's able to pay for produce *"is driven by how much I can sell it for. I'm competing with California or northwest and I have to be able to match that up to compete."* He emphasized that scale is the biggest barrier. *"Some people are used to \$1.00/lb for carrots but I'm more like \$0.15, so I have to work with people that are mechanized and big enough to compete. I get calls from people wanting to sell me 1,000 pounds*

of potatoes, squash etc., but I can't afford to pay them what they deserve to get on the fresh market."

Asked about aggregating produce from multiple growers, he said it's logistically difficult. By contrast, their typical runs of potatoes are 80,000 pounds a day; early in the year when processing potatoes from storage they might do 40,000 pounds a day, which is a less efficient/more expensive way to process them. The quantity of potatoes he contracts for from a single grower is as much as 400,000 pounds, and delivered all in one week. Clearly then, accommodating smaller volumes comes with additional cost for the decreased efficiency.

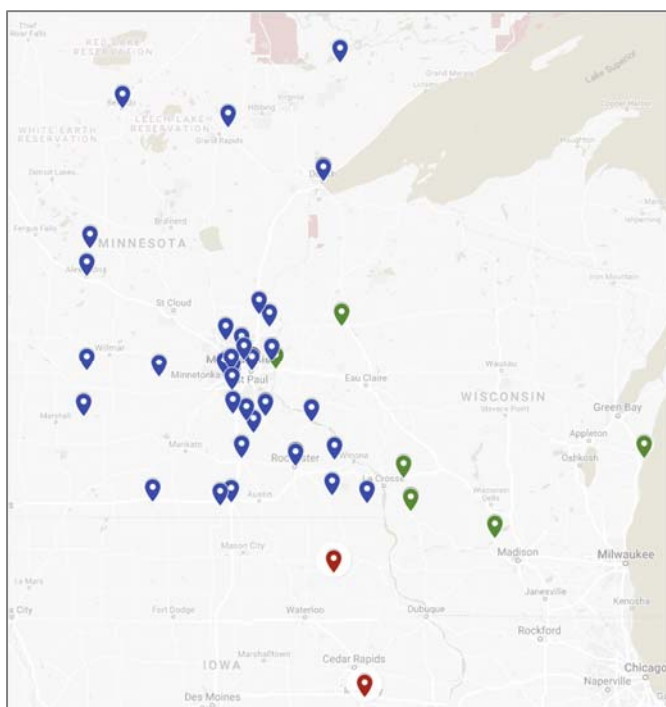
The hops grower expressed that they know their hops are expensive, but that among the three attributes — cheap, good, and customer service, the two they choose to focus on are good (product) and customer service. He has had some work educating his buyers, however. *"We had a brewer tell me, 'I can get those same hops for half the cost.' I could say, 'I can get the same beer for the tenth of the cost.' So I sell you this beer for this much. Your customers select you for a premium, but you don't select your ingredients for a premium."*

Survey

Response Rate and Demographics

In total there were 128 respondents, with 35 filtered out because they were vertically integrated businesses— only using their own ingredients in their products. An additional 30 were filtered out as incomplete. The set of completed surveys contains 63 responses, geographically distributed as shown in the map below.

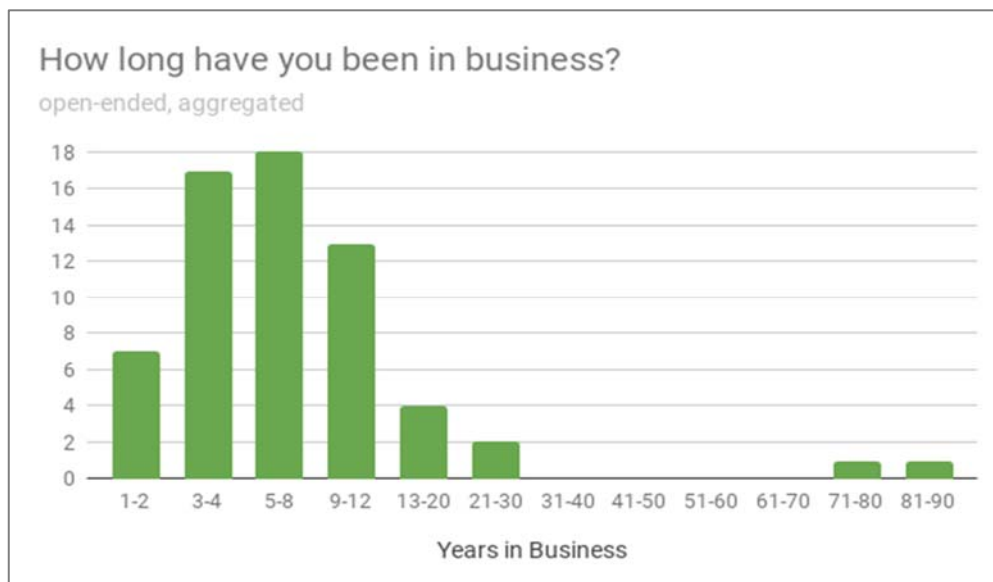
Figure 1. Survey respondents' geographic distribution.



As shown by the blue pins, 86% of respondents were located in Minnesota. Of the total, 27% were located in Minneapolis or Saint Paul, with even more located within the Twin Cities metro. Thirteen respondents reported having a manufacturing location that was different from their business location, and five of those were Minnesota businesses with a manufacturer located in a different state (Wisconsin: 3; Iowa: 1; N. Dakota: 1).

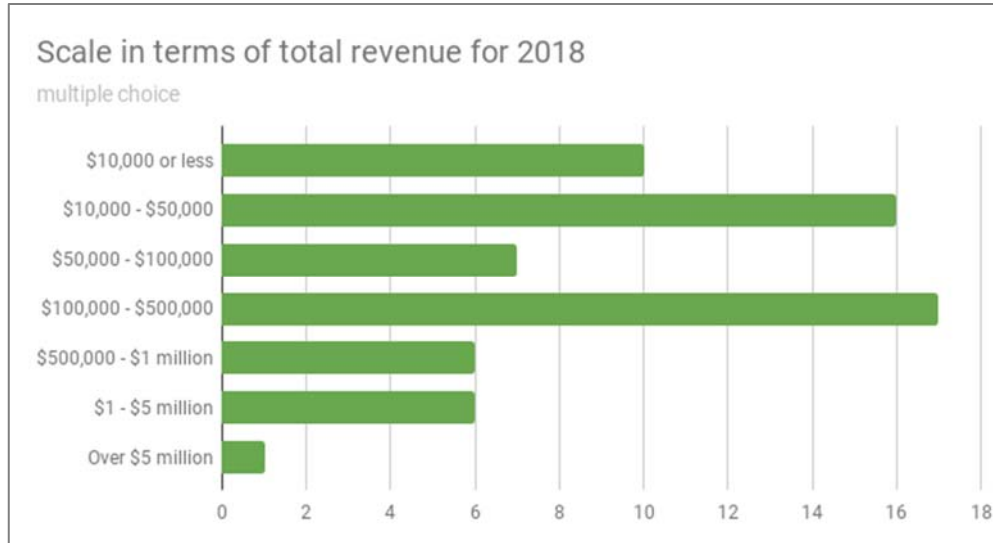
The majority of respondents' businesses were five to eight years old, with a similar size group that was three to four years old. As shown in the chart below, there were two outliers, one in business for 75 years and another for 84 years. Average number of years in business was 9.6, with a median of 6.

Figure 2. Years in business among survey respondents.



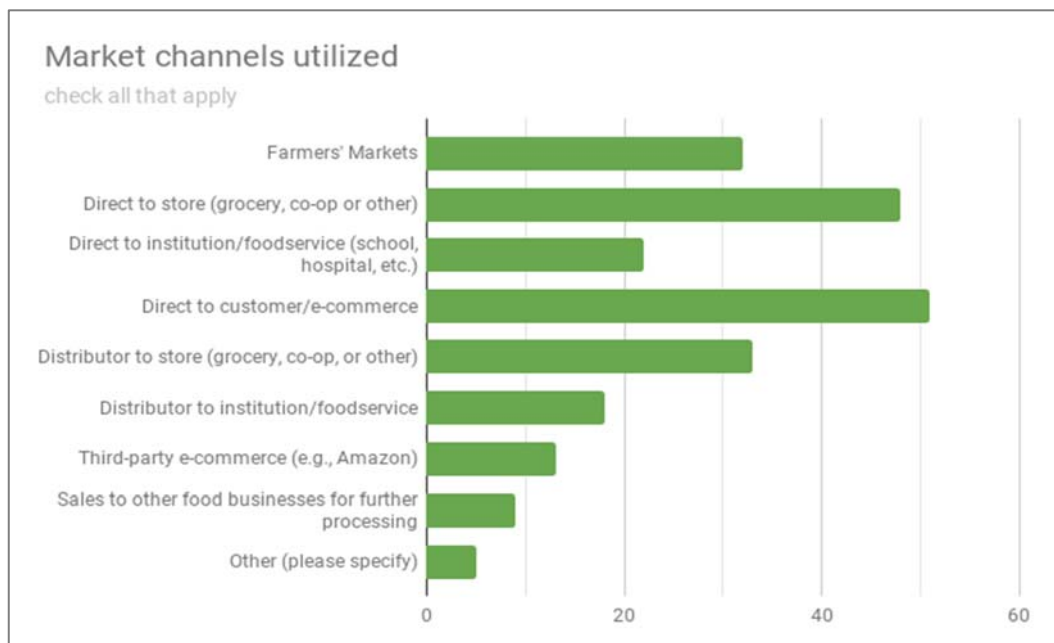
There was a wider range of responses to our question of scale based on total annual revenue. 52% reported revenue of \$100K or less; 27% reported revenue of \$100 to \$500K, with 25% in the \$10K to \$50K range (see Figure 3).

Figure 3. Survey respondents' business scale based on revenue.



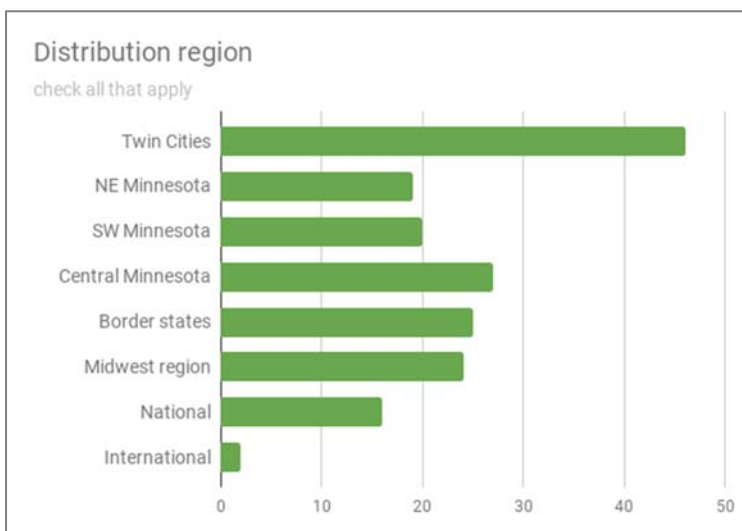
A majority (81%) of respondents use e-commerce for direct sales to consumers, and most (76%) report selling direct to stores, as shown in Figure 4 below. A quarter of respondents are utilizing three different market channels, and 60% use between two and four market channels. "Other" included restaurants, other regional stores, and on-farm sales.

