

CHAPTER 3. THE ECONOMIC RESEARCH

1. Meeting the Demand for Food through Local Production in Ada & Canyon Counties: Where Are We Today?
2. The Healthy Dozen Research

Meeting the Demand for Food through Local Production in Ada & Canyon Counties: Where Are We Today?

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Executive Summary

As the interest in locally produced food continues to grow in Idaho, some advocacy groups are seeking ways to increase the share of food demand supplied by local producers. For example, in 2010 the Treasure Valley Food Coalition, a local non-profit, launched “20x20,” a campaign to encourage 20 percent **local food** consumption by 2020. The analysis presented here is intended to provide a **benchmark** that would allow these groups to measure progress toward achieving this goal. We call this **benchmark** the “local share.” It is based on annual estimates of total **local food** purchased at farmers’ markets and grocery stores in Canyon and Ada Counties.

Our local share estimate should be considered very approximate. Because of limited funds, the analysis is based on a number of simplifying assumptions which are described in the report. While not precise in any sense of the word, it is at least a starting place for measuring changes in the food consumers buy and where they buy it. We believe the estimate may understate the actual figure, given that we only looked at the two market channels we considered to be the largest – farmers’ markets and grocery stores. Future efforts to improve the estimate should also consider Community Supported Agriculture organizations, restaurants, and other institutional food buyers.

With these caveats in mind, we estimate the local share in Canyon and Ada Counties to be about 2% - 1.8% sold through grocery stores and 0.2% through farmers’ markets.

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Meeting the Demand for Food through Local Production in Ada & Canyon Counties: Where Are We Today?

Background

This report describes an analysis of the local share of food consumed in Idaho's two largest counties, Ada and Canyon. Together these two counties make up 37% of Idaho's population. The report was funded by the Urban Land Institute's Idaho Chapter (ULI-Idaho), which commissioned the study as part of its "Sustainable Agriculture: Measuring Success" project. The University of Idaho's Office of Community Partnerships provided supervision and additional financial support.

Consumer interest in purchasing *local food* and buying directly from producers is growing in Idaho and across the nation as a whole. The most recently available data suggest that local marketing is still a small share of the total – the 2007 Ag Census estimated direct farmer to consumer sales in Idaho to be only \$7.8 million or 0.13% of total sales. Nevertheless, the growing number of shoppers at Boise's Capital City Public Market and proliferation of *CSA's* and community gardens clearly signal a change in consumer preferences in urban Idaho, at least on the margin.

Consumers as well as policy makers are interested in *local foods* for a variety of reasons. These include beliefs that fresher foods are more nutritious; low income households have less access to fresh, nutritious food than their middle and upper income counterparts; large scale farming operations have more environmental impacts than smaller producers; and local markets provide economic opportunities for small producers (Martinez, et al).

With increased consumer interest in *local foods*, advocacy organizations are seeking to increase the share of demand supplied by local producers. One challenge is the lack of data that would allow these groups to *benchmark* or measure progress towards achieving this goal.

The analysis presented here is intended to address that challenge by making preliminary estimates of the local share in Ada and Canyon Counties through farmers' markets and grocery stores, two of the largest *local food* marketing channels. We emphasize that our estimates are preliminary and based on a number of assumptions, which we describe later in the report.

Methods

The estimation of the local share was based on local food purchased at farmers' markets and grocery stores in Ada and Canyon Counties.

Rapid Market Assessments at Farmers' Markets

Working closely with ULI-Idaho and the Capital City Public Market, we conducted intercept surveys at seven farmers' markets in Ada and Canyon Counties to estimate total consumer expenditures on local food at farmers' markets. There are 12 farmers' markets in Canyon and Ada Counties (Idaho State Department of Agriculture), three of which are open during short periods of time (less than three months). The seven markets that were surveyed are anecdotally considered the largest and most permanent in the area. The locations and market information for each market surveyed are listed in the table below.

| Table 1. 2011 RMA Locations | | | | |
|------------------------------------|-----------------|---------------------------|-------------------|------------------------|
| Market Name | Location | Date of Assessment | Market Day | Market Hours |
| <i>Caldwell Farmers' Market</i> | Caldwell | July 20 | Wednesday | 5:00 – 8:00 p.m. |
| <i>Capital City Public Market</i> | Boise | July 9 | Saturday | 9:30 a.m. – 1:30 p.m. |
| <i>Eagle Saturday Market</i> | Eagle | July 16 | Saturday | 9:00 a.m. – 1:00 p.m. |
| <i>East End Market</i> | Boise | July 10 | Sunday | 10:00 a.m. – 2:00 p.m. |
| <i>Kuna Farmers' Market</i> | Kuna | July 16 | Saturday | 9:00 a.m. – 12:00 p.m. |
| <i>Meridian Urban Market</i> | Meridian | July 21 | Thursday | 5:00 – 9:00 p.m. |
| <i>Nampa Farmers' Market</i> | Nampa | July 9 | Saturday | 9:00 a.m. – 1:00 p.m. |

The surveys were conducted using volunteers identified by the Capital City Public Market and ULI-Idaho, and in coordination with individual market managers. They were performed in

accordance with Oregon State University's methods as described in "Tools for Rapid Market Assessments."

