Local Food System Evaluation

Final Report

Presented to Upper Saco Valley Land Trust
Compiled by Janet B. Wilkinson
March 2016
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Executive Summary

The first goal of this project was to research and evaluate local food and agriculture initiatives and resources. The second goal was to make recommendations for Upper Saco Valley Land Trust involvement to develop, improve and/or support the local food system.

The focus geographic area for this assessment was Carroll County, New Hampshire and Oxford County, Maine, and more specifically the towns served by the Upper Saco Valley Land Trust: Albany, Bartlett, Chatham, Conway, Eaton, Hart’s Location, Jackson and Madison, New Hampshire and Brownfield, Denmark and Fryeburg, Maine.

The food system research resulted in a database of 369 food system participants and 109 food system support organizations, all in a searchable database. Those in the eleven town USVLT service area were also programmed into an interactive google map.

A food system survey was conducted and had 68 respondents, mostly producers and consumers. They identified ‘community education and marketing’ as the greatest opportunity and ‘public policy issues’ as the greatest threat to the development of a thriving local food system. The most helpful resources for survey respondents were ‘Buy Local’ organizations, local farmers markets, financial services organizations, and education/technical support organizations.

Two community dialogue sessions were conducted, and shared themes including concerns about small farm viability, food affordability and lack of cooperation between parts of the local food system. They shared hopes for attaining a thriving, diversified local food system.

Agricultural census data reviewed for the local areas showed promising trends, such as increases in the number of farms and acres of farmland, increases in moderate-income farms, and increases in livestock and vegetable production.

Four stories of other relevant organizations were included to inform discussion. The organizations chosen were The Mad River Food Hub, Stone Barns Center for Food and Agriculture, Sustainable Iowa Land Trust, and Athens Land Trust.

Recommendations going forward include:

1) **Production and Harvesting: Promote Enterprise Viability.** Strengthen the efforts of an already formed collaborative of growers, in the form of funding or administrative support.

2) **Processing, Distribution and Marketing: Create A New ‘Middle’.** Centralize the processing, distribution and marketing of local goods to help close the gap and grow demand for local products.

3) **Consumption: Grow the Market Share.** Work with existing local resources to get more of the consumer base participating in the local food system.

4) **Nutrient and Waste Management: Food Waste Reduction.** This area is not only the weakest section of our local food system, but an area of weakness in our overall food system as well.

5) **System-Wide: Network Leadership.** Perhaps the largest void and greatest opportunity to create lasting change in this local food system is committing to convening and leading a local food system network.
USVLT's overall goal: Bringing real and positive change to our local agriculture system.

Goals of the project:
- Research and evaluate local food and agriculture initiatives and resources in Carroll County NH and Oxford County ME.
- Make recommendations for USVLT involvement to develop/improve/support the local food system of Carroll County NH and Oxford County ME.

Project Components:
1. Research local food and agriculture initiatives and resources in Carroll County NH and Oxford County ME. USVLT serves 10 towns in these two counties: Albany, Bartlett, Chatham, Conway, Eaton, Hart’s Location, Jackson, and Madison, New Hampshire and Brownfield, Denmark and Fryeburg, Maine. Deliverables include a comprehensive presentation of existing local food and agriculture initiatives, presented in both map and spreadsheet forms.
2. Evaluate the local food system including strengths, weaknesses, opportunities and threats. Deliverables include a survey of food system participants, two in-person community dialogue sessions, and a compilation of existing resources such as agricultural census data and summaries of past meetings.
3. Present 2-4 stories of local food and agriculture efforts outside of this geographic area to inform discussion.
4. Suggest a plan of involvement of USVLT including prioritized potential projects to join, new projects to initiate and resources to utilize. A minimum of 5 detailed recommendations will be made.
Overview of the geographic area

The focus geographic area for this assessment is the service towns of the Upper Saco Valley Land Trust (USVLT): Albany, Bartlett, Chatham, Conway, Eaton, Hart's Location, Jackson and Madison, New Hampshire and Brownfield, Denmark and Fryeburg, Maine. Much of the available data for these areas is at the County level, so some of the report analyzes all of Carroll County, New Hampshire and Oxford County Maine, where all of USVLT’s service towns are located.

Carroll County, NH was incorporated in 1840. It is the third largest county and the third least populous county in the state.1 Oxford County, ME was incorporated in 1805. It borders Quebec, Canada and is considered part of the Portland metropolitan area.2

An overview of agricultural information and statistics from the US Census of Agriculture for the focus geographic region is included in the ‘Other Collected Information’ section of this report.

County statistics via Wikipedia:

<table>
<thead>
<tr>
<th></th>
<th>Population, 2010</th>
<th>% population change since 2000</th>
<th>% of population below poverty line</th>
<th>Land area, square miles</th>
<th>Water area, square miles</th>
<th>Population density (people per sq. mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carroll County, NH</td>
<td>47,818</td>
<td>+9.5%</td>
<td>9.6%</td>
<td>931</td>
<td>61</td>
<td>51</td>
</tr>
<tr>
<td>Oxford County, ME</td>
<td>57,883</td>
<td>+5.63%</td>
<td>11.8%</td>
<td>2,078</td>
<td>97.26</td>
<td>26.3</td>
</tr>
</tbody>
</table>

1 http://bit.ly/1SdcqPv
2 http://bit.ly/1VvyPKE
**About Food Systems**

A food system includes all processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items.\(^3\) Inputs needed (resources, labor) and outputs generated (waste, bi-products) are also considered part of the food system. Food systems are influenced by social, political, economic and environmental factors.

