Northern Forest
Sustainable Economy Initiative:
Agricultural Sector Analysis

Source: M-ARK Project. Margaretville. New York

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Tables and Charts-Attached in Excel  
Best Practices Database (In Electronic Form only)
Section 1. Introduction

Charming, picturesque, beautiful are words describing the working agricultural landscape of the Northern Forest. Many often comment that if it were not for the way farming sculpts and frames our geography; one would not see the lakes, rivers, and mountains for the abundance of trees. The tourist-based economy is also dependent upon the way agricultural practices over the last four hundred years shaped and sculpted the scenic vistas and created a pastoral landscape. This countryside is cherished by residents and visitors alike.

The rural economy on which this scenic landscape is based is threatened by a disconnect between public perception and people’s actions. The romantic vision of farm life and farm land held in one’s heart does not slow the almost imperceptible annual loss of farm land to development caused by peoples’ decisions to build housing on farm land. Those romantic visions of farm life cloud public understanding of farming as an economic venture requiring a return on investment. Farming has two sides; the connection of people to the land with deep roots and values of place and another side; call it Agribusiness; a business that depends upon access to capital, good management, available labor, supply chains, access to markets and consumer demand. In the Northern Forest Region, one needs to honor the tradition and romance of Farming and demonstrate respect for the economic venture of Agribusiness.

Farming has traditionally been downplayed in the regions’ economic strategy in favor of heavy industry and manufacturing, but this has to change. Given priority standing, resources and policy considerations, the Northern Forest agricultural economy has great potential to feed, and provide non-food resources not only for the Northern Forest Region, but also the major population centers of the Northeast and perhaps export food resources to food-scarce regions of the world. The land acreage upon which the Northern Forest agricultural economy rests represents a considerable environmental
service to the region and the rest of the country in terms of open space, water quality and its indirect benefits to the tourist and recreation economic sectors. Raising the status, attention paid, and resources provided to Northern Forest agribusiness, now and in the future, may significantly improve its chances of success.

Section 2. Methodology

A mixed methods research approach was utilized to collect data for this analysis. An extensive collection of literature was gathered and a bibliographic list provided in the appendix to this document. This literature was reviewed (in an informal sense) and excerpts were used to evaluate the current state of agricultural economic trends and policy at the national, state, regional and local levels. Statistics are available from many sources and at many different levels of organizations. However, few, if any sources provided consistent information about the Northern Forest Region at a standardized metric. In order to find a common statistical denominator at the lowest geographic level for the Northern Forest region and to provide a quantifiable basis for comparison, the U.S. Department of Agriculture (USDA) Census of Agriculture was chosen as the quantifying measure because its data could be aggregated at the county level. In addition, the USDA Economic Research Service statistics were utilized because they provided useful information about agricultural activity in the region. A qualitative aspect of the mixed methods approach utilized involved surveying key informants. Twenty-one individuals were recommended to the project. They possessed expertise in aspects of agricultural policy or programs that were relevant to the project. A list of the key informants is attached in the appendix.

Section 3. Assumptions and Limitations

This report is limited in scope due to the time constraints associated with the nature of the contract. Agriculture and food systems are complex economic sectors and this
report can only provide précis compared to the scale and complexity of the issues being studied. Further analysis and study of individual issues and opportunities are needed.

For the purposes of the Sustainable Economy Initiative, Local Agriculture is defined as, “Produce, meats, or other goods grown or processed in the Northern Forest Region.” Agriculture is considered to be a business and treated as all other kinds of business ventures. It includes similar components, inputs/outputs such as: production, processing, distribution, marketing, labor, management, transportation network, regulatory environment, etc. As such, many of its problems, issues, challenges and opportunities follow a similar pathway.

Section 4. Agriculture Defined and its Sphere of Influence in the Northern Forest Region

It is with these assumptions in mind that the sphere of influence of agriculture is first measured in quantifiable terms by taking a look at the statistical information available about agriculture and the Northern Forest Region.

It is difficult to gather from available industry data the comparative importance of agriculture’s impact on the regional economy in terms of comparative sales, multipliers or other valuable metrics because the data does not exist in a form to make such statements and comparisons. According to the Carsey Institute and documented in a report entitled, Social and Economic Overview of the Northern Forest Region (October, 2007), the relative importance of agriculture to other industry sectors as an employment and wage source may only be illustrated using the North American Industry Classification (NAICS) employment data. In this classification system, agriculture is combined with forestry, fishing, and hunting to generate employment and wage information. Of the twenty “super-sectors” industrial sectors analyzed, agriculture, forestry, fishing and hunting ranked third from the bottom in employment.
Other forms of data are available that help paint the picture of agriculture’s role in the Northern Forest economy and its sphere of influence in the Northeast and around the globe. A small representation of available statistics is profiled in this section and the reader is referred to the appendix for a full examination of the regional quantitative analysis. The US Census of Agriculture is full of interesting and useful information appended to this précis.

How many farms exist in the Northern Forest? According to key informants, this number is changing rapidly as the number of small farms (less than 20 acres) increase every year. The 2002 Census of Agriculture is the benchmark on which the question is answered here and the 2007 Census which will be out in the near future will be a great basis of comparison to confirm trends.

### Number of Farms and Farms by Acreage

#### County Data Aggregated by State and Compared to Region and USA

<table>
<thead>
<tr>
<th>Item</th>
<th>NF Region of Maine</th>
<th>NF Region of NH</th>
<th>NF Region of NY</th>
<th>NF Region of VT</th>
<th>NFC Region</th>
<th>USA 2002</th>
<th>USA 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farms (number)</td>
<td>3,866</td>
<td>858</td>
<td>8,852</td>
<td>3,633</td>
<td>17,209</td>
<td>2,128,982</td>
<td>2,215,876</td>
</tr>
<tr>
<td>Farms by size - 1 to 9 acres</td>
<td>381</td>
<td>101</td>
<td>555</td>
<td>204</td>
<td>1,241</td>
<td>179,346</td>
<td>205,390</td>
</tr>
<tr>
<td>Farms by size - 10 to 49 acres</td>
<td>827</td>
<td>183</td>
<td>1,419</td>
<td>909</td>
<td>3,338</td>
<td>563,772</td>
<td>530,902</td>
</tr>
<tr>
<td>Farms by size - 50 to 179 acres</td>
<td>1,392</td>
<td>327</td>
<td>3,107</td>
<td>1,291</td>
<td>6,117</td>
<td>658,705</td>
<td>694,489</td>
</tr>
<tr>
<td>Farms by size - 180 to 499 acres</td>
<td>836</td>
<td>173</td>
<td>2,712</td>
<td>939</td>
<td>4,660</td>
<td>388,617</td>
<td>428,215</td>
</tr>
<tr>
<td>Farms by size - 500 to 999 acres</td>
<td>276</td>
<td>53</td>
<td>814</td>
<td>227</td>
<td>1,370</td>
<td>161,552</td>
<td>179,447</td>
</tr>
<tr>
<td>Farms by size - 1,000 acres or more</td>
<td>154</td>
<td>21</td>
<td>245</td>
<td>63</td>
<td>483</td>
<td>176,990</td>
<td>177,433</td>
</tr>
</tbody>
</table>
Compared to areas in Midwest and West, fewer farms in the Northern Forests are larger than one thousand acres and tend to be five hundred acres or smaller with the bulk of farms between ten and five hundred acres. The trends in the sizes of farms at the national level indicate a decline of some rate is seen in all sizes of farms with the exception of the ten to 49 acre farms. It is here that the statistics concur with the key informants at the regional level that small farms are on the increase within the region. Key informants also indicate that the number of medium sized farms is shrinking in favor of a rapidly growing number of small farms and a steadily increasing number of large farms.

In traditional dairy farming, which still is the primary commodity of New York and Vermont and the secondary commodity of New Hampshire and Maine, the trend is towards consolidation and growing very large or smaller dairy farms diversifying. As in all lines of business, there are winners and losers. Surviving farms are succeeding through improved business practices. The newspapers routinely advertise auctions signally farms sliding into bankruptcy or failure, selling off lands and herds, machinery and equipment.

The Northern Forest contributes significantly to the national and regional working agricultural landscape in providing almost four million acres in agricultural production. This represents four percent of the total agricultural land in production in the US and thirteen percent of the landmass in the Northern Forest Region.
## Northern Forest Land in Farming

### County Data Aggregated by State and Compared to Region and USA

Source: 2002 US Census of Agriculture and State Reports

<table>
<thead>
<tr>
<th>Item</th>
<th>NF Region of Maine</th>
<th>NF Region of NH</th>
<th>NF Region of NY</th>
<th>NF Region of VT</th>
<th>NF Region</th>
<th>USA 2002</th>
<th>USA 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land in farms - Average size of farm (acres)</td>
<td>225</td>
<td>182</td>
<td>206</td>
<td>182</td>
<td>199</td>
<td>441</td>
<td>431</td>
</tr>
<tr>
<td>Land in farms - Median size of farm (acres)</td>
<td>104</td>
<td>110</td>
<td>161</td>
<td>121</td>
<td>116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land in farms (acres)</td>
<td>967,559</td>
<td>159,666</td>
<td>2,101,979</td>
<td>683,836</td>
<td>3,913,040</td>
<td>938,279,056</td>
<td>954,752,502</td>
</tr>
</tbody>
</table>

In this case, it is important to note that New York State ranks first of the four Northern Forest states, contributing 54 percent of the working agricultural lands to the Northern Forest agricultural land equation. Maine follows second, providing 25 percent of the land mass. Vermont ranks third with 18 percent and New Hampshire possesses the least land mass and counties in the Northern Forest Region.

The acreage in agriculture in the Northern Forest Region was much greater than today. Agricultural Historians and Conservations, including Harvard’s David R. Foster have documented New England’s landscape through the centuries and in particular the hey day of sheep farming in the early 19th century. Between the Revolutionary War and the Civil War, a much larger share of the region was cleared. With the opening of lands to the West and the call of Manifest Destiny, many farmers abandoned their hardscrabble lands for the promise of easier farming in the Midwest. As a result, a large share of the forestlands we see today that border farm lands were once active agricultural land. In theory, if demand required, they could return to agricultural use.
Commodities generated from farms in each state provide a good introduction to the products of importance to the region:

**Top Five Agriculture Commodities, 2006**

*Source: USDA Economic Research Service, State Fact Sheets*

<table>
<thead>
<tr>
<th>MAINE</th>
<th>NEW HAMPSHIRE</th>
<th>NEW YORK</th>
<th>VERMONT</th>
</tr>
</thead>
</table>

Potatoes, milk, meat, cheese, blueberries, maple syrup, eggs, apples; food for life and living! What would the world do without these foods? Forage for livestock is essential and the rapidly growing nursery trade serves an important commercial market. While each state within the region has its particularly prized commodities, dairy continues to be a shared tradition. It is also important to note that the similarities in commodities far outweighs the variety; a situation that can cut both ways in terms of economic stability and diversification in the face of changing times.