A rapid market assessment is a survey tool that was developed to easily capture the opinions and habits of market-goers, as well as provide an attendance estimate. When performed on a consistent basis, this method of surveying can provide useful information for planning and decision-making processes (Lev, Brewer, and Stephenson).

Volunteers counted attendees for 10 minutes each hour at every market entrance. Each count was multiplied by six to calculate an estimated attendance for the hour, and then the hourly attendance counts were added together to provide the estimated attendance for the day.

We also interviewed Karen Ellis, Executive Director of the Capital City Public Market, to find out how attendance at the market varies over the season. We then took the attendance ratio between each market and the Capital City Public Market on the day of the RMAs, and multiplied the yearly attendance estimates by the ratios. This gave us estimated attendance patterns for each of the markets surveyed (see **Appendix**).

Additional volunteers gathered information from market-goers in the form of dot surveys, which were located in areas of high traffic at each market. Each survey question was written on an individual poster board, along with the different responses that could be chosen. Market-goers responded to the survey by placing a sticker dot on their response to each question.

Three questions were asked at each of the seven markets:

- What is your primary reason for coming to the market today?
- How much have you/will you spend at the market today?
- When you're done shopping at the market today, how much of your total purchases will be food?

We used data from the second and third questions to estimate the retail dollar amount spent on food per capita.

We applied the average amount spent per capita on food to the weekly attendance estimates to calculate the amount spent annually on food at farmers' markets.

To find the portion of the local share that can be attributed to farmers' markets, we took the annual amount spent on food and divided it by 2010 total annual food expenditures (U.S. Census Bureau) for the 2010 population of Canyon and Ada Counties.

Grocery Manager Survey

To estimate consumer expenditures on local food at grocery stores we interviewed the produce, meat, and dairy managers at selected grocery stores. We identified the stores with help from Pete Pearson, Director of Sustainability at Supervalu, a retail grocery chain. Mr. Pearson is responsible for sustainable strategy and execution at Supervalu, and also serves on the board of the Idaho Center for Sustainable Agriculture.

A mix of specialty stores, and local and national grocery store chains were surveyed. The sample also included discount grocery stores. The grocery managers were asked to estimate their weekly orders of local products throughout three time periods: April – June, July – October, November – March. This allowed us to account for the seasonality of the local food supply.

Overall, managers of 18 stores were surveyed in Ada County and managers of six stores were surveyed in Canyon County. This was roughly in accordance with county population, as the population of Ada County is about 392,000 and the population of Canyon County is about 190,000 (“Indicators Northwest” Website). The survey was administered through in-person interviews at the grocery stores in August and September of 2011.

The figures given by the grocery store managers were then converted to retail figures by multiplying them by 26.6%, the 2010 national gross margin percent (“Retail Owners Institute”). The gross margin is the amount of sales revenue retained by a company after taking into account the costs associated with the product sold. We added together the purchases of all of the departments surveyed in each store to get a storewide estimate of local food sales. Then we multiplied the retail amount of food in each store by the number of grocery (non convenience stores) stores in the two counties.

The portion of the local share that can be attributed to grocery stores is the annual amount of local food purchased by grocery stores divided by the 2010 total annual food expenditures (U.S. Census Bureau) for the 2010 population of Canyon and Ada Counties.

Assumptions & Data Limitations

Assumptions underlying estimates presented here include the following:

- 1) Farmers’ markets and grocery stores are currently the largest channels for local food in Ada and Canyon Counties. Restaurants and **CSAs** are also channels for local food, but their volume is currently not as significant as farmers’ markets and grocery stores. Therefore, the analysis produced estimates of a significant portion of, but not the total, local share.
- 2) Of the total amount that any given shopper spends at the farmers’ markets, he/she spends the same proportion on food regardless of the time of year. For instance, when someone spends 60% of their money on food in July, they also spend 60% of their money on food in October and May. The amount they spend will vary, but not the share spent on food.
- 3) Seasonal attendance patters at all seven farmers’ markets are the same. We used seasonal data

from the Capital City Public Market for the other six markets. By doing so, we ignored the individuality of the farmers' markets we surveyed. This could have resulted in under or overestimating the annual attendance figure.