*Local food systems* more directly connect the producer to the consumer by reducing the physical distance between where the product is grown, processed and marketed. Perceived benefits of robust local food systems include stronger connectedness, which can make the system more resilient and responsive and lead to greater community health. The reduced distance between parts of the system can create environmental benefits as well.

The capacity for local food systems to grow and succeed is impeded by the power of the industrial/conventional food system, which is reinforced by high profitability, strong political influence, and consumer interest in low cost and high convenience.

The diagram below, which was developed by the New Hampshire Food Alliance, has provided framework for what is included in the ‘food system’ and how it is organized for this project. Their framework breaks the local food system down into five segments: production and harvesting; processing; distribution and marketing; consumption; and nutrient and waste management.

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\(^3\) [https://en.wikipedia.org/wiki/Food_systems](https://en.wikipedia.org/wiki/Food_systems)
Food System Map and Database

The first objective of this project was to identify the individual enterprises that make up the local food system. Using the NH Food Alliance diagram (see above), a list of food system participants was compiled. It includes Carroll and Oxford County enterprises working in the areas of production and harvesting, processing and storage, distribution and marketing, consumption and nutrient and waste management. Some food system participants do multiple jobs in the food system.

369 food system participants were identified and input into an online database (url: http://bit.ly/1TOpT3z). 150 are from Oxford and 213 from Carroll County and 6 have locations in both counties. All of those located in the 10 service towns of USVLT were also input into a google map (url: http://bit.ly/1QS1EeW - Please note that only the primary food system service area was chosen for each map listing, while the database allows multiple food system segments to be chosen for each listing).

Database summary by food system segments:

- 125 Production/Harvesting, 24 of them in USVLT service area towns
- 69 Processing/Storage, 1 in USVLT service area towns
- 156 Distribution/Marketing, 12 in USVLT service area towns
- 190 Consumption, 116 in USVLT service area towns
- 44 Nutrient/Waste Management, 7 in USVLT service area towns.

Screen shot of the food system database:

<table>
<thead>
<tr>
<th>Name</th>
<th>Oxford</th>
<th>Carroll</th>
<th>Produ</th>
<th>Proc</th>
<th>Dist</th>
<th>Cons</th>
<th>Ware</th>
<th>Location</th>
<th>WebSite Notes</th>
<th>Conta</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1768 Country Inn</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N. Conway</td>
<td><a href="http://www.1768countryinn.com">http://www.1768countryinn.com</a></td>
<td></td>
<td>sumilabasu@yahoo 603-356-3636</td>
<td></td>
</tr>
<tr>
<td>302 West Smokehouse</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fryeburg</td>
<td><a href="http://www.302west.com/Smokehouse">http://www.302west.com/Smokehouse</a></td>
<td></td>
<td></td>
<td>207-635-3021</td>
</tr>
<tr>
<td>A Crosby Kennett Middle School</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Conway</td>
<td>jc_kn upgrade @aol.com 603-447-6364</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Wrinkle in Thyme Farm</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sumner</td>
<td><a href="http://sieg.eggs">http://sieg.eggs</a>, lamb, maple info@automaticity</td>
<td></td>
<td></td>
<td>(207)212-4058</td>
</tr>
<tr>
<td>Abbotts Family Farm</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sumner</td>
<td>Maple syrup: Steve Abbott, 603-388-2294</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admiral Peary Inn</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fryeburg</td>
<td><a href="http://www.admiralpearyy">http://www.admiralpearyy</a></td>
<td></td>
<td></td>
<td>(207)935-1299</td>
</tr>
<tr>
<td>Agape Homestead Farm</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ossipee</td>
<td><a href="http://lv">http://lv</a> Goat prod. Amy lampdairyprom</td>
<td></td>
<td></td>
<td>603-539-4456</td>
</tr>
<tr>
<td>Agape Ministries</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>West Ossipee</td>
<td>food pantry agapehomestead @</td>
<td></td>
<td></td>
<td>(603)639-4466</td>
</tr>
<tr>
<td>Agnes Grey School</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>W Paris</td>
<td>Diane d.todd@msa170</td>
<td></td>
<td></td>
<td>(207)674-2332</td>
</tr>
<tr>
<td>Almost There Restaurant</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N. Conway</td>
<td><a href="https://www.facebook.com">https://www.facebook.com</a></td>
<td></td>
<td></td>
<td>603-447-2325</td>
</tr>
<tr>
<td>Andover Elementary School</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Roxbury</td>
<td>Principal JSlayton@xerox</td>
<td></td>
<td></td>
<td>207-392-4381</td>
</tr>
<tr>
<td>Andover Food Pantry</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Andover</td>
<td>Food Pantry Andover Food Pantry</td>
<td></td>
<td></td>
<td>207-564-7968</td>
</tr>
<tr>
<td>Andover Maine Transfer station</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Andover</td>
<td><a href="http://www.andovermaine.org/depart">http://www.andovermaine.org/depart</a></td>
<td></td>
<td></td>
<td>(207) 392-3390</td>
</tr>
<tr>
<td>Apostolic Church of Rumford</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rumford</td>
<td>Food Pantry theacn@hotmail</td>
<td></td>
<td></td>
<td>(207) 364-7747</td>
</tr>
</tbody>
</table>
A database was also developed for food system support organizations [url: http://bit.ly/1TOpT3z]. It has 109 listings of organizations that support local food system development. 24 of them provide county level support, 53 provide statewide support, 23 provide region-wide (multiple states that include Maine and/or NH) support and 23 provide national or international support, with many providing local through national services from different offices.