Another indication of relative economic importance is the ranking of sales generated from within the counties in the region compared to each state as a whole. This information indicates the relative importance of Northern Forest counties within their states to agricultural production. What is important to note is that this information is useful in Maine, Vermont and New Hampshire, but due to the scale of New York in terms of geography, economics, population, etc., Northern Forest counties do not make the cut into the top five. Other statistics will demonstrate New York’s Northern Forest counties relative economic importance.
### Top Five Counties in Agricultural Sales by State 2002

**Source:** USDA Economic Research Service

#### MAINE

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>PERCENT OF STATE TOTAL RECEIPTS</th>
<th>MILLION $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aroostook</td>
<td>26.1</td>
<td>121.2</td>
</tr>
<tr>
<td>2. Androscoggin</td>
<td>20.8</td>
<td>96.6</td>
</tr>
<tr>
<td>3. Washington</td>
<td>8.90</td>
<td>41.3</td>
</tr>
<tr>
<td>4. Kennebec</td>
<td>6.50</td>
<td>30.2</td>
</tr>
<tr>
<td>5. Penobscot</td>
<td>6.20</td>
<td>29.0</td>
</tr>
<tr>
<td><strong>State total</strong></td>
<td></td>
<td><strong>463.6</strong></td>
</tr>
</tbody>
</table>

#### NEW HAMPSHIRE

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>PERCENT OF STATE TOTAL RECEIPTS</th>
<th>MILLION $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Merrimack</td>
<td>28.4</td>
<td>41.2</td>
</tr>
<tr>
<td>2. Grafton</td>
<td>13.7</td>
<td>19.8</td>
</tr>
<tr>
<td>3. Rockingham</td>
<td>11.7</td>
<td>17.0</td>
</tr>
<tr>
<td>4. Hillsborough</td>
<td>10.2</td>
<td>14.8</td>
</tr>
<tr>
<td>5. Cheshire</td>
<td>8.50</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>State total</strong></td>
<td></td>
<td><strong>144.8</strong></td>
</tr>
</tbody>
</table>

#### NEW YORK

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>PERCENT OF STATE TOTAL RECEIPTS</th>
<th>MILLION $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Suffolk</td>
<td>6.5</td>
<td>201.2</td>
</tr>
<tr>
<td>2. Wyoming</td>
<td>5.7</td>
<td>178.0</td>
</tr>
<tr>
<td>3. Cayuga</td>
<td>4.1</td>
<td>128.0</td>
</tr>
<tr>
<td>4. Genesee</td>
<td>4.0</td>
<td>124.9</td>
</tr>
<tr>
<td>5. Wayne</td>
<td>3.3</td>
<td>103.9</td>
</tr>
<tr>
<td><strong>State total</strong></td>
<td></td>
<td><strong>3,117.80</strong></td>
</tr>
</tbody>
</table>
Vermont’s Northern Forest counties constituted four of the five top performing agricultural counties in terms of sales in 2002, contributing 49 percent of the $237.8 million dollars in revenue. In Maine, three of the eight Northern Forest counties, Aroostook, Penobscot and Washington, are noted in the top five for 2002 in terms of contributing $136.3 million dollars in total agricultural receipts to the State of Maine. And here is where the beginning of the cumulative economic impact of agriculture can be glimpsed since this represents 29 percent of the top five counties in sales for that year. Grafton County, the only county in New Hampshire to make the cut as part of the top five in sale still represents 13 percent of the total sales contributing $19.8 million dollars to the economy. And while none of the New York Northern Forest counties are represented in this particular table, it does not mean that they did not generate cumulative revenues in the tens of millions of dollars. It simply means that the smallest revenues in New York State to rank fifth were in the hundred million levels; comparable to the first and second rankings in Vermont, New Hampshire and Maine.
Section 5. Northern Forest Agricultural Issues and Trends

Multiple Values and Beliefs

Agricultural experts, policymakers and farmers do not all agree on where agriculture stands today and where it should be going. Traditionalists stress the future is in big dairy commodities and fixing the milk pricing system on which it depends. Others counter that agriculture is dying because the Northeast scale farms can no longer compete (without deep public subsidy) with the Midwest 3,000 acre farms because of economy of scale. Futurists characterize the agricultural sector as a multi-scaled, closed system from farm to fork where agricultural and affiliated business practices, public policy, consumption, and geography interact to produce patterns of action and reaction, conflict and chaos. That being said, there are many who believe that, like politics, all agriculture is local; where success is dependent on how local farmers adapt to emerging trends and conditions, such as the growing organic, natural and local foods movement, consumer interest in where their foods come from, its safety and quality, and mechanisms that connect farmers to consumers. In all these cases, the goal must be to create a profitable, seamless, proactive, scalable system from a fragmented, reactive, rigid one. The food system is slowly evolving, step by incremental step, in that direction, but the assumption is that this process is rather organic and bottom up; deriving its momentum from agricultural interests with government following slowly in its wake. Optimism and planning must drive the system, not anxiety and defeat.

Local Foods

Public health, food safety and healthy lifestyle concerns drive the widely held consumer purchasing preference to know the origin of one’s food. From the cover of Time Magazine to the New York Times, the media is filled with articles about the class conscious consumer market where environmentalism and buying local foods converge. Local is green, fresher, safer, good for the local economy and you know where it is coming from. Popular movements promoting “local” foods and diets contribute to an
explosion of farmer’s markets, Community Supported Agriculture, farm stands, and other methods of connecting consumers to farmers. Skyrocketing fuel costs make transportation costs for food from remote markets less competitive than local and regional sources. Food branded with a U.S. state of origin is likely to be in greater demand that those without branding or with origins in foreign countries. In the past, it was exotic and cheaper to import; now it is exotic (and many times cheaper) to buy local.

These factors are significantly changing the organic and non-organic foods market. From production to direct market, wholesale to retail stores at the specialty and major chains, people in the food business are catering to the consumer’s desire to know that their food is local, wholesome, and in most cases, convenient. According to many experts in the field, value added local, natural and organic products and produce can’t be kept stocked on the shelves. One hundred years ago, a typical farm in the region produced a variety of products; apples, sheep, peaches, pears, grains, to name a few. A renaissance of specialty products reminiscent of traditional scale agriculture is happening throughout the region. Northern Forest agribusinesses are not uniformly ready for the East Coast market share demand, but the East Coast market is ready for the bounty of the Northern Forest farms! Statistics reveal that the number of small farms are growing, the types and range of primary and value added products sold from agribusinesses in the Northern Forest Region are changing rapidly in response to this growing demand.

- Many Northern Forest farmlands are within a day’s drive of the major population centers of the Eastern Seaboard. New York City and Boston to the south, Montreal to the North, and the surrounding metropolitan areas are potential market areas for local agricultural products where residents already connect to the region through vacation and recreation branding.
• Within a half day’s drive are Portland, Portsmouth, downstate New Hampshire, Maine, Massachusetts, and New York; Lake Placid, Capital District Albany Region, and Burlington, Vermont. These are excellent incubator markets for growing agribusiness ventures not quite ready for the big markets of the East Coast.

• Selling to institutional buyers, both near and far or to one or more grocery chains provide other approaches in any geography within or near the region.

• For the more modest producers, local farm stands, virtual and site based farmers markets, internet sales, direct deliveries, and Community Supported Agriculture shares (CSA) are other options for connecting to the consumers within an immediate area. Most CSA’s in the region are full and have waiting lists. Selling agricultural products to the consumers in the immediate area as compared to “exporting” them to major metropolitan areas has enormous economic benefits for the region as it causes the generation of the multiplier effect with dollars staying locally within the economy and continuously circulating. In addition, a greater level of profit is kept and captured within the regional economy.

**Climate Change**

Global Environmental Change could alter everything about food production dynamics worldwide. When the chronic water shortages of the California Central Valley and the intensively farmed, water dependent Southeast becomes problematic, the region’s abundance, perhaps surplus of water will make Northern Forest agricultural lands increasingly valuable for their production benefits. As farmland loss, desertification and extensification continue in Africa, India and Asia Northern Forest preserved agricultural lands will increase in value.
While the Maple Syrup industry and accompanying economic impact could shift north, Northern Forest proximity to the East coast metropolitan food markets and ports can be a competitive economic advantage for the dairy, produce and value added agribusinesses. A growing middle class in India and China will have more discretionary income with which to purchase American food products. This includes an increasing global demand for wheat. One is reminded that during the Civil War, much of the wheat that was used to make the bread for the Union Army came from Vermont, New Hampshire and Maine. Grains, and particularly organic grains, can again be part of the equation of products grown on the land in a new agricultural economy; one generated from a climate regime dramatically different from the one on which global agriculture is currently based.

**The Nature of the Farm Enterprise is Changing**

Who is considered a farmer and what is farming are two specific questions with very broad answers. Farming is not what it used to be, in any sense of the word. The demographics and economics of farming have changed dramatically. The Census of Agriculture began defining farming in 1850 and currently uses a definition created in 1974. It defines farming as, “... any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. Federal farm program payments are regarded as sales for the purpose of definitional eligibility.” With such a broad definition of what constitutes a farm, many key informants in the region agree that the variety of farm activities people engage in; from hobby farming and part-time farming to full scale agribusiness operations might not accurately reflect the economic sector; even one in a state of rapid change.

The demographics of farmers are changing as well. According to the USDA State Fact Sheets, in 1992, the average age of a farmer in any of the four states was 52.5 years and in 2002 they aged to 54 years. For principal farm operators, only 52 percent claim farming as their primary occupation. In all four states, the number of men involved in farms is decreasing as the number of women involved is increasing.
New people are also coming into farming. In general, they are no longer the children of farmers or agricultural school graduates. The “New” farmer is between 40-60 years old. Most are women. Most are entering their second occupation or profession and did not necessarily grow up on a farm. If they have on farm experience, it is likely they are diversifying their products or changing scale. A growing number are operating the smaller scale farms already referred to that are growing rapidly throughout the region.

This complicated picture is further exacerbated by the mixture of income sources used to keep the family farm alive. In many cases farm life is not supported completely by revenues from the farm operation. The results are revealed in the complex statistical profile provided below:

**Farm Income and Employment in the Northern Forest Region**

*County Data Aggregated by State and Compared to Region and USA*

*Source: 2002 US Census of Agriculture and State Reports*

<table>
<thead>
<tr>
<th>Item</th>
<th>NF Region</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maine</td>
<td>NH</td>
<td>NY</td>
<td>VT</td>
<td>Northern</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forest Region</td>
</tr>
<tr>
<td>Net cash farm income of operation</td>
<td>12,348</td>
<td>5,920</td>
<td>13,361</td>
<td>16,253</td>
<td>11,970</td>
</tr>
<tr>
<td>Average per farm (dollars)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net cash farm income of operation ($1,000)</td>
<td>56,287</td>
<td>5,866</td>
<td>136,489</td>
<td>67,339</td>
<td>267,981</td>
</tr>
<tr>
<td>Net cash farm income of operation (farms)</td>
<td>3,842</td>
<td>864</td>
<td>8,858</td>
<td>3,622</td>
<td>17,186</td>
</tr>
<tr>
<td>Principal operator by days worked off farm - Any - 200 days or more</td>
<td>1,509</td>
<td>343</td>
<td>2,834</td>
<td>1,284</td>
<td>5,970</td>
</tr>
<tr>
<td>(number)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal operator by days worked off farm - Any (number)</td>
<td>2,271</td>
<td>540</td>
<td>4,291</td>
<td>1,934</td>
<td>9,036</td>
</tr>
<tr>
<td>Principal operator by primary occupation - Farming (number)</td>
<td>1,778</td>
<td>405</td>
<td>5,618</td>
<td>1,988</td>
<td>9,789</td>
</tr>
<tr>
<td>Principal operator by primary occupation - Other (number)</td>
<td>2,088</td>
<td>453</td>
<td>3,234</td>
<td>1,645</td>
<td>7,420</td>
</tr>
<tr>
<td>Total income from farm-related sources, gross before taxes and expenses ($1,000)</td>
<td>7,799</td>
<td>3,926</td>
<td>24,989</td>
<td>12,570</td>
<td>49,284</td>
</tr>
<tr>
<td>Total income from farm-related sources, gross before taxes and expenses (farms)</td>
<td>1,024</td>
<td>201</td>
<td>3,051</td>
<td>1,230</td>
<td>5,506</td>
</tr>
</tbody>
</table>
Except for the largest scale operations, few Northern Forest farmers are fully dependent upon farm income for their entire livelihood. This is also the case throughout the United States. Many have, for various reasons, one or more dependents that bring home income and benefits from off farm employment. Some may have always had a member of the household work off the farm to provide health or retirement benefits. Some want to become full time farmers, but have yet to move the business into a stage of profitability returning a stable revenue stream to support benefits and income.