- 4) Seasonal variation in sales at all farmers' markets is the same as it is at the Capital City Public Market. This assumption ignores the possibility of farmers' markets having different seasonal variation in sales, which could have resulted in over or underestimation of annual sales.
- 5) Farmers' market shoppers who responded to the dot surveys are similar to all market shoppers in terms of total expenditures and expenditures on food products. Making this assumption means we ignored bias that may exist due to not surveying a representative sample of shoppers.
- 6) Produce, meat, and dairy departments currently stock the majority of local food products in grocery stores. Other departments stock very little local food. This assumption allowed us to narrow the scope of our survey to the three departments stocking the most fresh or minimally processed food.
- 7) The grocery stores we surveyed are representative of all grocery stores in Ada and Canyon Counties. Making this assumption means we ignored bias in the results due to not surveying a representative sample of stores.
- 8) Grocery store managers who responded to the survey are similar to all managers in terms of expenditures on local food products. Making this assumption means we ignored bias that may exist due to not surveying a representative sample of managers.

Findings

In total there were approximately 19,300 market attendees on the days of the RMAs, and about 2,400 of these individuals responded to the dot surveys.

Question: About how much have you or will you spend at the Market today?

Table 2. The majority of market-goers planned on spending \$11 – 20.

| Amount Spent | 2011 (percent) | Individual Market Ranges |
|--------------|-------------------|--------------------------|
| \$0 | 5 | 4 – 13 |
| \$1 – 10 | 28 | 22 – 53 |
| \$11 – 20 | 31 | 25 – 36 |
| \$21 – 30 | 19 | 10 – 23 |
| \$31 – 40 | 8 | 3 – 11 |
| \$41 – 50 | 4 | 0 – 7 |
| \$50+ | 4 | 0 – 6 |

Question: When you're done shopping at the Market today, how much of your total purchases will be food?

Table 3. Most people spend at least 50% of their market dollars on food.

| | 2011 (percent) | Individual Market Ranges |
|-----------|-------------------|--------------------------|
| 0 – 24% | 17 | 12 – 25 |
| 25 – 49% | 12 | 10 – 15 |
| 50 – 74% | 20 | 16 – 25 |
| 75 – 100% | 50 | 40 – 58 |

Using the mid-points of expenditure intervals we calculated a weighted average to estimate per capita spending on food at farmers' markets.

Per capita spending on food at farmers' markets = \$11.73

Assuming two adults per shopping group, we estimate the total amount spent on food for the day at the farmers' markets to be approximately \$113,000.

We were also able to estimate the amount spent on food each month and in total for the year at the farmers' markets surveyed, which can be found in Table 4.

Figure 1. Monthly Market Attendance

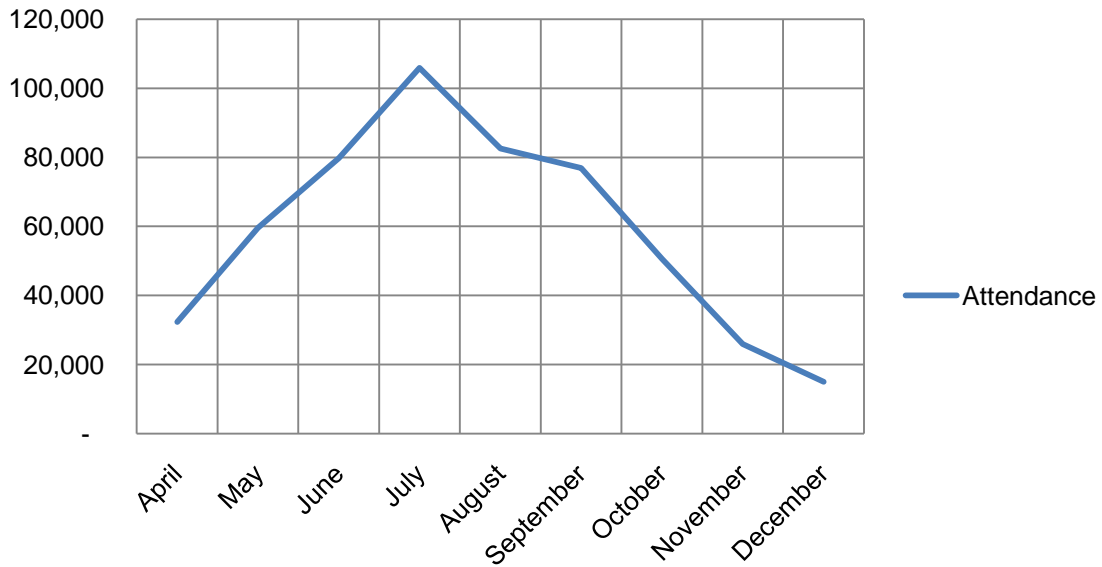


Table 4. Monthly food expenditures at surveyed farmers’ markets in the Treasure Valley

| Date of Market | Estimated Attendance | Total | Average per Capita Spending | Estimated Sales | Food |
|-----------------------------------|----------------------|-------|-----------------------------|--------------------|------|
| April | 32,320 | | \$11.73 | \$189,557 | |
| May | 59,568 | | | \$349,366 | |
| June | 79,744 | | | \$467,699 | |
| July | 105,911 | | | \$862,645 | |
| August | 82,592 | | | \$621,168 | |
| September | 76,896 | | | \$450,995 | |
| October | 50,550 | | | \$296,476 | |
| November | 26,000 | | | \$152,490 | |
| December | 15,000 | | | \$87,975 | |
| Annual Total Spent on Food | | | | \$3,478,371 | |