66 of the listings provide services and support for production/harvesting, 27 for processing/storage, 45 for distribution and marketing, 46 for consumption and marketing and 23 for nutrient and waste management. 16 of the listings provide food system services in all 5 areas of the food system.

A screen shot of the food system support organizations database:
Food System Survey

The second phase of the project was to develop and administrate an online survey to evaluate the local food system. It was open from January 5-19, 2016 and there were 68 respondents.

Respondents were first asked to self identify which segment(s) of the food system they ‘reside’ in. 49% identified as part of ‘Production & Harvesting’, 21% as part of ‘Processing’, 41% as ‘Distribution & Marketing’, 38% as ‘Consumption’, 19% as ‘Nutrient & Waste Management’, and 25% as ‘Supporting Organizations’, with 12% ‘Other’.

Using the same diagram, we then asked respondents to rate the food system according to its strengths (strength meaning its influence on the local economy and community, and its capacity to show resilience in adversity). Respondents rated the ‘Production & Harvesting’ area as strongest, ‘Consumption’ as 2nd strongest, and ‘Nutrient & Waste Management’ as least strong.

We then asked respondents to identify opportunities available for strengthening the local food system and threats that will stand in the way of efforts to improve it. They were given some suggestions for answers, but the answer section was open ended, so they could choose a suggested option or identify their own answer.

The prompts given as potential opportunities were: Production inputs like animal feed, seed, amendments; Special resources/circumstances that exist here like soil, land, water, human labor, location; Public policy initiatives; Tools/applications such as software, databases; Improved networking among or between specialists in different parts of the local food system; Improved technical training of specialists in different parts of the local food system; Community education / marketing about the economic, community and ecological benefits of strong local food systems.
Summary of opportunities actually chosen by respondents: ‘Community education and marketing’ was most mentioned as the greatest opportunity for improving the system, with 35 respondents mentioning it as one of two opportunities identified. The other most mentioned opportunities, with at least 6 mentions each, were ‘improved networking/collaboration between different parts of the food system’, ‘public policy’, ‘special resources/circumstances that exist here like soil, land, water, human labor, location’, ‘shared processing, packing, storage and distribution’.

Word Cloud – Opportunities:

(A word cloud is a visualization of word frequency in a given text as a weighted list. This word cloud was created via [http://bit.ly/1UeWGPJ](http://bit.ly/1UeWGPJ) with each answer given a single line.)

The prompts given as potential threats were: Services that are not currently provided; Products or technology that are needed; Areas where cooperation or support are lacking; Public policy issues at the local/state/national level; Cultural issues, such as "we've always done it this way".

Summary of threats actually chosen by respondents: When asked to identify two things that will stand in the way of or threaten efforts to improve our local food system, 20 respondents answered ‘public policy /regulatory issues’. The other most mentioned threats, with at least five mentions each, were 'services/infrastructure that are not currently provided such as processing, storage, distribution', 'competition / lack of cooperation between farmers', 'lack of town / government / institutional or other support / incentives', 'cheap imported food / dominance of large scale production and distribution systems', 'consumer apathy / ignorance / lack of demand' and 'poverty / lack of access to or affordability of locally produced products'.


Word Cloud – Threats:

(A word cloud is a visualization of word frequency in a given text as a weighted list. This word cloud was created via http://bit.ly/1UeWGPJ with each answer given a single line.)

Then we asked the respondents to identify the three most valuable resources supporting their business's capacity to be part of the local food system. Again, the answers were open ended, with some suggested resources but the option to fill in their own. Prompts given as examples of potential resources were: ‘Buy local’ type organization - NH Made, Maine Made, The Valley Originals, Slow Food Chapter, MOFGA/NOFA; Financial services - Farm Service Agency, NH Community Loan Fund, grants; Education / technical support - local schools, universities, Cooperative Extension, Small and Beginning Farmers, 4-H; Local farmers market; Your state's Department of Agriculture; Policy groups - New England Farmers Union, Farm Bureau; Small business groups - SCORE, Chamber of Commerce; Food access organizations - Food banks, food pantries, United Way; Internet services or social media.

The most-mentioned resources, with at least seven mentions each, were: “'Buy local' type organization such as NH Made, Maine Made, The Valley Originals, Slow Food Chapter, MOFGA/NOFA’, ‘local farmers market’, ‘financial services, loans, grants’, “education / technical support organizations”, “Federal Dep't of Ag. Resources like NRCS, State Dep't of Ag”, “website, social media, internet”, “small business support orgs like Chamber of Commerce’, and 'Personal capacity – ingenuity, frugality, reputation, self-education”.
Word Cloud – Most Valuable Resources:
(A word cloud is a visualization of word frequency in a given text as a weighted list. This word clouds was created via [http://bit.ly/1UeWGPJ](http://bit.ly/1UeWGPJ) with each answer given a single line.)