Figure 4. Survey respondents' distribution in terms of market channels utilized



Distribution regions accessed by respondents included segments of Minnesota, most commonly the Twin Cities; 40% indicated border states and 38% said Midwest region, while 25% distribute nationally and 3% distribute to international markets (Figure 5).

Figure 5. Respondents' distribution regions



The majority (89%) of businesses were owned by one or two individuals; 8% have three owners, and there were two outliers with five and seven owners. The average was 1.8, with a median of 2.

The majority, 79%, reported that business owners included women. Of 25 that reported a single business owner, 17 (68%) were women.

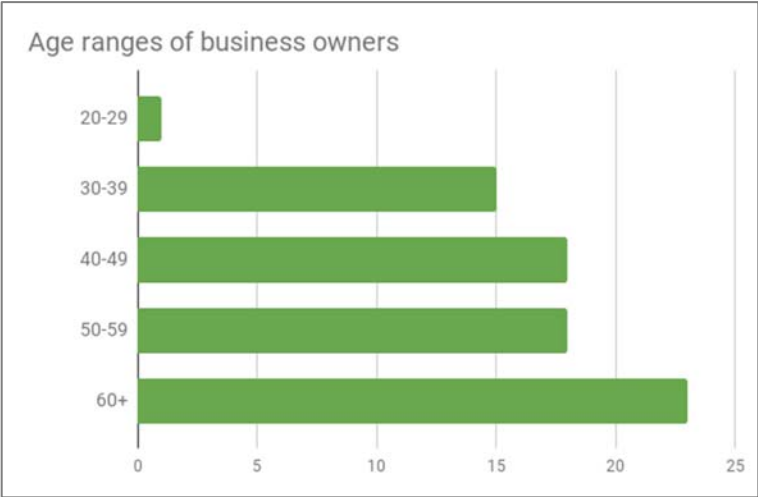
When asked an open-ended question about national heritage, 23 (37%) declined to answer.

Sixteen (25%) said

Caucasian/white, 10 said American, six (10%) said African American and two said German.

Age group of owners was fairly evenly distributed among those aged 30-59. The largest single group was 60 and over, and just one business owner was under 30 (figure 6).

Figure 6. Business owners' ages among survey respondents



Local sourcing data

Respondents were asked about the ingredient purchase categories, given the categories shown in Figure 7. The largest categories were fruit and vegetables, with 57% and 54% reporting that they purchase in those categories, respectively. The next largest category was 'other' but as Table 1 below shows, some of those products could be grouped into the provided categories.

Figure 7

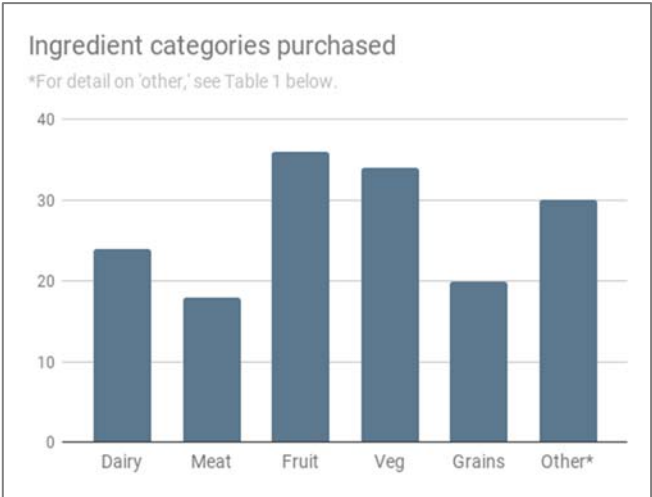


Table 1. Ingredients purchased, entered as 'other'

black garlic	eggs	cheesemaking aids
ginger	chia	olive oil
fresh herbs	pepitas	coconut oil
spices	smoked salmon	coconut milk
salt	hazelnuts	chipotle
vanilla bean	hemp	dried lime
flavor extracts	flaxseed	gochujang
coffee beans	lentil	soluble corn fiber
wine	chickpeas	maltodextrins

The majority of businesses (64%) reported that they do purchase some ingredients “that are grown or raised in Minnesota, either from farms or from a regional distributor, including value-added items” (figure 8). Table 2 below shows the specific ingredients purchased from Minnesota producers as reported by the 40 respondents, and Table 3 shows them aggregated by ingredient.

Figure 8.

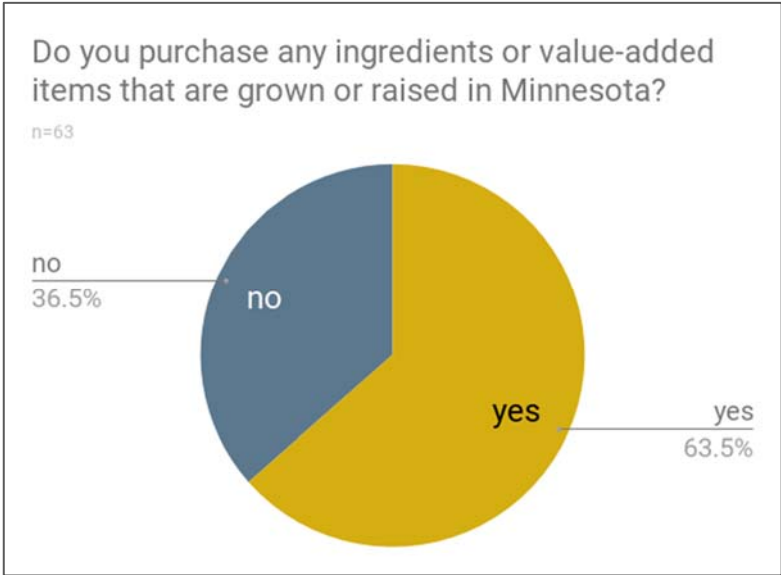


Table 2. Ingredients purchased from Minnesota farms or suppliers, listed verbatim. For the aggregated list, see table 3. Note: this was a sub-question for those who answered ‘yes’ to the question above (fig.8) to filter for those simply purchasing from aggregators within state.

strawberries, herbs, elderberries, raspberries, apples	Eggs, cheese, wild rice
Meat - chicken, beef and Vegetables & Other - carrots, daikon,	Ground beef, Flour, Onions
Corn, barley, rye, oak barrels	Beef, pork
rhubarb, herbs, cheese, sausage, smoked salmon, baked goods;	MN Apple Juice
grains and malt for spirits	Potatoes
apple, butternut squash, carrots, onion	Maple Syrup
wild rice beef pork goat lamb	Honey
flax, buckwheat, oats, maple syrup	Honey, fruit, herbs
hazelnut oil, baked goods, jams and jellies, fruit drinks, vinegar	grain
MN Hemp Farms, Hope Creamery	eggs
Fruit sugar flour cheese from a supplier	Chicken, pork sausage
Honey, maple syrup, tomatoes, some dried herbs	Raspberries
Apples, berries, fruits, pigs/pork.	jams
100% turkey & chicken, some Beef, some bison. All fruit and veg	buckwheat, oats, honey
Grapes, apples, raspberries, Aronia, honey	wild rice, oats, corn, buckwheat
sweet corn, beets, peas, green beans, edamame	Maple syrup Honey Buckwheat

Table 3. Ingredients purchased from Minnesota farms or suppliers, aggregated. Entries were listed once except where followed by the number of entries in parentheses.

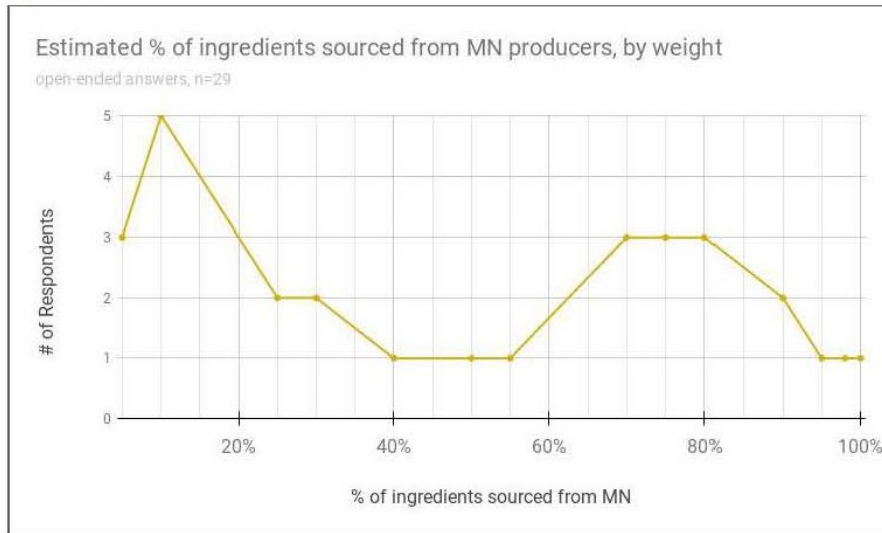
apple juice	Corn flour	hazelnut oil	potatoes
apples (6)	cucumber	herbs (4)	raspberries (3)
Aronia	daikon	honey (8)	rhubarb (2)
asparagus	dried herbs	Hope Creamery	rye
baked goods (2)	edamame	jams and jellies (2)	sausage
barley	eggs (3)	lamb	smoked salmon
beef (6)	elderberries	malt for spirits	soy protein
beets	flax	maple syrup (4)	strawberries
berries	flour (2)	MN Hemp Farms	sugar
bison	fruit (4)	mushrooms (2)	sweet corn
bread from MN	fruit drinks	mustard	tomatoes (3)
buckwheat (4)	garlic (2)	oats (3)	turkey
butternut squash	goat	onion (5)	vegetables (3)
carrots (2)	grain	pea flour	vinegar

In addition to asking what Minnesota-sourced ingredients respondents purchase, we also asked a second sub-question: "If yes, approximately what percentage of the ingredients, by weight, do you purchase from Minnesota producers? (e.g., lbs of MN grown ingredients ÷ total lbs of ingredients)."