The farm enterprise is also changing. Similar to the sustainable, 19th century model where product diversification were common, many of the new farm enterprises embrace the local foods movement, diversified their farm product, added secondary processing and direct market their products. They take advantage of the fact that the Northeast, is only second to California in the percentage of direct marketed products. Farm product diversification is another emerging trend in the Northern Forest where the following brief sampling of farm products is noted:

- Equine
- Hobby farmettes
- Grapes & Vineyards
- Agritourism & Agritainment
- Wind Farms
- Methane/Cogeneration for livestock bedding
- Non Food: biodiesel: soy oil and corn
- Composting
- Convenience: Processing; sliced apples and other products ...farm to school and other institutions
- Farm to restaurant collaborative
- Aquaculture to herb hydroponics closed cycle
- Organic Grains, including Wheat
If the nature of farming is changing in the Northern Forest, no one agricultural sector is affected by change than dairy farming. Dairy farming is the number one agricultural activity in New York and Vermont and the second most important agricultural activity in New Hampshire and Maine. Hood, Dean, St. Albans, Oakhurst, Houlton Dairy, Cabot and Agrimark are all important partners in the dairy business, but are limited in their ability to improve prices paid to farmers. Almost all the milk is exported out of the Northern Forest Region to the metropolitan areas of the Northeast and as milk protein around the world.

Commodity milk from the Northern Forest Region is now competing in a world wide market. In the near future, China intends to enter the milk market with 6,000-10,000 head herds. Notwithstanding the potential concerns about safety of Chinese products, supersized Chinese dairies will impact trade in the next twenty years. Northern Forest farmers are already squeezed to a small profit margin by the traditional system of milk pricing. Dairy farm limited profitability promotes the trends toward consolidation, the growing fields of organic milk and value added that are underway.

In New York, the new model is giant dairies and less of the smaller farms. Adirondack Farm in Peru, New York is an extremely profitable corporation with 1,400 head managing 2,400 acres. They raise all their own animal replacements, forage and are known in New York for their good environmental practices. Adirondack Farm’s milk goes to Agrimark and Cabot and they are able to produce a large volume by spreading their fixed costs over many units. The alternative model is value added, vertically integrated, where, for example artisan cheese is sold for $18.00 per pound as compared to wholesale milk at $180/hundred weight.

Northern Forest farms have advantages and disadvantages. They are good at growing forage, corn silage and have a surplus of water. Farming is a business and must continue to review its business plan on a periodic basis and evaluate its operations,
including expansion or diversification. The status of external conditions, such as the Farm Bill, milk pricing and fuel prices have an amplifying impact on commodity milk price and hence on the Northern Forest’s economy, farmland and farmers.

**Agritourism**

Local agriculture continues to expand its role as one of a variety of venues in the tourism and entertainment amenities of interest to an expanding visitor base in the Northern Forest Region. The connection between food and farmer sparks increased interest in farm tours, market stands, hay rides, petting zoos, working vacations and the like. Scenic Byway trails between agri-enterprises, such as cheese and wine trails, ski and food destinations are becoming more and more attractive.

The Brookings Report for Maine in 2006 highlighted Maine’s trademark as its beauty and agricultural communities are considering ways to incorporate agritourism into their strategies. Tourism and community officials increasingly incorporate local farming enterprises, farmers markets and farm stands into their regional guides, recognizing that visitors want to take advantage of these venues. New York State Ag and Markets and the Olympic Regional Development Authority promote an event in New York City each year called Winter Jam. This event makes visible to consumers agricultural products and winter activities and promotes the linkages between areas that are well known for sports and food. A partnership between N.Y.S. Department of Agriculture and Markets, Amtrak and New York-By-Rail magazine distributed an insert (featuring the Pride of New York branding) to riders on the New York-Montreal and Metro North train. This insert highlights opportunities to link recreation, food and tourism around New York that Amtrak riders can take advantage of. It included wineries, bed and breakfasts that featured New York grown products. Magazines and guides can also be distributed through the information centers on the interstates.

The bucolic landscape of farming defines the Northern Forest Region just as much as the forests do from the visitor perspective and there is concern that this landscape is not
destroyed through neglect of its economic needs. The region cannot afford to lose the cows nor the crops in the fields; the farmer’s markets or farm stands. They are a very strong tourist draw. An important bilateral process is to import tourists as farm products are exported. Tourists who are familiar with the Northern Forest Region are more likely to buy agricultural products as they return to the metropolitan areas to the south and recognize familiar geographic brands. Maple syrup, sharp cheddar cheese, and apples are all signature products of the region that visitors look for and provide nostalgic appeal of vacation memories. They can be used as leverage points for new and expanded product lines.

Source: Briana F. Holland
Section 6. Opportunities and Challenges

The most significant opportunity and challenge facing the Northern Forest Region today is to consider agriculture as one big system of connected actions and players from farm to fork. In this system everyone and every agency whose life (or jurisdiction) is touched by food in any way works in the same direction to build the agricultural economy on a strong foundation of a profitable land based farm operation. Furthermore, the region has learned the painful and hard way, many times over, the short sightedness of relying on sole industries as the primary basis of its major economic drivers. This is also true of an agricultural economy highly dependent upon a single wholesale commodity: milk. There is stability in diversification into a wide range of agricultural products so as to avoid becoming a potential target for economic devastation for households and destabilization of the land base. A Northern Forest Regional Food System based upon a diversified agricultural land base can avoid being a food pyramid that becomes a house of cards in the long term.

The agricultural base of the Northern Forest can be further strengthened by envisioning this system as open and cooperative, working together towards similar goals. This approach called a *Value Chain* was coined by the Value Chains Partnership (VCP) housed at Iowa State University and is defined as, “...a string of companies or collaborating players who work together to satisfy market demands for specific products or services.”
Considering the entire food system as a multi scale value chain, with partners and players in both the private and public sectors, open and receptive to each other’s need for profitability and success across all food and non food sectors, is an opportunity and challenge for the region. As the following specific issues, opportunities and challenges unfold, it is important to consider them in this context. They are part of a closed system and integrated network. What happens to one, directly or indirectly influences the other.

This section begins with a reference list of organizations referred to in Section 4 and their hierarchy of affiliation. It then goes on to look at the issues, opportunities and challenges facing the agribusiness operation from inputs to outputs and the sequence of activities to generate and move farm products to market. These include:

- **Consideration of Inputs**
- **Investing in Technical Assistance and Support Networks**
- **Access to Capital**
- **Machinery, Equipment and Services**
- **Land Preservation, Planning and Investment**
• **Expanding Markets in the Neighborhood, Downstate, in the Northeast and Abroad**

Throughout this section and the report, agricultural agencies are referenced. The following table gives a relative context to their affiliation:

### Primer of Agriculture-Related Agencies (A Representative Sample)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Acronym</th>
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<tbody>
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<td><strong>United States Agency: Department of Agriculture:</strong></td>
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<tr>
<td>Census of Agriculture</td>
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<tr>
<td>Economic Research Service</td>
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<tr>
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<td>Farm Service Agency</td>
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<td>Foreign Agriculture Service: Market Access Program</td>
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<td>Service Corp of Retired Executives</td>
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<tr>
<td>Small Business Development Centers</td>
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<td><strong>Multi Regional:</strong></td>
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<tr>
<td>Northeast Sustainable Agriculture Working Group</td>
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<td>Farm Bureau-state, county</td>
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<td>Departments of Agriculture and Markets in Each State with regional or district offices</td>
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<td>Land Grant Colleges and Universities</td>
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<td>Cooperative Extension (Can be affiliated with Land Grant Institutions)</td>
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<td>Local Agricultural Commissions</td>
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<td>Quasi-Public Bodies/Public Benefit Corporations:</td>
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<tr>
<td>Economic Development Councils or Commissions</td>
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<td><strong>Non-Governmental Agencies, Non Profits and Networks:</strong></td>
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<td>FarmLink is an example</td>
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<tr>
<td>Trade Associations &amp; Affiliated Groups:</td>
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<td>Organic Farmers Associations-National and Chapters in states</td>
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<td>Product Associations:</td>
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<td>Maine Blueberry Commission</td>
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<td>Land Trusts or Farmland Preservation Organizations: Statewide or Regional</td>
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<tr>
<td>Maine Farms for the Future</td>
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<td>Women’s Agricultural Networks</td>
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<tr>
<td>Community Supported Agriculture</td>
<td>CSA</td>
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</tbody>
</table>
**Investing in Farmers, Farming and Farms**

**A. Consideration of Inputs**

**Commodity Potatoes**

Maine’s potato farmers have many challenges. It is a long distance to market and there are limited options and competition for processing potatoes. The commodity sale process involves negotiating a sale price for the crop ahead of planting, regardless of what kind of season it will be. Contractors require a three year rotation on potatoes, forcing the farmer to plant 900 acres to annually raise 300 acres of potatoes. The rotation crop for potatoes is broccoli which is in great demand. Inputs are increasing due to fuel and fertilizer costs, but sale prices are not. This squeezes the profit margin. Economies of scale to maintain profitability are being achieved through consolidation of mid sized farms into larger aggregations.

Smith Farm in Presque Isle, Maine meets the demand of the wholesale market for potatoes and broccoli through an adapted system of inputs. The owners lease their land from other potato growers and irrigate to reduce crop risk. Another farm in Florida assures continue production in winter. They are growing products processed and packaged on site. A clean and efficient, high quality system with consumer preferences for safety in mind delivers a fresh vegetable to a growing market regardless of the season.

**Fuel Costs: An Obstacle and an Opportunity**

Thinking too small or thinking too big can be problematic. The localvore movement makes sub-regional interests think of fuel costs as being prohibitive to move goods past 30 miles. On the other hand, entrepreneurs are thinking of the head of lettuce coming from California or the bag of apples coming from Washington State and beating the cost of it traveling the remote distance. On one hand, 200 miles is considered too far with energy prices, but is it really just an issue of scale, marketing and competitive pricing?
A grocery store or wholesaler does not really care where the product comes from if it satisfies consumer demand at a comparable price. If a local product is priced at a few cents less than the California, Washington or off continent price, Northern Forest farmer can supply the demand at a price just below those charged by others, deliver the same produce for a lower price and make a profit.

**Energy**

Rising energy prices are a problem for every farmer, more so for the far distant farmers in northern Maine because transportation costs are higher.

Dairy farmers throughout the region are experimenting with waste to energy strategies that generate methane from manure. There is energy derived from the process, but to many an equally important byproduct is the useful bedding for livestock. With the outmigration of local sawmills to Canada, shavings and sawdust prices have increased dramatically, forcing farmers to look elsewhere for a bedding alternative. The waste to methane generation byproduct adds great value as a low cost input for dairy operations.

