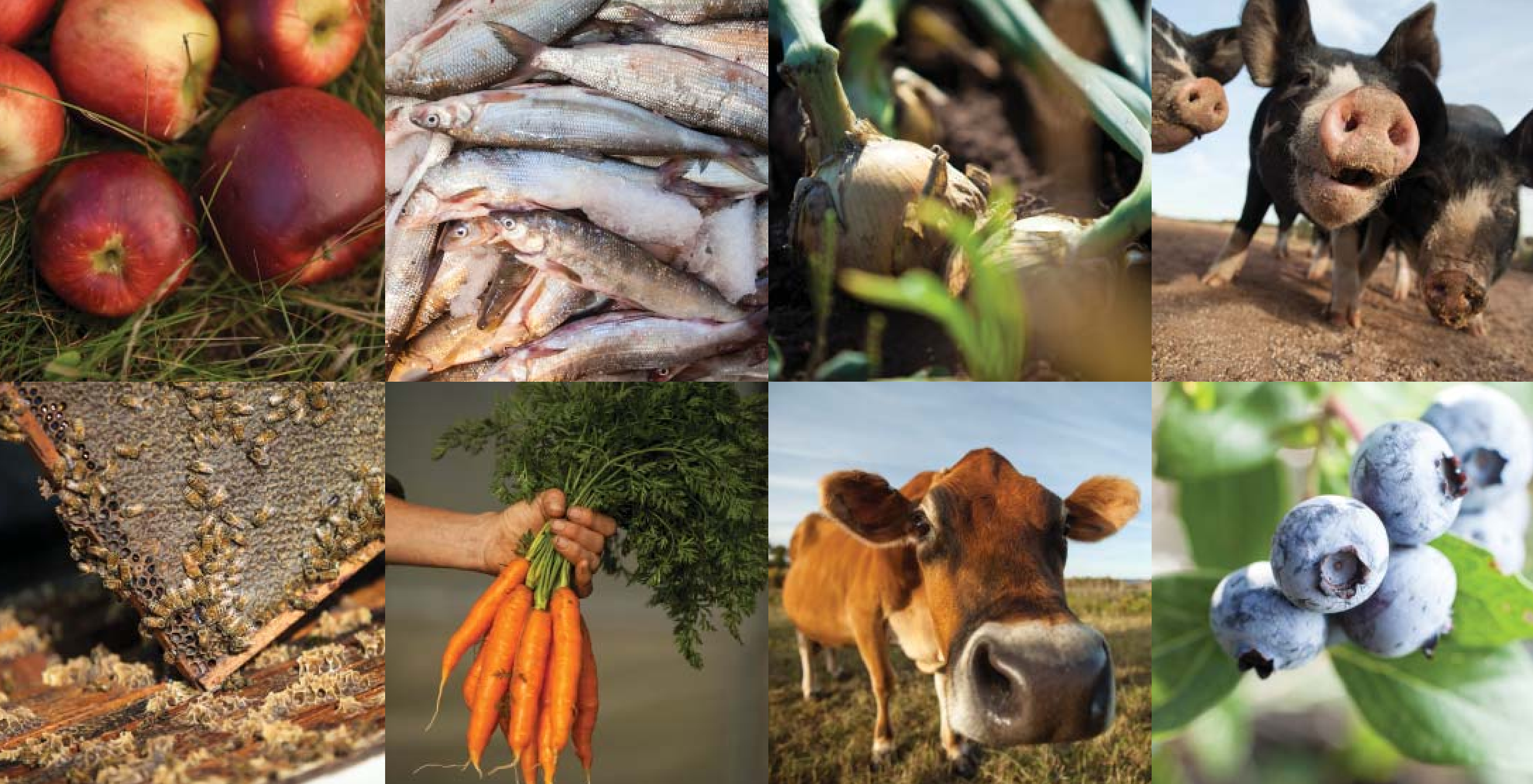

Ashland and Bayfield Counties Household Food Survey

JANUARY 2018

Center for Rural Communities
NORTHLAND COLLEGE

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USDA United States Department of Agriculture National Institute of Food and Agriculture

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Executive Summary

Key findings

Households in Ashland and Bayfield Counties support growing the local food economy and making sure that households across the income spectrum are able to participate and benefit from its development.

- A large majority of households share values related to access to healthy food, a regional culture of small farms, and water quality in Chequamegon Bay.
- 92 percent of households would like more of the food they purchase to be produced in Ashland and Bayfield Counties.
- A majority of households are willing to pay more for food produced locally.
- The most frequently reported barrier to buying more local food is that it is not available where households usually shop.
- Over 45 percent of households are willing to contribute to community programs that support wider distribution and greater affordability of local food.

Who should read this report?

- **Farmers and producers** who would like to grow the market for local food in Ashland and Bayfield counties
- **Local food outlets and retailers** who are interested in stocking more local food
- **Community organizations and stakeholders** who are working to improve access to healthy and local food

A strong local food economy...

Helps develop community capacity by creating jobs, establishing community identities, and promoting problem-solving through collaborative work between diverse stakeholders (Lyson, 2012).

Has local economic benefits such as the retention of dollars, spillover effects, and increased entrepreneurship (Martinez, 2010; Swenson, 2009).

Promotes a diet based on foods local to the Western Lake Superior region, which has been shown to be healthier than the Standard American Diet (Abasz et al., 2010).

This project focuses on food produced in Ashland and Bayfield Counties in order to achieve these benefits within the two counties.

Introduction

This report summarizes the results of the first phase of a four-year research study that aims to strengthen the local food economy in Ashland and Bayfield Counties. With an already burgeoning local food movement and many innovative efforts already underway, this study is meant to take a bird's eye view of all aspects of the local food economy. The purpose is to identify potential investments, programs, and strategies that build on ongoing efforts and overcome barriers particular to the region. Doing so will help communities within the two counties realize the benefits of a stronger local food economy.

Such economies help to create jobs, establish community identity, and promote collaborative work between diverse stakeholders (Lyson, 2012). They also keep dollars within the community, create spillover effects that support retailers and other sectors, and encourage entrepreneurship (Martinez, 2010; Swenson, 2009). Furthermore, a diet based on foods local to the Western Lake Superior region has been shown to be healthier than the Standard American Diet (Abasz et al., 2010).

Methods

Throughout this study we will be collecting information from household consumers, institutional consumers, retailers, farmers and producers, and community organizations. In August 2017, we mailed survey questionnaires to 2,000 randomly selected households in Ashland and Bayfield Counties. The survey instrument was designed to reveal the predictors and barriers to consumption of local food, values and beliefs about buying local, and the contextual factors that mediate food purchases and food access. We received 712 responses to the mail survey. To ensure a proportionate response from lower-income households, questionnaires were administered on-site at four The BRICK Ministries food shelf locations in Ashland, Cable, Cornucopia, and Mellen, and at the Bay Area WIC office in Ashland. Sixty-nine questionnaires were completed on-site. The results in this report are weighted by age, education, and race, and are therefore representative of the combined population of the two counties, with a margin of error of 3.45 percentage points.

Figure 1. Phases of four-year research study on the local food economy in Ashland and Bayfield Counties

Phase I: Household Demand and Access
Survey households to understand preferences for food produced locally and barriers to accessing local food.

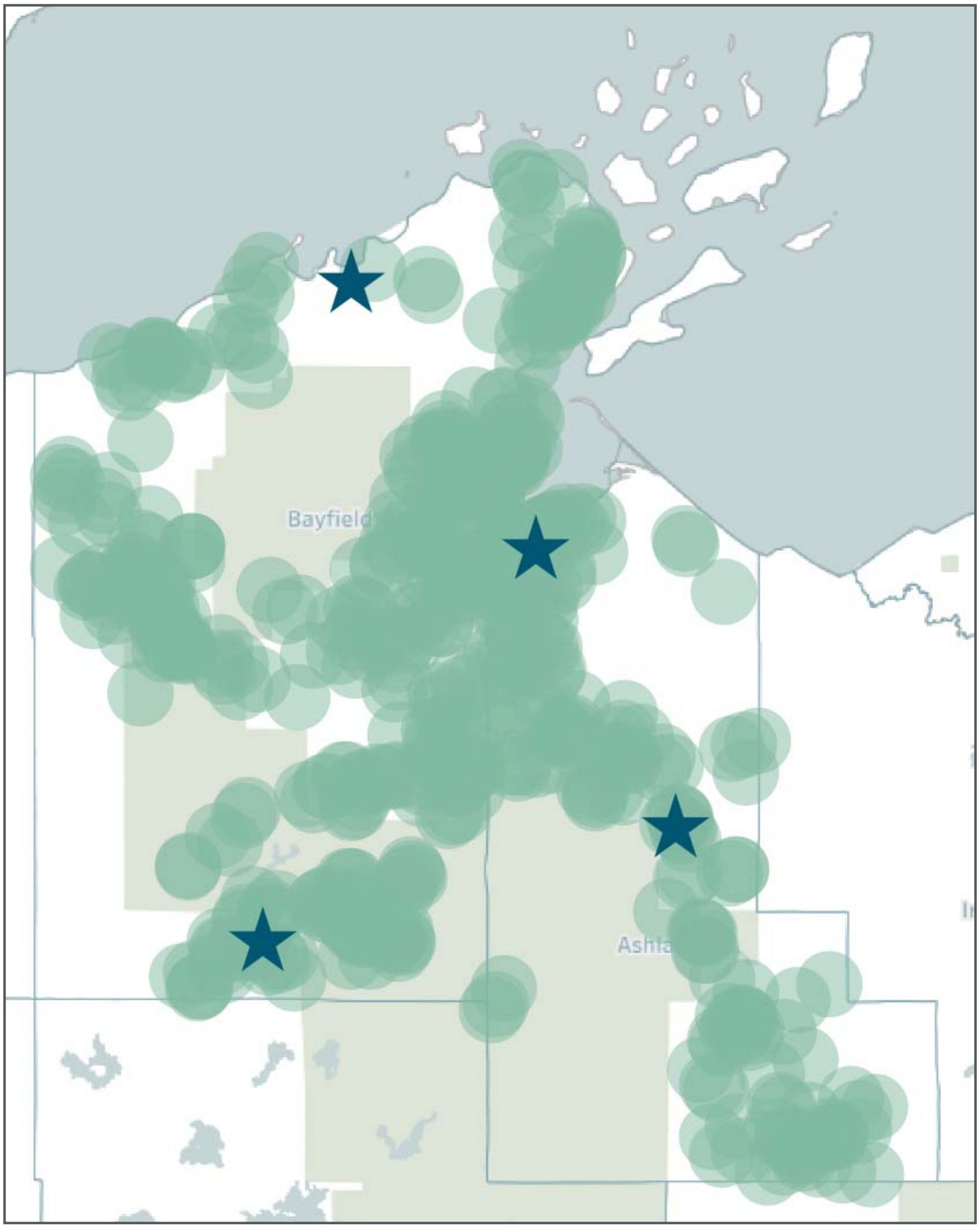
Phase II: Household Demand in Detail
Diary surveys and focus groups to obtain detailed information about household buying decisions and barriers to local food consumption.