Of the 40, 31 respondents provided an estimate for this open-ended question. The average amount of total ingredients purchased from Minnesota producers was 49%, with a mode of 10%. Alternative comments for this question included the following:

- *Depends on product*
- *Depends on the season*
- *Most of it*
- *Insignificant amount*
- *We grow our own fruits & herbs but also buy from other farmers; we buy MN-grown honey, and would like to find MN-grown mustard seed (paraphrased)*

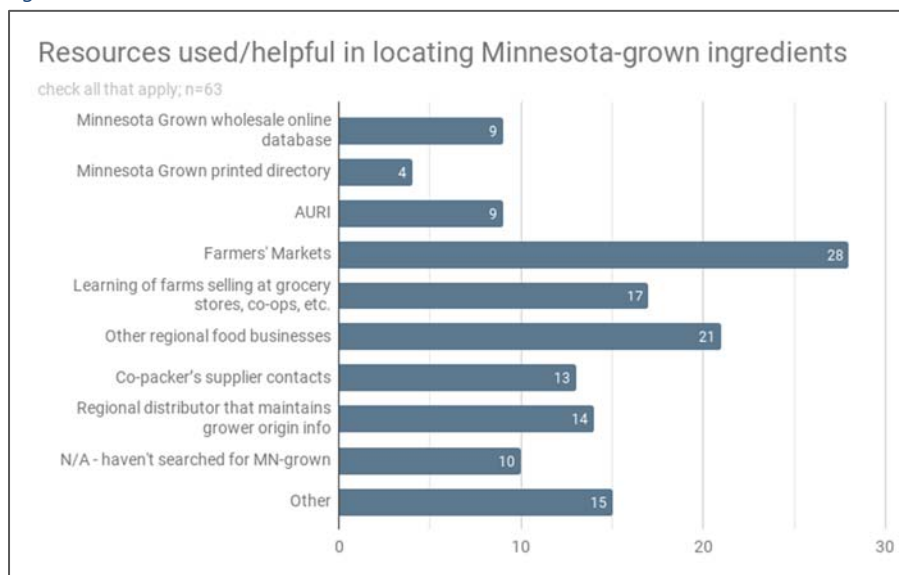
Figure 9.



Asked about resources that were helpful in locating Minnesota ingredients, the most popular response was Farmers Markets, at 44%. The second most important resource was other regional food businesses, with 33% of respondents reporting that as helpful. For the range of resources cited as helpful, see figure 10.

While 24% of respondents cited 'other' resources, the detail of those answers indicated five uses of 'word of mouth' and three for 'networking' as well as online searches and trade shows. Specific trade shows mentioned included FEAST! Local Foods Marketplace, MGGA (Grape Growers Assoc.), and Minnesota IFT (Institute of Food Technologists). Of these, MN IFT does not typically attract farmers, but rather supplier/aggregators who represent farmers. Ten respondents (24%) said they haven't searched for any Minnesota-grown food products or ingredients.

Figure 10.



Seasonality and other barriers

Researchers expected some factors to affect local sourcing, such as seasonality, price and transportation/distribution. Respondents were asked outright, "How has ingredient seasonality affected your ability to use local ingredients from your state or neighboring states?" Of 62 responses, 25 said that seasonality has *not* affected their ability to use local ingredients. Four comments stated that they use frozen items, which alleviates seasonality concerns. Many others expressed that seasonality was a problem, with comments such as the following:

- *We have run out of peppers in the winter/spring*
- *Seasonality affects our vegetable ingredients to the point that we do not currently source our veg locally in order to simplify our order process and in order to keep our costs consistent.*
- *I would buy much more local if available year round*
- *Unreliable supply*
- *It's huge, there is no long-term storage for anything in our area*
- *That is the challenge as we grow many [ingredient] needs and only source them [for] off season needs.*
- *We source from Co-op Partners when we run out of local produce.*

Two comments indicated that while seasonality is an issue, it is not the most important factor:

- *Seasonality isn't the primary problem.*
- *The main issue is cost.*

When asked about other barriers to using local farm products in their own processed product, a wide range of issues was apparent among 50 of the respondents. These comments were coded according to the barriers mentioned, and are presented in table 4 according to the issues mentioned, with the frequency of mention shown in parentheses. A representative comment is included as an example for each, but all provided open-ended responses to this question are verbatim in [Appendix C](#). Of note, 13 respondents indicated n/a; they don't experience other barriers.

Table 4. Barriers to using local farm products in a processed product, coded from 50 open-ended responses. Some responses mentioned multiple barriers. The complete list of comments can be found in the appendix.

Price (14 comments)

e.g., Grower wanting Retail pricing for wholesale lots

Availability/finding growers (14 comments)

e.g., Some products such as olive oil are not growable here, other products such as dried herbs can be ordered most efficiently in bulk from big distributors such as Frontier Herbs in Iowa.

Consistency/reliability of source and consistency/quality of product (6 comments)

e.g., Time and consistency. I think we could purchase chipotle grown locally but there are two issues: the time it takes to find someone who can meet our specs/pricing. Also, consistency of potency is important with Chipotle and we have seen substantial variability.

Matching and managing quantity needs (5 comments)

e.g., Our demand is typically higher than what most small producers can produce.

Also: As a young business, I don't have a track record of sales that I can use to reliably project purchasing needs. It is easier to purchase frozen fruit as needed. Purchasing at Costco is still cheaper than purchasing at retail (given my low production volumes) so as much as I would like to purchase locally, this is a challenge. I buy what Costco has available.

Distribution (4 comments)

e.g., Delivery of product to my facility, and, Timing to match our processing schedule

Co-packer determines sourcing (3 comments)

e.g., My copacker doesn't work with the supplier. Local farm isn't organic. Meat doesn't meet our requirements for humanely raised/antibiotic free.

Food safety concerns (3 comments)

e.g., Getting the HACCP supplier information

Suggestions to increase purchases of Minnesota-grown ingredients

Of the 41 comments that provided suggestions for this question, 18 of them (44%) suggested some form of facilitated online sales database, with some suggesting the inclusion of sales and distribution in that service, and that it could allow for buyers to pool their orders to benefit from scale. One respondent summed it up as, "Easy access to the producers and easy delivery and competitive pricing." Table 5 shows the main themes with example comments.

Table 5. Summarized suggestions for how to increase use of Minnesota-grown ingredients. Complete list of comments can be found in the appendix.

Facilitation (20 comments)

Examples:

- *I'd like to see a state sponsored database for ordering*
- *More availability through distributors who could aggregate locally grown food and streamline ordering, maybe.*
- *... perhaps a listserv or clearing house, but reality is that if we need something during the growing season we don't have time to go looking for them, the relationship has to already exist.*
- *I wish for a produce aggregator or online marketplace where growers could list their crops and buyers could potentially pool their orders so we benefit from scale.*
- *It would be great if there was a place that a producer could place a "wanted" listing for the local organic ingredients that they were in need of ... *example: Wanted - organic dried diced cucumber Then leave your email or phone number to be contacted if anyone had what you are looking for :)*

Cost issues (7 comments)

Examples:

- *Better pricing to smaller businesses vs. the lower prices local growers give to large grocery stores*
- *Does MN grown come with a higher price tag? If so, what selling points make the product exceptional for local consumers (beyond the carbon footprint) and for out-of-state consumers? Justifying higher costs to end-users is challenging for food makers. The attributes of MN grown quality need to be elaborated on, and it needs to be determined if MN grown is a mark of quality across the board or only specifically for certain products.*

Infrastructure support / intermediate processing (5 comments)

Examples:

- *Ways to store surplus seasonal veg – more IQF*
- *Being able to have a copacker for our product in Minnesota*
- *I would buy more root crops if they were available organic and in a form useable for processing*
- *Our ingredients need to be milled and cleaned before we can use them.*

Services / education for growers and/or for food businesses (4 comments)

Examples:

- *Have a class for growers on wholesale practices.*
- *Help to facilitate more connections between growers, producers and business owners. Funding*

Interviews

Information from the nine companies interviewed is presented in the table below. For privacy reasons the report excludes company identities but are available upon request.

Table 6. Ingredients sourcing among nine interviewees

Company scale	Currently buying...	from...
gross annual sales 10 million + ; processing in dedicated facility	flour blends with specific protein and ash count. Soft wheat (cake) comes from IL or IN; heartier blends from MT or Dakota. Pie crust is unbleached unbromated, probably from MN, WI or eastern Dakotas. dried and liquid eggs come from IA; butter was from MN – now WI.	Large mill that aggregates; in general, direct from ingredient suppliers.
gross annual sales 1-5 million; processing with co-packer	oats, buckwheat, sorghum in largest volume; dried fruit is most expensive ingredient	some direct from farmer; some from broker (but avoid broker/buy direct from distributor if/when possible). Use a supplier approval program to ensure quality and “continuous improvement.” Procurement is transparent because of working directly with suppliers.
gross annual sales 500K - 1 million; processing with co-packer	flax, chia, oat bran, dried fruit, nuts. Plant sterols, saskatoon berries go in everything. Developing an apple bar with a Honeycrisp from MN.	usually direct from the processor to get exact specs needed and the freshness needed. Literally get the chia off the boat and then have it ground, to get the quality we want. Fruit from a Michigan aggregator.
gross annual sales 100-500K; processing with co-packer	dried chickpeas; olive oil—testing sunflower oil	distributor, to copacker
gross annual sales 100-500K; processing with co-packer	cream cheese, white beans, kosher dill pickles	Mainline distributor; for pickles they’ve talked to local pickle makers but none who could do that scale
gross annual sales 100-500K; processing with co-packer	Gluten free oats; dried fruit; nuts.	Oats from regional mill likely grown in MN; Fruit from a Michigan aggregator – learned of them from an entrepreneur peer.
gross annual sales 100-500K; processing in dedicated facility	apples	direct from farms – to juice processor.

gross annual sales 100-500K; processing in dedicated facility	pre-made crust, IQF fruit, some flour for fillings, meat, onion & cheese for savory	Crust from Minnesota co-packer, other ingredients from a national bakery supply distributor
gross annual sales under 100K; processing in shared kitchen	garlic, oil (was canola, now sunflower), lemon juice	CA farm for the garlic; distributor from OH for the oil – comes from 4 farms, OH-IN; local farms for the herbs.

Challenges to sourcing

The report groups sourcing challenges mentioned during the interviews into six main themes: quantities of ingredients, meeting quality specifications, availability of the needed ingredient, use of a co-packer, use of a distributor, and cost. The lists below contain the specific mentions of challenges that arose during the nine interviews, including some quotes to illustrate the issues more clearly.

QUANTITIES

- For small businesses, being able to hit the order minimums to source directly from a processor. It can be difficult to find suppliers that will source product in small quantities.
- For small businesses, being able to hit minimum order requirements for delivery.
- For large businesses, local sources may not be available in enough quantity.
- For large businesses, they need to receive product in appropriate bulk quantities, such as a 50-lb cube of butter.
- For smaller businesses, competition for sources from other buyers who may buy larger quantities
- For smaller businesses in shared kitchens or using a copacker, there may not be space to store large quantities. This means they need to use a 'just in time' ordering and can't order bulk amounts to meet minimums or gain from economies of scale.

