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2012 Economic Impacts of Iowa's Regional Food Systems Working Group

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2012 Economic Impacts of Iowa's Regional Food Systems Working Group

Abstract
This report summarizes the statewide impact of the local food industry on Iowa's economy in connection with efforts of the Regional Food Systems Working Group (RFSWG). The report measured four indicators of economic change: local food sales by farmers, local food purchases by grocery stores, restaurants and institutions, job creation and funds leveraged to support development of regional food systems.

Disciplines
Agriculture
2012 Economic Impacts of Iowa’s Regional Food Systems Working Group

Corry Bregendahl and Arlene Enderton

October 2013

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This document was prepared by the Leopold Center for Sustainable Agriculture: Corry Bregendahl, Associate Scientist; Arlene Enderton, Program Assistant. Production, design and communications support: Geetha Iyer, Communications Research Assistant; Laura Miller, Communications Specialist.
Acknowledgements

The authors would like to express sincere appreciation to the regional food group coordinators who fully engaged in this work in many ways (see list, contact information, page 19). Not only did they recruit farmers and buyers of local foods to participate, but some of the coordinators also served on the RFSWG steering committee to advise on the process and help develop the survey tools.

In particular we would like to thank Teresa Wiemerslage, with the Northeast Iowa Food and Farm (NIFF) Coalition, the Northeast Iowa Food and Fitness Initiative (FFI) and Iowa State University Extension and Outreach (ISUEO), for her advisory role. We borrowed heavily from surveys she developed for the NIFF Coalition and the FFI as well as work Kamyar Enshayan has done in Black Hawk County and surrounding counties tracking restaurant purchases of local foods. Coordinators also reviewed the first draft of this report and provided feedback in response to preliminary results we presented at a quarterly RFSWG meeting. We are honored and privileged to serve this group of Iowa regional food system champions and look forward to another round of collaboration next year.

We also want to take this opportunity to thank Jessica Burtt Fogarty, RFSWG Coordinator, for her unflagging support, coordination, supply of requested information and review of the first draft. The authors want to express gratitude to the Leopold Center’s Communications Specialist Laura Miller and graduate student Geetha Iyer for their steadfast and on-point design and communications assistance. The Leopold Center’s Mary Adams expertly edited the copy and Craig Chase (Leopold Center and ISUEO) challenged us to think like economists (no easy task) and encouraged us to continually improve our reports. Laura Kleiman helped prepare the data collection guide that launched us on our journey into the unknown.

Finally, we would be remiss if we didn’t thank Rich Pirog for his past leadership of the RFSWG, as well as current and former directors of the Leopold Center for their support of RFSWG (Mark Rasmussen, Mark Honeyman, Lois Wright Morton and Jerry DeWitt). Past funders of RFSWG work also deserve the deepest gratitude. They include the W.K. Kellogg Foundation, the Wallace Center for Sustainable Agriculture, Iowa State University/ISUEO and the USDA’s Iowa Rural Development office.
INTRODUCTION

The purpose of this report is to communicate the statewide impact of the local food industry on Iowa’s economy in connection with efforts of the Regional Food Systems Working Group (RFSWG). Evaluation was conducted in 2013 in partnership with coordinators of the 15 regional food groups that comprise the statewide RFSWG group. Documented impacts are the result of collaboration between these coordinators and local food farmers and local food buyers. Evaluation focused on four indicators of economic change:

» Local food sales by farmers
» Local food purchases by grocery stores, restaurants, institutions and others
» Job creation as a result of local food production, processing or utilization
» Funds leveraged by RFSWG groups to support the development of regional food systems

WHY LOCAL, WHY NOW?

Local and regional food system work increasingly is moving to the mainstream. However, this does not mean that the work has become any easier. Five years ago, fervent interest in local food declined somewhat because environmental arguments for buying local were challenged on many different levels. Local food advocates then began discovering ways to appeal to consumers that had little to do with environmental impact and more to do with improving human health and reinvigorating local economies.

OBESITY

More than two in three (68.7 percent) American adults are either overweight (BMI of 25 kg/m² and higher) or obese (BMI of 30 kg/m² and higher). One in three or 31.8 percent of all children are obese or overweight. That’s 155 million adults and 23.9 million children who are classified as obese. Iowa has risen rapidly in the obesity ranks in the past two years, earning the dubious distinction as the 12th most obese state in 2012, compared to its ranking as the 20th most obese state in 2011.

THE RECESSION

The nation’s official poverty rate is 15 percent, which means that 46.5 million people are living in poverty. Almost three-quarters of Iowans are on the edge of poverty (earning less than twice the poverty wage), while 12 percent live in poverty. Although some states have fully recovered jobs lost during the recession, according to the State of Working Iowa (2013) using Bureau of Labor Statistics, Iowa continues to face a shortfall of jobs. Iowa is 36,000 jobs shy of its pre-recession peak, with an addition of 89,000 jobs needed to keep pace with population growth at pre-recession employment rates. More than a quarter of Iowans work for less than $10.73 per hour, and job growth is expected to occur primarily in lower wage occupations.

With the looming threat of reduced benefits for food assistance in the currently stalled 2013 Farm Bill and a government shutdown at the time of this writing, families find themselves facing deeper hardship than ever before. Lower-income families are increasingly reliant on food and/or nutrition from public sources, including food pantries, or free and reduced-price school lunch programs. As Americans grow poorer, they also get sicker. “There is no question that the rates of obesity and type 2 diabetes in the U.S. follow a socioeconomic gradient, such that the burden of disease falls disproportionately on people with limited resources, racial-ethnic minorities, and the poor.”