Phase III: Institution Final Demand and Retail Intermediate Demand
Interviews with institutional buyers at schools, hospitals, and food pantries, and retailers to uncover barriers to purchasing food directly from producers.

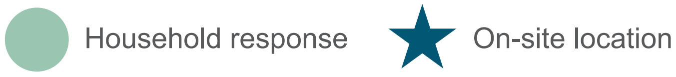
Phase IV: Producers and Community Organizations
Interviews with farmers, producers, and community organizations to identify opportunities and challenges related to production, marketing, and distribution.

Phase V: Community Workshop
Workshop during which results will be presented to stakeholders and a conversation will be held about how to increase local food sales, consumption, and access.

Figure 2. Spatial distribution of survey responses and on-site locations



Note: No addresses on Madeline Island were included in the survey mailing as an artifact of the random selection process.

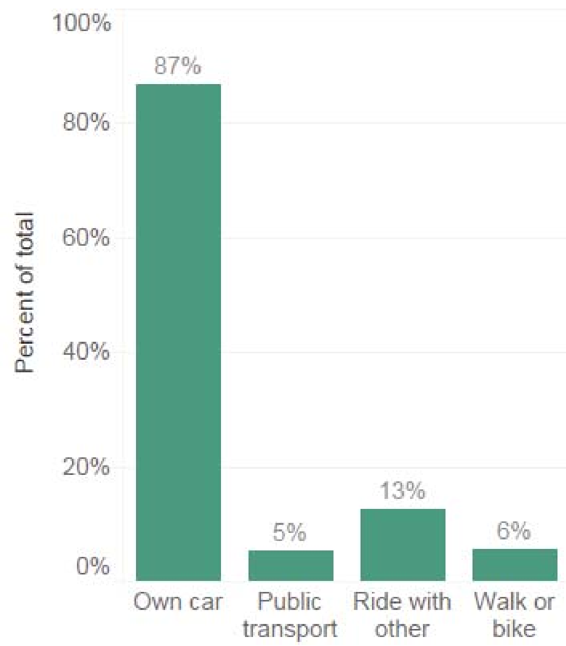


Household Characteristics

The majority of households across the counties are small with one to two residents (63.3 percent) or three to five (32.5 percent) residents. Over 55 percent of those who are purchasing food for their households are between the ages of 45 and 74 (55.2 percent), and 60.7 percent are female. A majority of households (53.4 percent) have an annual income of $39,999 or less.[1]

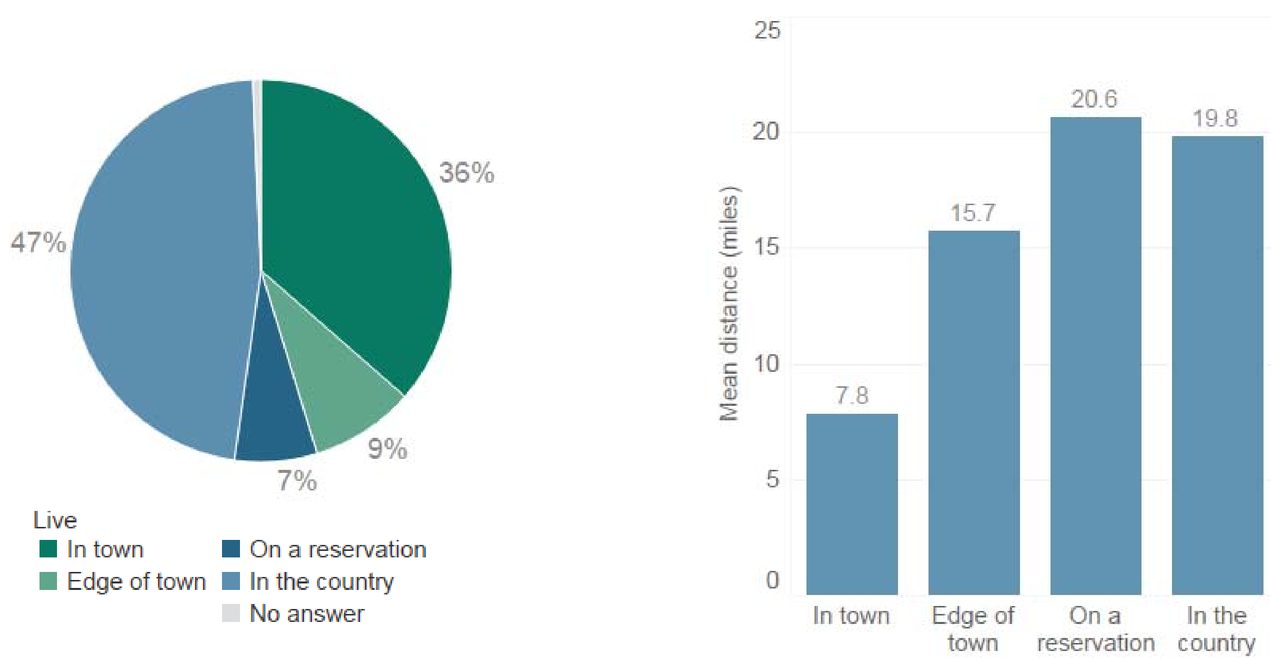
Over half of the households in the two counties live outside of town and travel by car more than 15 miles one-way, on average, to buy food. Households located on a reservation and in the country travel the greatest distances for food. Thirteen percent ride with a friend, neighbor, or family member, and 6 percent walk or bike to get food.

Figure 3. Modes of travel for food purchases



Some respondents indicated more than one mode of transportation.

Figure 4. Where households are located and mean distance they travel for food



[1]The reported income-levels are consistent with 2011-2015 American Community Survey 5-Year Estimates, which list a median household income of $39,381 for Ashland County and $46,665 for Bayfield County.

Table 1. Demographics

	Unweighted sample Valid %	Weighted sample Valid %
Household size		
1-2	71.9	63.3
3-5	25.0	32.5
6-8	2.9	3.8
9-11	0.3	0.3
Children under 18		
No children in HH	75.3	66.7
1-3 children	22.4	30.4
4-6 children	2.0	2.6
7-9 children	0.3	0.3
Age		
18-24	1.2	9.7
25-34	6.5	11.9
35-44	12.8	12.7
45-54	14.0	18.8
55-64	24.3	21.6
65-74	23.4	14.8
75-84	13.0	7.6
85 and over	4.9	2.8
Gender		
Female	61.0	60.7
Male	38.6	39.2
Other	0.3	0.1
Race/ethnicity		
White	89.7	85.6
Black	0.1	0.6
Native American	5.3	10.1
Two or more races	2.9	3.0
Other	1.9	0.7
Hispanic	0.8	0.5
Education		
Less than high school graduate	5.6	7.6
High school graduate	24.8	32.2
Some college/associate's degree	34.8	36.0
Bachelor's degree	18.8	15.7
Graduate or professional degree	16.1	8.6
Household income		
$9,999 or less	10.4	16.5
10,000-19,999	15.4	14.6
20,000-29,999	12.9	11.9
30,000-39,999	10.6	10.4
40,000-49,999	8.9	8.7
50,000-64,999	13.5	12.1
65,000-74,999	7.9	8.2
75,000 or more	20.4	17.4
Percentages may not add up to 100% due to rounding.	Total N=781	Effective N=759

Food and Community Values

Values are defined as 1) altruistic considerations related to topics such as water quality, the community, and the local economy; or they might be 2) personal values having to do with tradition, heritage, family, and health, among others (Feldman & Hamm, 2015). Both types of values influence beliefs about local food and the role that buying and eating local plays in fulfilling these values. Understanding what values are held in common and by whom can help guide production decisions, community efforts, and inform how those decisions and efforts are communicated and supported.

Shared values

Households in Ashland and Bayfield Counties hold values that are aligned with a vibrant, sustainable, and accessible local food economy (see Figure 5). The top three values held in common are that 1) everyone in our community should have access to healthy food (93 percent agree or strongly agree); 2) small farms are important to our regional culture (90 percent); and 3) the water quality in Chequamegon Bay is important (89 percent).

A majority of households also hold the belief that the best way to strengthen our economy is by supporting local businesses (88 percent) and that local development should be environmentally sustainable (77 percent). Taken together these values and beliefs suggest that there is support for growing the local food economy and making sure that households across the income spectrum are able to participate and benefit from its development.