At the end of the survey was space for general comments from respondents:

“We’d love to use locally sourced, ‘organic’ foods. We can’t pay a premium for it, guests might prefer locally sourced foods but most prefer a lower rate. We also can’t spend a lot of time and effort finding it, with all the work we already have.”

“We want to stress the need for more opportunities to connect local food to the public to the extent of making a viable living. We also as a farm personally find it extremely important to provide food to local programs, schools, and hospitals. The food fed to the community should come from the community.”

“After a slow day at the Farmer’s Market, if one stops by a Hannaford and sees the number of people shopping there, it is discouraging.”

“If there are strong resources committed to supporting a program like this the local community is crazy not to embrace it, you need to make sure they fully understand how much it can do for them and how to implement it. Something like this if done correctly can do wonderful things for the area community and at the same time build a natural local feeling of teamwork and community partnership to benefit all who live and work there.”

“You should engage qualified microeconomists to assist in developing rational plans.”

A link to the full survey results is included in the appendix.
Dialogue Sessions

Two dialogue sessions were conducted as part of this project. The purpose of the professionally facilitated sessions was to gather representatives from each section of the local food system to discuss ways that it might be improved for optimal community, ecological and economic benefit. The sessions were organized by Janet Wilkinson, William Abbott and Sasha Eisele and facilitated by Sasha Eisele.

We asked these questions:

1. What kind of community do we want to live and work in?
2. In what ways does our work (collectively and/or individually) affect the creation of healthy and whole communities?
3. What is our vision of success for our food system here in this community?
4. What IS NOT happening in our community that, if initiated, would provide great benefit to the community and the vision of success for the food system?
5. What IS happening in our community that provides great benefit to the community?

The Fryeburg dialogue session was on January 14, 2016 at the Fryeburg Academy's library. Among the 14 present, there were four farmers, three local food system advocates, a USVLT representative, a Maine Food Strategy representative, a Maine Farmland Trust representative, a UNH Cooperative Extension employee, an innkeeper, a bakery owner, a Fryeburg Academy teacher/administrator. The following quotes from participants help sum up the salient themes from the Fryeburg session:

“I worry that my community is becoming a rural suburb.”
“The values of my community have changed over the decades.”
“My town wouldn’t exist without the farmland.”
“Tourism here is key.”
“I wish we could be more of an artisanal culture.”
“How can we balance people who can pay the real price of the food vs those who can’t?”
“Vibrant farms are diversified. They have healthy infrastructure. The have transparency to the customer.”
“Many farmers can’t afford to apply the values they believe in to their own habits of consumption.”
“It’s so hard to walk around the grocery store and see what’s in people’s carts.”
“No matter how badly I want to sell to a local school or hospital, I can’t if I don’t meet the required certifications and regulations”
“People should have relationship with and ownership of what they consume.”
“We need to be living within the bounds of our natural ecosystems.”
“How do we create a system where our habits can be challenged?”
“There’s got to be a way to sell milk and make enough money for my son or daughter to do the same.”
“The agricultural land here is very valuable, and luckily a lot of it is still being farmed.”
“I am seeing much more emphasis on local foods in recent years.”
“There is some prosperity in our communities that allows people to make choices when it comes to things like food.”
“There are folks out there who are willing to take risks in business.”
The Conway dialogue session was on January 21, 2016. Among the 16 present, there were three farmers, two local food system advocates, three USVLT representatives, two NH Natural Resource Conservation District employees, a UNH Cooperative Extension employee, a bakery employee, a Memorial Hospital ‘Population Health’ Department employee, a NH Community Loan Fund employee, a NH Food Alliance representative, a Slow Food Saco Valley representative, and a representative of the North Country Farmers Cooperative. The following quotes from participants help sum up the salient themes from the Conway session:

“When I started my organic farm in 1980, you could count the number of organic farms around here on one hand.”

“When we started our organic farm seven years ago, we thought we’d be in CSA’s and farmers markets. Now we have access to plentiful wholesale markets. We have work to do to expand them, but they are definitely opened.”

“Entrepreneurs are bubbling up all over. Their new businesses often support local goods.”

“How can local farmers get paid equitably for their food AND people get equitable access to good, healthy, local food?”

“It all begins with soil. Good soil is tricky business and needs real attention.”

“Land needs to be available for new and beginning farmers. And we should focus production on smaller parcels, since that’s what we have here.”

“I’d like to see an educated community that is aware of all the benefits, and has access to all the parts, of the food system, especially to healthy food.”

“I can’t get local food conveniently without driving 5, 10 or 20 miles.”

“There are many resources already available that aren’t known or utilized here.”

“It’s so easy [for restaurants or other businesses] to ‘green wash’ and say what sounds good to consumers instead of being honest with them.”

“Businesses that ARE using local [food] should be celebrated.”

“It’s hard to care about where your food comes from when you’re worried about getting food at all.”

“We need to see greenhouses (high tunnels), everywhere. And more winter CSA’s and winter farmers markets.”

“More collaboration for events, organizations reaching out to each other, nonprofits and for profits.”