Maine Rural Partners is working with the State of Maine energy auditors to improve their ability to deliver technical assistance to Maine farmers, so that energy costs of farming are audited, then enrolled in conservation programs accordingly. Farms may be left out of many energy conservation programs run by utility companies, simply because auditors are unfamiliar with farm operations and methods of conservation that might apply to agriculture.

**Waste Stream Composting**

Secondary processors have the potential to take the waste products from their operations and recycle their organic materials into compost or utilize them as feed for livestock. For example, Champlain Valley Specialties, take their apple cores and either compost or distribute them for buffalo and pig feed. Nothing is sent to the landfill.
**Labor**

Farmers in more northern and rural parts of the region have a harder time recruiting and retaining employees due in part to the stigma attached to farm work. Yet farm work is diverse, requires multiple skill levels and can require a degree in animal science. While work is not easy, housing can be included and starting salaries begin at between $10.00 and $15.00/hour and increase significantly depending upon skill level and responsibility. Due to labor shortages, farmers are relying to a greater extent of immigrant labor because their needs are not being met locally.

Management of farm operations and secondary processing facilities is in short supply. In Maine it is reported that when new hydroponic tomato operation was are enticed to locate in northern Maine from Connecticut, the expertise needed to operate the 20 acre greenhouse operation needed to relocate as well. On the job training and other programs to improve the management skill sets are needed to accompany efforts to improve the value chain and to develop secondary processing. These are in addition to supporting expansion of production at the farm operation level by new and old farmers.

**B. Investing in Technical Assistance and Support Networks**

**Networks**

There are many organizations advocating and providing services to agriculture from the local to the national level. They range from traditional providers such as land grant institutions and Extension services, to public services such as State Departments of Agriculture and Markets, Natural Resource Conservation Service, Resource Conservation and Development Districts, National Resource Conservation Service Offices, and Farm Bureaus at the State and County levels. Others include, but are not limited to, the Farm Viability and New Farmer programs, Women’s Agricultural Networks, Land Trusts, Center for Dairy Excellence, FarmNET, Small Business Development Centers, and SCORE. These are supplemented by multiple trade, commodity associations, women farmers’ networks, regional sustainable agriculture and farmland preservation groups. The list is extensive and growing. The multitude and
plentiful nature of agricultural interests can be illustrated by a visit to any State Agriculture website to view the possible links to other resources.

There are multiple organizations at regional, state and multi-regional levels, stepping up to the plate to assist farmers, both old and new with almost every aspect of their farming operations. The hardest part is figuring out as a consumer of these services, where to jump in and which ones are suitable and appropriate.

**Knowledge Generation and Transfer**

So much is happening so quickly: manpower is professionalizing rapidly, input and output processes are changing so quickly if it difficult for information to move out to the farm and the farming venture at a pace that keeps up with changes. How can any one agency keep up on what everyone else is doing? This can be a problem without a unified referral system. In New York, there is a protocol where an inquiry is first referred to the local Cooperative Extension. However, throughout the region with so many agencies and organizations, it is difficult to determine who knowledge is generated and transferred. The information landscape can also be confusing. The proliferation of information available on the internet is astounding. It is difficult to know how to sort through it all. People seeking information tend to reach out to the trade journals, trade organizations, Extension and search the internet. Traditional technical assistance providers were set up to provide very specific kinds of assistance to dairy farmers and come from training and policy rooted in commodity farming. Now the interest has shifted to value added and specialty crops and livestock. There is concern whether they have the capacity, interest and policy directive to change with the times.

Creating a centralized method of disseminating and organizing information-keeping it up to date would be helpful to knowledge seekers in the region. A system, such as the American Heart Association or the National Alzheimer’s Association backtracks to each state, regional district or chapter so that local connections between inquirers and appropriate and suitable technical assistance or knowledge disseminators are made.
Such a system can be functionally separate for various kinds of information or linked to provide added usefulness to the knowledge seeker. For example, New York is in the process of setting up an “agritourism” database. The State will provide a service by listing individual producers of farm products. This will be similar to one already established for wineries. New Hampshire has a statewide, electronic database linking producers and consumers called the New Hampshire Virtual Farmers Market. A linked regional system for technical, producer and program information, such as an electronic, Who’s Who in agriculture would be a helpful too.

Trade Associations take knowledge generation and transfer to another level entirely. The Maine Wild Blueberry Commission represents the outcome of a group of farms who partnered and sponsored research. The discovery of the role that blueberries play in providing antioxidants to human health and nutrition was a consequence of their association. The collaboration also generated research on irrigation. The results paid off with increased acreage yields from 2,000 pounds to 12,000 by the judicious use of irrigation systems. The Sunrise County Wild Blueberry Association is a big proponent of the fresh frozen market and sharing knowledge amongst small producers enables the development of methods to establish packaging and markets where everyone in the association benefits.

Assisting the changing face of farming

A dramatically different type of farmer may require an updated approach to knowledge transfer. Using the old paradigms just may not work. There is also a perception that technical assistance providers believe that any farmer who doesn't work 100% on the farm or have a large farm is a “hobby” farmer. This term is used to denote less than a full commitment to farming and may influence the interest or commitment to helping such a farmer with developing a profitable business. Farm technical assistance providers may not look at small farm enterprises as small business or microenterprise start ups and this may be a barrier to good technical assistance provision.
According to the Northeast Sustainable Agriculture Working Group (NESAWG), as the number of small and large farms increase, the result is a loss of the midsize farms. Many of the midsize farms are family farms with a long history tied to the land. Stabilizing and mitigating the loss of this land group is sometimes referred to as, “Agriculture of the Middle” and includes farms that have gross annual sales between $50,000 and $500,000. Renewing this particular sector of the agricultural economy is a concern as program focus on both the smaller and larger segments.

Agribusiness as Microenterprise Farming Clusters
Throughout the Northern Forest Region, efforts are underway to capitalize on the growing number of small entrepreneurial farmers. Working with them as if they are micro-enterprises that require technical assistance to grow and expand, the strategy employed by numerous organizations is to “grow them out of” wholesale commodity products into higher value added product lines with a targeted market directed at the major and minor metropolitan areas to the south. By providing them with business planning, including distribution and marketing technical assistance, the goal is to create a viable economic sector catering to the local foods consumer preferences. For example, Jefferson County Dairy Profit Teams focus on productivity and profitability. Each state invests grants and loans in new farmers, but farming is capital intensive and risky. Risk sharing and pooling can deepen the funds available.

Each of the states in the region have at least one farm viability program that provides essential basic services to new (and old) farmers that begins with business planning. The model for most programs in Vermont, Maine and New Hampshire is the Commonwealth of Massachusetts’ Farm Viability Enhancement Program which “helps farmers keep their families on the land and keep sprawl from consuming their farms. It involves strengthening the business skills of farmers, combined with diversification and environmental integrity.” In Maine, the Farms for the Future program provides technical assistance to develop a business plan, partial grants up to $25,000 to implement the business plan, a non development covenant with an eight year term or a low interest loan option. Working case by case with farmers to improve the viability of the farm
operation is an effective way to increase management capacity and to add value to farm products. The Maine Farms for the Future program targets farms that may be marginally viable or part time operations. According to the Census of Agriculture, many small farms gross under $10,000 per year. Growing small and marginal farms to increase revenues into the $100,000-$250,000 range moves a farm operation from a part time to full time business.

In the Town of Windham, Maine, the Parson Smith Farm Project, spearheaded by the Threshold Resource Conservation and Development District takes agricultural business incubators to another level. In this unusual project, a group of organizations will purchase a sixty acre farm property and establish a training facility for new farmers by providing access to land and technical assistance. The property is also envisioned to have agritoursim and recreational facilities to extend its appeal to visitors. Value added agricultural training will be targeted towards small scale farming operations including niche livestock (goat meat production), dairy for specialty cheeses and yogurts, farm stand and Community Supported Agriculture vegetable and fruit production, greenhouse technology, herbs, ornamentals and cut flowers. The Vermont Technical College also utilizes farm business incubators as a training ground by providing land and training for value added development. This marriage of economic development principles and farming in new and exciting ways should be expanded throughout the region.

C. Access to Capital

Debt and Access to Credit

Farmers in general are averse to credit and taking on debt. Many moderate size dairy farms went bankrupt due to the large amount of debt for machinery and equipment they were carrying. The lesson learned was to conduct management and business planning early to avoid problems later on. New farmers need business planning prior to acquiring debt. Capital is needed to acquire land, processing capacity, equipment, buildings and livestock. Infrastructure in many cases needs to be rebuilt or is lacking. Breaking into markets is capital intensive. Better business planning will encourage creditors to lend and make for wiser decisions for both lender and business owner.
There are various new farmer technical assistance programs in the states that are linking small capital and program funding with business planning and securing the grants with temporary or permanent conservation easements (see below). In New Hampshire, the New Hampshire Viability Task Force recommends that implementation grants are needed to link technical assistance for business planning to farm land protection. Governmental assistance from the New Hampshire Legislature is needed to provide the resources to make this happen. In Maine, the Maine Community Foundation is interested in participating in a way that could help new and beginning farmers by providing affordable financing. These do not supplant large capital credit needs of new farmers. This is still a gap.

Conservation easements play a role in financing farming. Selling development rights can infuse cash into an operation and provide a sizable amount of capital. Often, a farmer will pay down debt at this time because their collateral is reduced by the sale of the development rights. This may stabilize their balance sheet. Often residual capital is used to reinvest in livestock and buildings. Land is also purchased in “like kind” exchanges to avoid capital gains taxes. The timing of transactions also takes place when one generation of farmer is ready to retire and the transition is being made to another generation or a new farmer, thus making it affordable and feasible to both parties.

Secondary processing and distribution facilities reported difficult experiences accessing public financing. Money appears to exist in various state, federal and local programs, but policies, such as job generation per amount of investment cannot be met. Most farmers and small scale agribusinesses are trying to achieve efficiencies in operation and keep labor costs down. Their business planning is not consistent with the job generation/unit of investment model. Agribusinesses are looking to invest money in machinery and equipment, warehousing and processing facilities; not on labor.
Several problems are cited by key informants. Venture capital is reported as being impossible to access. As a result, it is difficult getting into business and observations include how little help there is “out there.” Several of the most successful entrepreneurs in the region relied entirely on their own resources to get where they are today. They report little support and assistance when and how they needed it from public sources.

Northeast SARE and its parent, SARE (stands for Sustainable Agriculture Research and Education) a competitive grants program of the USDA is the closest thing the region has to a venture capital fund for agriculture, funding research and cutting edge projects. (It is one of the original funders of the Maine Farms for the Future program) Public funding processes tend to take longer than the time businesses have to take advantage of important business opportunities. The public accounting process does not coincide with the environment in which businesses operate.

Utilizing county and regional public benefit corporations as revolving loan fund authorities to pool and distribute funds provided by the federal and state governments could be a mechanism to expedite funding. In many regions, these authorities already have the experience managing loan funds. Broadening regulations and streamlining procedures of existing loan pools operated at the regional, state and local level, to accommodate the special circumstances and needs of agribusiness, in addition to creating new funding opportunities would be helpful. In New York, a 50 million dollar Agricultural Economic Development program is on the drawing board, but throughout the region there is concern due to the downturn in the economy that public and private investment will suffer. This is problematic at a time of rising food prices and food shortages placing all the more emphasis and demand on agriculture and agribusiness.