Farm direct values

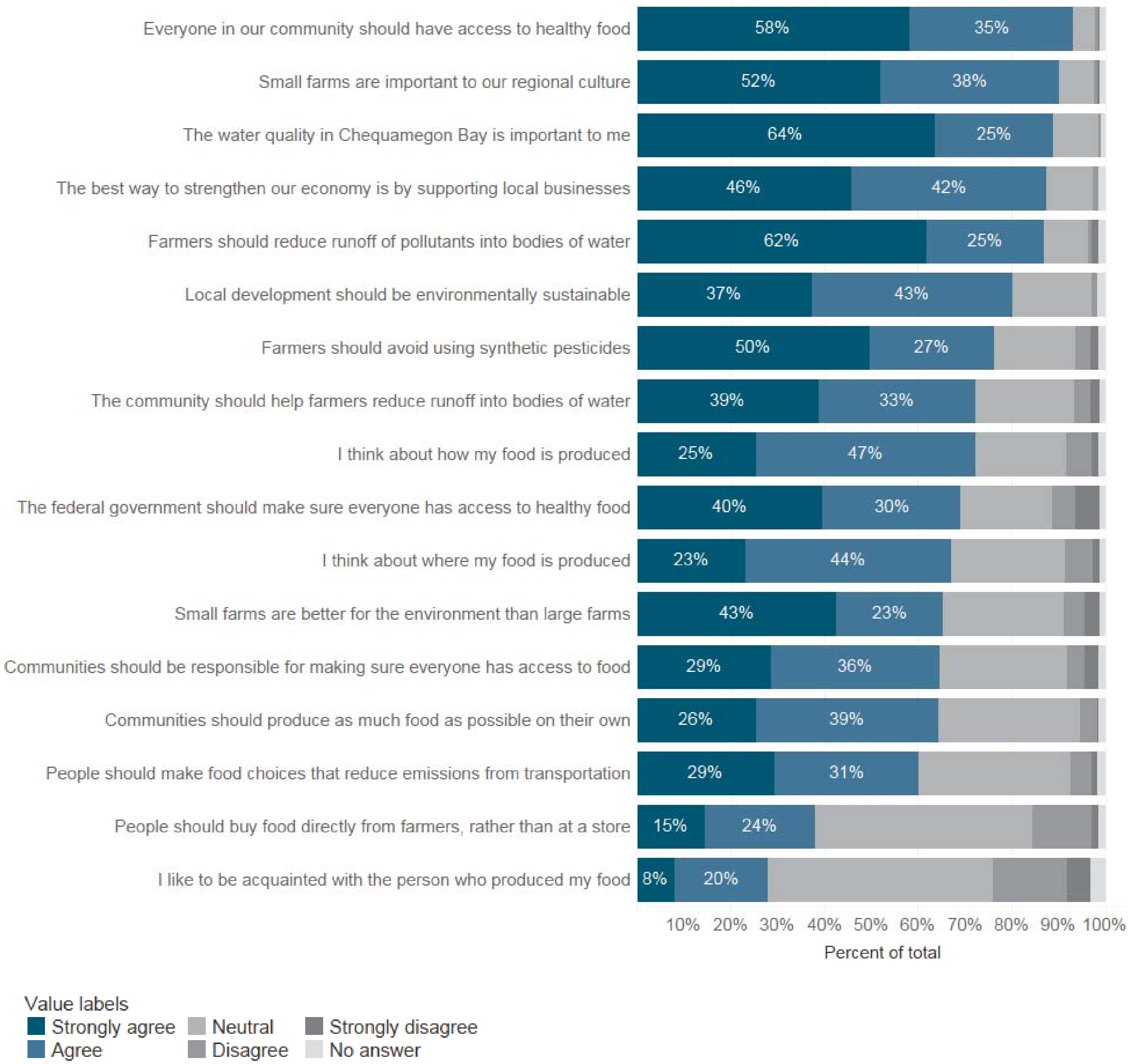
One of the purported benefits of direct food markets, such as farmers' markets or community supported agriculture (CSA), is the opportunity for social interactions between producers and consumers. Yet, although a majority of households value many of the attributes associated with a region of small farms and a strong local food economy, fewer are motivated by personal connections with farmers - only 28 percent agree that they like to be acquainted with the person who produced their food. Thirty-nine percent of households agree that people should purchase food directly from farmers rather than at a store.

These findings are notable in that they indicate the potential for reaching local food consumers in multiple ways, whether in retail outlets or through direct market distribution or sale beyond face-to-face exchange.

Environmental values

Fewer households hold values related to environmental issues that extend beyond our region, such as choosing foods that reduce emissions from transportation (60 percent). The importance of local environmental issues, such as water quality, are more likely to inspire broad community support.

Figure 5. Household level of agreement with statements that reflect community and food values




92% of households would like more of the food they purchase to be produced locally

Demand for Local Food

To assess household demand for food produced nearby, we first asked respondents to indicate how much of the food they currently purchase is produced by farmers in Ashland and Bayfield Counties. We then asked each household, overall, if they would like more of the food they buy to be produced locally.

Current consumption

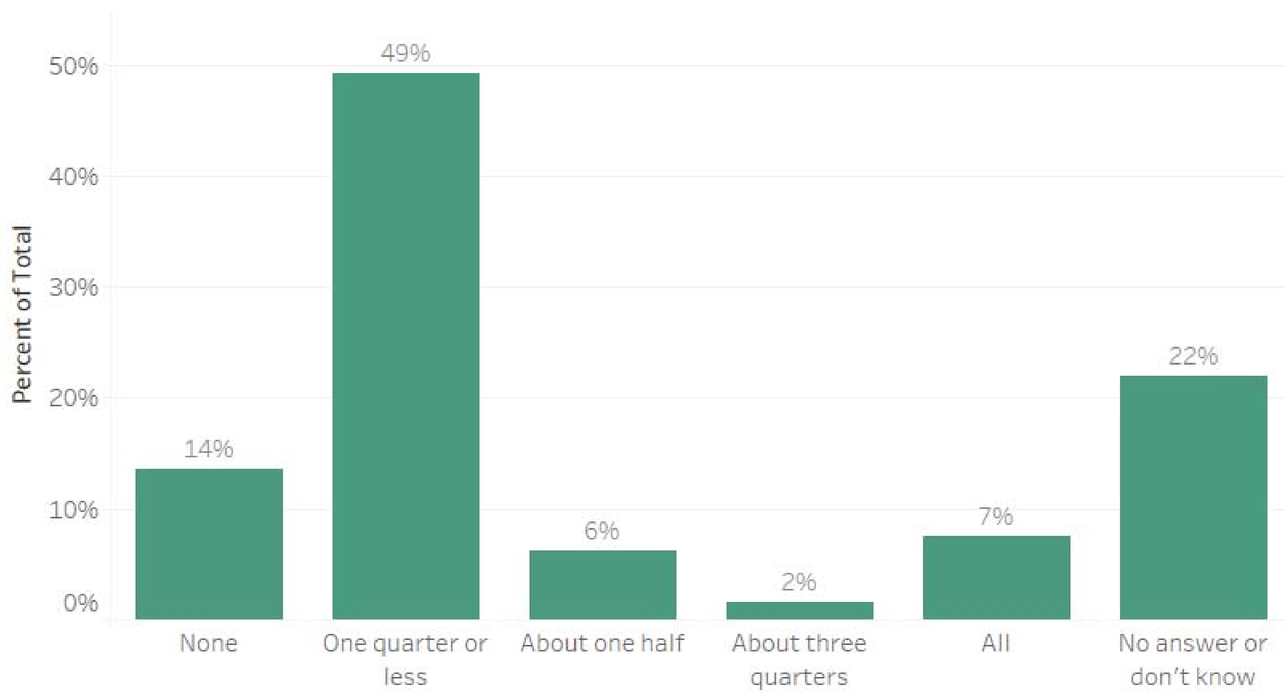
Sixty-four percent of households already buy food produced by local farmers (Figure 6). Fifteen percent of households report that one-half or more of the food they purchase is produced nearby. Only 14 percent report that none of the food they purchase is produced nearby, while 49 percent indicate that one-quarter or less is produced within the two counties. Twenty-two percent of households do not know how much of their food is produced locally.

Unfulfilled demand

Given that a majority of households already buy local food, it is not surprising that almost 92 percent of households would like more of the food they purchase to be produced within the two counties. This result is consistent with a previous study conducted by the CRC which found that over 90 percent of Chequamegon Bay Food Co-op members would like the food they purchase to be produced within 100 miles from where they live (Hofsetdt et al., 2015).

These findings, along with the values held in common by most households, present a tremendous opportunity for expanding the local food market.

Figure 6. When thinking about all of the food you buy, about how much is produced in Ashland and Bayfield Counties?



Barriers to Local Food Purchasing

We are also interested in finding out why households are unable to buy as much local food as they would like, or, for the households who do not want more of their food to be produced nearby, why that is the case.

We presented survey participants with three types of possible barriers to buying more local food: *availability barriers* having to do with the ability to find the types of foods they want or to identify food produced nearby; *resource barriers* related to income or household assets; and *cultural barriers* such as personal identity, trust, or common household activities.

Top barriers

The top barrier in the region is that **local food is not available where households usually shop for food**, with 70 percent indicating this is somewhat of a reason or a strong reason for not buying more (Figure 7).

The second most commonly reported barrier is that **it is too expensive** (68 percent). One possible interpretation of this result is that local food prices in the region are, in fact, high relative to household incomes or the prices of non-local foods. An alternative interpretation is that high prices are a commonly held perception, whether or not it holds true in most cases. Only 21 percent of households believe that local farmers do not charge fair prices, indicating that most recognize the value embedded in foods produced locally, whether or not they believe they can afford them. Further work will be done throughout this four-year study to determine the affordability of local food and how perceptions of price are influencing consumer decisions. We report findings about household willingness to pay for local food in the following section.

Three additional reasons for not buying more local food were selected by the majority of households: 'some of the things I eat are not produced nearby' (64 percent); 'it's not available year-round' (57 percent); and 'I don't know where to find food produced nearby' (50 percent).