“Of all places our hospitals should be getting the healthiest food available. All of our fallow fields around here would then be put to use.”

“Our school systems should be involved with education, and nutrient and waste management would be a great start.”

“Carroll County has a lot of good ag soil that could be conserved.”

“If we assume a vision of more farms and farmers, we need education available for them.”

“Technology could play a role in centralizing available resources. Lots of places are building their own solutions in their own silos. It could also play a role in distribution and marketing.”

“For the local food system to work, the consumer has to be open to eating a varied, season-based diet.”

“There are so many success stories, but they aren’t being shared!”
Other Collected Information

The USDA Census of Agriculture’s relevant statistics and trends from 2002, 2007 and 2012, and notes from the NH Food Alliance Carroll County session in 2014 are included below to inform continued conversation.

USDA Census of Agriculture

The Census of Agriculture, conducted every five years by the US Department of Agriculture, is the leading source of statistical information about American agriculture. The most recent Census of Agriculture was conducted in 2012, and collected information in all areas of farming and ranching, down to the county level. For the purposes of this report, we collected select information for the states of New Hampshire and Maine and the counties of Carroll and Oxford.

From dozens of available statistics, we chose to assess the following, for the 2002, 2007 and 2012 census data:

- Number of farms
- Acres of land in farms
- Number of farms by value of sales (Less than $2,500, $2,500 to $4,999, $5,000 to $9,999, $10,000 to $24,999, $25,000 to $49,999, $50,000 to $99,999, $100,000+)
- Principal Operator’s Primary Occupation (farming or other)
- Numbers of Livestock (cattle, hogs/pigs, sheep, laying and meat birds)
- Land used for hay/silage by number of farms and number of acres and dry tons
- Vegetables harvested for sale by number of farms and number of acres
- Orchard land by number of farms and number of acres

In the US overall we found some not-so-surprising trends. Land in farms by number of acres went down in all three censuses. The number of farms by value of sales has gone down in all areas as well, except those that make $100,000 or more, which rose in all three censuses. Overall numbers of livestock have been on the decrease in all areas, except the number of farms producing laying chickens and the number of overall laying chickens, which increased in all three censuses. Vegetables harvested for sale by both number of farms and number of acres was on the increase for all three censuses, although the number of acres of vegetables being harvested decreased slightly in 2012.

New Hampshire bucks the national trends in many areas. Both the number of farms and number of acres in farms increased over all three censuses while they decreased at the national level. Similarly, in Carroll County the number of farms increased over all three censuses, though the acres being farmed slightly decreased in 2012. New Hampshire also went the opposite way of the US as a whole when it comes to numbers of farms by value of sales, with all value areas increasing over the 2002-2012 period. Carroll County farms also saw increases in almost all areas, except a slight decrease in the number of farms with sales of $2,500-$4,999 and no change in the number of farms at $100,000+ (8 farms). There was a notable increase of one farm to 13 farms between 2007 and 2012 in the $50,000-$99,999 category in Carroll County. While the number of farms whose principal operator’s primary occupation is farmers (as opposed to the principal operator having an off-farm occupation as a primary source of income) has been on the decrease at the national level, it has been on the increase overall in New Hampshire and Carroll County. While most livestock numbers have been decreasing nationally, numbers of farms that have beef cattle, milk cows, hogs and pigs, sheep and lambs, laying chickens and meat chickens have all increased in Carroll County and in New Hampshire. The most notable downward trend for both New Hampshire and Carroll County is with production of hay and silage. The number of farms, land in production and tonnage produced of hay and silage has been steadily declining, as has the land acres in orchards (despite that the total number of farms with orchards increased at both the state and county level).
Maine also bucks the national trends in many areas, with the number of farms and acres in farms increasing over all three censuses. The same is true in Oxford County, with a remarkable increase from 68,719 to 75,275 acres of farmland between the 2007 and 2012 census. In both Maine and Oxford County, the number of farms will value of sales less than $2,500 has decreased, but the number of farms with value of sales in all other categories, including the $100,000+ category, has increased. The farms whose primary operator's full time occupation is farming also saw increases over all three censuses at both the state and county level. While beef cattle and milk cows have been on the decrease statewide, significant increases can be noted for the numbers of animals and numbers of farms raising pigs, sheep and chickens (meat and layers). In Oxford county the livestock numbers are less consistent, with the numbers of pigs and meat birds trending up and milk cows trending down. As with New Hampshire, the land used for hay and silage production in Maine and in Oxford County has been trending down, though not as steeply. Meanwhile, the number of farms and number of acres harvesting vegetable for sale has increased at both the state level # acres up by an astonishing 90%) and in Oxford county. The number of farms with orchard land and the number of acres in orchard production has decreased overall in Oxford County, and at the state level the number of farms with orchard land has increased while the number of acres in orchard production has decreased.

A link to the full statistical breakdown is available in the appendix.