Using national per capita food expenditure estimates and the population of Ada and Canyon Counties we estimate annual food expenditures in Canyon and Ada Counties to be about \$2 billion. Per capita expenditures on food nationally are about \$3,500 (U.S. Census Bureau).

Therefore, the farmers’ markets’ portion of the local share is approximately 0.17%

The next step in the analysis is to calculate the local share of total food expenditures at grocery stores.

The produce, dairy, and meat managers at 24 grocery stores in Canyon and Ada Counties were surveyed about their local food purchases.

Figure 2. Weekly Purchases of Local Food by Grocery Stores

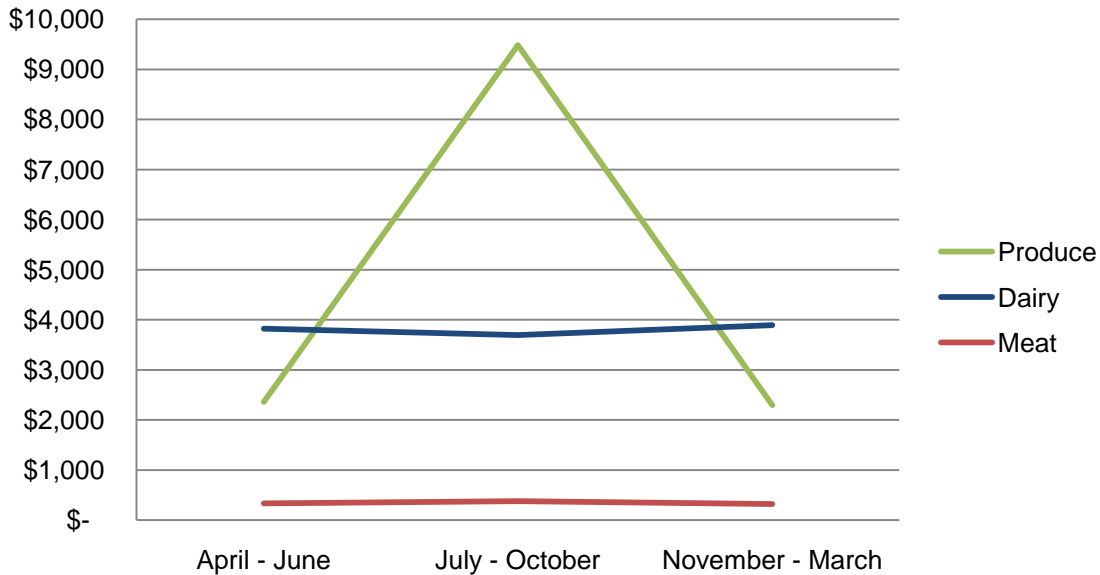


Table 5. Annual retail value of local food stocked per store in Ada and Canyon Counties.

| | Avg. Annual \$ (Wholesale) | Gross Margin Percent | Avg. Annual \$ (Retail) | Total Stores | Total Annual Avg. \$ (Retail) |
|--------------|----------------------------|----------------------|-------------------------|--------------|-------------------------------|
| Meat | 17,807 | 26.6% | 22,544 | 64 | 1,442,816 |
| Dairy | 197,479 | | 250,008 | | 16,000,512 |
| Produce | 245,178 | | 310,395 | | 19,865,280 |
| Total | 460,464 | | 582,947 | | \$37,308,608 |

Using national per capita food expenditure estimates and the population of Ada and Canyon Counties we estimate annual food expenditures in Canyon and Ada Counties to be about \$2 billion. Per capita expenditures on food nationally are about \$3,500 (U.S. Census Bureau).

Therefore, the grocery stores’ portion of the local share is approximately 1.8%.

We then added the farmers’ market and grocery store’s portions of the local share, and found the local share for Canyon and Ada Counties to be about 2%.

Discussion

The analysis described here is a first step in assessing the local share in Ada and Canyon Counties. A more complete study would consider Community Supported Agriculture organizations, restaurants, and other institutional food buyers in addition to farmers' markets and grocery stores. More accurate estimates could be developed if representative samples were collected and participants were chosen randomly.

Overall, this information is meant to be used as a **benchmark** to measure the change over time of consumers' local food purchasing habits. It is a preliminary estimate and based on a number of assumptions which have been described in the report.