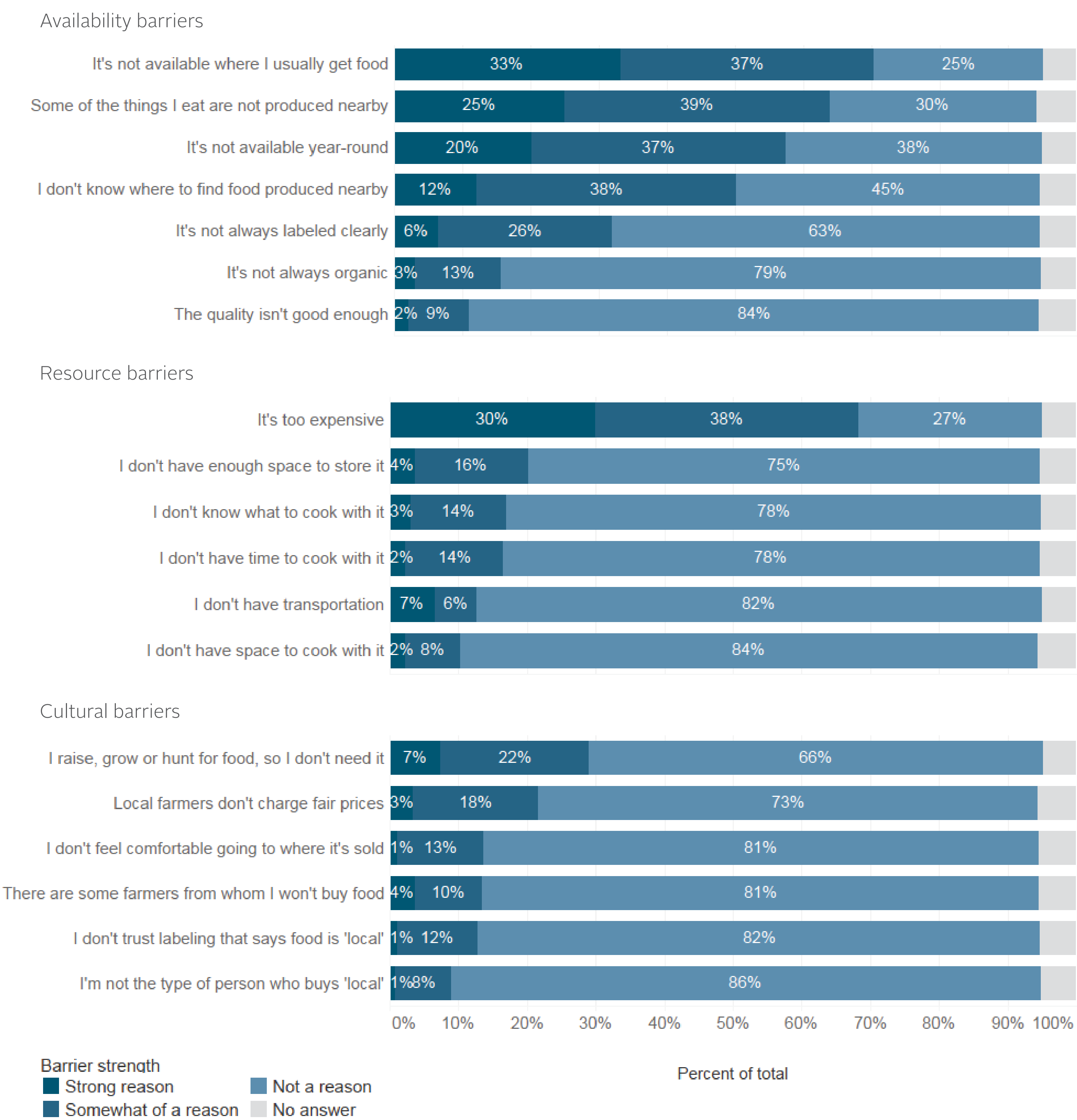
Cultural barriers

Cultural barriers related to local food consumption might include level of comfort going to where food is sold, trust in producers or labeling, or personal identity. Some households (14 percent) are uncomfortable going to where local food is sold. Though this is not a barrier for the majority of households, there is work to be done to ensure that all community members feel welcome in the local food market.

Interestingly, only 9 percent report that they are not the type of person who buys 'local'. Clear labeling at point of sale and communication efforts that help connect people with markets, outlets, and farmers can be consistent in messaging around local foods and shared community values.

Twenty-nine percent of households indicate that they raise, grow, or gather food so it is unnecessary to purchase more. A recent study conducted by the CRC finds that these types of self-provisioning activities are important sources of food for many households in northern Wisconsin (Kemkes et al., forthcoming). This culturally significant aspect of our region is worth noting because it signifies a connection to local food, but it also poses a challenge for producers in that food purchases are made with these activities in mind. Going forward we need to think creatively about how to align local production with what households are growing themselves.

Figure 7. Strength of barriers to buying locally produced food



Market Opportunities

There are several possible ways to meet the unfulfilled demand for local food in the region. In the survey we explored willingness to pay for local foods, what types of local food items households would be interested in buying, what changes would increase attendance at farmers' markets, and a few new ideas for making local food more accessible based on examples in other communities.

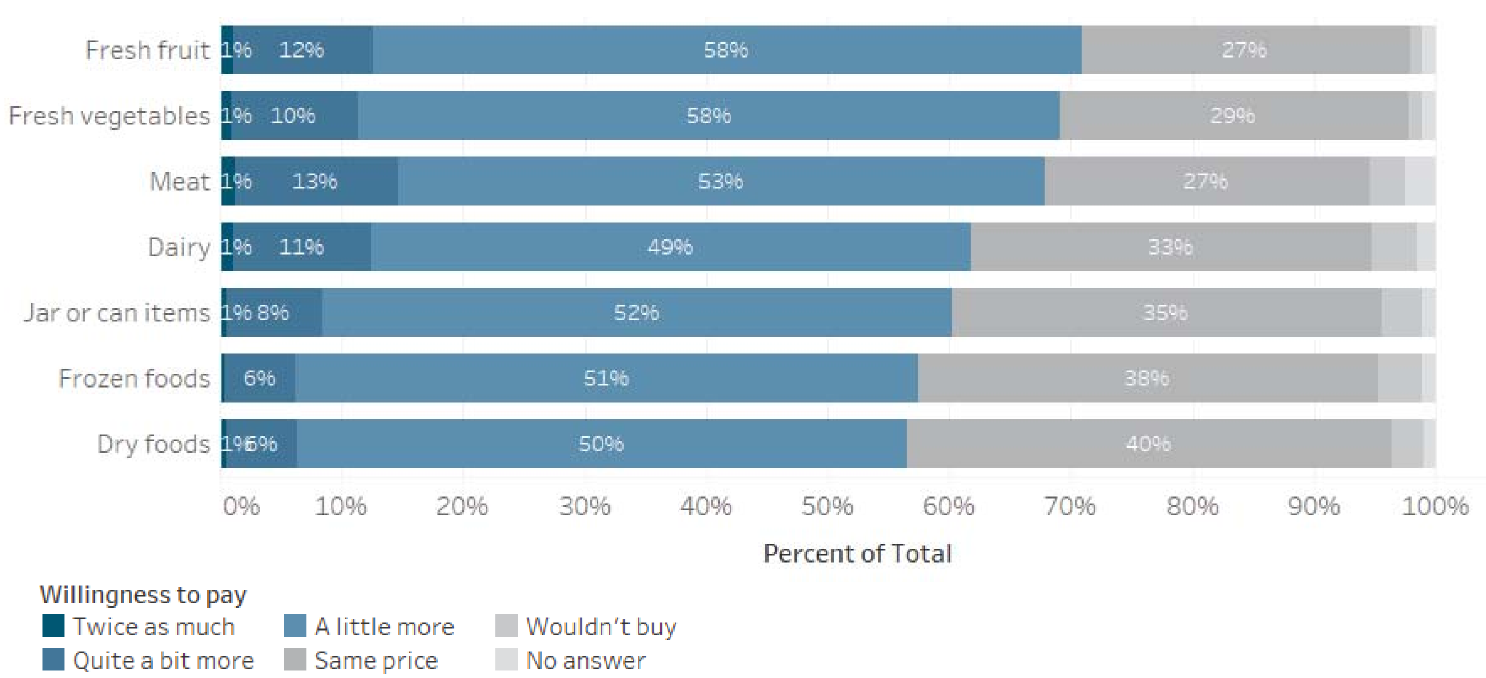
Willingness to pay for local

Because the majority of households in the region would like to buy more local food but believe it to be too expensive, it is important to understand how much, in fact, they are willing to pay. We asked how much households would pay for each of six types of local food items relative to the same item produced elsewhere (meat, fresh vegetables, fresh fruit, dairy, frozen items, dry items, and jar or canned items). Participants could choose 'the same price', 'a little more', 'quite a bit more', 'twice as much', or 'wouldn't buy'. Over 50 percent of households are willing to pay at least 'a little more' for locally produced food items across categories (Figure 8).

We also asked households where they shop for each food item. The location options in the survey included: Walmart, a grocery store, a food co-op, a neighborhood market, a gas station, from a farmer, delivery, or a food pantry or program. Due to space limitations, we report results for the top five locations. Respondents checked more than one location, if applicable.

In Table 2 we report the percentage of the total number of households who are willing to pay at least 'a little more' for food items produced locally in each shopping location. For example, 64 percent of households shop for fresh fruit at a grocery store and are willing to pay more than they would for fruit grown elsewhere. Similarly, 37 percent of households shop for jar or canned items at Walmart and are willing to pay more for those items if they are produced locally.

Figure 8. Willingness to pay more for locally produced food items



64% of households shop for fresh fruit at a grocery store and are willing to pay more for local fruit

Table 2. Percentage of households willing to pay more for locally produced food items by location

