The Overlooked Economic Engine

AGRICULTURE IS A KEY ECONOMIC ENGINE IN THE NORTHEAST
Connecticut, Massachusetts, New Hampshire, New Jersey, New York and Rhode Island

A REPORT BY FARM CREDIT EAST 2012
Dear Reader,

Agriculture, commercial fishing and the forest products industries are all important contributors to the Northeast economy. Combined, these industries generate more than $71 billion in economic activity resulting in 379,000 jobs.

Northeast agriculture and the related commercial fishing and forest products industries are very diverse. From dairy farms to commercial fishing along our coastal territory, and all of our fruit, vegetable, vineyard, timber, nursery and greenhouse producers in between — the Northeast has a diversified crop mix, which has allowed our producers to prosper in a global marketplace. Despite hardships in the dairy industry in 2008 to 2009, the Northeast continues to be a leading U.S. dairy production area. Northeast consumers have had a growing interest to “buy local,” which has contributed to the growth of agricultural retail. The strength of Northeast agriculture is in its diversity and well-managed farm businesses.

The Northeast continues to grow as an attractive location for food processors and tourists, therefore increasing the contributions of agriculture to the Northeast economy. Our proximity to major urban centers allows for reduced transportation costs and faster turnaround from the farm, to the processor, to the market and into the hands of the consumer. Food processors within our region bring additional jobs to the area and keep money within our community. The mix of picturesque landscapes, growth of ag retail and interest in buying local is creating new opportunities and leading to the growth of agritourism — again bringing money to the community.

Agriculture may be one of the oldest and most traditional occupations in the United States, but it continues to evolve and be beneficial to the Northeast economy. It is important that the non-farming public consider the importance and value of having strong agriculture in the Northeast. Why not have the food we eat, timber we use in our homes and nursery and landscaping products grown locally? It makes sense to not be further dependent on imports when we can produce products here, create jobs in our communities and ensure a safe supply of food.

For public policymakers, this means ensuring that we have policies that allow our farmers to thrive and grow. Our public sector costs — property taxes, fees and regulatory compliance — cannot be greater for Northeast farmers and forest product businesses than for those regions we compete with.

Agriculture has a bright future in the Northeast, but farmers need favorable public policy and consumer support to enable them to continue farming. Increased restrictions and compliance issues will only hinder production, job creation and economic growth in the Northeast.

This report outlines the significance of agriculture as an economic engine in the Northeast. Agriculture is a true wealth-generating industry — farmers harvest products that leave farms for markets throughout the Northeast and the world.

Bill Lipinski
Chief Executive Officer
Farm Credit East, ACA
A HARVEST OF
379,000
JOBS
REPORT SUMMARY

Don’t overlook the farms, fishing ports and forests of the Northeast as major economic engines in our states’ economies and especially in our rural communities! The 64,570 farms and related businesses in our six-state region produced an estimated $17.4 billion of farm gate output and employed 175,515 men and women directly in 2010. Equally significant, this farm production supports $53.9 billion of processing output as well as 203,371 jobs off the farm in downstream processing and marketing as well as upstream agribusiness support activities.

At a time when communities, states and our nation are challenged to create additional jobs and economic activities, it is vital to understand that the Northeast’s oldest, most traditional industry is still a major economic force in providing consumers with food, plants and forest products, while creating off-farm jobs, economic opportunity and tax base.

Farm Credit East recently supported an independent study by Dr. Rigoberto Lopez of the University of Connecticut (see page 25 for full profile) to quantitatively estimate the multiplier impact of Northeast agricultural production on the larger economy. This report presents those findings as an instructional resource for government, economic development agencies and our nonfarm neighbors to truly appreciate the economic and community benefits of successful, profitable agricultural producers.

The purpose of this report is to ascertain and document the importance of agriculture and related industries to the Northeast economy. Natural resource-based businesses like farming, fishing and forestry have been important to the region since colonial times, when they formed the backbone of the economy. Today, while the economy and society have changed a great deal, agriculture remains vital to the region.

This analysis reflects only the direct economic impact of agriculture, commercial fishing and forest products as defined in the summary section on page 17.

Northeast farms mean 175,000 jobs on the farm and 203,400 directly related jobs off the farm.