References

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- "Personal Consumption Expenditures by Type of Product." *Bureau of Economic Analysis*. U.S. Department of Commerce, 30 Sep 2011. Web. 20 June 2011.
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- United States. Census Bureau. *2007 Economic Analysis: Sector 00: All Sectors: Geographic Area Series: Economy-Wide Key Statistics: 2007*. 2011. Web.

Appendix

| Table 1A. Estimated Farmers' Market Attendance by Market | | | | | | | | |
|--|----------|---------|--------|----------|------|----------|--------|---------------|
| Date of Market | Caldwell | CCPM | Eagle | East End | Kuna | Meridian | Nampa | Total |
| 16 – April | - | 10,000 | - | - | - | - | - | 10,000 |
| 23 – April | - | 10,000 | - | - | - | - | 1,160 | 11,160 |
| 30 – April | - | 10,000 | - | - | - | - | 1,160 | 11,160 |
| 7 – May | - | 10,000 | 830 | 590 | 290 | 1,130 | 1,160 | 14,000 |
| 14 – May | 240 | 10,000 | 830 | 590 | 290 | 1,130 | 1,160 | 14,240 |
| 21 – May | 240 | 10,000 | 830 | 590 | 290 | 1,130 | 1,160 | 14,240 |
| 28 – May | 288 | 12,000 | 996 | 708 | 348 | 1,356 | 1,392 | 17,088 |
| 4 – June | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 11 – June | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 18 – June | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 25 – June | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 2 – July | 432 | 18,000 | 1,494 | 1,062 | 522 | 2,034 | 2,088 | 25,632 |
| 9 – July | 325 | 13,548* | 1,124 | 794* | 393 | 1,531 | 1,572* | 19,287 |
| 16 – July | 336 | 14,000 | 1,130* | 826 | 396* | 1,582 | 1,624 | 19,894 |
| 23 – July | 321* | 15,000 | 1,245 | 885 | 435 | 1,536* | 1,740 | 21,162 |
| 30 – July | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 6 – Aug. | 360 | 15,000 | 1,245 | 885 | 435 | 1,695 | 1,740 | 21,360 |
| 13 – Aug. | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 20 – Aug. | 360 | 15,000 | 1,245 | 885 | 435 | 1,695 | 1,740 | 21,360 |
| 27 – Aug. | 336 | 14,000 | 1,162 | 826 | 406 | 1,582 | 1,624 | 19,936 |
| 3 – Sept. | 432 | 18,000 | 1,494 | 1,062 | 522 | 2,034 | 2,088 | 25,632 |
| 10 – Sept. | 288 | 12,000 | 996 | 708 | 348 | 1,356 | 1,392 | 17,088 |
| 17 – Sept. | 288 | 12,000 | 996 | 708 | 348 | 1,356 | 1,392 | 17,088 |
| 24 – Sept. | 288 | 12,000 | 996 | 708 | 348 | 1,356 | 1,392 | 17,088 |
| 1 – Oct. | 192 | 8,000 | 664 | - | - | - | 928 | 9,784 |
| 8 – Oct. | - | 9,000 | 747 | - | - | - | 1,044 | 10,791 |
| 15 – Oct. | - | 8,000 | 664 | - | - | - | 928 | 9,592 |
| 22 – Oct. | - | 9,000 | 747 | - | - | - | 1,044 | 10,791 |
| 29 – Oct. | - | 8,000 | 664 | - | - | - | 928 | 9,592 |
| 5 – Nov. | - | 4,000 | - | - | - | - | - | 4,000 |
| 12 – Nov. | - | 5,000 | - | - | - | - | - | 5,000 |
| 19 – Nov. | - | 8,000 | - | - | - | - | - | 8,000 |
| 26 – Nov. | - | 9,000 | - | - | - | - | - | 9,000 |
| 3 – Dec. | - | 5,000 | - | - | - | - | - | 5,000 |
| 10 – Dec. | - | 5,000 | - | - | - | - | - | 5,000 |
| 17 – Dec. | - | 5,000 | - | - | - | - | - | 5,000 |

* Represents actual RMA counts, not executive director estimates.

Rapid Market Assessment Questions and Responses

Question: What is your primary reason for coming to the Market today?

Table 2A. Most people attend farmers' markets for the Agricultural products.

| | 2011 Total | Individual | Market |
|------------------------------|-------------------|-------------------|---------------|
| | (percent) | Range | |
| Agricultural Products | 45 | 17 – 69 | |
| Atmosphere | 42 | 13 – 58 | |
| Prepared Foods | 9 | 6 – 13 | |
| Arts | 7 | 1 – 14 | |
| Music | 3 | 0 – 8 | |
| Children's Programs | 1 | 0 – 3 | |

Produce Manager Survey

- 1) Do you purchase produce that is grown in the Treasure Valley Foodshed (also called "hyper-local" in this survey)?