FACE OF A LOCAL FOOD CHAMPION: BARB GRIJALVA

When Barb Grijalva began selling vegetables from her garden at the farmers market 13 years ago, she could not have predicted what a productive livelihood it would become. People began requesting different produce, and to keep up with demand, she purchased and moved to a 10-acre farm. The family operation has since grown to 20 acres.

She is currently president of the Fairfield farmers market, and a member of Hometown Harvest of Southeast Iowa. She participates in Hometown Harvest’s sponsored events, and last year had a potato dig at her open house with almost a hundred visitors. She estimates that 80 percent of her guests would not have attended had Hometown Harvest not created a directory, fliers and the other advertisements. “They put our name out there,” she says.

LOCAL PARTNER:
Hometown Harvest of Southeast Iowa
The Cost of Obesity

In an economy rocked by recession precipitated by global economic decline beginning in late 2007, the sheer financial cost of obesity is staggering. In 2012, one study estimated that the direct cost of treating obesity and obesity-related conditions in 2005 was $190 billion in the United States. In a report issued by the Union of Concerned Scientists (UCS), if Americans consumed just one additional serving of fruits or vegetables a day, the nation would save $5 billion in health care expenditures and prevent 30,301 heart disease and stroke deaths annually. From 1998-2000, well before Iowa moved up in the obesity ranks, the state spent an estimated $783 million on adult obesity-attributable medical expenditures. Estimates for annual obesity-related health spending in Iowa for 2010 are $5.4 billion.

The Role of Agriculture

What does agriculture have to do with all of this? We can’t talk about health unless we talk about food. And we can’t talk about food unless we talk about agriculture. U.S. agricultural policy provides price supports primarily for five major commodity crops: corn, cotton, wheat, rice and soybeans. This effectively serves to increase supply, driving down the price of those products and byproducts, much of which is used as animal feed or transformed into processed food. This also puts farmers who grow non-commodity crops (and their consumer audience) at a relative disadvantage. Fruit and vegetable consumption is known to help control weight and prevent a myriad of life-threatening diseases. Yet, median daily intake rates of vegetables and fruits among U.S. adults are a paltry 1.1 and 1.6 times per day, respectively. Farm Bill legislation (and the push for subsidy reform) have been a topic of heated debate for years in terms of possible impacts on agriculture, the environment, and human health. Many observers wonder what would happen if policy incentives now used to support commodity crops could be used to support fruit and vegetable production that would increase supply and drop the price of foods that people need to stay healthy. However, this may not be necessary. Although (unsubsidized) locally produced and processed food is decried as much more expensive, consumer market research shows that local meat and produce is not more expensive than comparable non-local products.

We cannot and should not wait for the day when subsidies are used to encourage fruit and vegetable production. Instead, we can and should set priorities in the absence of policies. And our priority right now should be to explore the role local food systems can play in helping resolve the nation’s obesity epidemic and financial woes.

Grim health statistics, a 2013 Farm Bill mired in legislative politics, and a country still stagnating from five years of economic recession suggest the situation is dire. What aid can local agriculture offer? As this report shows, local food system development offers economic opportunity at the same time it presents one possible (albeit long-term) solution for the obesity epidemic. There are no quick fixes, and there is considerable effort ahead for local food system proponents.
**Local Food Markets in Iowa**

It is hard to know how much Iowans spend on food in total although a 2008 figure cites $8 billion per year with only 10 percent going to food produced in Iowa.\(^{15}\) This is a significant amount of money leaving the state to pay for imported food. In 2007, nearly 3,000 farms in Iowa sold products worth $16.5 million directly to consumers, up from 2,455 farmers selling $11.6 million in direct sales in 2002.\(^{16}\) The 2007 direct sales figure represents only .1 percent of all agricultural sales in the state,\(^{16}\) although we expect to see an uptick in 2012 Census of Agriculture results.

Iowa’s 229 farmers markets rank among the top ten states listed in the 2013 USDA National Farmer’s Market Directory\(^{17}\) yielding sales of $9.8 million during the 2004 market season.\(^{18}\) Farmers markets are a popular type of direct market hosting local food transactions. Community Supported Agriculture enterprises, or CSAs, also are direct markets, and Iowa had an estimated 50 CSAs in 2006.\(^{19}\) Yet farmers markets and CSAs represent only a small portion of markets buying local food. The 2011 Iowa Local Food and Farm Plan\(^{20}\) laid out a list of potential intermediated and institutional markets for local foods grown in Iowa, which we took the liberty of updating (Table 1). The total number of potential large-scale markets for buying local produce in Iowa (excluding CSAs and farmers markets) is estimated at 22,189.

The participation of large-scale businesses and institutions in the local foods movement is growing, but little data on this activity has been available until now (with the exception of Farm to School programs). Until the 2008 Agricultural Resource Management Survey (ARMS) was conducted on sales to food purveyors such as grocery stores and restaurants, we had little information for this segment of the local foods sector. These transactions are referred to as *intermediated* sales as opposed to direct sales to consumers, although intermediated sales do not include sales to institutions like hospitals and schools. Still, there is very little additional data to complement the ARMS study, and even the ARMS researchers failed to collect data on the value of sales linked to institutions.\(^{32}\) We fill this gap by presenting data on local food purchased by institutions and *intermediated* markets.

