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2014 Local Food Consumption in Vermont

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Research assistance from Justin Barton, former University of Vermont student

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The 2014 local food purchase study updates the 2010 local food purchase study using the same methods (Conner et al., 2013). At that time, the team had accounted for \$52 million of local sales, representing 2.5% of Vermont's food bill. In the rest of this working document, data sources and data analysis are described before the presentation of the results.

Data sources

We created a list of stakeholders likely to have data on local food sales including businesses, states agencies, institutions and non-profit organizations, using the list from the 2010 study and by adding stakeholders that were not contacted for the 2010 study. Sixty stakeholders were contacted between March and October 2015 and we received data from 26 of these stakeholders (Table 1).

Table 1. Type of stakeholders contacted and data received

Stakeholder types	Number contacted	Data received
Distributors	6	2
Food cooperatives	15	7
Food hubs	8	4
Food manufacturers	8	3
Food service providers	2	2
Institutions	10	4
Non-profit/facilitation organizations*	5	1
State agencies	3	2
Supermarkets	3	1

Notes. * this category includes organizations such as NOFA, Health Care without Harm, Vermont Grocers' Association, etc.

Stakeholders for which we did not receive data include seven coops/small stores, three higher education institutions, four beer and wine distributors, five food manufacturers, and two large supermarkets. Other stakeholders such as non-profit/facilitation organizations responded that they did not have data to share. Information on how we addressed the data gaps is available in the data analysis section.

Additionally, publicly available data were used. We used data from the 2012 Census of Agriculture to account for direct sales from farmers to consumers through CSAs, farmers' markets, or farm stand and data from the 2013 Economic Census Non-employer statistics to account for small scale food producers with no paid employees or payrolls as these very small businesses likely sell their product close to the point of production. The data from the Census of Agriculture and Economic Census were adjusted for inflation.

Data analysis

First, the data from all sources was reviewed to remove sale of products that did not meet the local food definition of Vermont+30 miles and to avoid double counting. Data were only removed when we had sufficient information to make the determination of geographic location. Duplicates were removed from distributors' number when it was clear that we had received data from buyers and sellers. In some cases, we received complete sales report with client names in other cases we received data from clients and where they made their purchases. In some cases, double counting was inferred but we did not have enough details to precisely tease out the double counting. In this situation, we made the decision not to include some of the data received. This was particularly the case for food producers who supplied their data as well as restaurants, distributors, and retailers.

When local food data were not directly available we made extrapolations to estimate local consumption, this is the case for sales from independent retailers, supermarkets, and alcohol namely beer, wine and cider.

To estimate the total local sales from independent retailers including food coops and small grocery stores, we used the results of the 2013 Independent retailers study (Desai, Roche, Kolodinsky, Harlow, & Nilan, 2013). According to this report, independent retailers accounted for about \$750 million in retail food and beverage sales and it was estimated that 5% of what they stock is local. To avoid double counting, we removed independent retailers' data obtained from other sources including food coops and distributors. It is however possible that there is overlap between the non-manufacturers data from the Census Bureau and sales to food coops and distributors as those were impossible to tease out but likely small due to the scale of operations included in the non-manufacturers statistics.

To estimate the total local sales from the three major supermarket chains in Vermont, we used data obtained from one of the major supermarket chain to make extrapolations. From the supermarket data received we removed non-food items and items that did not originate in Vermont, as well as sales from one food manufacturer from whom we had received data. To calculate the percent of local food sold by the supermarket chain that provided data we used the total local food sales reported by the supermarket chain, market share data and total sales for the retail sector from the Northeast Market Review (Imperial Distributors, 2010) which included data specific to Vermont. We were then able to

extrapolate local sales to the two other supermarket chains. Furthermore, local sales from the supermarket that provided the data were categorized by food types and we used this categorization of food types to extrapolate to the two other supermarket chains. Of note, the data from the supermarket chain did not include produce sales.

To estimate the total local alcohol sales, we used data from the Vermont Department of Taxes which included gallons sold for the different levels of tax rates based on alcohol amount for alcohol produced in Vermont. To get to the total amount of sales based on number of gallons sold, we collected price data at three locations (one supermarket, one liquor store, and one food coop) in the Burlington area in May 2015 for all local beer, wine, and cider. Of note, the data made available by the Vermont Department of Taxes did not include small breweries and wineries that use one of the large distributors for distribution and there are no estimates on that amount. We were also not able to obtain data on liquor.