**Summary notes from NH Food Alliance’s Carroll County Gathering**

Sep 24, 2014 at Camp Calumet, Freedom NH, 17 participants

(The NH Food Alliance organized meetings state-wide in 2014 and published notes and findings4, including the below from the Carroll County meeting. Many of the same themes found in this research project were identified in that meeting)

- Production & Processing: Need technical support for alternative production methods such as season extension techniques (i.e. high tunnels); Community kitchens as an option for adding value to local food
- Farm & Food Enterprise Viability: Low wages and profitability make it difficult to make a living in farming; Increasing farm profitability needs to be carefully balanced with goals of ensuring access to healthy, local food; Need robust technical support and training/education options for young people who want to become farmers; creative ways to transition farm ownership to younger generations
- Distribution & Marketing: Need new ways to connect growers to local markets: a directory of direct markets, retail, restaurants, institutional options; Collective/cooperative approaches to distribution: shared transportation, cooperatives could make reaching wholesale and institutional markets more cost effective; Storage and commercial kitchens needed
- Consumers & Public Health: Importance of nutrition education about healthy food choices and preparation of healthy, local foods; Emphasis on making local foods more convenient for consumers to buy and prepare
- Food system literacy: consumers need to understand where food is coming from and the value of consuming local foods both for personal and community health
- Food Access & Security: Local food needs to be convenient for consumers transportation to markets is also an issue for consumers; Increase availability with more green grocery stands, market trucks, etc.; Social service providers also need a directory to help connect clients with healthy food options, farm stands, etc.

• Nutrient & Waste Management, Food Rescue: Entrepreneurial opportunities in composting; Need to make full use of locally grown food including distribution of excess to food pantries or food banks, food processing, and composting; Excess and seconds can go to animals as well!
• Policy: FSMA: Food Safety Modernization act could make cooperative processing, composting, and direct marketing very challenging; NH regulations make commercial composting difficult; Need to review state level policy to see what laws/regulations impede local food production/distribution and retool state to get behind local foods
• Food System Networking: Engage local citizens in conversations and dialogue about food issues (i.e. egg production and related issues); Learn about other efforts in the region and what’s working (i.e. best practices here in NH or in other New England states); recognize role that local context plays in what “works”; Promote communication, collaboration and information sharing across the network; Need for public education about the benefits of buying local food for economy, health, environment.
Stories

Another objective of the project was to research and present several stories of local food and agriculture efforts outside of this geographic area to inform discussion. We chose to highlight a food hub, an educational/incubator farm, and two land trusts.

The Mad River Food Hub

Why did we choose it?: The concept of a food hub came up many times throughout the project. The Mad River Valley Region, where this food hub is located, has many similarities to the Mount Washington Valley, including a tourism driven economy dotted with many small farms and small communities.

About the organization: Mad River Food Hub, founded in 2011, is dedicated to aiding clients and partners in establishing value added food businesses. Funding for its startup came from a combination of an individual investor (the founder), foundation and government grants.\(^5\)

The Mad River Food Hub is located in a 4,000 sq foot building in Waitsfield, Vermont. The business is organized as a low-profit limited liability corporation (L3C), a business entity that provides a structure for socially beneficial, for-profit ventures.

It offers two meat processing rooms and equipment, smoke room, produce processing room and equipment, freezer and cooler storage space, dry storage space, refrigerated delivery truck, plus mentoring and consulting services. The most recent service addition was a local distribution service with deliveries as far as Montpelier and Burlington. Users rent processing space by the day (for example, one of the meat processing rooms can be rented for $150/day), and rent storage space by the month (for example, refrigerated storage is $25/pallet/month).

It was the first for-profit food hub in the state, and the first shared-use meat processing facility in the state. A result of collaborative work of the founder and organizations including Mad River Valley Localvore Project, Valley Futures Network, Mad River Valley Planning District, Vermont Land Trust, Farmers, Businesses, Non-profit Organizations and residents, it moved over $1,000,000 worth of food from 50 clients and was operating at 60% capacity in 2014.\(^6\)

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\(^6\) [http://madriverfoodhub.com/](http://madriverfoodhub.com/)
Stone Barns Center for Food and Agriculture

Why did we choose it?: We wanted to find at least one organization involved in farmer education. This one simultaneously works on farmer and consumer education. Also of note is the successful effort there to incorporate for-profit enterprise (the restaurant) with the non-profit farm, which increases the entire Center’s feasibility. Stone Barns success in its short 10 year existence is due in large part to its location, close to New York City and its many wealthy suburbs.

About the organization: Stone Barns Center for Food and Agriculture is on a mission to create a healthy and sustainable food system that benefits us all. Located on 80 acres just outside New York City, it is a farm and education center that hosts 100,000 visitors every year.

It was founded by the Rockefeller family and collaborators including conservation planners and organic farmers and others in the 1990’s. Their goal was “to create a working farm practicing resilient, transparent, four-season agriculture and open to the public as a hub of learning, creativity and experimentation”. The founders also invented Blue Hill, an onsite restaurant partner, to “demonstrate the concept of an ecological cuisine – seasonal and regionally appropriate food grown and raised in harmony with ecosystem of which the farm is part”.

The programs are aimed at both farmers of all experience levels and ‘food citizens’ (consumers). Programs currently include a farm, farm store, CSA, culinary center and restaurant, an annual Young Farmers Conference and other mission-related events, on farm apprenticeships and training, public programs, Farm Camp for kids, and on-farm research and experimentation. Its unique digital offerings include their website’s ‘ideas’ page, http://bit.ly/1pwCKeo, which features two different blogs and a series of ‘changemakers’ profiles, and the Virtual Grange, http://bit.ly/1UDmjrU, an online hub for beginning farmers around the country.