**Table 1: Potential institutional and intermediated markets for local foods in Iowa**

<table>
<thead>
<tr>
<th>Type of market</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery and food stores</td>
<td>914(^{21})</td>
</tr>
<tr>
<td>Convenience stores</td>
<td>1,881(^{21})</td>
</tr>
<tr>
<td>Meat and poultry sales</td>
<td>138(^{21})</td>
</tr>
<tr>
<td>Restaurants</td>
<td>&gt;6,000(^{22})</td>
</tr>
<tr>
<td>Natural food stores and coops</td>
<td>36 (2011)</td>
</tr>
<tr>
<td>State government buildings</td>
<td>39(^{23})</td>
</tr>
<tr>
<td>Museums</td>
<td>261(^{24})</td>
</tr>
<tr>
<td>Community hospitals (Iowa Hospital Association)</td>
<td>123(^{25})</td>
</tr>
<tr>
<td>Certified nursing homes</td>
<td>444(^{26})</td>
</tr>
<tr>
<td>Child care programs</td>
<td>9,963 (2012)(^{27})</td>
</tr>
<tr>
<td>Food pantries and meal sites</td>
<td>317 (2004)(^{28})</td>
</tr>
<tr>
<td>State prisons</td>
<td>9(^{29})</td>
</tr>
<tr>
<td>K-12 public school buildings</td>
<td>1,409 (2011-12)(^{30})</td>
</tr>
<tr>
<td>Post-secondary institutions (degree granting)</td>
<td>67 (2011-12)(^{31})</td>
</tr>
<tr>
<td>Caterers</td>
<td>588 (2011)</td>
</tr>
<tr>
<td><strong>Total potential markets</strong></td>
<td><strong>22,189</strong></td>
</tr>
</tbody>
</table>

Farmers markets and CSAs represent only a small portion of markets buying local food. The total number of large-scale markets for buying local produce in Iowa is estimated at 22,189.
The Regional Food Systems Working Group (RFSWG)

The RFSWG was established in 2003 to promote local and regional food system development. In 2006, RFSWG was restructured and shifted to engaging partners working in specific geographic areas. Since then, the RFSWG has served as a statewide umbrella network for all Iowans working to build a more resilient regional food system. RFSWG partners attend quarterly meetings to address challenges in local food system development; learn from each other and others; network; and share tools, information, and ideas.

Aside from its organizationally based partners, the RFSWG is comprised of a substructure organized into 15 regional food groups covering 90 of Iowa’s 99 counties (see Figure 1). Funding support for each group has come from the Leopold Center, as well as dollars leveraged by coordinators and partners. Each group works with different stakeholders—farmers, food-based businesses, non-profits, Extension, RC&Ds, educational institutions and government agencies—to support local food systems development in their region.

Today, the group is led by a Steering Committee. Work is coordinated by a RFSWG Coordinator, who convenes and facilitates the quarterly meetings and supervises group functioning. Funding for the RFSWG is provided by the Leopold Center through its competitive grants program and is scheduled to end in January 2014.

Methods

In compiling this information, we made an important distinction between research and evaluation. We set out to discover and document outcomes—or what changed—as a result of, or in association with, the decades-long work of the RFSWG. We therefore only contacted business owners and RFSWG partners connected to this work. This evaluation presents actual data collected from producers and purveyors of local food of whom coordinators had knowledge or with whom they had a relationship. These data are not statistical generalizations derived from study samples, nor are they figures generated from economic models based on a list of assumptions. As such, these data are limited to the social networks of the RFSWG coordinators, thereby representing only a small proportion of the actual local food sales, purchases and jobs created as a result of local foods commerce in Iowa.

After extensive consultation with regional food group coordinators and steering committee members, in 2013 we developed a data collection guide that identified the four indicators we agreed to measure and how to measure them. Despite the fact that we collected data on only four indicators, it still took five months to assemble because of the amount of coordination required to communicate with the 11 regional food group coordinators who were actively pursuing data with their local contacts.

We developed three surveys to gather data: a farmer survey, an institutional/intermediated market (IIM) survey and a survey for regional food group coordinators to report on financial leverage.
than three farmers or three IIMs, whereas some of the new groups struggled to get three of each.

Criteria for inclusion were that farmers and IIMs:

» Had to be associated with local food systems development in the region, and
» Were either producing or purchasing locally grown products, as defined by coordinators and the reporting farmers or IIMs

We could not emphasize enough the role of trusting relationships between regional food group coordinators and their partners in generating these data. Coordinators assured respondents their responses were confidential. Our role as evaluators was to facilitate this process in any way we could. The appropriate place for us to assist, having no ongoing relationship to potential respondents, was to offer reports of summary results at both the statewide and regional levels. In addition to receiving data collection support, a statewide report, and a customized report of region-specific results, each of the coordinators was compensated $400 for the time they spent collecting and submitting the requested information.

We encountered some challenges in the data collection process. Producers were asked for baseline data regarding all the jobs and people they employed to run their operation, so we could compare it to changes that might occur between this year’s data and next. Because of the detail involved in baseline reporting (among some other issues), we received completed jobs data from 47 of the 103 farmers. IIMs were only asked for information on new jobs since the size of their workforce could preclude respondents from answering questions on jobs, only a portion of which were related to local foods procurement.

Another challenge we encountered was turnover among coordinators, which is why we did not have full participation from all 15 regional food groups.

**IMPACT OF LOCAL FOOD ON FARMERS**

**ABOUT FARMER RESPONDENTS**

We received data from 103 farmers in 12 of the 15 RFSWG regions. Seven farmers (7 percent) were based in neighboring states such as Nebraska, Illinois, and Wisconsin, but sell to markets in Iowa, reflecting the need to keep a regional focus when defining local food (avoiding definitions that say Iowa-grown, for example).