**Commercial Lending**

Commercial lenders, such as MBT, HSBC and Key Bank do not provide farm credit. This leaves few commercial lenders left, except at the regional level available to support investment in agribusiness. Regional banks are risk adverse, but the farm sector and local economic development interests could do a better job at educating loan officers about agricultural activities in the region and encourage risk taking with the agricultural
sector. Farm Service Agency and Rural Development are beginning to be the only region wide sources of farm credit with the exception of few state and privately supported programs that vary by state in the region.

**D. Machinery, Equipment and Services**

**Farm services**

Farm support services, such as machinery and equipment dealerships, large animal veterinarians, grain and hay suppliers are in short supply. In Vermont, close to the Canadian border, there is sufficient critical mass of farmers on both sides of the border to support a limited service industry. Elsewhere, farm support services are disappearing, in demand and in short supply. This is a growing problem.

**Water Storage and Irrigation**

Taking their cue from the summer droughts that signal the change in climate, many farmers are challenged by water shortages and need to store water for dry periods. In Maine, a bond was passed that provides low interest loans to develop water sources, ponds and impoundments and to draw and store water for crop irrigation. There is also cost sharing through USDA through other programs. Long sighted farmers are considering ways to store and release water so that they are not disabled by summer droughts that are foreseen by climate change scientists. Irrigation technology makes farmers more efficient and reduces production risks.

**E. Land Preservation, Planning and Investment**

Land is an integral part of agriculture’s infrastructure. Agricultural land protection includes soil protection, land conservation, right to farm laws, purchase of development rights, appropriate zoning, and other supportive activities that enable the infrastructure of land to be maintained. Land policy across the Northern Forest Region varies considerably. In New York, agricultural land protection includes a comprehensive list of protections, both regulatory and voluntary, coupled with incentive grant programs. In
New Hampshire, land protection is linked to farm viability so that technical assistance coupled with land protection can assure that infrastructure is maintained.

The condition of soil resources is the source of concern. Agricultural soils require protection because without them, agriculture is lost and the local food system may collapse.

Land resources are slowly dwindling. The dramatic increase in the number of farms smaller than 20 acres represents fragmentation of the agricultural landscape. The 2007 Census of Agriculture, which is pending, will reveal an even greater number of small farms. This is a problem in the dairy and potato sectors because a critical mass of acreage is necessary to work the land efficiently for a volume of production and for the size of equipment. Fields need to be 100-150 acres.

While the number of farms is increasing, the conversion of prime agricultural lands to housing and other forms of development is also increasing, especially around cities and towns. Competing uses for farmland for estate properties, second home development and exurban subdivisions is happening across the four states. In Maine, it was noted that as farmland becomes fragmented, it becomes harder to use for dairy and potatoes. Consequently, smaller, marginal lands go out of satellite production for these farm products. Eventually, the parcels can get sold for development instead of leased to other farmers. As such they are very vulnerable for conversion.

A continuing challenge is to preserve farmers’ equity in their farm, without destroying the farmers’ ability to complete intergenerational transfers of land. Farmland Protection Programs can help ease the financial burden by providing much needed cash, maintain farmland viability, and, at the same time, protect farmland for generations to come through conservation easements. Infusion of capital to keep existing programs moving forward is needed. Conservation easements can provide farmers with the same relief that they provide in the timber industry; as they reduce the carrying costs of farmers.
Farmers would prefer to lease a majority of their working lands and own only a third. Long term leases are hard to come by since a year or two is not sufficient for the investment needed by a farmer and a thirty year lease might be appropriate for an orchard to be development. The higher the ownership of the land asset, the higher the development pressures for land fragmentation and the lower the farmer’s profit.

Conservation easements can be useful, but need to be regulated and monitored. There are concerns about their durability and differing points of view on whether they should be durable. Land Trusts throughout the region continue to gain momentum and acres of conserved farms continue to grow on their balance sheets. For example, the Vermont Land Trust conserved over 350 operating farms and over 110,000 acres in the past twenty-five years. This is particularly so where property assessments are on the rise. On the other hand, there is always the chance that real estate values and development pressure from outside interests dramatically drive up the value of land and persuade even the staunchest property owner to sell their property in lieu of granting a conservation easement.

**Permissible Uses**

Designing Local Land Use ordinances so that value added agriculture is treated as permissible uses and encouraged is something that most local governments are not aware of until a variance request is made. Creating an awareness by local government that their zoning ordinance can deter a farm from profitability and have unintended consequences, is necessary in agricultural areas. Communities can review and amend their zoning laws to allow for direct marketing facilities, on farm tourism, farm stands, etc. The American Farmland Trust is an excellent resource for best practices and technical assistance for communities to obtain model language friendly to farming for their local land use laws. Many towns and villages are developing awareness of the role of farmland in their communities through the farm to fork programs and consumer awareness. Encouraging agriculture within their borders is becoming popular local policy and efforts are strengthening at the local level.
Members of the community can also preserve farmland through improved understanding of the nature of farming within their borders. The Glynwood Center of Cold Spring, New York developed the Keep Farming ® Program to help communities assess their personal and community values surrounding economics, local foods, aesthetics and natural resources. From an assessment and facilitated group process, self designed strategies are cultivated and implemented to foster a partnership between farmers and other stakeholders. The State of New Hampshire recently adopted legislation enabling local governments to create local agricultural commissions. Handfuls were created at the 2008 Town Meetings and will create non regulatory publically appointed groups that promote and give voice to local agriculture. Similarly, The River Valley Growth Council in Oxford County, Maine created a ten town Agricultural Commission to prepare an agricultural economic development strategy for its region.

**Acquiring Farmland**

The new generation of farmers is middle aged and increasingly dominated by women and the existing farmer is aging; reaching retirement age. Land is becoming very expensive and access to land is more difficult. Transitioning land to new farmers is a critical issue in the Northern Forest Region. Programs exist to match those looking for land with those wanting to sell. These services exist in all four states, including Land Link Vermont and at the regional level, New England LandLink. According to the Northeast Sustainable Agriculture Working Group, 70% of U.S. farmland will change hands in the next twenty years. While listing land is a good start, succession planning, farm viability assistance, and conservation planning are all important components in a comprehensive program to address the turnover of agricultural lands soon to come.
F. Expanding Markets in the Neighborhood, Downstate, In the Northeast and Abroad

Farmers and their intermediaries need to consider the preferences and desires of the various customers for their farm products. Capturing a greater share of the local, regional, downstate, Northeast and export market is an important goal for Northern Forest agribusinesses. To do so, farm products must reflect current trends for variety, condition, packaging, and processing. They must also be branded to address the local foods and food security concerns of the consumer markets. Furthermore, they must meet the demands of the retail and wholesale suppliers, distributors, institutions and other outlets who act as the interface with the consumer.

Local secondary processing enables producers and the regional economy to retain more value and wealth as compared to just raw production so wherever possible value added processing is desirable and a win-win opportunity for the consumer and the producer. Investments need to be made in season extenders, such as passive solar greenhouses and hydroponics where winter greens, tomatoes and other vegetables for the table can be produced.

What to Produce?

Individual retail customers, wholesale groceries stores, restaurants, institutions of all shapes and sizes are all part of the farm to fork, slow food movement around the corner and miles away. They exist in single units, collaboratives and combinations. Out of region demand for the following is noted by key informants:

- Carrots, root crops
- Apples (Empire, Macintosh, Honeycrisp), Processed Apples, Hard Cider and Apple Cider
- Greenhouse Line: Grape Tomatoes, Seedless Cucumbers
- Organic milk
- Goat milk and goat milk products
- Lamb and chevon- especially Kosher & Halal
- Grass fed livestock (beef), GMO free
- Organic grains
• Grains-organic and non-organic (flax, oil seeds)
• Maple Syrup
• Season Extenders: Winter Greens through passive solar greenhouses
• Berries of all kinds: fresh, fresh pack frozen
• Specialty and heirloom potatoes
• Vodka
• Onions
• Winter Squash
• Eggs
• Organics of any kind

Buy Local
Investing in the primary and secondary agribusinesses in the Northern Forest Region might slow, and perhaps stop the flow of wealth from the region in the form of dollars paid to companies such as SYSCO, US Foods and other private companies by restaurants, institutions and other consumers. These companies provide products at huge markups and local businesses pay exorbitant prices for products that have every possibility of being produced locally at lower prices with ample profit margins. Local competition and distribution opportunities for agricultural and secondary processed food products could fill a market opportunity now filled by outside of region businesses. Restaurants have made significant names for themselves by promoting their menus as adventures in local eating.

Creating indoor year round farmer’s markets can serve as tourist destinations and as food source for local population. They serve as incubators for the smallest new farmer producers and serve as magnets for new value added producers. Retrofitting historic buildings to infill and recycle space also creates a demand for new markets at the local level providing a local stimulus and tourist attraction.

Secondary and Value Added Processing
The Northern Forest Region’s proximity to major metropolitan markets provides a competitive advantage to the four states in terms of economic development policy to add jobs and capital investment in the area of food processing, distribution and
transportation hubs. With high fuel costs, branding opportunities and proximity to markets, teaming up the State Economic Development Agencies and the Agricultural and Markets Departments to jointly promote, facilitate and invest in the development and location of small, medium and large food processing facilities in the region makes sense.

New York State adopted an “Upstate” economic development policy to promote food processing as an area of growth. The State’s rationale is based upon clustering theory combined with the logic of locating food processing near concentrated Northeast consumer populations. Assistance with location and financing will be provided to companies interested in building processing plants proximate to agricultural producers and transportation linkages. The results are paying off.

Dairy is the largest agricultural sector and a priority investment area for New York but is also of significant importance to Vermont, New Hampshire and Maine. New York State is reinvesting and making new investments in secondary dairy processing. For example, Jefferson County invested in a plant for the Great Lakes Cheese Company. Fulton County and Fage Yogurt Company of Athens, Greece, invested 27 million dollars in a new plant located in Johnstown. Fulton County recently built a one million square foot distribution facility for Euphrates Feta Cheese in Johnstown. The owner of Euphrates was recently quoted in a trade journal stating that, “…the quality of milk in the United States is among the best in the world…” Business is booming and as a result, the owner of Euphrates recently bought out a Kraft yogurt company and intends to make a Greek style yogurt for the US market at its South Edmenston, New York facility. Johnstown’s success is in part due to its wastewater facility accommodating the needs of secondary dairy processors and an aggressive, proactive economic development strategy.

Creating shovel ready agricultural industrial sites is one way to be prepared for the possibility relocation or expansion of secondary processing facilities that wish to be located closer to their markets. Another approach that Jefferson County Agricultural
Economic Development Corporation used is a virtual industrial park covering the entire county so that an agribusiness could locate anywhere and benefit from financial incentives available from the State and County.

In Maine, there is a need for secondary processing closer to the field and newer forms of processing, such as fresh freezing of blueberries and fresh pack processing of potatoes. In Vermont, there is a need for incubator sites for developing new products and facilities for small start ups to package and process products for market. Across the region development of shared commercial kitchen operations are underway for value added processing of products. Addressing these needs for new technologies and facilities in secondary processing provide value and profitability to the farm products generated within the region.

**Livestock Processing**

The demand for grass fed meat is an expanding market throughout the Northeast and while the Northern Forest Region might be able to produce grass fed, organic, natural and non organic livestock in response to demand, a bottleneck in livestock processing prevents meat from reaching the marketplace. Wolfe’s Neck Pineland Farms Natural Meats Inc. is raised in Maine, New York and Vermont, transported and slaughtered in Pennsylvania, finished in Maine, and distributed to Hannaford food stores and other stores. This beef makes a huge circuit!