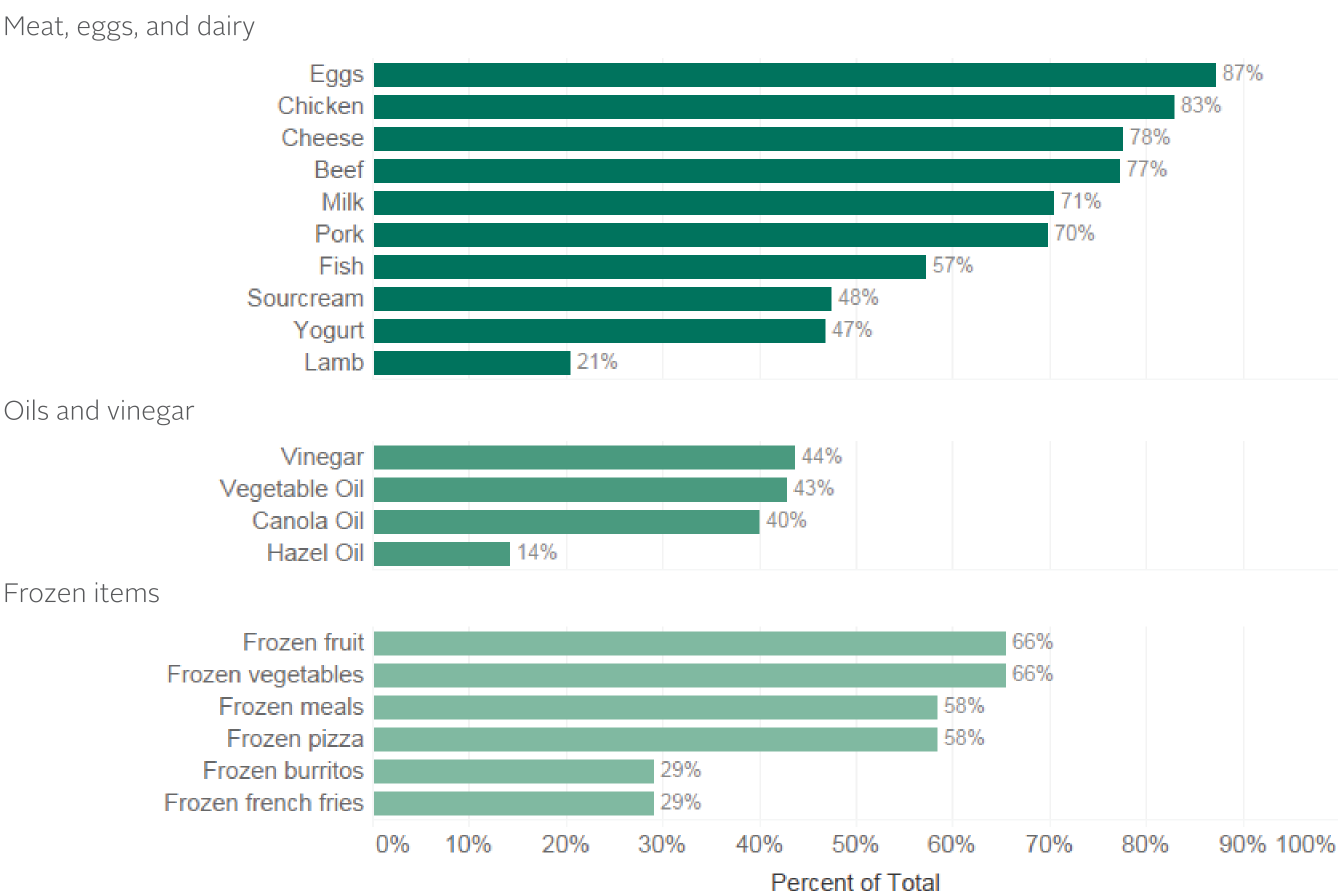
	Location where households purchase each type of food item				
	Grocery store	Walmart	Co-op	From a farmer	Neighborhood market
Local food category	Percentage of total sample willing to pay more				
Fresh fruit	64	36	21	20	13
Fresh vegetables	60	35	22	22	16
Meat	56	23	12	18	24
Dairy	50	31	14	9	16
Jar/canned items	48	37	16	5	10
Frozen items	49	34	12	3	9
Dry items	46	36	19	1	8

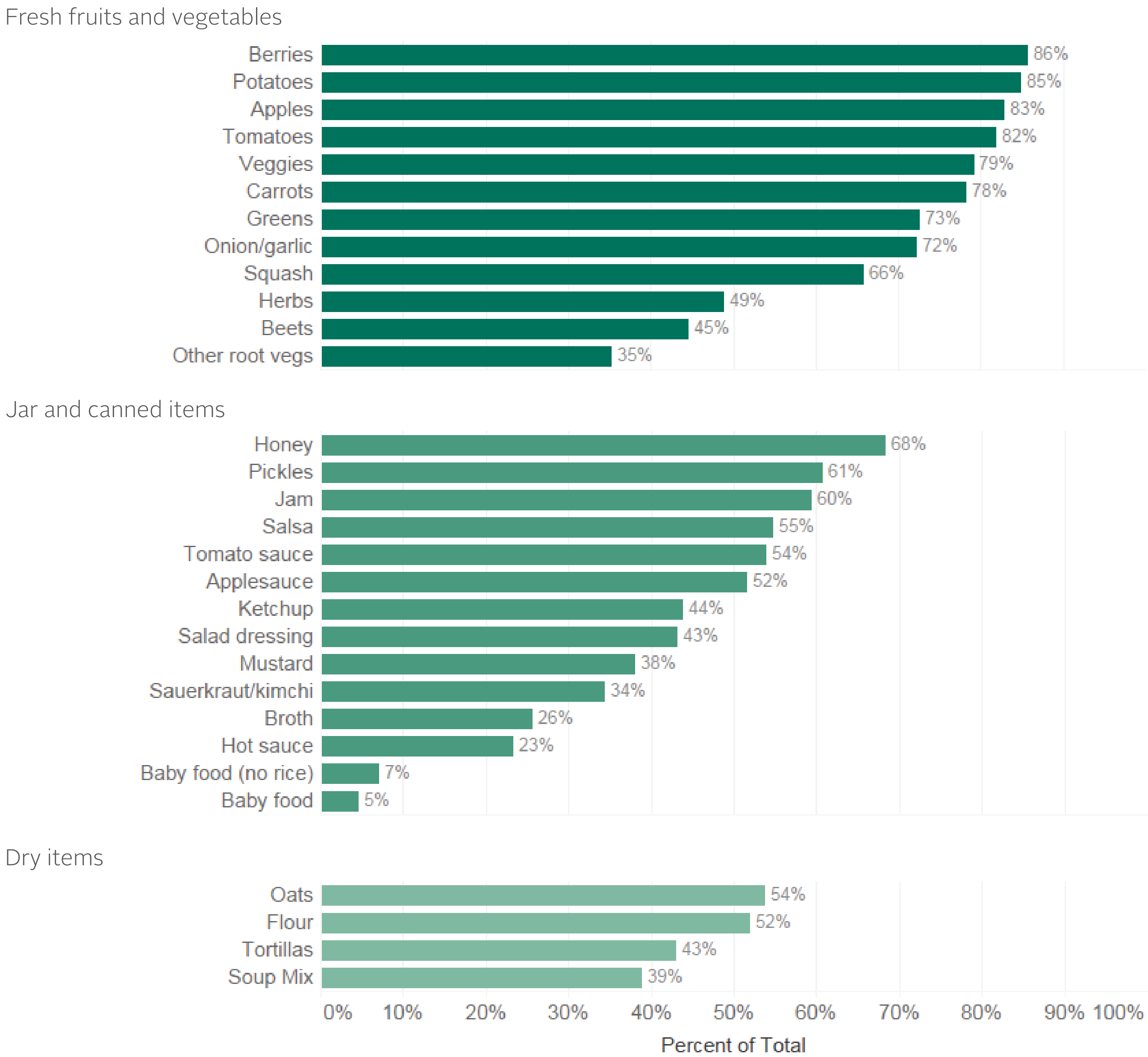
Demand for local food items

Sixty-four percent of households indicate that a barrier to purchasing more local food is that some of the things they eat are not produced in Ashland or Bayfield Counties. Because farmers in the region can grow and produce a number of foods, we asked survey respondents to choose from a list of food items to indicate which they would buy if those items were produced locally, sold where they usually shop, at the prices they are willing to pay. If the item is already produced locally, the participant was asked to select foods they would like farmers to produce more of.

In Figure 9 it is evident that there is significant demand for new items and for items that are already produced locally to be made more widely available. Some of the top items include berries (86 percent), potatoes (85 percent), apples (83 percent), and tomatoes (82 percent). The top five canned and jarred items are honey, pickles, jam, salsa, and tomato sauce. A majority of households are interested in buying oats and flour. There is also high demand for several meat and dairy products, such as eggs, chicken, cheese, beef, and milk, and for frozen items, such as veggies, fruit, pre-prepared meals, and pizza.

Figure 9. Household demand for local food items where they shop at willingness to pay prices




Fresh fruits and vegetables
Berries 86%
Potatoes 85%
Apples 83%
Tomatoes 82%
Veggies 79%
Carrots 78%
Greens 73%
Onion/garlic 72%
Squash 66%
Herbs 49%
Beets 45%
Other root vegs 35%
Jar and canned items
Honey 68%
Pickles 61%
Jam 60%
Salsa 55%
Tomato sauce 54%
Applesauce 52%
Ketchup 44%
Salad dressing 43%
Mustard 38%
Sauerkraut/kimchi 34%
Broth 26%
Hot sauce 23%
Baby food (no rice) 7%
Baby food 5%
Dry items
Oats 54%
Flour 52%
Tortillas 43%
Soup Mix 39%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percent of Total

Farmers' markets

Farmers' markets are one way for producers to sell directly to consumers. We first asked households how often they go to farmers' markets in the communities of Ashland, Bayfield, Washburn, and Iron River when those markets are in season. Very few households attend on a regular basis (less than 4 percent), and less than half attend the Ashland market 'sometimes' or 'regularly' (Figure 10). Several respondents also indicated on their surveys that they attend the Cable farmers' market.

Because the Ashland market is the largest in the region, we inquired about what types of changes might incline households toward more frequent attendance. Twenty-eight percent of households who never attend the Ashland farmers' market would be 'likely' or 'very likely' to go more often if it is bigger with more farmers, and 27.7 percent are more likely to attend if they know what is being sold (Table 3). Similarly, 59.3 percent and 58.2 percent of households who go only sometimes, are more likely to shop at the market with these changes, respectively.

Over 30 percent of households who go to the market sometimes would go more often if there was an artist or flea market or if the farmers' market was in a different location, such as a community center or park.

A shuttle that would transport people from their neighborhood or community would help almost 16 percent of households who go sometimes and 9 percent of those who never go, get to the market more often.

Figure 10. How often do you go to the following farmers' markets when they are in season?