Once the data were cleaned and duplicates were removed we categorized the data by food type including meat, eggs, vegetables, fruits, dairy, processed food and other types, baked goods, and beverages. We also categorized the data by seller type including hospitals, higher education, k-12 schools, state governments, food stores, restaurants, direct to consumers, and food hubs. The data for which information for the food type and/or buyer type was not available was categorized as 'not categorized'. The data from wholesalers were allocated to the buyer category as the information was available for all the wholesalers. Additionally, some food hubs provided information on buyer types (schools, restaurants, food stores, etc.) while others did not. We chose to report the sales from food hubs as its own category due to data limitation. Another reason for creating a food hub category is related to the fact that food hubs have grown in importance in Vermont in the past few years and isolating the food hub category should allow to track changes over time.

To calculate the percent of local food consumed in the state we needed an estimate of the total food expenditures. We used food expenditures at-home and away-from home data from the Economic Research Service at the United States Department of Agriculture (United States Department of Agriculture, 2014) and per capita disposable income (United States Department of Commerce, 2015). We calculated that in 2014 \$4,195 was spent on food per capita representing \$2.7 billion spent on food.

2014 Local food consumption

In 2014, we accounted for \$189 million of local food sales which represented 6.9% of the food bill. The 2014 local food sales for Vermont are available in table 2 by food type and in table 3 by buyer type.

Table 2. Local food sales in 2014 in Vermont by food type

Food type	2014 Total (US\$)	Percent
Not categorized	56,845,961	30.1
Other (processed, sweeteners, grains, etc.)	39,170,117	20.7
Beverages (includes alcoholic and non-alcoholic)	31,702,672	16.8
Dairy	28,351,673	15.0
Baked goods	14,382,399	7.6
Meat	7,983,333	4.2
Vegetables	5,518,801	2.9
Eggs	4,016,394	2.1
Fruits	994,679	0.5
Total	188,966,028	100.0

Table 3. Local food sales in 2014 by buyer type

Buyer type	2014 Total in US\$	Percent
Coop and grocers	95,139,658	50.3
Direct to consumer	45,837,771	24.3
Not categorized	22,070,770	11.7
Chefs/restaurants	18,196,867	9.6
Higher education	3,930,762	2.1
Hospitals	1,657,904	0.9
Food hubs	1,241,173	0.7
Farm to school	744,103	0.4
State government	147,020	0.1
Total	188,966,028	100

In comparison, in 2010 we accounted for \$52 million dollar in local sale (or \$56 million when adjusted for inflation for comparison purposes). However, it is important to note that more data was collected this time and that extrapolations were made for missing data such as sales from supermarkets, independent retailers, and alcohol (which was not done last time). When comparing data that was collected both for 2010 and 2014 we find that an increase of \$33 million or an increase by 59% (figure 1).

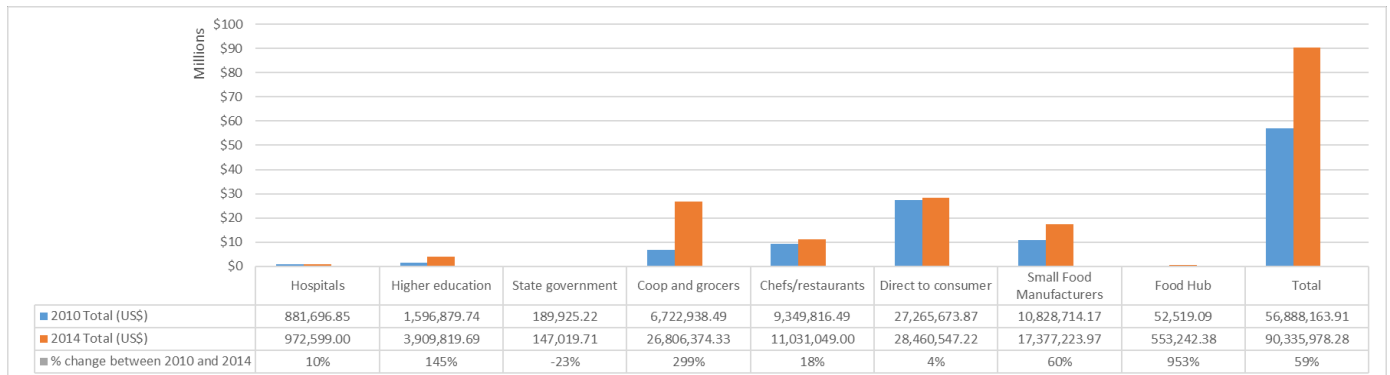


Fig 1. Changes in local purchasing between 2010 and 2014

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