There is also a growing market for Kosher and Halal processed products, especially in the Northeast. There are Kosher and Halal goat and lamb processing plants in Brooklyn and Utica, and standard meat processing facilities in Pennsylvania, but the demand is outstripping production. Processing and demand for GMO free, Kosher, Halal, free range, organically fed and processed chicken, goat, and lamb is significant and the facilities for processing are extremely limited.
Throughout the region, and particularly in New Hampshire, the capacity to process livestock is being lost. Many questions remain unanswered, but studies were conducted. Many agree that the market demand is pronounced, so why is the bottleneck still there? Limited, in region processing is done in Vermont and Maine. It is difficult to find people who want to go into this line of business and skilled labor.

One possible cause may be the Federal interstate commerce laws that do not allow for reciprocal inspections and the limited number of federal inspectors. According to one key informant, it is easier to bring meat in from a foreign country and ship from state to state than to produce meat in one state and ship it across state lines.

Animals to facilities or facilities to animals? State reciprocity to move animals across state lines or more federal inspectors? Are there methods to ensure that the interests of the farmer are protected when the animals leave their custody, including being sure that the meat returned to the farmer for a direct sale is theirs? Northeast Livestock Processing Service Company of New York sponsored by the Cooperative Extension of Saratoga and Washington Counties Agricultural Economic Development Program, provides an intermediary between the farmer and the slaughtering facility to protect the interest of the farmer. They help coordinate group transportation to slaughter and they assure that the farmer gets back the meat from the animal they sent (Chain of custody assured). A cooperative system to create a portable livestock processing system for the region would be profitable for the grass fed livestock sector. The Small and Beginning Farmers of New Hampshire created a portable poultry processing facility to accommodate the 1,000 birds/day/person/year USDA requirements so that members could market their meat to retail outlets. They retrofitted a horse trailer into mobile poultry processing facility and rent it for $40/day for members.

**Branding**

The branding of local products can reach a consumer audience in the major cities, who, at this point are inclined to buy local. The development of fresh and processed local
products, possess a competitive psychological and economic advantage. From a psychological perspective, New York City is one of the best markets in the world. People are in synch with the idea of local food and its health benefits. The opportunities for local farmers who are smart about what they grow are enormous. The challenge is managing the cost of doing business.

Delivery costs to a Northeast major metropolitan areas are ten times less if grown in the East as compared to elsewhere due to fuel costs. The Glynwood Center of Cold Spring, New York is completing a study of the cost of doing business in the Hudson Valley as compared to Southeast Pennsylvania and the Napa Valley of California. States that are able to take advantage of this opportunity on the branding and development of their products are certain to succeed. As a result, it is an excellent time to expand well known labels, such as Cabot, Macadam or species, Macintosh, Cortland, Cheddar, Blueberries. While organic is an important and growing market share, “local”, natural and home grown are equally important to promote.

This is also true of the institutional market. Jerry Dygert, Owner of Champlain Valley Specialties, in Keeseville, New York, sells packaged and sliced apples (among other products) to school systems in New York State, New York City (1,400 schools), Florida, Virginia, West Virginia, and New England. His apples are branded as New England, Virginia and New York grown apples. He indicates that districts prefer to buy apples from within their respective states as much as possible, and then defer to New York State apples as their second choice.

Vermont sets the standard for cache of name, embodying the image of clean, wholesome and quality. Branding for Vermont is relatively simple and many times leading edge. Trade associations, such as the Vermont Cheese Council also play in branding by focusing attention on the region. Their efforts at bringing attention to Vermont cheeses and the resulting 40 awards and 14 first places of artisanal cheeses speaks for itself to consumers and goes a long way in marketing efforts. Novel
collaborations between the Vermont Agency of Agriculture, Vermont Ski Areas Association, Vermont Cheese Council, Wood and Beef Industries created the Vermont SKIBURGER, a branded meal, grown and processed in Vermont, complete with a made in Vermont toothpick.

For Maine and New Hampshire, the challenge is bridging the recreational connection, which is very strong to the food connection. In New York, it is disassociating with the “Big Apple” and associating with upstate and the “green” side of the “Apple.”

It was also suggested that there be some exploration of fair trade branding to marketing to get more value for the local and regional products back to the producers. New England Family Dairy Farms, a cooperative organized in New Hampshire is exploring this possibility for New England produced milk. Another option Vermont is exploring is whether consumers in New York, Rhode Island and Boston might pay more for their milk if they knew proceeds were going back to the farmer. A recent study sponsored by the State of Vermont revealed that a good segment of consumers are willing to pay $.60 more per gallon if this were to happen.

Certified organic products are also a form of branding that appreciates in value each year. The Northeast Organic Farming Association of Vermont reports a 16 and 20 percent increase the past two years in its certification program with five hundred farms and processors currently enrolled. Trends in each state are similar with respect to the growing demand and development of organic products leading to great potential for branding in this area. Deep Root Organic Cooperative has achieved recognition for their brand in the Northeast riding the coattails of this trend.

**Working with the Retail Grocery Chains and Investing in the Creation and Packaging of Branded “Product Lines”**

Mainstream consumers will continue to shop the commercial grocery stores where they seek convenience for the best price. Throughout all the chains, local, natural and
organic food sectors are growing rapidly in response to consumer demand. Convenience, competitive price and local sourcing are in demand by the growing baby boomer—an aging population demographic. This is the focus of future food opportunities.

Commercial grocery stores are a culture and business world unto themselves. They work within limited space to unload trucks and their managers do not want to deal with a myriad of suppliers. Successful distributors and intermediaries who have mastered the commercial grocery managers indicate that cultivating sales contracts with this segment take time and understanding the client. Grocery chains want a product line that is less expensive, just as reliable and convenient to unload, fresh and responsive to the consumer as the competitor. Within the Northern Forest are two locally owned commercial food grocery stores, Hannaford Foods (Maine) and Price Chopper (New York). With one million birds, Giroux Poultry of Chazy, New York is a major wholesaler of eggs that supply commercial grocery stores out of Clinton County. They clearly have learned the ropes to the satisfaction of wholesalers. The Office of Sustainability at University of New Hampshire report that conversations are beginning with Hannaford and Stop and Shop to determine their interest in connecting more directly to the local food system. Dialogue needs to ramp up and continue to strengthen and improve the connection between local food systems and the outlets.

Packing standards and production quality need to be consistent between farmers and a standardized for sales to remain consistent. Deep Root Organic Cooperative suggests that new growers and collaboratives of growers need to learn that every customer has different expectations and standards for quality. Packaging also has its advantages and pitfalls. The choice of rubber bands or twist ties can result in unanticipated inefficiencies or handling problems. Quality control is a critical aspect of developing a product line.

**Capturing Farm Bill Resources**

Northern Forest Sustainable Economy Initiative Agricultural Sector Analysis
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The Northeast receives a disproportionate share of nutrition-related Farm Bill funding due to the rural/urban demographic profile and urban population of the Boston/New York metropolitan regions. While the Western states may receive a larger share of the “on farm” subsidies, the East receives the nutrition dollars. Per capita shares may be equitable, but the Northeast population densities mean, bottom-line, more dollars flow Eastward for the 14 different nutrition programs (food stamps, school lunch programs, WIC, etc.). Enrollees in these programs buy food and represent another market share for Northern Forest agribusinesses. For example, in 1996, the use of debit cards by food stamp enrollees precipitated creation of a wireless device for processing enrollee payments at farmer’s markets. The Women, Infants, Children Program (WIC) provide enrollees with farmer’s market coupons with a cash value as well. In this way, Farm Bill nutrition dollars convert to farmer’s market cash payments that circulate in the local economy on a weekly basis.

The connection between healthy eating and lower income households is the focus of many social service programs. The New York City Department of Health promotes the expansion of fresh fruit and vegetables in lower income neighborhoods in New York City. The Kellogg Foundation has launched a major initiative, called Food and Society, calling for all populations to be considered in a future food system comprised of “healthy, green, fair and affordable.” Throughout the country and in each state, social service programs are connecting healthy lifestyles to food systems and nutrition programs. New approaches involving health, agriculture and social services represent opportunities for re-engineering the connection between producers and consumers. Falling under the heading of “farm to fork”, these programs are expanding rapidly.

In lower income neighborhoods in New York City, Macadam Cheese was persuaded to stock its products, an unusual move for this company. As a result, Farm Bill nutrition dollars contributed to the purchase of upstate, value added products. If more regional value added producers can be connected to outlets in lower income neighborhoods, then incremental progress on capturing Farm Bill nutrition dollars can add up to large
scale multiplier effects in the economy. Connecting Northern Forest agribusiness to these initiatives and riding on their coat-tails can build market share and capture greater sales. It is essential to secure greater amounts of these nutrition dollars in both the fresh and processed food sectors. If it is not the focus of a strategy, then these dollars will flow to other products and states.

Value Chain Intermediaries between Producers and Consumers

Throughout the Northern Forest Region, at various levels and intensities, investment is being made in intermediaries who bring together producers and consumers. Intermediaries include the aggregators, brokers and distributors who all play different functions in various situations and in various value chains. Efforts must be made to nurture and grow these intermediaries and to connect them to the minor and major market opportunities, including the growing markets in Boston and New York. Fledgling intermediaries incubate producers and help them learn to produce for new markets, learning to accommodate their farm products to new customers. They learn to standardize quality, produce on periodic schedules, collaborate to advertise, package and transport, negotiate fair prices and participate in the process in a cyclic manner. Markets are never fully secure, but until the collaboration can be supported by the revenue stream from the market share, the labor intensive broker role requires outside financial support.

Use of the internet and the web as well as other forms of intermediaries to direct market products and to link resources and organizations, consumers and producers is growing rapidly. Access via the internet allows local and regional consumers of various sizes to access food networks and purchase local products. At the smallest scale, North Country Farm Fresh Cooperative, Adirondack Harvest, Local Harvest, Vital Communities of the Upper Connecticut River Valley and Crown of Maine Cooperative are examples of small, regional linkages within the Northern Forest set up by Extension, or other collaboratives to serve as brokers between consumers and producers. Aggregators and distributors gather up smaller farms into critical mass to supply
products to market and can utilize a cooperative form of business or other business models. Many models exist at various scales. These groups and organizations of producers and value chains continue to sprout in a rather organic way around the region without a great deal of public financial support; prompted by interest or spark plugs and organized primarily by the non-profit or private sectors.

Another important role that brokers provide is to set up the transportation and delivery arrangements between producers and institutions, such as schools. Traditionally the system that institutions use relies on large national and international distribution systems that are largely external to the region and include surplus food distribution networks. These include Department of Education and Defense in the public realm for surplus foods. SYSCO and US Foods in the private sector are two examples of typical supplies or procured institutional foods. They make it easy for ordering and delivery. In order for institutions to make the switch in scale and consider procurement of local foods, ordering and delivery also needs to be convenient and within budget. The New Hampshire Farm to School Program coordinated by the University of New Hampshire Office of Sustainability, manages the institutional procurement process for a group of six to 24 small scale local food producers. Arranging the logistics of contract for the procurement of local foods, their transportation and delivery from point to point and troubleshooting between parties is a critical function. In this way, institutions are able to participate in the Farm to School Program in a manageable way and local farmers find a stable local market for their products.