The geographic radius where reporting farmers sell the majority of their food (n=73) ranged from 1-1000 miles, with an average sales distance of 76 miles from the farm and a median distance of 45 miles from the farm (where half of the farms reported selling to markets less than 45 miles from the farm and half reported selling to markets further than 45 miles from the farm). Two in three farmers sold the majority of their food 50 miles or less from their farm. Seventy-one percent sold their food within 100 miles of the farm, while 96 percent sold it within 200 miles of their farm.

**FARMER SALES**

Farmer sales were reported as total food sales sold directly to consumers; intermediaries such as grocery stores, regional distributors, restaurants, and other retailers; and institutions such as schools, hospitals and residential care facilities. Note the contrast to the 2007 Census of Agriculture data (which only included local food sales direct to individual consumers) and the 2008 ARMS data (which measured local food sales direct to individuals and intermediaries but not to institutions).
Figure 2. Total food sales (n=103), 2012

The 2012 farm sales for the 103 farmers totaled $10,549,296. We found some notable differences between data we collected from 2012 RFSWG farmers and farmer data collected for the 2008 ARMS and reported by previous studies. Table 2 shows that farmers contributing data to the RFSWG farmer survey reported average sales nearly double that reported by Low and Vogel ($102,420 versus $56,240). One might expect that one or a few numbers could skew this in a higher direction. However, when we used the same three income categories (sales less than $50,000, sales $50,000-$249,999, and sales $250,000 or more) as Low and Vogel, we observed a similar pattern (see Table 2). Although our averages were not doubled in all categories, all were higher than the average sales Low and Vogel reported for each category. Possible reasons for this difference:

1. The ARMS data surveyed a sample of all farmers. Our respondents were selected because they are incorporating local foods into their operations as a conscious business decision as opposed to pursuing it as a lifestyle choice. However, this does not adequately explain our higher means for medium and large farms.
2. If Low and Vogel had measured all sales as opposed to only direct sales to intermediated markets, their figures likely would be higher.

Figure 2 provides a more detailed breakdown of the RFSWG data by categorizing sales into six versus three categories. The results show that the vast majority of our farmer respondents (76 percent) are reporting local food sales less than $50,000.

The farmer sales data raises some important questions. What portion of the sales totals for Iowa might our figures represent? As noted previously, the 2007 Agricultural Census showed 3,000 farms reported $16.5 million in direct sales to consumers in Iowa. Our 103 farmers reported $10.5 million in total sales. Oddly, our survey reached 3 percent of Iowa’s direct sale farmers in the 2007 agricultural census, yet documented 64 percent of direct sales measured by the same census. Why this discrepancy? There could be a number of reasons; the most likely explanation is that the Census is failing to measure the value of local foods farmers are selling to IIMs by measuring only what they sell directly to consumers.

**On-Farm Job Creation Related to Local Food Sales**

Much immediate interest in the local and regional foods movement has focused on estimating jobs benefits. For example, using Otto and Varner’s 2005 economic modeling work in Iowa, the USDA claims that for every full-time job created related to local foods, another half-time job is created in other sectors of the Iowa economy (a multiplier of 1.45). Others have calculated that

<table>
<thead>
<tr>
<th>Table 2: Farm sales data from RFSWG survey farmer respondents (n=103)</th>
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<tbody>
<tr>
<td><strong>RFSWG farm sales data</strong></td>
</tr>
<tr>
<td>Number of farmer respondents providing farm sales data</td>
</tr>
<tr>
<td>Total 2012 local food sales</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Average per farm</td>
</tr>
<tr>
<td>Small farms (sales less than $50,000)</td>
</tr>
<tr>
<td>Medium farms (sales $50,000-$249,999)</td>
</tr>
<tr>
<td>Large farms (sales $250,000 or more)</td>
</tr>
</tbody>
</table>
operations engaged in local food sales have 1.3 jobs per operation and support 13 full-time equivalent (FTE) jobs (defined as 2000 hours worked in a year) per $1 million in sales. We wanted to see how our data measured up.

The RFSWG evaluation presents jobs data from 47 of the 103 farm operations (46 percent of farmer respondents) who participated in our farmer survey (Table 3). Data from our 47 farmers confirm the figure of just over 1 FTE job per operation. However, our data show local food farmers support 7.7 FTE jobs per $1 million in sales compared to 13 that were calculated in previous studies. This figure may have been different had we had complete jobs data from all 103 farmers.

We also calculated the average local food sales of farm operations creating at least one new job ($517,672) and the average local food sales of operations creating at least one new FTE job ($958,942). However, the latter figure is skewed based on farm operations that had created new jobs, but also had very high local food sales. In this case, it is more accurate to rely on the median local food sales ($45,000) of farms creating at least one new FTE job. In other words, half of farms creating at least one new FTE job sold less than $45,000 worth of local foods and half sold more than that. Thus, even small farms selling local foods are creating FTE jobs for Iowans.