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[7](http://www.stonebarnscenter.org/articles/history.html)
Sustainable Iowa Land Trust

Why Did We Choose It?: This is a brand new organization, so was chosen in part for the fact that it is establishing itself in the current socio-political climate. Many conversations throughout the research process have pointed to an interest in not only promoting local food system development, but promoting sustainable farming practices used within that farming system. SILT aims to do this in part by offering discounted services and farmland at discounted prices for farms and farmers that choose to use sustainable practices.

About the Organization: The Sustainable Iowa Land Trust (SILT) was initiated in December of 2014, “when twenty-five of the most well-respected leaders in sustainable agriculture, development and planning parked themselves in a hotel conference room for two days and hashed out the details of an organization that was two years in the making.”

SILT is comprised of two nonprofit entities: a 501(c)3 and a 501(c)2 (currently in formation). The c3 focuses on education and public outreach and works to secure grant funding, private financial contributions, and raise funds by presenting events and making appeals. The c2 entity will hold the titles to, and collect the income from, SILT owned farms. It will charge market-based rates for services, such as farm marketing, easement management, and provision of technical assistance to farmers and landowners.

The approximately $7 million annual budget is supported primarily by donations, grants and earned income (farm, rentals, café, etc).

SILT will not only preserve farmland, removing it from development pressure, it will require sustainable agricultural practices to grow food for human consumption in perpetuity, removing it from commodity pressure as well. Whether SILT owns the land and offers long-term affordable leases or it enforces easements on land that remains privately held, it will reduce the price of farmland for healthy food farmers for generations to come, increase food security for all Iowans and improve soil and water quality throughout the region with good farming practices.

In an interview, the founder advised against efforts to provide marketing/education on behalf of farms or other businesses: “We let the farmers decide how to approach the institutions and markets, and we’ll provide the support for them to do that. We want to stay out of the farmers business. For instance, we might help a farmer discover the pluses of the individual farm, but then we’ll let the farm or groups of farms do the marketing. We’ll put everything together for them so they have the resources.”

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8 [http://silt.org/solution/plan-so-far/](http://silt.org/solution/plan-so-far/)
Athens Land Trust

Protected Land + Affordable Housing + Community Gardens = Improved, Sustained Quality of Life.

Athens Land Trust

Why did we choose it?: Increasingly, conservation initiatives are seeking to make connections between conserved areas and the people living around them, for the benefit of both. Agriculture and local food systems essentially exist in the intersection of the two. The Athens Land Trust is one of few organizations in the country that is both a conservation and community land trust, with a community agriculture program connecting the two and creating healthier communities, from the ground up.

About the organization: The Athens Land Trust was founded in 1994 in Athens, Georgia, with a goal of both protecting open spaces AND keeping housing lots affordable, two goals which were seen by some as conflicting.

“Our first project, Kenney Ridge, included the preservation of 38.8 acres of open space in a development that also set aside land for affordable housing. Since that time, ALT has built or rehabilitated 49 affordable single-family homes, created dozens of low-income rental opportunities, and preserved over 13,000 acres of land, partnering with myriad organizations and growing a stronger community along the way. That creativity and our success have led to ALT being identified as a national model by both conservation and community land trusts.”

The Athens Land Trust works in the areas of affordable housing, land conservation, community agriculture and neighborhood revitalization. The community agriculture program was created in 2010 as a way to bridge conservation efforts with community work. The focus of the community agriculture program is to develop a sustainable local food system in Athens’ most food insecure areas, and to provide economic opportunities to farmers and underserved individuals.

Community agriculture / food system related programs include a community garden network, young urban farmers program, farm outreach, farm to school, a local farmers market, a community market garden, a community farm, and serves as a Food Corps service site.

“We have seen how land use can either promote inequity or create healthy neighborhoods. And we believe that Athens Land Trust can play a role in ensuring that our community supports and encourages land use that will benefit the whole. This support will come through education – education about how healthy soil allows healthy plants, how healthy housing supports healthy families, and how access to healthy ways of living create healthier communities.”

9 http://bit.ly/1U1KpxH
10 http://www.athenslandtrust.org/about
11 http://bit.ly/1U1KpxH
Recommendations

The recommendations here are organized by the food system segments of the NH Food Alliance diagram, taking into account all information presented in this report.

1) Production and Harvesting: Promote Enterprise Viability. The functionality of the ‘production and harvesting’ segment is, of course, fundamental to all other local food system development. Fortunately, it has been identified during this project as the strongest segment of the local food system. We recommend focusing on promoting viability of production and harvesting enterprises by strengthening the efforts of an already formed collaborative of growers, in the form of funding or administrative support.

Carroll County farmers and value-added producers have been meeting over the past two years to discuss ways to collaborate and improve their own businesses and most effectively participate in the local food system. Some potential projects they’ve discussed include: creating a paid position to coordinate cooperative marketing; developing equipment sharing between farms; expanding a recently launched CRAFT (Collaborative Regional Alliance for Farmer Training) initiative; and cooperative purchasing. As many as 50 farmers have attended meetings. The working name of the group is the Eastern Slope Food Shed and the best contact is Olivia Saunders (full disclosure: the author of this report is also involved in this group as a volunteer).