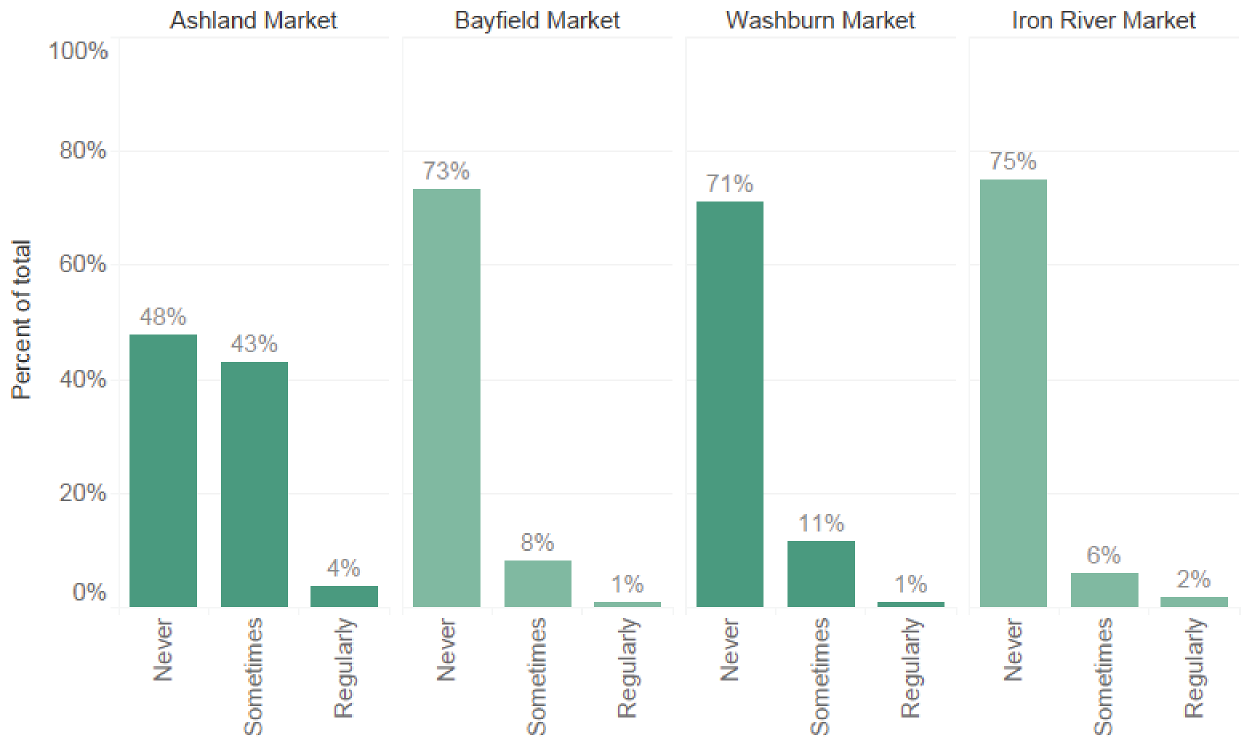


Table 3. How likely is it that you would go to the Ashland farmers' market more often if....

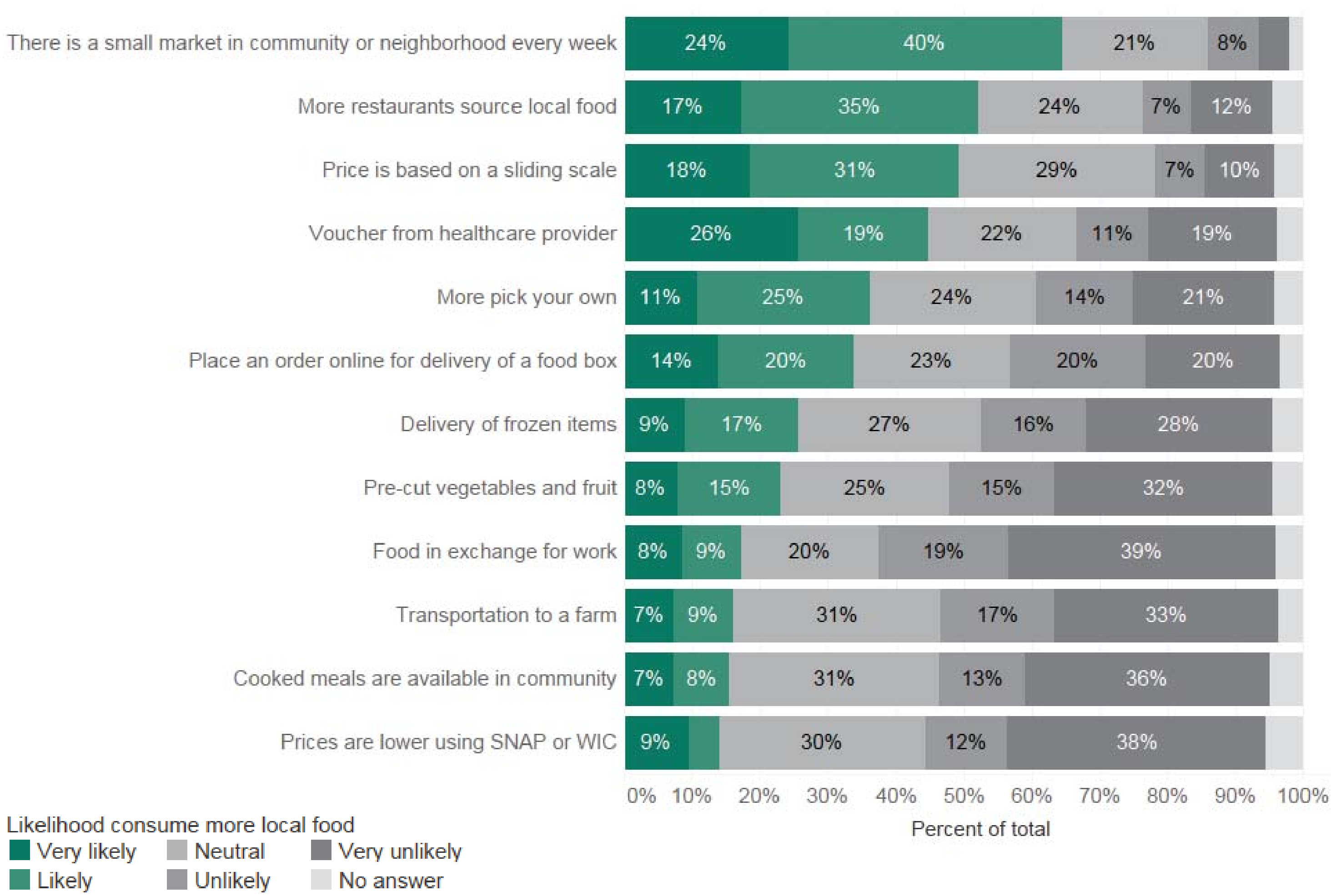
Go to Ashland farmers' market...	Percentage of households who attend 'regularly', 'sometimes', or 'never' who are 'likely' or 'very likely' to attend more often with changes				
	Bigger with more farmers	Know items being sold	Artist or flea market	At a community center or park	Shuttle from my community
Regularly (N=28)	71	62	33	43	24
Sometimes (N=327)	59	58	34	30	16
Never (362)	28	28	17	14	9

Program and market possibilities

Beyond purchasing food at farmers' markets and retail outlets, there are several ways in which households might go about finding and consuming more local food. We collected ideas for programs, distribution and transportation options, and food production possibilities based on prior and ongoing efforts within the region, and new ideas from programs in other places. A weekly small market within a community or neighborhood would make it 'likely' or 'very likely' for 64 percent of households to buy or eat more food produced nearby (Figure 11). Over half (52 percent) of households would like more restaurants to source local food. Almost half (49 percent) would be likely to buy more local food if price is based on a sliding scale.

Although not as popular across the entire population, programs that provide transportation to a farm, offer food in exchange for work, and make cooked meals available in one's community are supported by at least 15 percent of households, and might improve access for some households who are otherwise excluded from the local food market.

Figure 11. How likely is it that you would buy or eat more food produced nearby if...



Food Access

One of the main objectives of this project is to improve access to locally produced foods for lower-income households in a way that is economically viable for small farms. Given that our results show that 93 percent of households in our region believe that everyone in our community should have access to healthy food, we can use the following results related to food security, food distribution programs, and community support to think about how we might fulfill this shared value.

Cost

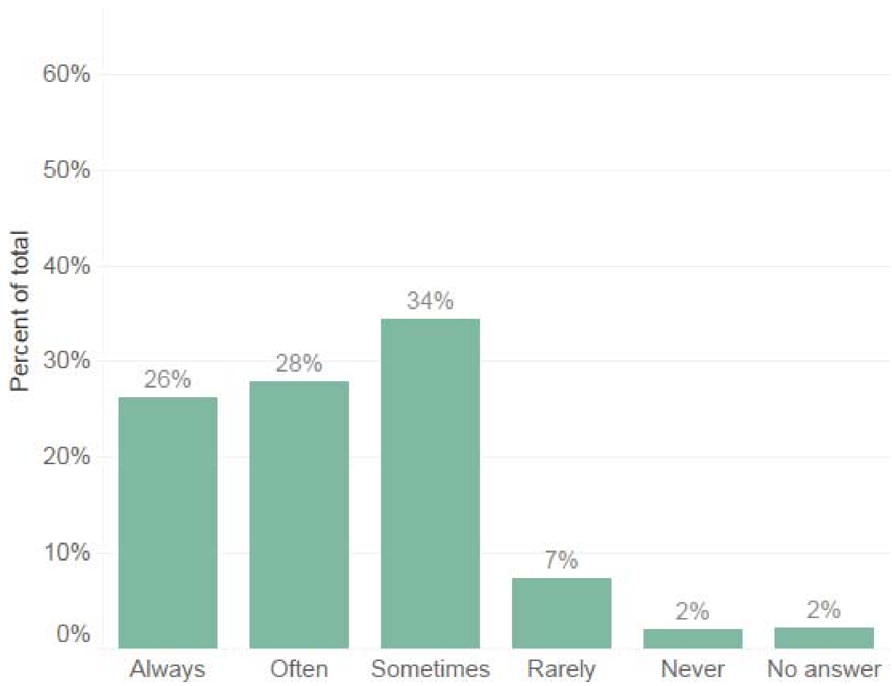
We asked respondents how often cost is the most important factor when deciding what food to buy. Over half (54 percent) report that cost is a priority 'always' or 'often' (Figure 12). The most frequently reported response is that cost is 'sometimes' a priority (34 percent). Very few households are in a position to not consider cost in their food purchasing decisions. These results align with the perception that local food is expensive and the typical household being willing to pay 'a little more' for local food items. Households value the attributes associated with local food production, but given income constraints, are unable to pay a large premium.