- Yes
 No (if no, skip to question 6)

- 2) Do you purchase hyper-local produce through distribution centers/distributors (i.e. Grasmick) or directly from farmers?

- Distribution Centers/Distributors only
 Farmers only
 Both Farmers and Distribution Centers/Distributors

- 3) How many hyper-local farmers does your store currently have direct selling/buying relationships with?

- 0
 1-4
 5-9
 10-14
 15+

4) Would you like to expand your store's direct relationships with hyper-local farmers?

Yes

No

5) How much money (estimated) does your store spend weekly on hyper-local produce during these periods (from both distribution centers/distributors and farmers directly)?

| April – June | July – October | November – March |
|--------------|----------------|------------------|
| \$ | \$ | \$ |

6) Would you like to buy more produce that is grown hyper-locally?

Yes

No

7) What produce would you like to purchase hyper-locally that you're not able to get?

8) Please rank your barriers to purchasing more hyper-local produce from most important (1) to least important (7).

High Prices

Food Safety Concerns

Insufficient Transportation & Refrigeration

Product Availability

Can't Fulfill Needed Volume

Corporate Requirements (i.e. establishing vendor ID numbers for farmers, etc.)

Other (please explain below):

Meat Manager Survey

1) Do you purchase meat that is raised in the Treasure Valley Foodshed (also called “hyper-local” in this survey)?

- Yes
 No (if no, skip to question 6)

2) Do you purchase hyper-local meats through distribution centers/distributors or directly from ranchers?

- Distribution Centers/Distributors Only
 Ranchers Only
 Both Ranchers and Distribution Centers/Distributors

3) How many ranchers does your store currently have direct selling/buying relationships with?

- 0
 1-4
 5-9
 10-14
 15+

4) Would you like to expand your store’s direct relationships with hyper-local ranchers?

- Yes
 No

5) How much money (estimated) does your store spend weekly on hyper-local meat during these periods (from both distribution centers/distributors and ranchers directly)?

| April – June | July – October | November – March |
|--------------|----------------|------------------|
| \$ | \$ | \$ |

6) Would you like to buy more meat that is produced hyper-locally?

- Yes
 No

- 7) What meat would you like to purchase hyper-locally that you're not able to get?
- 8) Please rank your barriers to purchasing more hyper-local meat from most important (1) to least important (7).

- High Prices
- Food Safety Concerns
- Insufficient Transportation & Refrigeration
- Product Availability
- Can't Fulfill Needed Volume
- Corporate Requirements (i.e. establishing vendor ID numbers for ranchers, etc.)
- Other (please explain below):

Dairy Manager Survey

- 1) Do you purchase dairy products that are produced in the Treasure Valley Foodshed (also called "hyper-local" in this survey)?

- Yes
- No (if no, skip to question 6)

- 2) Do you purchase hyper-local dairy products through distribution centers/distributors or directly from producers?

- Distribution Centers/Distributors Only
- Producers Only
- Both Producers and Distribution Centers/Distributors

- 3) How many dairy producers does your store currently have direct selling/buying relationships with?

- 0
- 1-4
- 5-9
- 10-14
- 15+

- 4) Would you like to expand your store's direct relationships with hyper-local dairy producers?

Yes

No

5) How much money (estimated) does your store spend weekly on hyper-local dairy products during these periods (from both distribution centers/distributors and producers directly)?

| April – June | July – October | November – March |
|--------------|----------------|------------------|
| \$ | \$ | \$ |

6) Would you like to buy more dairy products that are produced hyper-locally?

Yes

No

7) What dairy products would you like to purchase hyper-locally that you're not able to get?

8) Please rank your barriers to purchasing more hyper-local dairy products from most important (1) to least important (7).

High Prices

Food Safety Concerns

Insufficient Transportation & Refrigeration

Product Availability

Can't Fulfill Needed Volume

Corporate Requirements (i.e. establishing vendor ID numbers for producers, etc.)

Other (please explain below):

The Healthy Dozen

Definition: A group of 12 crop and livestock products that are produced, or have been produced historically, in the Treasure Valley Foodshed.

Methodology:

Factor 1: What is currently grown in the Treasure Valley Foodshed, or has been produced their historically?

Source: Ag Census 1940 & 2007

Each of the products that were ultimately selected have either been produced in the Treasure Valley Foodshed or are currently being produced there. To qualify as being produced/has been produced acreage for the crop must have been reported in the Ag Censuses.

Factor 2: Agronomic feasibility. Can it be grown here successfully, are there detrimental disease and pest factors that need to be considered?

Source: Dr. Steve Love, UI Aberdeen Research & Extension Center.

It was determined that none of the crops we selected faced significant barriers to being grown in the Treasure Valley Foodshed.