At the largest scale, New Hampshire Virtual Farmer’s Market provides a statewide internet based linkage between consumers and producers and in Vermont, the Vermont Fresh Network fills this role. These are generally publically underwritten. In New York State Agriculture and Markets dedicates a staff person (Bob Lewis) whose job it is to act as an intermediary between farmers and secondary processors who sell New York State products and help them into the New York City markets. Currently there are 85 Farmers Markets operating in New York City serving 200 farmers and keeping 30,000
acres in production. Bob Lewis reports that the major market facilities in New York City want to increase the volume of local products going through them. These facilities, which include the large produce markets, are part of the historic food supply system for New York City. They are interested because of consumer demand and because of transportation economics. If the distribution facilities in New York exist, then it is important to find out how best to utilize these facilities to the advantage of the Northern Forest agricultural interests.

Intermediaries can provide an important role in direct marketing. States should invest at a greater levels projects and programs that enhance the value chain networks that promote direct marketing from farm to fork within the regional food system.

**Concentric Market Development**

The consumer base for local foods within the Northern Forest Region is relatively small compared to the 70 million people who live 8 hours away. However, key informants point out that small, regional networks have advantages of providing close to home training grounds for producers to accommodate standardization of products, aggregation of quantities needed to satisfy vendors and generally learn the ropes of new markets. For some producers, this market provides sufficient profit to support their scale of operation. In other cases, growth is desired and part of the business plan. Concentric market development outwards either to larger wholesale or retail grocery chains, larger geographic areas such as southern Maine, Vermont, New Hampshire or New York become promising targets. It is in these cases that infrastructure, such as warehousing, distribution and transportation become important components of the value chain that determine the success of the venture.

The current members of the Deep Root Organic Cooperative of Johnston, Vermont, come from Vermont and Quebec and began by serving the upper valley of central Massachusetts as their market area. Since 1986, demand for their high quality product
skypocketed and they became the largest distributor of organic produce on the East coast. They now include Whole Foods Market as a major customer and wholesale distributors as the remainder of their client base. Deep Root began with a smaller market area then branched out as the collaborative venture developed the capacity to meet demand and deliver superior product.

**Distribution and Transportation Networks**

Distribution systems within the four states are rapidly developing in a rather organic and responsive way to efforts by entrepreneurs, partnerships created between farmers, consumers, retail and wholesale networks, and public and private trade associations. Transportation to markets in the major metropolitan areas of Boston and New York, let alone the Portland, Portsmouth, Massachusetts, Albany Capital District area for small and emerging producers throughout the Northern Forest Region is problematic. According to one key informant, “Nothing is right at the moment-everybody is on their own.” For example, in New York, Champlain Valley Specialties owns four tractor trailers and does its own trucking of its products. Deep Root Cooperative in Vermont contracts its trucking to an independent. These two exemplary businesses vary in terms of their approach to delivering their products to clients, but are both extremely successful operations started from scratch. Each demonstrates alternative approaches in addressing delivery of products to customers; a critical component of business success.

Cross Docking facilities that employ a combination of rail, tractor trailer and small truck to move agricultural commodities from the Northern Forest Region to the designated major and minor markets need development. Rail X of Rotterdam, New York is a private company with two, 55 car trains operating non stop between Rotterdam and Washington State, dedicated to transporting apples and onions. They also have trucks leaving their Rotterdam facility every day for New York City and possibly can take pallet sized loads to New York if a farmer could get their produce to Rotterdam serving a possible delivery function. In the New York section of the Northern Forest, there is no other north-south cross docking facility. RailX is considering a Rotterdam to Florida
connection. The region needs these kinds of multiple hubs where larger forms of transportation can be utilized at some economy of scale to move products downstate; and then be met by smaller scale transport to move product to various distribution points. These could be turn key operations or join ventures started in either the public or non-profit sector, grown into profitable businesses then spun off into for-profit entities.

**Exporting Internationally**

A variety of export opportunities may prove to have value for Northern Forest Region agribusiness. These include the growing Asian and Indian markets as their middle classes continue to grow in wealth and demand western-style products and foodstuffs. Mexico and the Caribbean continue to be a market with a demand for dairy products. With the increasing demand for rice, and the fact that Minnesota grows rice well, the question was raised by one key informant whether any research was being conducted within the region’s compatibility to grow rice in its abundant wetlands.

Maple syrup is produced in all four states and is marketed independently by each state. Vermont has led the way in demonstrating vertical integration of processing that can make all the difference in connecting branding, image and consumer buying preferences. Increased export potential exists in Asian markets. An effort on the part of the Northern Forest maple industry to improve cooperative marketing might lead to increased revenues and communities of practice.

Federal financial assistance is available to the entire range of Northern Forest Region agribusinesses through USDA and the Foreign Agricultural Service, Market Access Program for marketing activities to help develop opportunities to sell farm products abroad. Staff resources exist in each State Department of Agriculture to help access this funding and leverage resources to export agricultural products.
Section 7. National and Four-State Agricultural Policy
Opportunities and Challenges

U.S. and Canadian Dollar
A strong Canadian dollar brings commerce across the border to the U.S. to spend on U.S. goods. On the other hand, a weak U.S. Dollar hurts farmers along the Canadian border who buy machinery, equipment, grain, hay, and other inputs from Canada.

Dairy Farms and Commodity Milk Revenues
There is a common concern across the four states that there is a critical need to find a way to keep dairy farms in operation. The 1930’s based milk pricing system and the Congress’s actions to delegitimize the Northeast Dairy Compact in 2001, contribute to an unstable revenue stream for commodity milk. The Vermont dairy farmers obtained reauthorization of the MILC program negotiation in the 2008 Farm Bill, thus providing price support for commodity milk for smaller dairy farmers and the State of Maine adopted price supports as well for its dairy operations during falling milk prices. However, the costs of doing business (inputs) are increasing, milk prices are good now, particularly because milk protein is being sold to China and India, but can change rapidly. Price supports provide temporary subsidy to keep farmers in business during times when milk prices fall.

Ethanol, Renewable Energy and Oil
Traditional farming is fossil fuel intensive in terms of inputs. Gasoline, pesticides and herbicides all require fossil fuels for their manufacture. Efforts to substitute alternative approaches and fuel sources need to be accelerated.

The production of ethanol already affected corn supplies and prices for livestock feed. It will continue to have multiplier effects for small and medium sized farms’ profitability. Ironically corn production is energy intensive, using gasoline intensive agricultural
methods to produce a product intended for a renewable energy market. Opportunities around small feed stocks and cellulosic’s need to be developed to take the pressure off corn before food prices escalate beyond the point of crisis.

**Interstate Commerce**
If the Northern Forest Region is indeed going to act as a regional food system, the myriad of rules and regulations governing commerce across state lines associated with food systems requires review and reform. Regulations at both the Federal and State levels require review. There are examples worth further evaluation and discovery through legislative hearing, survey and inquiry. One example is small scale livestock processing which is hampered by regulations that prohibit producers from selling processed meat. As a result, producers sell live animals to customers who then arrange for their slaughter. Procurement regulations for public institutions do not encourage small scale and local purchasing. Food recycling and composting operations may also be negatively impacted by public regulations that do not encourage small and local efforts to promote these actions.

**Labor Climate**
Agribusiness shares with other economic sectors the difficulties in finding employees in all skill classes. The problem is exacerbated by the stigma attached to farm labor. As a result, much of the on farm labor is part of the “don’t ask, don’t tell policy” associated with immigrant labor. Since production schedules are very much dependent upon the kind of agricultural operation, labor needs vary from livestock operations that can be year round, to seasonal fruit and produce. Farmers and their supportive organizations are wrestling with management issues associated with health care, housing, language, education, immigration reform, and visas.

**Climate Change and the Farm**
It is important to be looking out to mid century and determining the climate trends and the adaptive capacity for the Northern Forest Region. It will take ten to 20 years to re-
establish a sustainable agri-economic system in the Northern Forest Region and during that time the change in climate will be changing as well.

The region needs to be informed about the likelihood of longer droughts in the summer and growing seasons. In order to build capacity and self reliance, research is needed to suggest the types of infrastructure development to support irrigation and the kinds of drought resistant crop species to plant. Crops with commercial potential that ripen later in the fall season, such as apples and strawberries being studied at UNH, require further study as well.

The climate will also change world wide. It is very likely that the Northern Forest Region will gain importance as a “cradle of essential food production” due to its abundant supply of water and intact agricultural lands unspoiled by pollution and other forms of degradation. It is important to build capacity to be self-reliant, reestablishing the knowledge and practices of growing more grains, both organic and not here for livestock feed and food.

**Dairy Policy Evolving the Dairy Industry**

States need to create a multiple prong dairy policy to reflect the change in practice at the local level; one that supports operations that want to wholesale raw milk, another for those who want to go organic and produce organic value added product lines and a third that want to produce non-organic value added dairy products. Almost all of the milk in the region is exported and processed elsewhere. As a result, profits associated with processing are captured by other markets.

The dairy industry is very important to the region, but it is so institutionalized and set in its ways that it is hard to evolve the industry and promoting change is difficult. The system milk price supports that date back to the 1930’s is hard to replace, and, as a result, changing to a modern system of leadership with new forms of networks is also difficult. The leadership paradigm follows an old institutional tradition which is difficult and slow to change.
Environmental Quality and Farm Viability Objectives

USDA spends millions of dollars in conservation and price support programs for various commodities and technical assistance funds to conserve soil and water, employ and install best practices, but for the level of this investment, little time, money and attention is paid to the economic viability of the farm operation. With the recent concern about non-point pollution and water quality concerns, there is concern about how the business of farming is going to afford to internalize the capital costs to address these concerns when the profit margins are so small already. Some programs, such as the Natural Resource Conservation Service provide equipment payments or subsidies to farmers for environmental practices on farms. It is important that the financial support programs keep pace with the mandates.

Federal Program Language

As suburbanization encroaches upon farming areas, the population of once rural areas may increase dramatically. The U.S. Census will reflect these changes and redefine a census tract as no longer rural even though it contains farms and rural lands. Federal Farm programs base their eligibility for grant and loan assistance on Census definitions of rural. A farm area close to a suburb within a metropolitan area, such as Chittenden or Grand Isle Counties in Vermont, (or elsewhere in the region) may become ineligible for funding and be cut off. This needs further study.

International Trade Policy

Imports of agricultural goods that can be produced within this region face price competition from global sources. The process is influenced by the complications of NAFTA and the World Trade Organization.

Economic Development Policy
Economic Developers at the State Level do not always see agriculture and the food industry as a key economic driver given equal status with manufacturing and technology. As a result, it is not given priority in terms of funding, incentives, promotion, site selection and attention by State economic development agencies and policy makers. Considering how few manufacturing and technology opportunities come to the Northeast and how many opportunities exist in agribusiness, it is in each State’s best economic interests to redirect significant resources to agriculture and value added agribusiness.