QUALITY/SPECIFICATIONS

- Specific aspects of ingredient quality such as the moisture, type of sweetener are important for the quality of the end product and can also affect 'clean label' attributes. For example, beet sugar is grown locally but is not consistent with a 'non-GMO' standard
- Substituting local ingredients for a commodity ingredient may not yield the needed qualities in the end product; for example, one product formulation included local sunflower oil instead of coconut oil for a lower saturated fat level, but because the flavor changed, the formulation required more sugar, and the shelf life was lower, so it was not a sustainable change.
- Recipe formulation has to change if using raw, uncooked ingredients compared to using IQF ingredients.
- Attributes of local eggs don't fit with product consistency/consumer expectations. For example, local eggs used for a pastry egg wash resulted in an undesirable orange color.
- For baking, flour must have specific protein and ash levels for different uses, so the quality is number one.

AVAILABILITY

- Minnesota has quality products but not enough variety.

- To create needed blends, flour typically comes from different regions. For cake, we need soft wheat and those usually come from Illinois or Indiana. If we're looking for heartier product it comes from Dakotas or Montana. For pie crust we use unbleached, unbromated flour, which probably comes from Minnesota, Wisconsin or eastern Dakotas.
- While local garlic is available, if your product is centered on that ingredient the specific attributes of the different varieties of garlic are significant. If a variety originates from Italy and grows well in California, it may not be suited to the Minnesota climate, even if a permit could be obtained to grow the patented variety in Minnesota.

COPACKERS

- When moving to a co-packer you may lose control over your sourcing
- When moving to a co-packer they may require more documentation (ie for SQF – Safe Quality Food audit verification) than some local growers may have.

DISTRIBUTORS/AGGREGATORS

- Need timely shipments from suppliers, and distributors do that well
- Distributors buy from wherever they can get it and that source may change according to availability.
- Smaller businesses may hesitate to make too many inquiries from distributors as to ingredients' origins.

"When you ask too many questions, they get a little bit nervous."

However, some have not had this problem: *"I've never had any pushback from asking about origin info. The sunflower oil - high oleic and organic - comes from four farms: three in Ohio and one in Indiana."*

- Larger businesses may purchase products aggregated from many sources, making it more difficult to determine exact origins.

"Mills can identify where the grain was grown and we're a pretty big company so we should be able to ask, so we could provide a legitimate answer about the grain origins if we need to. We have a full department that works continuously on getting the documentation in. In general, the mill wants to be cost-efficient, too, so the grain is coming from the region. Bringing it from further away would drive more cost into it."

- Some brokers and distributors may not want to reveal the sources for their product out of concern the purchase could be done without them.

COST

- Price is difficult at small scale. *"Everything goes back to cost."*
- Additional labor and time to prepare and process compound the cost of bringing in raw ingredients, i.e. fruit, vegetables, even raw eggs.

- For processors to purchase local ingredients, they know they need to ask for a lower price than what growers could get in retail markets; this is especially difficult because the relationships formed mean mutual empathy and concern for the others' success.

"I just switched over to sunflower oil but will still source it through [out of state distributor]. Their cost is a good fit for me. I would have liked to source from [local grower] but their cost is three times more. I understand their pricing but I can't transfer that kind of cost difference."

- To keep product pricing reasonable for customers, ingredients need to be purchased that don't raise the cost of goods. For example, if pickles are an ingredient, buying more expensive artisan-made pickles would potentially make your product too expensive to succeed in the marketplace.

"It's expensive to be in the food startup industry. We need to make the business economics work. Not able to do organic because of the price point."

- Some consumers understand the value; most do not. The more consumers understand the value of having local ingredients in locally-made products, the more sustainable it is to factor in the cost of goods into the end product price.

For a deeper look into the challenges of local sourcing, see the Sourcing Relationships case study in [Appendix E](#).

Potential strategies to assist with local sourcing

- When starting out you may not have relationships with local distributors but as your production and distribution grow, that can be a natural progression. *"I wasn't in distribution yet so didn't think of using a local distributor for ingredients. In my second year I started learning more about them."*
- Smaller businesses may be able to make group purchases to reach minimum order sizes.
- As you scale up you may be able to source directly from an intermediate processor rather than a distributor. *"If they [the distributor] don't have the quantities I need, I can go through the actual supplier themselves."*
- As you scale up you may be able to develop a protocol for assessing suppliers towards 'continuous improvement' to select for factors like quantity discounts as well as other things like the growers' agricultural/environmental practices, their social/employee practices and business structure, and geography to best align with your own business philosophies.
- If you're sourcing through an aggregator, let them know you'd like the information about product origins.
- If you're sourcing product from a grower, consider using a written agreement to be more risk tolerant—not only will it help you ensure that you can count on that source, it will also help the grower plan to have a solid understanding of how much product is needed

and how it should be cleaned or prepared. Also consider options for sharing the risk, such as contracting for a given amount of acreage instead of a set yield such as bushels.

- If freezing product is an option, it could allow for larger processing runs at decreased frequency (instead of smaller, more frequent runs).
- Purchasing direct from a supplier/aggregator can be more reliable in terms of supply consistency and ingredient origins.
- To get the exact product needed it may help to have an intermediate stage of processing done on contract. For example, instead of ordering a large amount of nut meal, it may be more advantageous to purchase the whole nuts and have them ground to specs.

Means for locating local product

- Distributors (BIX, Co-op Partners Warehouse, Market Distributing, Reinhart)
- Farmers markets
- Industry shows (IFT, Fancy Food Show, Natural Products Expo West/East)
- National Organic Program Integrity Database (see fig. 11)
- Minnesota Grown Directory (print)
- Minnesota Grown Online Wholesale Database
- MPI Directory - Meat and Poultry Inspection, powered by FSIS (see fig. 12)
- Online marketplace options: Azure Standard, Barn2Door, Local Harvest, Local Line, RED Market*
- Facebook's Farm Direct Minnesota
- AURI

- Referrals

For a deeper look into technology solutions for local sourcing, see the Tech for Sourcing case study in Appendix F.

Figure 11. Screenshot from the Organic Integrity Database online directory, a searchable tool for finding growers and processors of certified organic crops and food products. Note, in this example, a search for Minnesota listings resulted in 1,011 records.

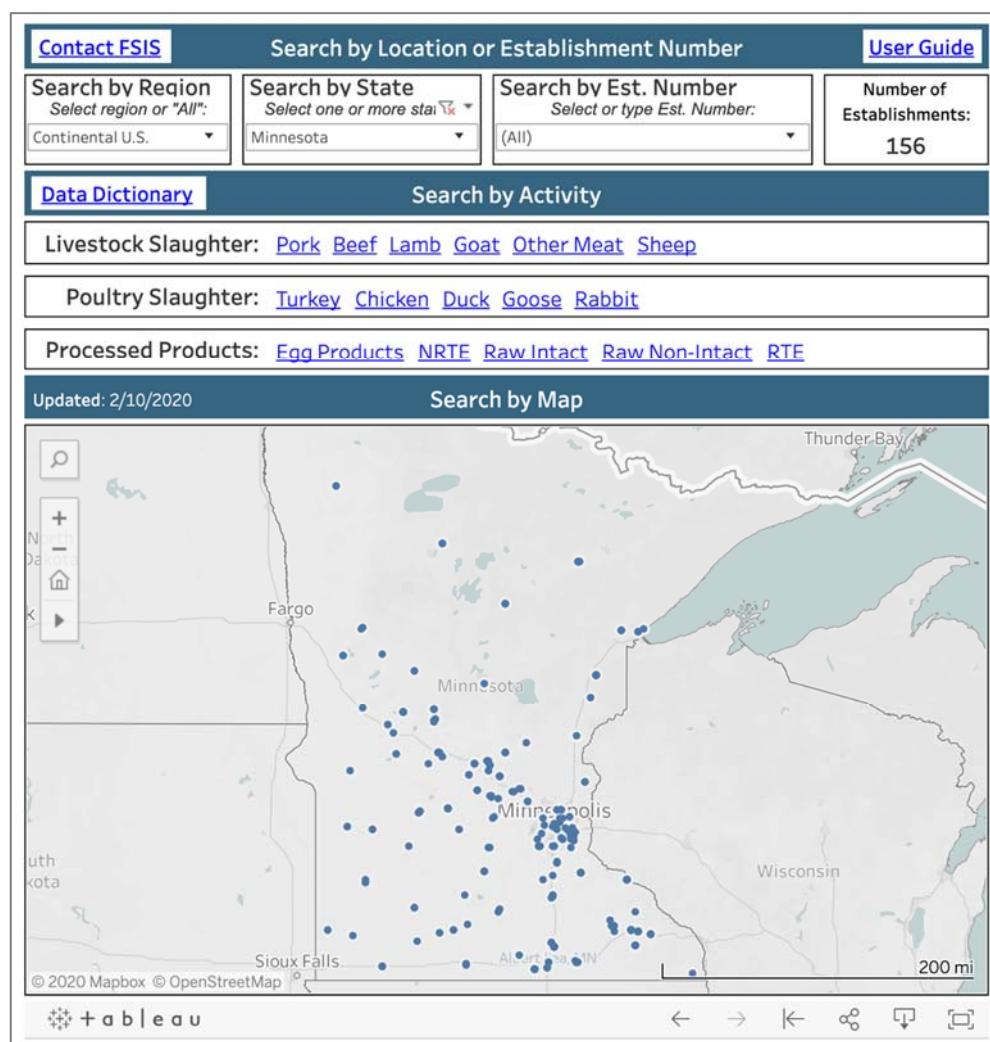
The screenshot shows the USDA Organic Integrity Database search results for Minnesota. The page has a green header with the USDA logo and navigation links. Below the header, there's a search bar with a dropdown menu set to 'Certified' and a 'Reset' button. A green 'Advanced Search' button is also visible. The main content area displays a table of search results. The table has columns for Operation, Certifier, Info, Status, City, State/Province, Country, and Certified Products. The 'State/Province' column is highlighted with a yellow circle, and the 'MN-Minnesota' option is selected. A pop-up window titled 'Operation Details' is open over the 'Ardent Mills, LLC' row, showing contact information for Madeline Glass. The table lists various organic operations in Minnesota, including Andrew Barsness, Andrew Mast, Andrew Schauer, Andy E. Miller, Andy Raber, Archie & Denise Kluender Farm, Ardent Mills, LLC, Askegaard Organic Farm-Mark Askegaard & Beth McConnon, At Last! Gourmet Foods, Inc., and Aveda Corporation. The bottom of the page shows a pagination bar with '1011 records in 102 pages'.