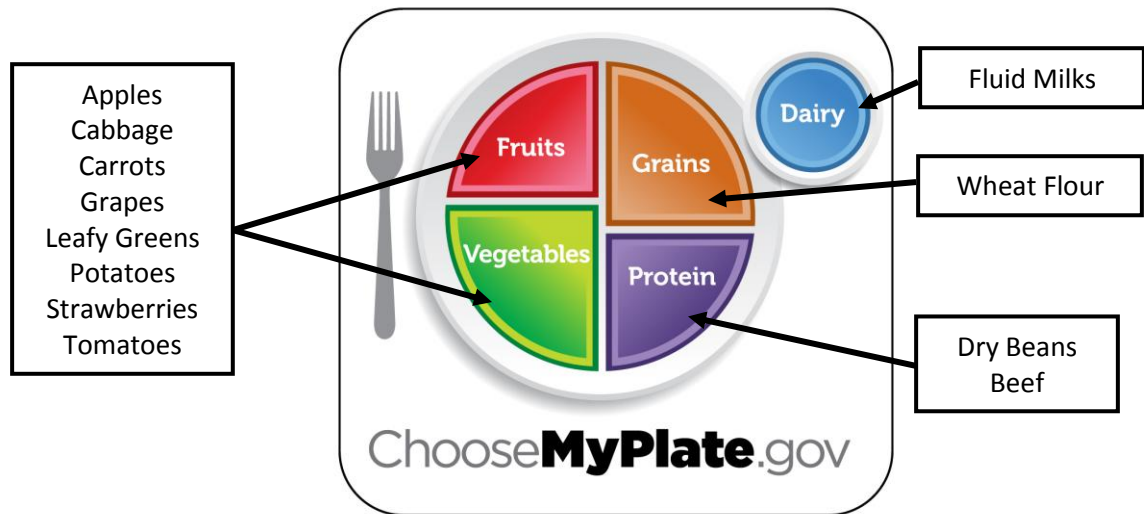
Factor 3: Does each product have the potential to be processed into a value-added product?
 Note – Although such processing infrastructure does not currently exist for many of these products, it is important to think of ways to diversify in the future.

Source: Brainstorming session with Janie Burns, Priscilla Salant, Erinn Cruz.

| | | | |
|-----------------------|---|---------------------|---|
| Apples | <ul style="list-style-type: none"> • Juice • Applesauce • Dried | Grapes | <ul style="list-style-type: none"> • Grape Juice • Wine • Raisins |
| Beef | <ul style="list-style-type: none"> • Products for Institutional Use | Leafy Greens | <ul style="list-style-type: none"> • Salad Mixes • Dehydrated |
| Beverage Milks | <ul style="list-style-type: none"> • Products for Institutional Use | Potatoes | <ul style="list-style-type: none"> • Chips • Fries • Flakes • Microwaveable Pouches |
| Cabbage | <ul style="list-style-type: none"> • Coleslaw • Sauerkraut • Salad Mixes | Strawberries | <ul style="list-style-type: none"> • Flash Frozen • Jams/Jellies • Dried • Syrup • Puree |

| | | | |
|------------------|---|--------------------|---|
| Carrots | <ul style="list-style-type: none"> • Flash Frozen • Juice • Puree | Tomatoes | <ul style="list-style-type: none"> • Sauce/Paste • Puree • Flash Frozen • Ketchup • Salsa • Juice |
| Dry Beans | <ul style="list-style-type: none"> • Canned • Soup Mixes • Refried Beans • Baked Beans • Chili | Wheat Flour | <ul style="list-style-type: none"> • Baked Goods • Baking Mixes |

Factor 4: Do these products provide a balanced mix on the USDA's new food plate, with an emphasis on fruits and vegetables?



Acreage Estimates

In order to estimate the amount of acreage needed to provide for 20% of Canyon and Ada Counties' food needs we followed these steps for each product:

- 1) Find the per capita consumption
 - a. Source: USDA, ERS, "Food Consumption, Prices, and Expenditures, Food Availability (Per Capita) Data System"
- 2) Find the 2010 population and projected 2020 population of the counties
 - a. Source 2010: USDA, ERS, "Food Consumption, Prices, and Expenditures, Food Availability (Per Capita) Data System"
 - b. Source 2020: US Census Bureau, 2010 Census Data; (population growth rate of 21.1% * 2010 Population) + 2010 Population
- 3) Find the estimated 2010 consumption of healthy dozen products
 - a. Source (calculation): Healthy Dozen Per Capita Consumption * 2010 County Population