Local food farming, at least in the Midwest, is associated with smaller farms that require less start-up capital including less land and equipment. This makes farming for local food production accessible to people with fewer financial resources. However, opportunities are not limited to small farmers. Large-scale, commodity farmers also are looking for opportunities in local food production, leading some to diversify their operations. The 2007 Census shows that 119 operations in Iowa with 1,000 acres or more sold nearly $1 million worth of products directly to individuals for human consumption.36

Table 3: Farm jobs data from RFSWG survey (n=47)

<table>
<thead>
<tr>
<th>RFSWG farm jobs data</th>
<th>Comparative studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of operations with jobs data</td>
<td>47</td>
</tr>
<tr>
<td>Average number of jobs per operation</td>
<td>6.4</td>
</tr>
<tr>
<td>Average number of FTE* jobs per operation</td>
<td>1.4</td>
</tr>
<tr>
<td>Total number of all jobs per $1 million in sales</td>
<td>31.7</td>
</tr>
<tr>
<td>Total number of FTE* jobs per $1 million in sales</td>
<td>7.7</td>
</tr>
<tr>
<td>Number of operations reporting the creation of at least one new job in 2012 as a result of local food sales</td>
<td>14</td>
</tr>
<tr>
<td>Total number of new jobs created (on 14 operations)</td>
<td>36</td>
</tr>
<tr>
<td>Number of new FTE jobs</td>
<td>10</td>
</tr>
<tr>
<td>Average local food sales of farm operations creating at least one new job</td>
<td>$517,672</td>
</tr>
<tr>
<td>Average local food sales of farm operations creating at least one new FTE* local food-related job</td>
<td>$958,943</td>
</tr>
<tr>
<td>Median local food sales of farm operations creating at least one new FTE* local food-related job</td>
<td>$45,000</td>
</tr>
</tbody>
</table>

*We defined FTE as both full-time and year-round jobs.
Impact of Local Foods on Buyers

Intermediated markets (grocery stores, other retailers and restaurants) and institutional markets (hospitals, schools, residential living facilities, etc.) are buying high volumes of Iowa's local food products. Institutions often are unrecognized customers for local foods, yet they reported purchasing 17.5 percent of the total IIM local food purchases we measured. With approximately 22,000 institutional and intermediated markets in Iowa, we only surveyed 0.3 percent of those markets for our evaluation. Institutions have tremendous potential for supporting local food development in Iowa.

About Institutional/Intermediated Market (IIM) Respondents

We received data from 74 IIM respondents in 12 regions. Our IIM respondents represent K-12 schools; residential living facilities including nursing homes, hospitals, summer camps and colleges; caterers; grocery stores; restaurants; and non-profit organizations. Ninety-seven percent of the 74 institutions reporting were based in Iowa; the remaining two were based in Illinois and Wisconsin.

Institutional Purchases of Local Foods

Table 4 shows that we were able to track nearly $9 million in IIM local food purchases. The average purchase was $120,731, although half of these markets bought less than $7,265 in local foods and half bought more (the median). In order to calculate the percent of the food budget spent on local foods, we also asked respondents to report the total food budget for the IIM they represented. Nearly half (47 percent) provided their total food budget. The average total food budget for 35 respondents was more than $2 million. Some IIMs were purchasing very little local food while others used up to 92 percent of their food budget to buy local food. The average percent of their total food budget used to purchase local food was 8.7 percent.

While the average percent of the total food budget spent on local food was nearly 9 percent, nearly half of those providing total food budget figures (35) reported they spent 0-5 percent of their food budget on local food (Figure 3). Eighteen percent spent at least 30 percent or more of their food budget on local food, which is a common target for those dedicated to buying local.

Figure 4 (see next page) shows the proportion of responses received from each type of institutional/intermediated market represented as well as the proportion of the total IIM local food purchases we measured. Grocery stores comprised 30 percent of responses, yet were responsible for 75 percent of reported purchases. Residential food service comprised 12 percent of responses and 17 percent of purchases. Interestingly, residential food service reported a larger quantity of food purchases than did restaurants, despite having fewer respondents than

<table>
<thead>
<tr>
<th>Table 4. Summary of purchasing data from institutional/intermediated markets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RFSWG IIM purchasing data</strong></td>
</tr>
<tr>
<td>Number of institutional/intermediated market respondents providing purchasing data</td>
</tr>
<tr>
<td>Total 2012 IIM local food purchases</td>
</tr>
<tr>
<td>Median purchase</td>
</tr>
<tr>
<td>Average purchase</td>
</tr>
<tr>
<td>Total food budget for IIM respondents (n=35)</td>
</tr>
<tr>
<td>Average total food budget</td>
</tr>
<tr>
<td>Median total food budget</td>
</tr>
<tr>
<td>Average percent of local foods purchased of total food budget</td>
</tr>
</tbody>
</table>
These catering staff members served food grown in the University of Northern Iowa student garden at the UNI Panther Plot Harvest Festival this September.

Restaurants, which constituted only 7 percent of reported purchases and 26 percent of responses. This indicates residential food service establishments, on average, may be spending more on local foods than restaurants. And while K-12 schools had a great showing in terms of survey participation, their sales only equaled 0.3 percent of the total reported, indicating that much work has yet to be done to help schools in Iowa purchase and serve local foods.

Institutional Job Creation Related to Local Food Purchases

Unlike the farmer survey where we asked for baseline jobs data from all respondents, we did not ask for the same baseline data from institutions since some might employ over a thousand people with hundreds of different job titles. However, we could ask IIM respondents about new job creation within their institution/business as a result of increased local foods purchasing. The results are summarized in Table 5.

Three of the 74 IIMs indicated at least one new job was created in 2012 as a result of local foods purchases, yielding a total of 17 new jobs. The vast majority of new jobs created (14, or 82 percent) were FTEs. IIMs that created at least one new job spent an average of $238,370 on local food purchases although the average local food purchases for IIMs creating at least one new FTE job was higher at $303,555.