Operation	Certifier	Info	Status	City	State/Province	Country	Certified Products
Andrew Barsness	[MCIA] Minnesota Crop Improvement Association	1	Certified	Hoffman	Minnesota	United States of America	CROPS: Other: Corn (field)
Andrew Mast	[NICS] Nature's International Certification Services	1	Certified	Chatfield	Minnesota	United States of America	CROPS: Other: Corn, Oats, Pasture, Soybeans
Andrew Schauer	[MOSA] Midwest Organic Services Association, Inc.	1	Certified	Eitzen	Minnesota	United States of America	CROPS: Tuber/Root Vegetables: Tubers; Other: Garlic... More
Andy E. Miller	[MCIA] Minnesota Crop Improvement Association	1	Certified	Eagle Bend	Minnesota	United States of America	CROPS: Other: Annual Seedlings... More
Andy Raber	[MCIA] Minnesota Crop Improvement Association	1	Certified	Clarissa	Minnesota	United States of America	CROPS: Other: Corn (field)
Archie & Denise Kluender Farm	[OCIA] Organic Crop Improvement Association	1	Certified			United States of America	CROPS: Other: Corn, Hay, Oats, Peas, Rye, Soybeans, Vetch
Ardent Mills, LLC	[OTCO] Oregon Tilth Certified Organic	1	Certified			United States of America	HANDLING: Other: Bread Flour... More
Askegaard Organic Farm-Mark Askegaard & Beth McConnon	[OCIA] Organic Crop Improvement Association	1	Certified			United States of America	CROPS: Other: Fallow, Flax, Oats, Soybeans, Wheat
At Last! Gourmet Foods, Inc.	[MCIA] Minnesota Crop Improvement Association	1	Certified	Minneapolis	Minnesota	United States of America	HANDLING: Other: Lard, Soups
Aveda Corporation	[QAI] Quality Assurance International	1	Certified	Blaine	Minnesota	United States of America	HANDLING: Other: All-Sensitive Body Formula (414.19.1)... More

Operation Details for Ardent Mills, LLC:
 Contact: Madeline Glass
 Address: 200 North Riverfront Drive, Mankato, MN 56001
 Phone: (507) 388-1679
 Email: madeline.glass@ardentmills.com
 Web URL: Operation8150002283
 ID:

Page size: 10 | 1011 records in 102 pages

Figure 12. Meat and Poultry Inspection Directory, available online and through a mobile app. Selecting for Minnesota facilities inspected by USDA's Food Safety and Inspection Service yielded 156 results, represented by dots on the map. Clicking the dot brings up the facility details.



Selecting a supplier

Interviewees were asked to identify their top three criteria in selecting a supplier, and in this question there was not a distinction for local suppliers. Not surprisingly, the business owners are resolute in their commitment to ensuring the quality of their own products, so that their customers return for the dependable products they expect. This reflects the fact that quality and specified attributes of the ingredients were the most important, most commonly offered criterion.

Second most common was the availability of the needed quantities and associated bulk pricing. Third most common was responsiveness, expressed as being able to get ingredients quickly; whether that meant direct communication with a known grower and short transport distance, or prompt delivery from a highly automated order and deliver system by a distributor, the outcome

here was the important part. These are highly practical, pragmatic criteria, along with the need for the supplier to carry the needed documentation—whether that be certifications or food-safety-related. The two last criteria, however, speak to a higher tier of decision-making that is more values-based and geared towards businesses that devote significant effort towards continuous improvement. These businesses make supplier choices based on supporting like businesses with whom they have cultivated a relationship, and one has made the effort to create a unique supplier code of conduct, such as buying from a grower cooperative or a supplier that has other social benefit practices that align with those of their own business.

Table 7. Most important criteria for selecting a supplier

criterion	number of times mentioned
ingredient specs / quality	8
order quantity/price	7
responsiveness – willingness to work with a small producer and ship quickly	6
documentation (CoA, allergens, claim certs, etc.)	3
relationship / community / family-owned	2
supplier code of conduct	1

Discussion

Potential benefits to food manufacturing businesses from sourcing local ingredients include two main angles. First, depending on the sector, shorter transport distances may translate to cost and/or time savings or may bear on ingredients' freshness. Second, especially for the smaller businesses, company values and branding may compel them to maintain a connection with the production methods and values of the growers whose ingredients go into their products. Of these two sources of motivation, the second may have the potential to be the strongest driver. For example, businesses who want local growers to be part of their story are more likely to seek out growers to fulfill their ingredient needs, as we saw with a breakfast cereal maker looking for oats closer to home. In that sense, it is highly important to continue to educate consumers so that the companies sharing local sourcing practices are valued and sought out in the marketplace.

One uninspected angle in this investigation was the frequency with which food businesses re-assess their ingredient sources. In fact, much of the data suggests that when relationships develop, buyers prefer to maintain those relationships unless there are intervening factors such as crop losses, producer changes such as bulk quantities available or cost, or, on the manufacturer side, in the case of scaling up, transitioning to a copacker, or both of those. A copacker may already have sourcing relationships they prefer to maintain, or may have food safety or other certification standards that a former supplier might not meet.

One of the in-depth interviews revealed business practices that involve a commitment to continuous improvement with regard to sourcing. Seven Sundays has developed a supplier approval program that provides a framework for them to review supplier practices, which may include a range of parameters related to quality and documentation of certifications, but also aspects related to the newly-added supplier code of conduct, which is more focused on socially impactful practices and sustainable growing practices. That way, when approached by a new supplier at a trade show, they say, *"Send me what you have on your sustainability and social impact practices," and I can review that to see if we can do better than our current suppliers on those parameters.*" For more about Seven Sundays, see the case study in [Appendix G: Successful Local Sourcing](#).

Another compelling example of successful local sourcing in that case study comes from You Betcha Kimchi, who exemplifies the practice of finding a grower when volume is low, and developing a relationship that will allow the grower to increase their production to mirror the processor's increase in scale. The case study in [Appendix F, Tech for Sourcing](#), involves a glimpse at a few online purchasing platforms brought up during focus groups and interviews with manufacturers. The founder of RED Market, a local platform, has been working to help ensure the recording of buyer demand and made available to growers, which is a feature lacking in other online selling platforms. Katie Myhre voiced, too, a belief in the power of having young businesses start out by sourcing with local farms, then having both the grower and the processor scale up together. This underlines the importance of steering young businesses to the community of growers.

Among the challenges to local sourcing revealed in this data sample, the most prevalent was price. Processing businesses have many expenses, and thin margins. We've also seen that they have a high regard for the local farmers they know, and respect those farms' needs to earn a fair price for their products. In some cases they are more comfortable in finding ingredients at their price range, outside of Minnesota, than in asking the Minnesota producer to come down in their asking price.

A second major challenge to local sourcing among the food businesses sample was availability/finding a grower. Based on focus group and interview data, this factor is multi-layered: availability is inherently intermingled with product state, and the purchase of many ingredients from an aggregator or another processor. Another variable may be whether an intermediate processing step can be done efficiently. For example, one company uses tomato paste as an ingredient; they have found that local tomatoes are most often sold fresh for optimal margin, and that one small processor they worked with was unable to produce paste

without chunks. They decided to go with a mainline paste for a combination of cost and quality/product consistency.

The largest single reported mechanism for finding suppliers that we found was farmers markets; the second was networking with fellow entrepreneurs.

Overall, the food manufacturing businesses in this study have a strong interest in quality and efficiency. That is, they have specific needs for the quality and attributes of their ingredients in order to ensure their standards for their final product. In addition, they have a need to keep their bottom line strong to ensure their business is financially sustainable. Factors identified in this research and expected to move the needle on use of Minnesota-grown ingredients by Minnesota food manufacturing companies include a highly efficient list for finding ingredients, searchable by ingredient, form (i.e., dried, frozen, fresh), and pack size. In addition, assisting businesses in developing company standards for continuous improvement could encourage them to routinely revisit supplier selection while also suggesting potential communication points to include in marketing their products. Finally, for the state's food manufacturers to have a place to list wanted ingredients could collectively represent a beneficial planning strategy for the state's specialty crop growers. It could also facilitate the development of grower-processor partners that could scale together.

Note:

As this report is being finalized, we're experiencing an unprecedented challenge to our food system as a result of the global coronavirus pandemic. While there are many hardships created by the closed businesses, there are potentially long-term shifts to online shopping and delivery systems that are becoming more widely used and important for these businesses. There may be opportunities in the near future to see more unified platforms for sharing both product for sale and also product in demand.

Recommendations

Relationships and Communication

Clear, straight-forward communication is critical, whether you're sourcing directly from growers or through an intermediary. Recommendations include:

- Plan early. Farmers need to have a market for their product before they plant or raise it, and manufacturers need to have reliable sources. Conversations with farmers in advance may inform decisions such as amounts and varieties to plant.
- Discuss quantity, quality, price, timing, fluctuations in supply and demand.
- Get to know each other's needs and processes – for example, with produce, ask how they want the product cleaned, how they want it packed, what delivery looks like.

- For farmers, if it looks like you'll lose a crop, let the buyer know as soon as possible so they know they can move to their back-up plan.
- A written agreement can ensure that both parties are on the same page.
- Building trust and strong relationships can help the parties weather challenges better and see opportunities.
- Co-packers, frequently used by food manufacturers, present additional communication issues. The company will have less control over day-to-day logistics and sourcing but may be able to influence sourcing.
- Have back-up plans. When sourcing from farmers in Minnesota, things like seasons and weather will impact availability. Manufacturers need to have alternate options in case a farmer's crop fails, ripens late, or otherwise doesn't meet specifications.

Quality/Attributes

- Be clear on quality needs and make sure farmers are able to deliver to specifications.
- Discuss necessity or requirements of certifications (e.g. organic, halal, etc.).
- For grain sectors - attributes like protein and starch content are very important, so know what is required. As weather is variable it will affect these attributes annually. Both growers and manufacturers need back-up plans if grain doesn't meet specs.
- While some manufacturers require consistency, others may be able to find innovative ways to work with variability.
- Both parties need to know requirements for food safety (e.g., HACCP, GAP-certified).

Quantities/Availability

- Manufacturers require sufficient quantities of ingredients within key timelines.
- Have a backup supplier when quantities cannot supply demand (e.g., distributor to back fill with alternative supply chain or farmer).
- Scaling can be a challenge. As a manufacturer grows, especially quickly, their current suppliers may not be able to scale at the same rate to meet their needs.

Costs and Convenience

- Certifications - can help and/or can be costly - and consumer interest shifts regularly
- Some ingredients just don't make sense financially. (e.g., if a manufacturer requires tomato paste as an ingredient, the cost of raw tomatoes and the added step of turning them into paste make those local tomatoes far too costly. A farmer could make much more selling direct. Exceptions could come during peak tomato season where the fresh market is saturated and farmers are incentivized to bring prices closer to national distributor prices.)
- Fresh products mean more cleaning/prep by the manufacturer that adds cost.
- Local supply chain sourcing takes time and adds logistical hurdles—and can add costs.
- Because manufacturers have to compete across a product sector with other manufacturers it will partially drive what they can pay for ingredients. That also might drive the type of farmer they can work with (e.g., mechanized vegetable farmers who can sell carrots for less than those using manual labor).