- 4) Find the average yield per acre for each product. We used the Idaho yield wherever possible. When we couldn't use the Idaho yield we used the average U.S. yield.
 - a. Source: USDA, NASS
- 5) Find the required production of each product in acres or head to meet the 20% goal in 2010 and 2020.
 - a. Source (calculation): Desired year's estimated consumption (either 2010 or 2020) ÷ average yield
- 6) Convert the required head of cattle into acres required
 - a. Source (calculation): head of cattle required * desired AUM

| The Healthy Dozen, Per Capita Consumption | |
|--|-------------------------------|
| Food | 2009 Consumption (lbs) |
| Apples | 48.18 |
| Beverage Milks | 177.6 |
| Beef* | 60.8 |
| Cabbage | 8.9 |
| Carrots | 10.2 |
| Leafy Greens | 23.4 |
| Dry Beans | 6.1 |
| Grapes | 18.49 |
| Potatoes | 114.5 |
| Strawberries | 8.71 |
| Tomatoes | 88.7 |
| Wheat Flour | 134.6 |

Source: USDA, ERS, "Food Consumption, Prices, and Expenditures, Food Availability (Per Capita) Data System"
<http://www.ers.usda.gov/Data/FoodConsumption/FoodAvailSpreadsheets.htm#vegtot>

Ada and Canyon County Consumption of Health Dozen (in pounds of food)

| | 2010 | | | 2020 | | |
|----------------|------------|------------|--------------------|------------|------------|--------------------|
| | Ada | Canyon | Total | Ada | Canyon | Total |
| apples | 18,904,146 | 9,102,310 | 28,006,456 | 22,892,920 | 11,022,898 | 33,915,818 |
| beverage milks | 69,684,024 | 33,552,725 | 103,236,749 | 84,387,353 | 40,632,350 | 125,019,703 |
| beef* | 23,855,792 | 11,486,518 | 35,342,310 | 28,889,364 | 13,910,174 | 42,799,538 |
| cabbage | 3,492,049 | 1,681,415 | 5,173,463 | 4,228,871 | 2,036,193 | 6,265,064 |
| carrots | 4,002,123 | 1,927,015 | 5,929,138 | 4,846,571 | 2,333,615 | 7,180,186 |
| leafy greens | 9,181,341 | 4,420,798 | 13,602,139 | 11,118,604 | 5,353,587 | 16,472,191 |
| dry beans | 2,393,427 | 1,152,430 | 3,545,857 | 2,898,439 | 1,395,593 | 4,294,033 |
| grapes | 7,254,829 | 3,493,186 | 10,748,015 | 8,785,598 | 4,230,249 | 13,015,846 |
| potatoes | 44,925,793 | 21,631,684 | 66,557,476 | 54,405,135 | 26,195,969 | 80,601,103 |
| strawberries | 3,417,499 | 1,645,519 | 5,063,018 | 4,138,591 | 1,992,724 | 6,131,315 |
| tomatoes | 34,802,776 | 16,757,470 | 51,560,246 | 42,146,161 | 20,293,296 | 62,439,457 |
| wheat flour | 52,812,329 | 25,429,036 | 78,241,365 | 63,955,730 | 30,794,562 | 94,750,293 |

*Retail weight

Source: Healthy Dozen Per Capita Consumption * 2010 and 2020 County Population

20% Healthy Dozen Required Production for Ada & Canyon Counties – 2010 and 2020 (Acres/Head of Livestock)

| | 2010 | | | 2020 | | |
|----------------|-------|--------|--------------|-------|--------|---------------|
| | Ada | Canyon | Total | Ada | Canyon | Total |
| apples | 219 | 105 | 324 | 265 | 127 | 392 |
| beverage milks | 2,050 | 987 | 3,038 | 2,483 | 1,196 | 3,678 |
| beef* | 6,086 | 2,930 | 9,016 | 7,370 | 3,549 | 10,918 |
| cabbage | 20 | 10 | 30 | 25 | 12 | 36 |
| carrots | 19 | 9 | 28 | 23 | 11 | 33 |
| leafy greens | 91 | 44 | 135 | 111 | 53 | 164 |
| dry beans | 239 | 115 | 355 | 290 | 140 | 429 |
| grapes | 94 | 45 | 139 | 113 | 55 | 168 |
| potatoes | 217 | 104 | 321 | 262 | 126 | 388 |
| strawberries | 14 | 7 | 21 | 17 | 8 | 25 |
| tomatoes | 120 | 58 | 178 | 146 | 70 | 216 |
| wheat flour | 2,612 | 1,258 | 3,869 | 3,163 | 1,523 | 4,686 |

| Grazing Rate | 2010 | | 2010 | |
|--------------|------------------------------|--------------------|------------------------------|--------------------|
| | Beverage Milks (in acres) | Beef (in acres) | Beverage Milks (in acres) | Beef (in acres) |
| 1/3 AUM | 9,113 | 27,048 | 11,035 | 32,755 |
| 1 AUM | 3,038 | 9,016 | 3,678 | 10,918 |
| 3 AUM | 1,002 | 2,975 | 1,214 | 3,603 |

*Retail weight

Source: Healthy Dozen Per Capita Consumption * 2010 and 2020 County Population