Table 5. Intermediated/institutional jobs data from IIM survey

<table>
<thead>
<tr>
<th>IIM jobs data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of IIM respondents reporting the creation of at least one new job in 2012 as a result of local food purchases</td>
<td>3</td>
</tr>
<tr>
<td>Total number of new jobs created in these 3 institutional/intermediary markets</td>
<td>17</td>
</tr>
<tr>
<td>Number of new FTE* jobs</td>
<td>14</td>
</tr>
<tr>
<td>Average local food purchases of IIMs creating at least one new local food-related job</td>
<td>$238,370</td>
</tr>
<tr>
<td>Average local food purchases of IIMs creating at least one new FTE* local food-related job</td>
<td>$303,555</td>
</tr>
</tbody>
</table>

*We defined FTE as those that are both full-time and year-round.
Impact of Regional Food Groups on Regional Food Systems

The final economic indicator we measured was the amount of financial leverage regional food groups received to support their regional food systems work and partners. We asked RFSWG coordinators to report all funding from grants, budget allocations, fundraising, producer dues, etc. that was leveraged and used by their regional food systems during the 2012 calendar year (we added “used” because much funding was leveraged before 2012 but applied to work done in 2012; we also did not include in our analysis funding that was leveraged in 2012 but not used that same year).

Financial Leverage

Table 6 shows eight RFSWG coordinators reported a total leverage of $766,020. More than half the amount (55 percent) was leveraged from Iowa sources or at least sources whose awards were based on decisions made in Iowa. This includes federal pass-through money originating at the national level while the decision to award funding is made at the state. Eighteen percent of the total ($141,675) came from local sources in Iowa including county Extension Councils, donors, producers, patrons, community foundations, family foundations, etc. Forty-five percent ($341,933) of all leverage came from national sources such as government and non-profits including both private and philanthropic foundations. This is funding that made its way to Iowa that otherwise would never have been invested in the state.

Leveraged funds were used for a variety of purposes, including support for local foods coordinators, developing small business planning workshops, creating and enhancing local food markets, strategic planning, establishing school gardens, building greenhouses, improving food processing profitability, transitioning farmers to produce for wholesale markets, and more.

Further analysis of the leverage data is shown in Figure 5. Forty percent of funding came from nationally based foundations and non-profits. Seventeen percent came from USDA’s Iowa Rural Development office and 12 percent from ISU Extension and Outreach. The Leopold Center also has been a consistent food system funder, providing 10 percent of dollars reported by RFSWG coordinators.

Table 6. Funding leveraged and used in 2012

<table>
<thead>
<tr>
<th>Source</th>
<th>Leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total funds leveraged for use in 2012</td>
<td>$766,020</td>
</tr>
<tr>
<td>Number of regional food groups reporting financial leverage</td>
<td>8</td>
</tr>
<tr>
<td>Within Iowa source (including federal pass through funds such as RBEG funds and federal specialty crop block grants where the decision is made by Iowa agencies/entities)</td>
<td>$423,919 (55%)</td>
</tr>
<tr>
<td>State level source (IDALS, RD, Leopold Center, etc.)</td>
<td>$281,127 (37%)</td>
</tr>
<tr>
<td>Local level source of funding (county Extension, donors, producers, patrons, community foundations, etc.)</td>
<td>$141,675 (18%)</td>
</tr>
<tr>
<td>Non-Iowa source (where the decision for funding is made outside of Iowa)</td>
<td>$341,933 (45%)</td>
</tr>
</tbody>
</table>
**Financial Leverage and Economic Impact**

Job creation is vital for economic recovery given consistently bad news about job loss, the unemployed and the plight of the working poor. Industrial recruitment that focuses on persuading large companies and/or manufacturers from outside the state to locate here has been a popular way to create jobs in rural areas as opposed to targeting more local-based development. Iowa is no stranger to this approach, but it has yielded mixed results. Unfortunately, the process of industrial recruitment sometimes benefits the recruited company more than the community in which it locates. An increasing number of economists are pointing out that these hard-won new businesses may fall well short of supplying the promised number of jobs.

Meanwhile, communities may have offered an array of incentives to corporations, such as property tax and sales tax abatements, infrastructure upgrades, free land, tax credits, grants, and industrial revenue bonds. For example, six Wal-Mart stores have been subsidized by Iowa taxpayers using these incentives at a cost of nearly $17 million.\(^3^7\) Regardless of the total number of jobs provided, it has been documented that many big box retail jobs pay less than a livable wage (Wal-Mart pays on average 31 percent less than what all retail workers receive).\(^3^8\) As a result, Wal-Mart workers comprise a disproportionately large portion of workers receiving public assistance, such as food assistance, free- and reduced-price school lunches, Medicaid, and subsidized housing. In California, families of Wal-Mart employees use a) 40 percent more in taxpayer-funded health care than the average for families of all large retailers and b) 38 percent more in other non-health care public assistance compared to the average for families of all retail employees.\(^3^8\)