Northeast farms generated $17.4 billion in farm value — this grows to $71.3 billion with primary processing activities.
OVERALL NORTHEAST AGRICULTURE

• Is a significant industry with more than a $71 billion impact on state output, measuring the value of agricultural output as statewide sales generated directly from the industries and through multiplier effects on other industries impacted.

• $29.6 billion contribution in value-added, which is the difference between the value of output and the cost of raw materials.

• Approximately 379,000 jobs generated across the six states.

• Maintains stewardship over 9.3 million acres of land in farms and millions of acres of productive forest lands, providing significant environmental services that improve the quality of life in ways that are immeasurable.

Top Northeast agriculture sectors:

• Dairy cattle and milk production tops the list with more than $4 billion in output and nearly 32,000 jobs generated.

• The greenhouse and nursery sector, with an approximately $2.6 billion output, generates 26,500 jobs.

• Commercial fishing, with more than $2 billion in output, creates 19,500 jobs.

Top Northeast agriculture processing sectors:

• Paper mills, with $10.1 billion in output and nearly 32,000 jobs generated.

• Fluid milk processing, with nearly $9.4 billion in output and more than 36,000 jobs generated.

• Fruit and vegetable canning, pickling and drying, with $7.5 billion in output and 24,000 jobs generated.
NORTHEAST AGRICULTURE*
BY OUTPUT VALUE

Cash field 5%
Forestry 7%
Fruit 7%
Support industries 9%
Vegetable 10%
All other 12%
Dairy 23%
Greenhouse & nursery 15%
Fishing 12%

*Includes commercial fishing and forest products
STUDY HIGHLIGHTS

Impacts of agriculture, commercial fishing, forestry and related businesses in six northeastern states

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<th>STATE</th>
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</table>

Diversity of Northeast Agriculture

There are nearly 65,000 farms throughout Farm Credit East’s six states. The Northeast has seen a great deal of growth among agricultural retail and part-time farming operations, which has resulted in an increase of farms with gross revenues of less than $50,000. While these operations may be small, they help provide a diverse mix of crops to the region.

Of these 65,000 farms, nearly 13,500 of them generate more than $50,000 in revenue. Although fewer in number, these farms provide the bulk of employment and economic activity in the area’s agricultural sector. All types and sizes of farms are important to the region’s agriculture. The strength of the Northeast’s ag industry is in its diversity.
Agriculture is a major contributor to the economy in Connecticut. There are 4,900 farms in the state, maintaining some 400,000 acres in farmland according to the USDA’s 2010 survey.

Of the $4.6 billion in output of Connecticut farming, fishing and forestry, more than $2 billion was value-added contribution that stays within the local economy.

Agricultural production was responsible for 14,300 jobs; agriculture and seafood processing, 6,876 jobs; and forest-products processing, 5,568 jobs, for a total of more than 26,700 jobs.

- Greenhouse and nursery production was the largest sector in Connecticut, at $457 million in output and 4,782 jobs.
- Dairy production was second, with almost $100 million in output and nearly 1,000 jobs.
- Off-farm support activities for agriculture and forestry, everything from veterinary services to fertilizer sales and equipment repair, generated $92 million in output and nearly 2,000 jobs.
- Dairy product processing generated more than $1 billion in output and was responsible for 3,647 jobs.
- Forest products processing was dominated by the paper mill sector, with $1.14 billion in output and more than 3,500 jobs.

In addition, agricultural industries provided significant open space: 400,000 acres of land in farms and 1.5 million acres of land in forests.

Despite Connecticut’s status as a small, densely-populated state, agriculture, fishing and forestry are significant industries. Their combined overall output amounts to approximately $1,300 per state resident.
Agritourism
benefiting the consumer, the producer and the economy

Many farm operators, especially those in proximity to urban markets, have recognized the growing interest among the public to visit farms and learn about how the food they eat is produced. This has led to the birth of agritourism. Agritourism is any agriculturally-based operation or activity that brings visitors to a farm or ranch. This includes a wide variety of activities, such as buying produce direct from a farm stand, navigating a corn maze, picking fruit and vegetables, feeding animals, riding horses, or tasting many of our great Northeast wines.