Infrastructure Upgrades and Additions Desired

- Milling, cleaning, drying and storage facilities for local grains
- Sufficient USDA or E2 (equal-to) meat processing plants for small to mid-scale producers
- Small to midsize regional dairy processors
- New supply chain processors for mid-size manufacturers and producers (e.g. freezing, drying, canning, cutting/slicing)
- Storage (e.g. dry warehouse or freezer space for manufactured product and cold storage for produce with sufficient cross-docking capabilities)
- Distribution systems that cater to mid-size manufacturers, producers and retailers
- Supply chain clusters - (e.g., pooling stakeholders to achieve goals through synergy, limit redundancies, make use of underutilized infrastructure such as rural grocery stores, freezer space, or empty delivery trucks)
- Initial processing for specialty grains to make ready for use by manufacturers (e.g., milled and cleaned grains for brewing, distilling, flour or other culinary uses)

Resources Desired

- Comprehensive database of suppliers that is easily searchable and up-to-date
- Clearinghouse or sales platforms (Craigslist style) where manufacturers can advertise wanted ingredients which could lead to connections with farmers willing to grow what is needed
- Ensure that resources are clear, accessible and easier to navigate
- Training for producers to inform them on selling into the manufacturing sector, including the pros and cons of selling wholesale, how to price (and why a lower price isn't always a bad thing), and how to monitor profitability.
- Facilitated networking for connections between farmers and manufacturers, with guidance that ensures they cover key topics in their discussions.
- Facilitated networking for connections between manufacturers and investors.
- Incentives for local purchasing.
- Technical support for marketing to help manufacturers highlight the value of local supply chains.
- Grants and low/zero-interest loans for farmers selling into CPG and other markets to scale-up.
- Guidance for identifying trustworthy produce aggregators, brokers and foragers.
- Facilitated connections through farmers markets, word of mouth, online, trade shows, Minnesota Grown online wholesale and printed directory, AURI clients, co-ops and producer associations
- The services the state and others provide, such as educating growers on food safety and business practices, and cost share for trade shows, are beneficial and should be continued.
- How about sample contracts used between producers and small business buyers?

Recommendations for Agencies and Service Providers

- Food businesses don't commonly include local sourcing in their value proposition, partly due to supply chain uncertainty, but also because they don't often understand the value their local brand delivers to the marketplace and how to include that in their pricing. More technical support for food marketing to highlight the value of local supply chains could be very beneficial for manufacturers as well as farmer suppliers. This could include marketing and messaging help regarding product variability, economic multiplier data to show how a locally-sourced product provides economic return for the region, or more general visibility of "Minnesota Grown" label messaging that helps consumers understand the value it represents.
- Exposing farmers to the option of selling into the manufacturing sector will also be helpful, especially if included as the farm source, for their own branding purposes. They should also consider more closely the tradeoff of market choice: farmers markets bring higher margins but come with fees, and costs of labor and time, as well as uncertainty regarding sales fluctuations.
- This data suggests that manufacturers would select more MN-produced ingredients if there were a one-stop-shop for finding and ordering ingredients, with the caveat that it be comprehensive and up to date.
- Distribution is a difficult and costly step for food businesses, and data from this study suggests that distribution cooperatives among manufacturers would be beneficial and desirable.
- Networking opportunities that allow manufacturers and farmers to meet and discuss a variety of issues should be maximized. Important topics include ingredients in demand from manufacturers and available from farmers, as well as coming together on cost.
- Other services the state provides, such as educating growers on food safety and business practices, and cost share for trade shows, are beneficial and should be continued.

Appendix A

Focus group questions



Focus Group Discussion Schedule

Arrivals (name tags, release forms)

Introduce project objectives/scope, then group introductions.

What's your background on local sourcing or selling to manufacturers? How long have you used that model, or have you always done so?

Break—lunch

What percent of the ingredients that you source are Minnesota-grown?

Has this increased or decreased?

Are you currently looking to increase?

What barriers or difficulties have you experienced?

How have you met or surpassed them, or are you still facing them?

Are there any barriers to local sourcing related to regulations/inspectors?

What resources/tools have you used to either find suppliers or buyers? Have you used other mechanisms such as software/apps to manage purchasing or tracking/traceability.

What do you see as the main benefits to sourcing local ingredients OR to selling product to manufacturers?

Does your local sourcing play any role in your marketing—website? Packaging?— To what extent?

Final thoughts and adjourn

Appendix B

Survey questions



Local Sourcing Survey for Food Businesses

1. Do you purchase food products from other businesses for use in your products?

This survey is intended for food businesses that purchase ingredients from other companies as opposed to vertically integrated operations. If you select no you will be taken to the end of the [survey](#).

- Yes
- No

2. Which of the following do you purchase for use in your products, including value-added items such as honey, jam, flour, dried milk powder? (*check all that apply*)

- | | |
|--------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Dairy | <input type="checkbox"/> Veg |
| <input type="checkbox"/> Meat | <input type="checkbox"/> Grains |
| <input type="checkbox"/> Fruit | <input type="checkbox"/> Other (please specify) |

3. Do you purchase any ingredients or value-added items that are grown or raised in Minnesota, either from farms from a regional distributor, or some other seller?

- Yes
- No

4. [\(skip logic\)](#).....If yes, please list those ingredients you purchase from Minnesota farms or suppliers: _____

5. [\(skip logic\)](#).... If yes, approximately what percentage of the ingredients, by weight, do you purchase from Minnesota producers? (e.g. lbs of MN grown ingredients ÷ total lbs of ingredients) _____

6. What resources have you found helpful in locating Minnesota product/ ingredient suppliers? (*check all that apply*)

- ☐ Minnesota Grown wholesale online database
- ☐ Minnesota Grown printed Guidebook
- ☐ AURI
- ☐ Farmers Markets
- ☐ Learning of farms selling at grocery stores, co-ops, etc.
- ☐ Other regional food businesses
- ☐ Co-packer's supplier contacts
- ☐ Regional distributor that maintains grower origin info
- ☐ Other _____

7. How has ingredient seasonality affected your ability to use local ingredients you're your state or neighboring states? _____

8. What other barriers have you experienced in trying to use local farm products in your own [product](#)? _____

9. What suggestions do you have to increase the use of Minnesota-grown or other locally-grown product by specialty food makers like yourself? (*if we should contact you to discuss, please include your contact info below*)

10. Please give us a general idea of your scale in terms of total revenue for 2018:

- | | |
|----------------------------------------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> \$10,000 or less | <input type="checkbox"/> Between \$500,000 and \$1 million |
| <input type="checkbox"/> Between \$10,000 and \$50,000 | <input type="checkbox"/> Between \$1 million and \$5 million |
| <input type="checkbox"/> Between \$50,000 and \$100,000 | <input type="checkbox"/> Between \$5 million and \$10 million |
| <input type="checkbox"/> Between \$100,000 and \$500,000 | <input type="checkbox"/> More than \$10 million |

11. Approximate number of years in business: _____

12. Business location: _____

13. Manufacturing location (if different): _____

14. Retail channels utilized (check all that apply):

- ☐ Farmers' Markets
- ☐ Direct to store (grocery, co-op or other)
- ☐ Direct to institution (school, hospital)
- ☐ Distributor to grocery store, co-ops, club stores
- ☐ Distributor to convenience store
- ☐ Distributor to foodservice
- ☐ Direct e-commerce
- ☐ Third-party e-commerce (e.g., Amazon)
- ☐ Sales to other food businesses for further processing

15. Distribution region (check all that apply):

- ☐ Twin Cities
- ☐ NE Minnesota
- ☐ SW Minnesota
- ☐ Central Minnesota
- ☐ Border states (Wisconsin, Iowa, Dakotas)
- ☐ Midwest region
- ☐ National
- ☐ International

16. Number of business owners: _____

17. Please indicate gender of business owners:

- ☐ Male
- ☐ Female
- ☐ Decline/prefer not to answer

18. Please indicate age ranges of business owners:

- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60+

19. Please indicate nationality of business owners (or enter n/a if preferred): _____

20. If you're selected as one of the 10 respondents to receive \$50, please indicate the name and address you'd like on the check: _____

Appendix C

Open-ended responses from select survey questions

Note: comment themes are in bold, presented within comments where possible, but otherwise shown in brackets and caps.

Q8. What other barriers have you experienced in trying to use local farm products in your own products?

Price and availability

Pricing, delivery, the time to figure out where and who to get it from and licensing issues

expensive, not carried by large distributors

Price and Reliability. When there is poor crop and high demand

Price is usually higher

Even though the products may be local, sometimes they are actually quite a bit more expensive.

Grower wanting Retail pricing for wholesale lots

They don't understand the difference between a wholesale price and a retail price. They aren't willing to work with me.

price

High prices Control of products by promoters at farmers markets

Cost, access.

The cost.

[price and availability] Just knowing who has what available when, also wanting quantity discount for small quantities.

Availability

availability out of season

not enough resource to find what's available

We use ingredients like citrus, which simply aren't grown in the region. And, simply coordination can be an issue when trying to purchase more ingredients that are locally grown. You lose the advantage of streamlining through a single distributor if you are sourcing directly from multiple producers. And that extra effort barrier can stop us from doing it to the fullest extent that we would like even though it is extremely important to us and our values.

Some products such as olive oil cannot be grown here, other products such as dried herbs can be ordered most efficiently in bulk from big distributors such as Frontier Herbs in Iowa.

The type of produce used in some of our product cannot be grown in Minnesota or any state that experiences snow or freezing temps.

Heritage wheat is our primary product. There is not much wheat grown in MN.

Find other growers and ingredients that are MN grown such as mustard seed!

basics like salt and sugar don't seem to be local. That's all I purchase.

finding growers/suppliers

Can't get anyone to call us back

[Unsure of meaning here - availability?] Culturally diverse produce overall - like daikon, Chinese broccoli, Asian mustard greens (roots) - and especially different when looking for organic.

*Finding **consistent** sources*

They might run out

Unusable, unreliable supply

Supply

Years of maturation, high quality products

Time and consistency. I think we could purchase chipotle grown locally but there are two issues: the time it takes to find someone who can meet our specs/pricing. Also consistency of potency is important with Chipotle and we have seen substantial variability.

**Q8. What other barriers have you experienced in trying to use local farm products in your own products?
(cont'd)**

[QUANTITY]

Our demand is typically higher than what most small producers can produce

Sourcing larger amounts

Correct package sizing for our needs. We do not have the storage capacity for entire crops.

Suppliers that meet the standards (100% grass-fed, free-range, etc), but do not have the volume to get product to us economically.

As a young business, I don't have a track record of sales that I can use to reliably project purchasing needs. It is easier to purchase frozen fruit as needed. Purchasing at Costco is still cheaper than purchasing at retail (given my low production volumes) so as much as I would like to purchase locally, this is a challenge. I buy what Costco has available.

distribution, how to get the product delivered to us

Distribution

Delivery of product to my facility

Timing to match our processing schedule

[CO-PACKERS]

lack of co-packers and bottling lines for beverages in the metro area or within a 50 mile radius.

We work with a co-packer (contract packer) to create our food product. We are in the early stages of developing our relationship with said co-packer and, to appease them, we have chosen to work with their preferred vendors. We are hoping that once we have established a report and order history with this company we will be able to request Minnesotan grown products.