Similar studies have been conducted on another retailer, sporting goods chain Bass Pro. In Council Bluffs, Iowa, a Bass Pro store received $20 million in subsidies in 2004.\(^3^9\) Yet little is known about the number of jobs created, although Bass Pro promises to deliver 300 in most locations.\(^3^9\) In Council Bluffs, if this were true, the first set of public subsidies per job would have equaled $66,666. Since Bass Pro, like Wal-Mart, also is known as a low-wage employer, there are inevitable additional costs associated with their workers accessing public assistance. The California study referenced earlier estimates an average of $2,103 per year is spent on Wal-Mart employees through public assistance programs.\(^3^8\) Adding this amount to the public cost of a Bass Pro job in Council Bluffs, Iowa, brings the public cost to $68,796 per low-wage retail job in the first year. Attracting social networking giant, Facebook, to Altoona earlier this year shows that even landing high-wage jobs can be expensive. The Iowa Economic Development Authority board approved $18 million in tax benefits to create at least 31 new jobs paying $23.12 per hour. That’s a public cost of $580,645 per job. The city of Altoona also provided additional local incentives.\(^4^0\)

Studies like these prompted us to run our own calculations of public “cost per job” for those working in local/regional food systems. Because 44 percent of the funding for this work has come from non-profit foundations and not taxpayers (see Table 7), the remaining 56 percent was paid by taxpayers. The investment cost of creating one new job (calculated by comparing total leverage to the number of new jobs created) is a modest $14,453. The investment cost of creating one new FTE job in the local foods sector is $31,918. This means that the public subsidized each non-FTE local foods job in the amount of $8,094 while taxpayers subsidized one FTE local foods job in the amount of $17,874. Both figures are much lower than the estimated $68,769 in public funds used to subsidize non-FTE Bass Pro retail jobs in Council Bluffs and the $580,645 per job paid to bring Facebook to Iowa.

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**Face of a Local Food Champion: University of Northern Iowa**

University of Northern Iowa (UNI) has worked with the Northern Iowa Food & Farm Partnership (NIFFP) since it started as a Buy Fresh Buy Local group in 1997. Today UNI’s food service spends approximately 29 percent of its total food purchasing dollars on products from within 250 miles of the university, and more than $100,000 on food from the seven counties where NIFFP works.

Lisa Krausman, administrative dietician and purchasing manager for UNI’s Residence Administration, says using local food helps farmers in the community and also the university. And whether or not students, UNI’s primary audience, are aware that their food is local, Krausman hopes “they know it when they taste it and say, ‘Wow! This is a really good cucumber!’”

**Local Partner:**
Northern Iowa Food and Farm Partnership
CONCLUSIONS AND IMPLICATIONS

This evaluation is the first coordinated, comprehensive, statewide attempt to measure actual community impacts associated with regional food system development in Iowa. By tracking just four indicators of change, we are able to explore the relationships between farmer sales of local food, institutional and intermediated markets’ purchases of local foods, job creation, and investments in regional food system development. We relied on comparisons from previous studies and existing literature (when available) to put our findings into perspective. In the process we uncovered some disheartening statistics, but also saw reason for hope that local and regional food systems can help alleviate the multiple crises affecting us.

PUBLIC ATTENTION

Local food production as a way to address health and financial problems is attracting greater attention. The state as a whole is ramping up support for local food production and regional food systems development. Iowa has 57 organizations, 23 programs and 10 funders that support this work, along with 27 different initiatives, Centers, programs and facilities at Iowa State University, as well as 36 student courses at ISU that address this topic. Iowa Public Health is getting involved, and for the past two years, the Iowa legislature has funded the Local Food and Farm Initiative to strengthen local food commerce in Iowa. The Healthiest State Initiative is a public-private partnership with the goal to make Iowa the healthiest state in the nation in five years. According to Governor Terry Branstad, the creation of new jobs, reduction in government costs, and a stronger educational system are all critical components dependent on the health and well-being of Iowa’s people. All of these issues are connected to healthy food systems.

GREATER ACCESS

Much of the popular focus on local food commerce is limited to direct-to-consumer markets (such as farmers markets) or those who can afford to eat healthy food. These markets represent only a small portion of local food sales, potential markets, and a population that needs greater access to healthy food. There are more than 22,000 institutional and intermediated markets for local food in Iowa with the potential to generate billions of dollars each year for the citizens of Iowa.

JOBS

By connecting the jobs data with the financial leveraging ability of the regional food groups, we discovered that it cost the public $17,874 to support one new FTE job in the local foods sector. Past studies show that for one non-FTE retail job, it costs Iowa taxpayers an estimated $68,769 in the first year.

<table>
<thead>
<tr>
<th>Table 7. Financial leverage and public cost of new local food sector jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leverage</strong></td>
</tr>
<tr>
<td>Total funds leveraged for use in 2013</td>
</tr>
<tr>
<td>Number of jobs created (36 farmer, 17 IIM)</td>
</tr>
<tr>
<td>The investment cost of creating 1 new job (regardless of FTE)</td>
</tr>
<tr>
<td>Public cost of 1 new job (56%)</td>
</tr>
<tr>
<td>The investment cost of creating 1 new FTE job</td>
</tr>
<tr>
<td>Public cost of 1 new FTE job (56%)</td>
</tr>
</tbody>
</table>

We discovered that it cost the public $17,874 to support one new FTE job in the local foods sector.
**Potential Impact: Current Players**

If the average total percent of local food purchased from buyers’ total food budget increased from the actual 8.7 to 30 percent among only those buyers participating in this evaluation, these markets would have reported more than $21.5 million in local food purchases in 2012, potentially creating 93 new fulltime jobs (buyer-based and on the farm). Based on the leverage data collected from the regional food groups, public expenditures needed to support the creation of these jobs would equal $1.7 million.