Promoting enterprise viability is what the NH Food Alliance has chosen as its strategy at the statewide level as well: “By focusing our first initiative on farm, fish, and food enterprise viability, we can help support the entrepreneurial backbone of the food system, and at the same time address key issues related to food access, healthy communities, and natural resources.”

2) Processing, Distribution and Marketing: Create A New ‘Middle’. The term ‘farm to plate’ is popular, but unfortunately skims over all that happens between the two. Consumers at individual to institutional levels—often even those who wish most strongly to support local food system development—demand convenience and affordability, and the ‘conventional’ food system outcompetes in those areas. Centralizing the processing, distribution and marketing of local goods could help close the gap and grow demand for local products.

Carroll County is home to one of only four slaughterhouses in the state, a major asset. The North Country Farmers Cooperative was initiated in Coos County for farmers to market, sell and deliver produce to local institutions. They already deliver to Carroll County restaurants and seek to service local farms in this region as well as well, a potential distribution and marketing asset.

Missing from this ‘new middle’ is the capacity for aggregation, processing and storage of locally produced components, both animal and vegetal. Regional ‘food hubs’ have been successfully filling this space around the country. The Healthy Food Access Portal defines a food hub as “a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers in order to satisfy wholesale, retail, and institutional demand.” A successful food hub could develop the local food system by increasing demand for locally produced components, enabling new entrepreneurial enterprises, and facilitating access to locally produced products for all levels of consumers.

We recommend further research into the feasibility of starting a food hub, including regarding services to provide and ownership and management models, and an economic impact assessment.

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3) **Consumption: Grow the Market Share.** The ‘consumption’ section of the local food system as defined by this project includes all consumers (homes, schools, hospitals, restaurants, grocers and food assistance programs) and all dimensions of equity (health outcomes, food access, food security, race, wages). Several food pantries thought that it was a mistake that they were included in the online survey for this project, which illustrates a major disconnect as they don’t see themselves as part of the local food system.

The recommendation is to work with local enterprises and resources that operate in this area of the food system to develop strategies for growing the market share and getting more of the consumer base participating in the local food system. Potential strategies might include public awareness campaigns, story telling campaigns, or conducting a series of community dialogue sessions. Potential collaborators include Global Awareness Local Action (GALA), MWV Green Team, NH Farm to School, Slow Food Saco Valley, The Valley Originals and all of the farmers markets, health food stores and school and institutional food service directors. The group of farmers from recommendation #1 above will also likely be willing to participate.

4) **Nutrient and Waste Management: Food Waste Reduction.** Every year, American consumers, businesses, and farms spend $218 billion, or 1.3% of GDP, growing, processing, transporting, and disposing food that is never eaten. That’s 52 million tons of food sent to landfill annually, plus another 10 million tons that is discarded or left un-harvested on farms. Meanwhile, one in seven Americans is food insecure.\(^5\) Those statistics illustrate that this area is not only the weakest section of our local food system, but an area of weakness in our overall food system as well. The problem is large enough that legislation making recycling of organic waste mandatory is already passed in some states\(^6\), and it is an area of great interest for transfer stations and entrepreneurs alike.

There are many tactics that could be taken for reducing food waste locally. Setting up composting in schools would support educational goals. Providing scholarships to Maine Compost School for transfer station staff members could lead to composting programs going at transfer stations. Gleaning programs, on farm composting programs, and the promotion of sustainable growing practices could help with waste and nutrient management on farms. In the event that a food hub is developed (see recommendation #2 above), a regional compost facility could potentially be included with it. Potential partners and resources in this area are the Maine Compost School, Mr. Fox Composting, Northeast Resource Recovery Assn. and NH Gleans.

5) **System-Wide: Network Leadership.** A thriving local food system incorporates practices, policies, and operations that are beneficial in many ways: to the local, regional, and global economy; for our land, water, and living resources; and for our communities, including public health and our social connections to one another.\(^7\) Perhaps the largest void and greatest opportunity to create lasting change in this local food system is committing to convening and leading a local food system network. The reasons are many: to connect players within the system; to contribute to the broader movement; to share resources; to tell stories and provide support; and to unify around public policy positions, best practices and food system development strategies and priorities. Some ways to get started with this: share the outcomes from this project with those who contributed to it, both within and outside the local system and organize follow-up dialogue sessions with those who participated in the initial ones. Several of the recommendations above will require ‘network leadership’ commitment in order to be fulfilled as well.

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\(^7\) [http://1.usa.gov/1Ram4mU](http://1.usa.gov/1Ram4mU)
"We should not be discouraged to find that local food economies can grow only gradually; it is better that they should grow gradually. But as they grow they will bring about a significant return of power, wealth, and health to the people." -Wendell Berry, Another Turn in the Crank

Appendix

Google map of the local food system:
https://www.google.com/maps/d/edit?mid=zwhv64SHIqbo.kQPA00n3tWNY

Google database:
https://docs.google.com/spreadsheets/d/1LV3muZB8QaDDdbf9UrDV46EHpkaXoytHH8u_Zx2rZZU/edit?usp=sharing

The Google database includes a separate spreadsheet for each:

- Survey responses (also available as a more readable PDF if desired),
- Food system contact listing,
- Food system resource listing,