Food security

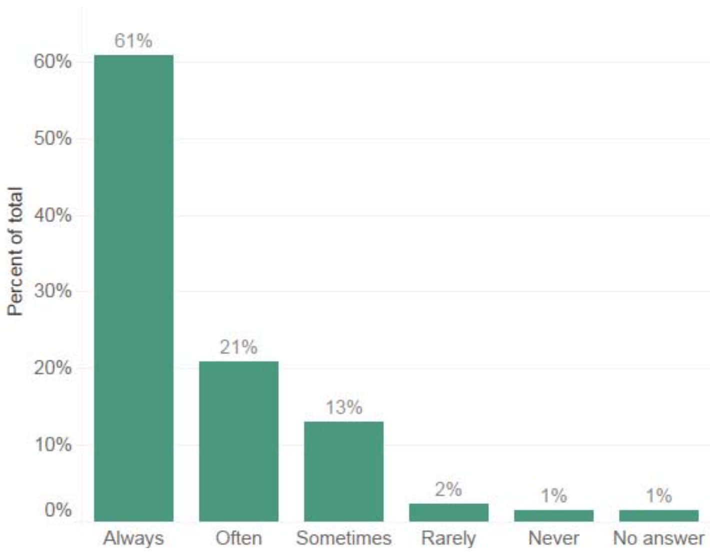
Some households in the region are experiencing food insecurity – we find that 25 percent of households in the region experience anxiety related to food 'always', 'often', or 'sometimes'. We also find that 16 percent of households have reliable, ongoing access to food only 'sometimes', 'rarely', or 'never'.

Figure 12. Cost considerations and food security

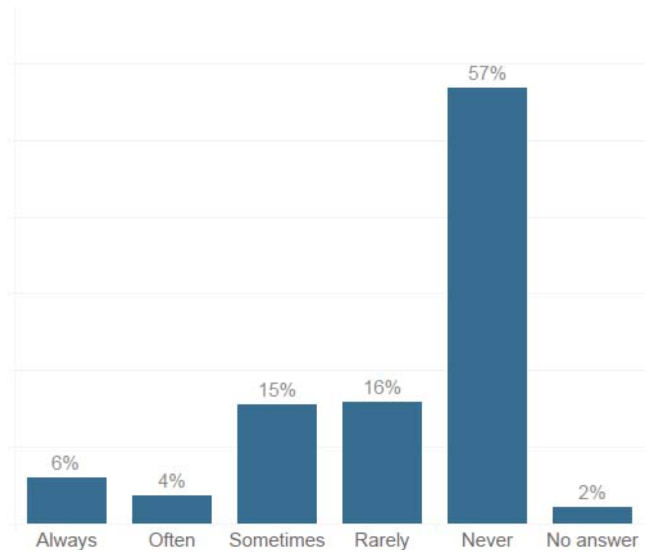
Cost is the most important factor when I am deciding what food to buy



I have reliable, ongoing access to food



I have anxiety about getting enough food



Food programs and community support

Food pantries and food distribution programs are important sources of food for many lower-income households, as are federal nutrition assistance programs that make food more affordable. Twenty-eight percent of households obtained food from a pantry, or food distribution or meal program in the last year. Of those who got food in this way (N=212), 73 percent used a food shelf or pantry, 52 percent used FoodShare, 19 percent used a Food Distribution Program on a reservation, and several others (14 percent) used community or senior meal sites (Figure 12).

The willingness of community members to give time or money to these types of programs is essential for their success. Furthermore, informal networks for sharing are an important source of food for many. In the last year, over 70 percent of households gave food to family members, friends, or neighbors (Figure 13). Forty-three percent gave food to a community program, 28 percent gave money to a community program, and 16 percent contributed time. An overall willingness to share, volunteer, and contribute financially is a tremendous community resource that can be leveraged to help improve access to healthy, local food for all households in our region.

To that end, we asked survey participants to indicate if they would be willing to contribute to programs or community funds that make local foods more accessible throughout the two counties. Close to half of households in the region (45-47 percent) are willing to give to such programs (Figure 14). These types of community-level redistribution efforts could help close the gap between what households are able to afford and the prices that farmers and producers need to charge in order to remain viable.

Figure 12. Food programs used in the past year (N=212)

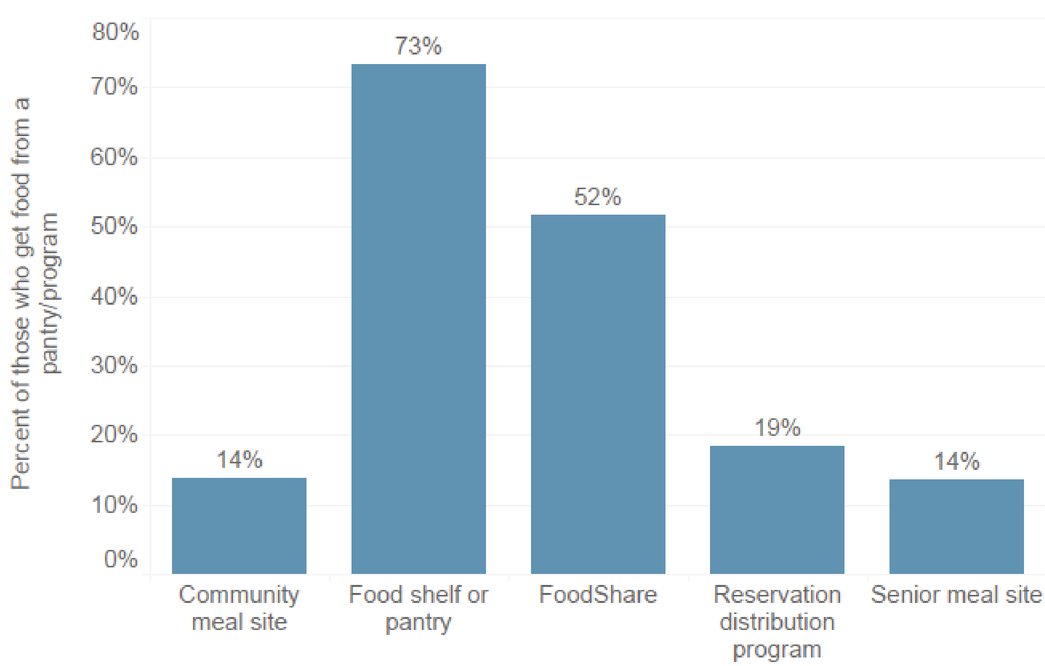


Figure 13. Giving to food programs and other community members over the past year

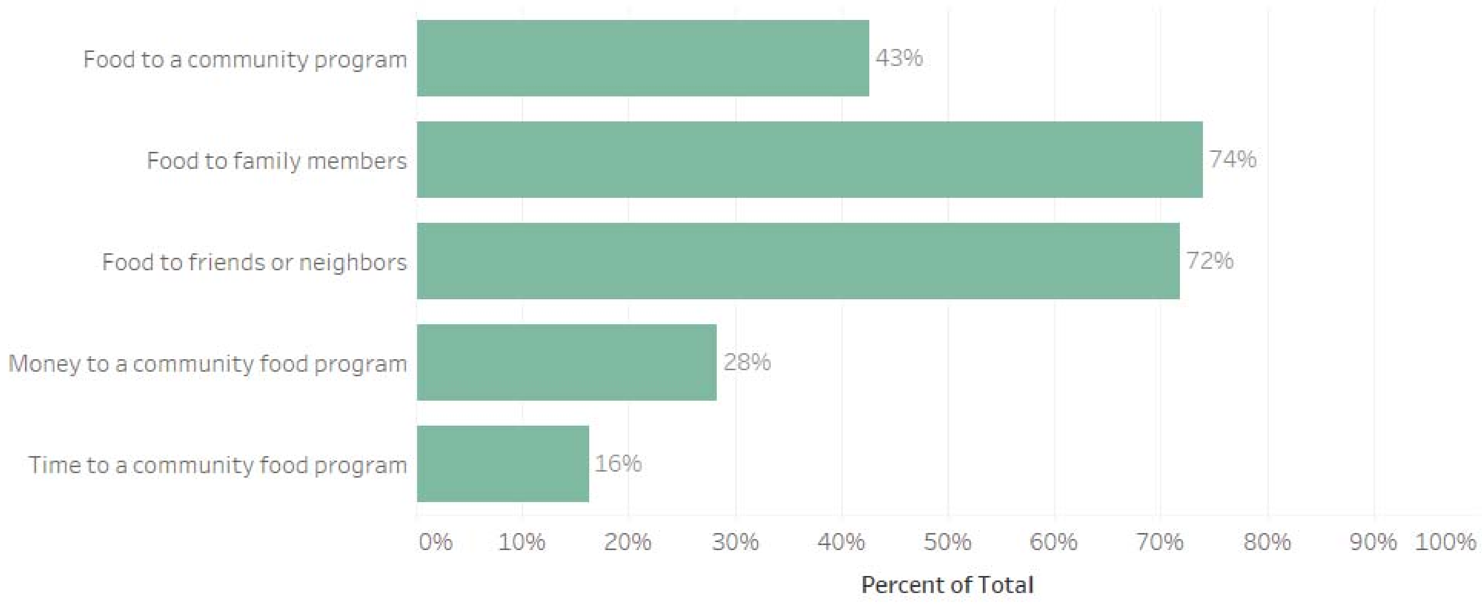
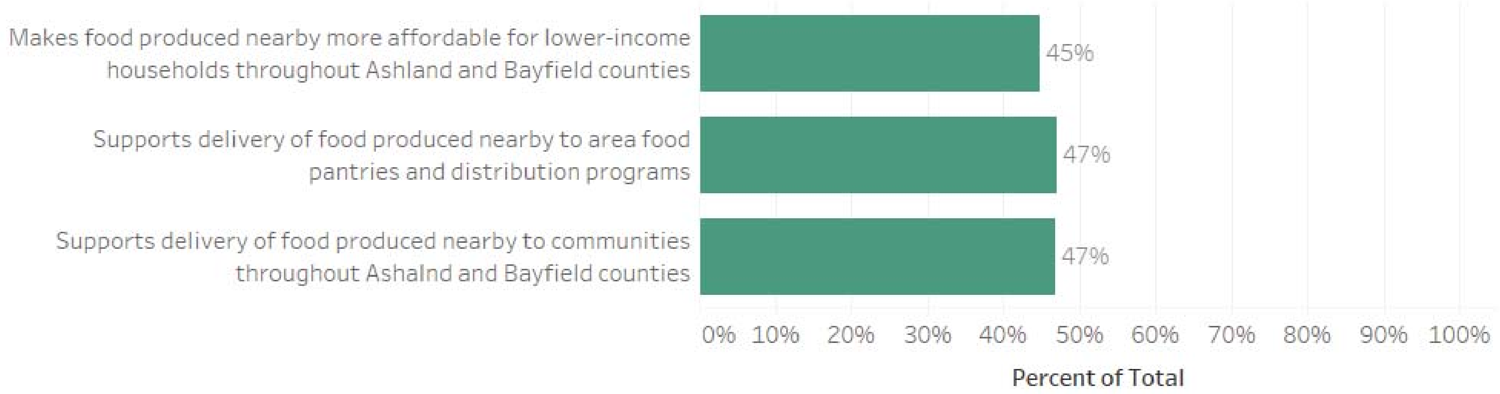


Figure 14. Willingness to contribute to a local food program that...