Food Systems
Food Systems planning replaces traditional thinking in many post modern circles and reconsiders agriculture’s place in society. The “farm to fork” concept places food in a much larger and increasingly valuable context. One sees evidence of these policies in the national farm to school movement and in the efforts to provide healthy options for the Farm Bill nutrition subsidies. This restructuring and rethinking of agriculture focuses on the entire process; from soil and land through the farm enterprise to food, nutrition and public health. Systems thinking to some incorporates a public sector responsibility, similar to one held for a water, wastewater or transportation system. It reawakens the historic tradition by state and local government of stewarding food system planning by protecting the food resources and, for example, providing for markets, the safety and security of the food system and the public health. The global pandemic of obesity, concerns about food security and safety have given further credibility to the public benefits of food systems planning. As a result, most governmental agencies and organizations, at all geographic levels are adopting food systems policies.
Section 8. Regional Blueprint Recommendations

Embedded within the text of this report are many small recommendations that can be culled for further study and evaluation by the agricultural sector and users of this report. The following recommendations are of regional import and create the catalyst by which agriculture can take the great leap forward. They are meant as twin engines; to drive a thriving agricultural economy and provide a stabilizing force for the significant four million acre natural landscape of the Northern Forest:

✨ Raise Agriculture’s Visibility as a key economic sector affecting the viability of the natural landscape of the Northern Forest

New York, Vermont, New Hampshire and Maine individually and collectively and the United States Government should recognize and appreciate the importance of a viable agricultural economy for maintaining four million acres of working landscape and open space in the Northern Forest Region.

- Recognize the significance of four million acres in agricultural production in the Northern Forest and give it equal standing for forests. (Wood does not feed people.)
- While no one wants to be a Cassandra, in absence of a viable agricultural economy, the future of this landscape, the identity, character, culture, livelihood, food source and dependent tourism will disappear.

🎯 Create a Proactive Regional Food System Policy
The Sustainable Economy Initiative presents a wonderful opportunity and a challenge to create a cohesive platform to launch a proposal for a comprehensive Four State Sustainable Agricultural Local Food Policy. History demonstrated through the Northeast Dairy Compact that Maine, New Hampshire, Vermont and New York will cooperate on agricultural policy as it is in their best interests to do so. Creating a proactive, regionally grown food system policy and implementing program that will sustain working farms, promote value chains from landowner to consumer and generate an appreciation of the connection between food choices and the environmental services provided by the Northern Forest Region is in the region’s best interests. The benefits are significant to the consumer, the public health system, the profitability of agribusinesses and the regional economy and to the environment.

- Taking the cue from other collaborative efforts to fight acid rain and air pollution, collaborate on lawsuits, advocate for forest policy and the like the region should marshal its resources and promote an agricultural platform adopted by the Maine, New Hampshire, Vermont and New York that is standardized and consistent with regard to local food policy.

- Testimony should be gathered from all levels of constituents to determine the extent of barriers to food systems, including those mentioned in this report. A plan of regulatory reform should be put forward to remove or mitigate these barriers at least between the four states if not at the Federal level.

- This policy should also embrace consumer trends towards organic and natural foods, value added products and other economic development tools that diversify and build agricultural value chains in the Northern Forest Region, making stronger connections between producers and consumers. Washington State recently enacted legislation to begin making comprehensive food policy regulatory reform at the state level. A summary of their action is provided below:

**Best Practice: Washington State**

*Local Farms - Healthy Kids (HB 2798 / SB 6483)*

"Local Farms – Healthy Kids establishes Washington as a national leader in promoting local food policy. Governor Gregoire signed it into law on March 27, 2008."
By increasing the amount of Washington-grown food consumed through our schools, food banks and farmers markets, this bill will help keep working farms working and promote new awareness of how our food choices affect our health, communities, and the environment. Increasing consumption of food that has been grown and produced locally reduces packaging, refrigeration, storage and transportation, requiring less energy and resulting in less waste.

A broad coalition of environmental, farming, school and public health interests worked together to push the effort through. Despite staunch opposition from the Processed Food Industry, the bill moved reached final passage largely intact. Through a series of changes to existing purchasing laws and creation of new programs, the Local Farms – Healthy Kids Act is one of the most comprehensive and far-reaching efforts in the country to promote state-level local food policy.”

Source: [www.environmentalpriorities.org/local-farms](http://www.environmentalpriorities.org/local-farms)

**Create a Northern Forest Working Lands Alliance**

Throughout this report is evidence that there are many different interests working throughout the four states on agriculture. The common agricultural interests outweigh the matters that divide them ten to one. The states vary in their willingness to use conservation easements as a tool for farmland preservation and there is divisiveness surrounding the issues of organic versus non organic farming. And there are varying values and believes. But everyone wants to see farming be profitable and survive. Experts agree on strategies to strengthen existing farms and retain agricultural land viability. Collaborative marketing and joint ventures, product and brand development, assistance in use of technology and management, workforce training, and stronger connections to markets and suppliers are but a few of the actions necessary to be taken. The watchword in each of these is **cooperation**. Rather than isolated and independent, there is a need to work together as an industry trade association would do, to keep the economic sector competitive. Regional collaboration can increase market share and help local farms compete in a world market. The American Farmland Trust (AFT) is successful at convening multi interest coalitions of partners interested in seeing working lands protected and standardizing policy regarding working lands. Standardized policies within the Northern Forest would create cohesion in the food system and the beginnings of scalable value chains. Cross pollination and better
economies of scale with some programs may be achieved. AFT’s Connecticut Working Lands Alliance is working nearby to “get all parties rowing in the same direction.”

Invest in Secondary Processing at every possible opportunity.

Rather than exporting wholesale, value-added secondary processing will keep economic benefits local and build cumulative economic wealth in the region. Fresh frozen and packaged products produced and branded in the region keep agricultural land working and profitable. Applying the cluster-based development scenario to the agribusiness economic sector is prudent and timely. Already well developed in some farming areas, such as northern Vermont and Maine, it can be strengthened and extended and be the rule rather than the exception.

New York sees itself as a leader in food processing and is utilizing cluster based development as an upstate economic development strategy. Secondary processing is expanding far beyond diary and local agricultural products to include Barilla Pasta Plant near Batavia, Beechnut Baby Food in Montgomery County, and an undisclosed organic food processor. The principle motivation is to cluster close to the New York City metropolitan areas and to reduce energy and transportation costs….and to cash in on the buy local consumer trend.

Support the increased rate of diversification and value added activity of agriculture in the Northern Forest so that food security is enjoyed by the Northeast concurrently with conservation of farmland and higher profitability by Northern Forest farmers.

Government at all levels continues to play a significant role as investment banker and technical advisor for agriculture. Government investment drives the institutional
infrastructure of the land grant college system that conducts research and development activities, the extensive network of organizations that provide technical assistance and the funding that grants and lends to agribusinesses both old and new. The traditional paradigm of “only” commodity and “only” big are real farmer or farming requires reconsideration and revision. All parties need to get with the times. The trends and the markets speak for themselves. Government investment will pay off with larger market shares filled by the private sector within a decade. A shift is already beginning but needs to pick up speed. This can be accomplished by increased attention, flexibility and investment in all forms of agribusiness described in this report.

- Build stronger value chains from land owners to consumers in order to make farmers more profitable across all food groups and keep our productive resources active. Each link in the chain, from land owner, producer, intermediary to consumer, needs to be strengthened through an initial significant investment. Product, marketing and packaging research, training, management expertise, infrastructure development, etc, all comprise aspects of needed investment.
- Recognize and focus on farming operations and agribusiness of various scales; being mindful of the “Agriculture of the Middle” as well as the microenterprises.
- Invest resources at different scales. Small networks and value chains are equally important to large ones.
- Invest in concentric market development in order to feed the region, the neighbors and the Northeast and the globe.
- Invest in the retention, expansion and diversification of farms and related value added agribusiness with a focus on sustainability and rapidly growing markets (e.g. organic foods, local and natural foods, Asia, India, etc.-see body of report)
- Promote procurement by and selling to institutions such as schools, prisons, colleges, etc. and facilitate local purchasing. The magnitude and scale of opportunities for institutional procurement and bidding, both within the region and
around the country is huge. Within the region, governments have flexibility within their legal boundaries to stipulate preferences for local foods and products.

- **Support Institutions and Extension in their effort to research:**
  - New and heirloom species and to provide innovation and support to agriculture. This is particularly so with respect to climate change and its impacts on agriculture.
  - Promote the development of green chemistry and bio-plastic applications for agriculture.
  - Alternative applications of potatoes.
  - University of Vermont, Maine and New Hampshire, Miner Institute, Chazy, New York and Cornell University, in addition to other research institutions in the region, play an active and engaged technical assistance and research role in diversifying agricultural production. They look ahead and are important partners in the future of agriculture.

- **Strengthen connections through community supported agriculture (CSA’S), regional farmer’s markets, restaurants and grocery stores by supporting the existing group of fledgling agricultural networks in the region. Build new networks at various scales, but do not forget the existing ones that are yet to be profitable and at the break even point.**

- **Continue to research, evaluate, and experiment with the reintroduction of organic and non-organic grain crops as a livestock feed, local and regional food stock. Concurrently monitor national and global commodity futures for organic and non-organic grains to position the Northern Forest farmers in a competitive position to supply the region and the Northeast.** Jack and Anne Lazor of Butterworks Farm in Westfield, Vermont are experimenting with growing organic grains, including wheat breeding varieties. More work is needed at the farm, extension and university research level.

- **Solve the Livestock processing dilemma faced by the region and overcome the bottleneck faced by the region’s livestock producers.** Consider the growing
Kosher and Hallal Northeast markets in any plans to develop multiple livestock processing facilities since these markets will pay a premium markup.

- Cross Docking facilities that employ a combination of rail, tractor trailer and small truck to move agricultural commodities from the Northern Forest Region to the designated major and minor markets need development. The region needs multiple hubs where larger forms of transportation can be utilized at some economy of scale to move products downstate; and then be met by smaller scale transport to move product to various distribution points. These could be turn key operations or join ventures started in either the public or non-profit sector, grown into profitable businesses then spun off into for-profit entities.

  - Capitalize upon the Maine Department of Transportation’s plan’s to develop a ten year statewide rail plan. The State will be inventorying and evaluating rail infrastructure and services and opportunities for new or expanded services in accordance with the Federal Rail Administration’s proposed state rail plan requirements. This plan will support the development of state policy regarding freight and passenger rail transportation and present priorities and strategies to enhance rail service in Maine that benefits the public. Considering the role that rail may play in cross docking facilities, it is essential that Maine utilize this opportunity to factor in agribusiness needs for north-south distribution.

**Invest and Promote Agritourism as a Complimentary Tourism Venue**

Agritourism and agritainment provide complimentary venues that support ecotourism, cultural and heritage tourism activities in the Northern Forest Region and should be incorporated at every opportunity into the economic strategies employed at the local, regional and state level. Visitors do not come to the region for only one purpose and enjoy participating in the variety of amenities the area offers.
• Locally grown and processed food should play a major role in visitor experience and should be emphasized in every message provided to visitors.

• Scenic Byways and other corridor/trail marketing efforts should emphasize food. The Cheese and Wine Trail in New York and the Cheese Trail in Vermont are excellent examples certain to attract the growing “foodies” movement.

• Restaurants should be encouraged to feature local foods on their menus and stores to stock local products.

• Farm Tours and Stays; petting zoos, Market Stands, Farmers Markets, etc. should be supported through development, investment and promotion.

Source: M-ARK, Margaretville. New York
Section 9. Appendices:

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The Dairy Processing Task Force of the Frederick County Office of Economic Development  
[www.yellowwood.org](http://www.yellowwood.org)


# Northern Forest Sustainable Economy Initiative: Agricultural Sector Analysis

## Key Informant Interviews

Conducted by Ann Ruzow Holland, Consultant, Willsboro, New York 12996  
February, March and April, 2008

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<td>2/18/08 1-2:00PM</td>
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<td>3/11/08 4-4:30PM</td>
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