My copacker doesn't work with the supplier. Local farm isn't organic. Meat doesn't meet our requirements for humanely raised/antibiotic free.

food safety aspect of dried herb and spices; *I hesitate to bring in a product that could make my food product unsafe.*

Getting the HACCP supplier information

USDA inspection

[LACK OF PROCESSORS]

not enough small to mid-size processors of grains

Many of the soy and pea protein is grown around here but sent to China for separation and then reenters US under our distributors name. Any changes in the tariffs will affect the price of our products.

[PREP]

Not ready for my process (hasn't been stemmed, washed etc)

[prep and price] Cost and prep time. I could never peak [sic, assume "peel"] that many apples. The labor kills me not just making the pies

Q9. What suggestions do you have to increase use of Minnesota-grown or other locally-grown product by specialty food makers like yourself?

Facilitation: 20 comments

Make it easier to find the farmers!

Access to resource guide outlining local producers and their locations, business info, etc. would be helpful.

Have even more resource lists---especially for businesses that don't have a website.

Start an online store

provide an online wholesale market

I'd like to see a state sponsored database for ordering

create Minnesota grown products website

I wish for a produce aggregator or online marketplace where growers could list their crops and buyers could potentially pool their orders so we benefit from scale.

More availability through distributors who could aggregate locally grown food and streamline ordering, maybe.

Shared distribution, online local grown wholesaler list.

Increase food hub collaboration to get more local products out there

Not sure, perhaps a listserv or clearing house, but reality is that if we need something during the growing season we don't have time to go looking for them, the relationship has to already exist.

Easy access to the producers and easy delivery and competitive pricing.

Better access to larger producers of the products we use

need to be larger scale

Increase targeted sales & marketing efforts

Go beyond setting up groups for networking and involve the bigger players - big beverage companies/ food services / catering/ hospitality to work with smaller businesses.

*It would be great if there was a place that a producer could place a "wanted" listing for the local organic ingredients that they were in need of ... *example: Wanted - organic dried diced cucumber Then leave your email or phone number to be contacted if anyone had what you are looking for :)*

better processing and storage better communication between interested farmers and end-users

Is there a printed resource?

Cost issues: 4 comments + mentioned in 2 other comments

Does MN grown come with a higher price tag? If so, what selling points make the product exceptional for local consumers (beyond the carbon footprint) and for out-of-state consumers? Justifying higher costs to end-users is challenging for food makers. The attributes of MN grown quality need to be elaborated on, and it needs to be determined if MN grown is a mark of quality across the board or only specifically for certain products.

Better pricing to smaller businesses vs the lower prices local growers give to large grocery stores

Price

Cost and consistency improvements.

Q9. What suggestions do you have to increase use of Minnesota-grown or other locally-grown product by specialty food makers like yourself? (cont'd)

Infrastructure support/ more processing: 5 comments

ways to store surplus seasonal veg – more IQF. Better pricing for local (it's weirdly more expensive than CA or Mexico). It's just so inconsistent to access. We can't print "local veg" on our label because it's not always available.

being able to have a copacker for our product in Minnesota

I would buy more root crops if they were available organic and in a form useable for processing

I'm looking for the supplier for frozen pureed local organic vegetable. chipmuncher@live.com

Not much since our ingredients need to be milled and cleaned before we can use them.

Services/education for growers and/or for food businesses: 4 comments

Have a class for growers on wholesale practices.

Help to facilitate more connections between growers, producers and business owners. Funding and grants for the smaller producers to expand operations, with education on how to apply for grants, etc. .

Maybe a grant program that give back X amount of money based on how much we buy locally?

Offer food safety courses that come with certificates of completion?

Production of needed crops: 3 comments

Diversity in commodities - as the community and consumer trends are changing. We need more diverse produce, spices and other varieties as ingredients.

Grow super hot peppers

Find more farmers to grow the kinds of wheat we use. We provide seed at our cost but we don't contract with farmers for their product because we test for glyphosate residue before purchase. We would be interested in heritage brands other than the ones we currently carry if they meet the flavor and baking standards we need.

Miscellaneous comments not coded

Season extension. Whenever my ingredient are sourced from MN they come through my Alberts Organics. This is my only real way to access MN foods.

Scaling up is difficult. Diversifying a business is also a challenge -if you are doing one thing well-such as growing veggies, how do you find time to start separate dried herb business that has enough volume to reach out. So identify and then helping those folks who can grow and diversify would be good.

signage stating local grown or MN grown

Be more transparent

Less regulation of meat products

none at this time, we are doing our best to use local ingredients.

none really

Because we do not use state-based suppliers I'm not sure how to respond to this question.

I don't have any suggestions at this time

Appendix D

Interview questions

Introduction: The purpose of these interviews is to gather information from manufacturers in order to develop publications and workshops where we can share insights, lessons, and best practices that help both manufacturers and farmers locate supply chain partners, develop efficient supply systems, negotiate fair contracts, and leverage the relationship in marketing.

1. Can you tell us a little about the history of your business? We are especially interested in when it was first established and how it has changed over time.
2. To help us categorize your size in terms of scale, was your total revenue in 2018 above or below \$1 million?

IF ABOVE, was it above or below \$5 million?

→ IF ABOVE \$5 million, was it above or below \$10 million

IF BELOW \$1 million, was it above or below \$500,000?

→ IF BELOW \$500,000, was it above or below \$100,000?

3. What do you consider to be your key ingredients? When you started, how did you source these ingredients?
4. Do you source directly from farms? Or, if you source local ingredients through a distributor, do you maintain communications with the supplier farm?
5. What were/have been your most significant obstacles related to sourcing and how has this changed over time, or as you have grown?
6. How did you “meet” your farmer suppliers – i.e., how did you identify them, make contact with them, and decide on establishing a business relationship with them? (if you can recall, was there a database or tool that helped)
7. What are the three most important criteria you use when choosing a supplier for your most important ingredients?
8. How were the initial transactions structured, and what has changed over time (formal contract, informal commitment, other)? -- Have you ever ended a sourcing relationship? Why?
9. How much and what percentage (if any) of your key ingredients do you currently purchase directly from farmers? Do you anticipate that amount changing? How large are the farms that supply you and where are they located?

10. Have the sources of your ingredients ever been part of your marketing strategies? For example, do you use 'farm stories' as a marketing tool, have you ever? If so, has your ability to carry farm stories changed over time?

Appendix E

A Closer Look: Tech for Sourcing

During data collection and analysis, the topic of technological solutions for finding and ordering local products arose numerous times. The entities mentioned do not represent a comprehensive view of available options, but we present them here to focus on those mentioned by study participants. Technology is always changing, and with the social distancing rules imposed as a result of the Coronavirus pandemic, 2020 has seen an increased acceleration of use in the months since this data was collected.

Small food manufacturers have many individualized skills to develop, from business accounting to marketing and everything in between. Data from the focus groups, survey and interviews that comprised this investigation suggest that they source ingredients in a variety of ways, e.g. going to farmers' markets, networking with peers, and talking with others in the industry. Minnesota Department of Agriculture's (MDA) online Wholesale Directory was reported as helpful for some (14%) of survey respondents. It was perceived by some as limited because it only includes Minnesota Grown members and might not contain the most up-to-date information.

If our recommendation to food businesses is to source from local suppliers when possible, it follows that we should continue investigating ways to direct them to efficient ways to find those suppliers. Indeed, the surveyed businesses expressed a great deal of interest in more efficient online information in response to an open-ended question on how to increase local sourcing. Comments like the ones below indicate that while the existing Minnesota Grown directory has many good components, even more facilitation would be helpful.

"I'd like to see a state sponsored database for ordering"

"I wish for a produce aggregator or online marketplace where growers could list their crops and buyers could potentially pool their orders so we benefit from scale."

"... perhaps a listserv or clearing house, but reality is that if we need something during the growing season, we don't have time to go looking for them, the relationship has to already exist."

Online marketplace options were mentioned throughout the focus groups and interviews, when there was more opportunity to ask follow-up questions. Six different online platforms were mentioned: MDA Wholesale Directory, Barn2Door, and Local Orbit (now Local Line), Azure Standard, LocalHarvest, and RED Market. Barn2Door and LocalLine are sales platforms for individual farms (although LocalLine has a food hub option). MDA's Wholesale Directory, Azure Standard, and LocalHarvest, are buyer-facing, allowing for someone to search for products needed, though the similarities end there.

Azure Standard allows for searching by brand name and carries some local products, such as SnoPac frozen fruit and vegetables, but many of the products do not contain origin information.

On the other hand, MDA's Wholesale Directory (which only includes MN products) and LocalHarvest both allow for a search to be centered on a specific location, with the option to filter by specific crop/ingredient.

RED Market is a Twin Cities-based start-up working to make introductions and facilitate purchases between farmers and buyers. Founder Katie Mhyre hasn't seen many CPG companies use her services; her main buyers have been restaurants, and she's targeting more corporate foodservice buyers in the coming season. She has observed, *"A lot of CPG companies say, 'well, when I get to be this size, that's when I'll start working with farmers.' But that's a big missed opportunity because, if you start very small, there's plenty of small farmers that are also at that scale, and you can grow your businesses together. right at the beginning."*

Mhyre envisions a strong system as something that will allow for stronger planning—actually collecting data from buyers on what they are looking for, and sharing that with the farmers.

"Beginning CPG companies may go to Costco & Restaurant Depot or even farmers' markets, based on what they need right in that moment. They're figuring all of that out because they're at the early stage, but I think the sooner they can calculate that information about poundage, the better it will be setting up relationships with farmers."

One important factor that goes across platforms is that success depends on the platform having up-to-date information and being actively used by both buyers and producers.

There is a lot of activity in the development of online platforms and they continue to improve in functionality. The National Young Farmers Coalition released a comparison chart in April 2020.⁴

Additional information on the platforms mentioned can be found on their websites, listed below.

Azure Standard

Based in: Dufur, Oregon
Operating since: 1987
Website: azurestandard.com

LocalLine

Based in: Kichener, Ontario
Operating since: 2015
Website: site.localline.ca

Barn2Door

Based in: Seattle, WA
Operating since: 2015
Website: barn2door.com

RED Market

Based in: Minneapolis, MN
Operating since: 2015
Website: redmarketmn.com

⁴ <https://www.youngfarmers.org/wp-content/uploads/2020/04/Farmers-Guide-to-Direct-Sales-Software-Platforms.pdf>

Local Harvest

Based in: Santa Cruz, CA

Operating since: 2000

Website: localharvest.org

Appendix F

Case study: Impacts of Growth on Sourcing

A growing startup out of Stillwater, Minn., Sara's Tippy Pies has seen significant changes since it began in 2012.

Initially processing in a church kitchen and selling at farmers' markets, the first shift came for owner/founder Sara Hayden when she started selling her personal-size "hand" pies through Aamodt's Apple Farm store, also the source of her apples. Also key to her niche market success was Lift Bridge Brewery, who put the "tippy" in Tippy Pies.