**Potential Impact: New Players**

If all of the estimated 22,189 large-scale markets and institutions in Iowa spent the current buyer average ($120,731) on local food, that would translate into more than $2.7 billion, with the potential to create more than 11,688 FTE jobs. The public investment needed to help create these jobs in the local foods sector would be $208.9 million.

Iowa is inarguably an agricultural state with a deep and rich farming legacy buttressed by some of the most fertile soils on earth. There is so much to eat, yet paradoxically, Iowans are suffering higher rates of diet-related disease than ever before. Iowans also are recovering slowly from the economic recession. To counter this, we propose that an increasing proportion of food be grown in closer proximity to its consumers because of the attendant benefits it will bring to the economy. Re-localizing the food system in new and innovative ways can help create jobs lost during the recession, increase retention of local food dollars, create a stronger economy, and improve health outcomes. Making it possible for Iowa farmers to grow this food, coupled with providing the support needed to help those products make their way into the stomachs of every Iowan, has the potential to improve the health and economic well-being of Iowa’s citizens.

Healthy Harvest of North Iowa organized a sold-out, all-local dinner event with 12 producers and three participating restaurants. Historic Park Inn’s 1910 Grille in Mason City (pictured here) continues to feature local products on its menu.
FACE OF A LOCAL FOOD CHAMPION: NICK MCCANN

Nick McCann, business specialist for Iowa State University Extension and Outreach, assembles bags of food for a workplace food box program, a new type of community-supported agriculture (CSA) enterprise. McCann says, “What this is designed to do is to create a win-win. The customers end up with a weekly delivery [at their workplace] of local food at a reasonable price. The farmers have an additional market for their product at a fair price and don’t have to deal with the demands of marketing and logistics.”

As a food system value chain coordinator with a northeast Iowa regional food hub, McCann helps farmers develop new products, leads discussions and research on product collection and distribution, and identifies new partners and urban markets for these products in the Driftless Region. USDA Rural Development funds some of his technical assistance. He learned about similar programs in other parts of the country by taking part in a study hub facilitated by the Wallace Center at Winrock International and the W.K. Kellogg Foundation.

LOCAL PARTNER: Northeast Iowa Food & Farm Coalition

ENDNOTES

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Face of a Local Food Champion:

**Ed Kraklio**

Ed Kraklio, operator of Nostalgia Farm and Fresh Deli in Davenport, has a vision for the food system that is much bigger than just his farm and restaurant. He believes in partnerships, saying, “It’s a misconception that a lot of people have, that one farm can handle it all… you can’t.”

The restaurant opened as a direct result of participating in the Quad Cities Food Hub. Kraklio was on the Food Hub’s startup committee, and found through their searches that “there was […] a calling for a local foods restaurant.” Fresh Deli uses food from Nostalgia Farm, as well as other local producers. Smaller producers who are unable to supply to the restaurant regularly are featured in the retail area at the front of the store or during special events. “We promote their product,” he explains. “It’s all about working together as a community when it comes to farming.”

Local Partner:

**Quad Cities Food Hub**


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**Face of a Local Food Champion:**

**Pat Ennis**

Increased interest in raw, local honey has helped Spring Valley Honey Farms expand. The company primarily sells honey, but also bees, wax, other secondary hive products, and pollination services to fruit, vegetable and nut producers.

Pat Ennis, who runs the northern division of Spring Valley, says, “If you want something [raw and] local the best place to get it is at the farmers market or to know a beekeeper.”

Approximately 15 percent of Ennis’ sales are through farmers markets, 25 percent through the on-farm store, and 60 percent through wholesale. Spring Valley’s sales have increased because of the exposure the business gets through Healthy Harvest of North Iowa. “Through [Healthy Harvest’s] website and the newspaper and pamphlets available at farmers markets it lets people know we are there,” says Ennis.

**Local Partner:**

Healthy Harvest of North Iowa
Photo credits: Northeast Iowa Food and Fitness Initiative [schoolgirl (p. 1); ratatouille workshop (p. 1)], Jessica Rilling [E. Hill bread (p. 1); Zahradnik family apples (p. 4); J. Parisi pasta (p. 14)], Jan Swinton [B. Grijalva market (p. 3); Davis school beans (p. 9)], Suzanne Sontag [K. Enshayan workshop (p. 5); UNI catering (p. 11)], Alexi Groumoutis [D. Raasch and son (p. 7)], Jan Libbey [Healthy Harvest dinner (p. 15)], Rachel Wobeter [UNI kitchens (p. 13)], T. Wiemerslage [N. McCann food box (p. 16)], Ed Kraklio [E. Kraklio cherries (p. 17)], Peggy Ennis [P. Ennis bees (p. 18)].
Strength in sharing

Here are members of the Regional Food Systems Working Group from the August 2013 quarterly meeting. Active membership includes farmers, educators, lenders, business owners and local food practitioners throughout Iowa as well as coordinators of these regional food groups:

» Flavors of Northwest Iowa
» Northern Iowa Food and Farm Partnership
» Northeast Iowa Food & Farm Coalition
» Southern Iowa Regional Food Systems
» South Central Iowa Area Partnership
» Hometown Harvest of Southeast Iowa
» Dubuque Eats Well
» Field to Family Food Coalition
» Healthy Harvest of North Iowa
» Eat Greater Des Moines
» Quad Cities Food Hub
» Harvest from the Heart
» Food and Farm Initiative of the Heartland
» Greene County Local Foods Working Group
» Central Iowa RFSWG

Find contact information inside on page 19.

FIND THIS REPORT, a two-page summary and related information on the Leopold Center website: www.leopold.iastate.edu/local-food

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