Early Recommendations

Some broad recommendations that follow from these early summary statistics are:

Information sharing

Key results of this study point toward broader sharing of information to help strengthen the local food economy. A significant barrier for households is that they do not know where to find local food. FEAST by the Bay currently serves as an informational hub for the local food system in the region – in the short term, the website could be more widely advertised across media outlets. Future efforts might work to expand the information available on the site or to build a more frequently updated platform that consumers could access on a weekly basis to find out where local food is being sold.

Additionally, many households are more likely to attend the Ashland farmers' market if they know what is being sold each week. Having this information would help many households coordinate trips into town and determine what foods would supplement those they are growing or raising themselves.

Community programs

Given the three key findings that 1) the vast majority of households value everyone in the community having access to healthy food, 2) local food prices are perceived as a barrier to consumption, and 3) almost half of the households in the region are willing to contribute to a program that supports local food access, a community-level redistribution program could cover the gap between the costs of production to local farmers and household willingness to pay. Further work will be done within the scope of this project to explore the possibility and viability of such a program.

Affordable local food

Along the same lines, throughout this research study, we will analyze price differentials between locally produced food items and similar items produced elsewhere. This information will help identify ways of mitigating price as a barrier to local food consumption. For example, if, in fact, some local items are not significantly more expensive than those produced elsewhere, communication and marketing strategies could work to dispel this belief. If local prices relative to income-levels are indeed a barrier, producer and community efforts might be focused according to the following, among others: 1) identify products for which the premium for local is small and make these products available where people shop, 2) leverage federal assistance programs to reduce prices for lower-income qualifying households, and 3) build community programs that offset the cost of production and local distribution, or that support a sliding-scale for consumers.

Retailers

The combined findings that 1) a majority of households shop at retail outlets, 2) the most significant barrier to buying more local food is that it is not available where households typically shop, and 3) a majority of households are not highly motivated by personal interactions with farmers, suggest that there is opportunity for local foods to be made more widely available through food retailers. Such opportunities will be explored in the later phases of this project following interviews with retailers, distributors, and producers.

Importance of water quality

Households across Ashland and Bayfield Counties value water quality in the Chequamegon Bay, and they also value our regional culture of small farms. It follows that local producers would do well to adhere to production and conservation practices that protect this resource, and in so doing, create an opportunity to build a marketing strategy that communicates their stewardship of land and water.

Community investment

Seasonal limitations are a significant challenge for farms in the region, yet recent programs and initiatives to build hoop houses to extend the growing season and the opening of the Hulings Rice Food Center at Northland College present opportunities for overcoming this barrier.

Additional investments in food infrastructure and entrepreneurial efforts will be required to offer local food year-round, meet consumer demand for new and value-added food items, and to make it possible for more restaurants to serve local foods.

Further analysis

We recognize that these early recommendations require further investigation, community organization, and financial resources. We hope that by making them, we spark ideas for new strategies, initiatives, and funding opportunities that might begin to address the most significant barriers to a strong local food economy in Ashland and Bayfield Counties.

This report serves as a brief summary of results that follow from the household survey conducted as the first phase of this four-year research project. The CRC will continue to analyze the household survey data to answer more in-depth research questions and to provide more detailed findings. Such findings will be reported as they are developed. Throughout this project we will continue to collect information systematically in order to help fill out a more complete and detailed picture of the barriers and opportunities that exist in our region. All results will inform future phases of the project and will be shared through the community workshop in the final phase.

Methodology in Detail

In August 2017, survey questionnaires were mailed to 2,000 households in Ashland and Bayfield Counties. The survey instrument was developed by research staff at the Center for Rural Communities using Alphabet Theory as a framework (Feldmann & Hamm, 2015). The theory helps to identify predictors and barriers to consumption of local food by taking into account how values, knowledge, and beliefs influence attitudes, and how contextual factors mediate food purchasing behavior and food access. For example, a household might hold values and beliefs aligned with a desire to purchase local food – such as valuing water quality and believing that small farms are better for the environment – but contextual factors – such as local food availability, transportation options, or income levels – limit their ability to do so.

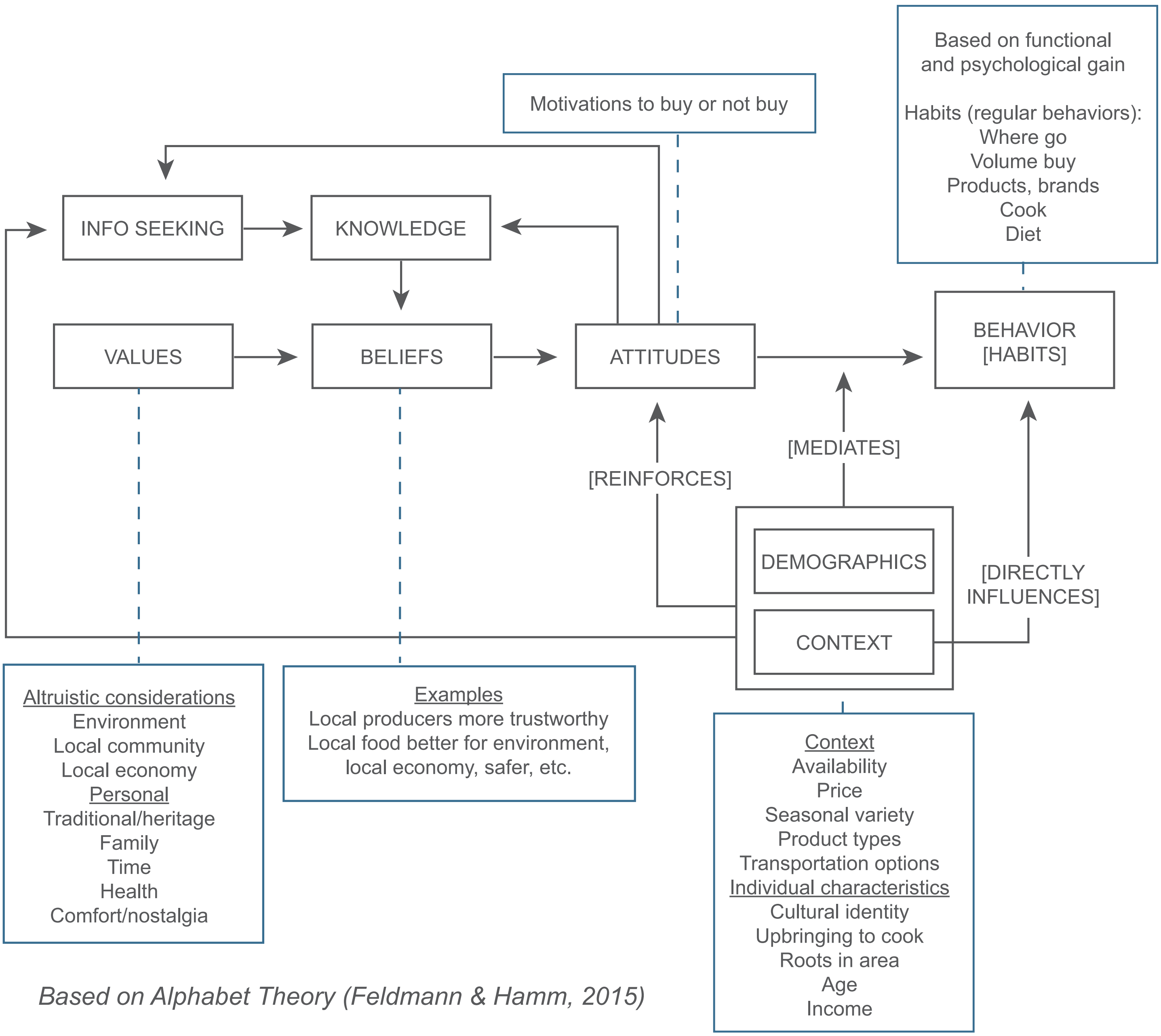
A list of 5,000 randomly selected addresses across the two counties was supplied by the private firm ListGiant. The list was stratified by median household income level in each county; 500 households below the median income level, 400 above, and 100 with no reported income were randomly selected in each county.

Instructions attached to the survey indicated that someone who makes decisions regarding food purchases should respond on behalf of his or her household. The Dillman method (2014) was used to improve the response rate. Respondents whose questionnaires were received before September 15, 2017 were entered into a drawing for one of five $100 Visa gift cards as remuneration for participation. We received 712 responses, resulting in a 39 percent response rate for the mail survey.

Additionally, to ensure a proportionate response from lower-income households, survey questionnaires were administered on-site at four The BRICK Ministries food shelf locations in Ashland, Cable, Cornucopia, and Mellen, and at the Bay Area WIC office in Ashland. A student research assistant was on location to assist participants. Sixty-nine questionnaires were completed on-site, for a total sample size of 781.

Because the demographics of the final sample did not align with census data in the categories of age, education level, and race, the sample was weighted by raking to correct for non-response bias in the reported results. Due to missing values or the value of the weight variable being zero or negative, the final effective sample size is 759. The reported results are representative of the combined population of Ashland and Bayfield Counties, with a 3.45 percentage point margin of error.

Figure 13. Theoretical framework for household local food demand



Based on Alphabet Theory (Feldmann & Hamm, 2015)

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