Alcohol partnerships grew to include local wineries, distilleries, and additional breweries, while her sales reach increased with catering for weddings. Her "Pies with a Purpose" program resonated with Finnegans Brew Co., who initially donated beer for that effort, allowing more proceeds for the beneficiary, Down Syndrome Association of Minnesota. (Two more beneficiaries have been added since then.)

The social benefit initiative, launched in 2014, was another strong step towards building a loyal customer base. Sara's story is genuine and resonates with people on many levels, most especially for giving back to a cause that holds special significance, as her daughter lives with Down Syndrome.

Becoming a vendor at the Minnesota State Fair in 2015 was a huge step that ultimately underscored the need to make the business scalable; outsourcing the pie crust production was a logical move. In 2016, a fellow entrepreneur at the State Fair suggested she try Gregory's Foods for the crust.

Gregory's Foods, a family owned business in Eagan since 1980, offers all things baking, from dry mixes and frozen dough, to fillings, glazes and icings, as well as scratch ingredients. They continually innovate to achieve clean label products that also have optimal flavor and shelf life.

Sara says Darrell Mickschl, R&D Director at Gregory's, has been responsive in perfecting the process so the crust meets her needs. During 16 months needed for development, they ensured she was ahead of the trans-fat ban set to take effect in 2018.

Gregory's sources grain from all around the region, processed by Ardent Mills. Because of their customer service and rigorous SQF (Safe Quality Food) procedures, however, they're able to identify origins of the flour if needed. At that scale, flour is always a blend, and precisely guided

Sara's Tippy Pies

sarastippypies.com

In business since: 2012

Location: Stillwater, MN

No. of employees: 6 + 2/retail, 20/state fair

Gross annual sales: 100K

Product lines: frozen personal-size dessert pies, savory pies for events and catering

Sales channels: wholesale-foodservice & catering, wholesale-frozen pies, retail

Distribution: Market Distributing, mainly in the Twin Cities metro area



by protein levels for the specific use of the flour. Pastry flour, Darrell says, likely comes from Minnesota, Wisconsin or the Dakotas. *"It's all coming from that region. You don't want to drive costs into it by bringing it from further away."*

But he's confident the exact sources of the grains in the flour blends could be discovered if they asked. Because of food safety requirements, traceability and tracking information has to be known, recorded and accessible. Gregory's has a full department that manages that type of documentation.

While local flour might not carry the scale efficiencies, other agricultural ingredients used in significant quantities at Gregory's include eggs and butter. Again, scale plays a pivotal role.

Eggs are brought in as a liquid or dried product from two different intermediate processors: dried eggs are from Minnesota's Sparboe Farms, and liquid eggs from Deb-El out of New Jersey, which has farms throughout the Midwest. On requesting source information from Deb-El, Darrell was able to learn that the majority is from Iowa farms but they were not forthcoming with any further detail, except that they're from the United States.

Gregory's orders butter by the 50-pound cube, which was coming from Minnesota until the supplier stopped making that bulk size. They knew of a Wisconsin producer and made the switch. Darrell says, *"We could have sourced the butter from as far away as California but the logistics would have been tough."*

So, local offers potential efficiencies that makes it pragmatic from a business standpoint beyond the story of supporting local partners.

For Sara's Topsy Pies, pragmatics has intervened somewhat with the local sourcing she started out doing. She no longer sources fresh fruit, opting for IQF for its consistency in the pies as well as shelf stability and the labor savings of the ready-to-use fruit. The Michigan company providing the frozen fruit is used to fulfilling specs such as selecting wild blueberries instead of large ones, but less accustomed to requests about where the fruit comes from.

When Sara requested information about the apples they were shipping her, the sales rep was open to finding out, but is taking a long time in responding. As a small, young business, it may be more difficult to get these answers.

Another difficulty of being small is reaching order minimums, not just for pack sizes, but also for deliveries. US Foods recently informed Sara that they won't deliver to her unless she orders 15

Gregory's Foods

gregorysfoods.com

In business since: 1980

Location: Eagan, MN

Number of employees: 101

Gross annual sales: 10 million +

Product lines: frozen bread and bun doughs, cookies and batters, to mixes and bases, fillings, glazes and icings, and a long list of scratch ingredients.

Sales channels: wholesale-foodservice, wholesale-ingredients & supplies, wholesale-private label, retail, fundraising

Distribution: self-distributed; minimum order for delivery: \$500



"Gregory's Guru" Keith Heggernes makes site visits for tech support and

cases or more. Meanwhile, suppliers like Dawn Foods have a cost-based delivery minimum. Despite feeling unappreciated for her orders of 9 cases that might reach as much as \$1,200, she has no option but to either coordinate group purchases with other food businesses, or turn to other suppliers.

Appendix G

A Closer Look: Successful Local Sourcing

Food businesses who lead with local sourcing

Ferndale Market

John Peterson operates a vertically-integrated farm and market, also distributing a range of turkey products. While he doesn't source ingredients as were studied for this project, he did have a similar issue when faced with the challenge of scaling up his production while maintaining their free-range standards.

The solution was to foster partner farms. To ensure the birds are raised in the same way and coordinated with the supply needs, John structured these contracts so that he owns the birds from the beginning rather than purchasing them at maturity; however, the effect is the same. He knew that he needed more inputs and worked with neighbor farms to produce what he needed. Essentially, this allows those partners to grow as Ferndale grows.

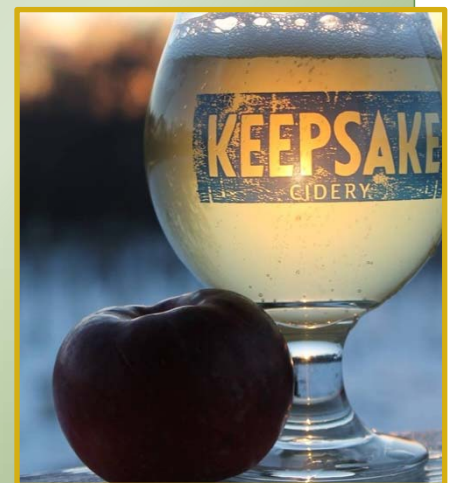


Keepsake Cidery

Nate Watters initially planned to grow all of the apples he'd need for his hard cider, but started buying apples while waiting for his trees to mature. Five years later, he gets just 10% of his apples from his own trees, sourcing most from area farms. Why? Three words: variety, weather, and community.

Cider is best made from unique varieties—not the ones used for eating—and it took trial and error to find apple varieties that worked. Next, they source off-farm to spread out risk. Nate has seen wide variability in weather from just a difference of five miles, so it's safer to source from different places. Finally, there's a bond among the growers—*"something social, cultural, a building of a community,"* said Nate. *"Some of these orchards like that there were these apples they used to sell, no one bought them, and now we buy them."*

Realizing that the community needed to band together, he was a strong proponent and an initial founder of the Minnesota Cider Guild, which has grown in a few years to about 40 members, 20 of whom are active growers or cider makers. Nate is concerned that the boom in cideries will mean heightened demand for the unique-



flavored varieties. He feels he can't in good conscience ask farmers to plant more cider apples, however, given the drastically lower margins compared to selling 'eating' apples like Honeycrisp. Shorter transport distances are an incentive to source locally. Keepsake Cidery is mainly doing it for community though: their farm is open on weekends for music and food, and of course, cider.

You Betcha Kimchi

As food entrepreneurs making kimchi, Iman Mefleh and Joe Silberschmidt started out committed to making a 100% locally-grown kimchi product. They have used ingredients they grew themselves, gradually adding more local farms as they began to scale up.

They discovered their local ginger farmer, Melissa Driscoll of Seven Songs Organic Farm, from reading a newspaper article. After visiting Melissa's farm, they hammered out a deal to exchange their labor on the farm for the ginger and garlic they needed.

Coming from families of farmers and foodies, Iman and Joe had a foundation and an understanding of what they were taking on. They built on that with the Land Stewardship Project's Farm Beginnings course, and work to be as much of a partner with their farm suppliers as possible—helping them with their planning process.

For example, their planning discussions allow Melissa to set up quantity and price agreements earlier to help her decision making. They now have an arrangement where Iman and Joe pay ahead for their ginger, like a CSA, which helps both parties with cash flow.

Melissa said, *"I love selling 100 pounds of ginger at once, and not piece by piece at farmers market, even though I'm selling it for less per pound. This year I went into more wholesale and less farmers market, and my ability to make money went much higher because I'm spending a lot less time marketing."*

Iman and Joe now source from 10-12 local farms. They've met some farms through The Good Acre, which was also their production space from 2017-19 before they opened their own kitchen, Seward Makes. They enjoy some flexibility in their sourcing—they're able to use some of the Grade B since their veggies are shredded, which helps farmers realize more sales.



Joe said, *"building those relationships with our farmers to mutually benefit each other is really a core goal of our business."*

Seven Sundays

Hannah Barnstable began selling Seven Sundays muesli at Minneapolis farmers markets in 2011. After a few years she was selling through local co-ops and husband Brady joined the effort, and recently—just over eight years in, they are in select Costco locations and announced that they're in Whole Foods nationwide.

In this journey they've experienced several shifts in their sourcing. Initially, it was difficult to find suppliers that would provide small quantities. Ingredients were expensive because they were not in bulk, and their best hope was to ask their distributor to do mixed pallets of nuts, seeds and dried fruits. Fruits were also difficult, too, because of wanting them free of preservatives, sugars, or pesticides. They found a local grain farmer for their oats, rye and barley that could fill their needs for a while; when they exceeded what he could grow they suggested that he transition to growing their buckwheat, and that has remained a good arrangement.

At industry shows like IFT they met brokers and distributors who could do mixed pallets; that evolved into ordering full pallets, and now full truckloads. Gradually they learned minimum order sizes and where their ingredients were being grown, seeking out opportunities to work directly with suppliers over brokers—it helps with cost and being prepared for consumer questions about ingredients.

With their level of experience and scale, Seven Sundays has now established a supplier approval program to ensure quality. Brady says they engage in *"sort of a continuous improvement game,"* swapping out two or three suppliers a year. *"When I have options, I'll look at sustainability and social impact aspects to help pick the best,"* he says.

Part of that continuous improvement includes sourcing close to home. *"There isn't a policy yet, but I have a goal of 30% local being our minimum. Where I can, I want to grow that local sourcing number."* And because they were sourcing oats from Canada to find sufficient quantities, Brady turned to his network of farmers and contacts at Grain Millers and Practical Farmers of Iowa to build a larger base of farms that could produce oats to their quantities and specs. For their part, they're providing estimates of how many acres of production they can use, which helps the farmers plan their crop rotations. They're starting to learn more about contracting, a tool for getting more small oats growers on the ag landscape in the Midwest.

All of this focus comes from a genuine concern for the impact their purchasing has on regenerative agriculture, farmers, and



community, so they discuss that in their consumer messaging—even if they're not sure of its impact. *"The communications piece to the consumer is hard because we really care a lot and I think there are some really loyal people who care, and also a lot who don't care. The regenerative ag story is complex and difficult to communicate, but we share the stories and hope that people will see over time that we're doing something positive."*