While agritourism provides educational and entertainment benefits to the consumer, it also provides several benefits to the farm operator and the local community. Agritourism offers opportunities to supplement income from farm production activities and helps to diversify a farmer’s income stream, serving as a potential cushion against farm income fluctuations resulting from variability in weather, prices and other factors. In addition, agritourism stimulates the local economy and in areas of higher land values can add to local government tax revenues used to support local schools and other public services (USDA ERS, 2007).
In a state most often associated with high-tech industry, natural resource-based businesses remain tremendously important. As of 2010, there were 7,700 farms in the commonwealth maintaining more than 500,000 acres of farmland. There are 40,000 cows and calves in Massachusetts.

Agriculture and related processing activity is responsible for $13 billion in output in Massachusetts. $5.5 billion of that is value-added income that remains within the community. Almost 31,000 jobs are directly attributable to farming, fishing and forestry activity. Agricultural and seafood processing adds $7.4 billion in output and 28,233 jobs. Forest products processing is responsible for another 9,000 jobs.

- Commercial fishing was by far the largest sector in Massachusetts, at 1.5 billion in output and more than 12,000 jobs.
- Greenhouse and nursery production was the largest land-based sector in Massachusetts, at $300 million in output and 3,792 jobs.
- Massachusetts is one of the largest producers of cranberries in the United States, second only to Wisconsin, with over 2.3 million barrels of production.
- Equine breeding and boarding, with fruit farming a close second, were each responsible for approximately 2,500 jobs.
• Off-farm support activities for agriculture and forestry, everything from veterinary services to farm supplies and equipment repair, generated $416 million in output and more than 5,000 jobs.

• The processing sector in Massachusetts is significant to the commonwealth’s economy. Dairy processing produced $2.5 billion in products and created some 8,322 jobs. Seafood preparation and packaging generated $1.8 billion in output and generated 8,258 jobs.

• Forest products processing was dominated by the paper and paperboard sector, with $2.2 billion in output and more than 7,100 jobs.

• Altogether, Massachusetts agriculture was responsible for 25,870 on-farm and 42,240 off-farm jobs.

The overall output impact amounted to approximately $2,000 per state resident. In addition, the industries provided significant open space: 520,000 acres of farmland and 2.6 million acres in forests.
Wineries 3%
Sawmills & pallet mfg. 4%
Seafood processing 5%
Frozen food 6%
Animal slaughtering and processing 12%
Canning, pickling & drying 14%
Dairy processing 34%
Paper mills 22%

PROCESSING
BY VALUE OF OUTPUT
The Northeast’s dynamic farming community combined with its access to markets of more than 125 million people and proximity to leading research institutions has led to the Northeast becoming an increasingly attractive location for food processors. Processing activities include yogurt plants, paper mills, animal and poultry processing, milk, butter and cheese manufacturing, fruit and vegetable preserving and seafood processing businesses. Processing plants are beneficial to the local economy because they provide economic activity and jobs to local residents.

As the largest lender to agriculture in the Northeast, Farm Credit East makes an investment in the future of agriculture with every farm, fishing and forest product loan that we make. We also provide financing to farm supply, marketing and service and processing businesses — this is all part of our commitment to Northeast agriculture.

In late 2011, the Genesee County Economic Development Center began breaking ground for the Genesee Valley Agri-Business Park, a 202-acre property in Upstate New York. By the end of summer 2012, this park will be home to an Alpina Foods’ specialty yogurt-making facility; a “yogurt cluster” run in partnership by PepsiCo service and a German dairy business; and MarkTec, a company that produces and services product-labeling equipment for the food industry. In support of agricultural development, Farm Credit East is a key investor in the Genesee Valley Agri-Business Park.
The Granite State has a vibrant and essential agriculture and forestry industry, as indicated by approximately $2.5 billion impact on state economic output, and 18,500 jobs generated statewide.

- Commercial logging, with its impact of $313 million and 2,800 jobs, was by far the largest sector.
- Greenhouse and nursery production was second, at $83 million in output and 1,590 jobs.
- Dairy production generated $76 million in output and 1,309 jobs.
- Off-farm support activities for agriculture and forestry, everything from veterinary services to surveying and equipment repair, generated $58 million in output and more than 1,340 jobs.

- Seafood preparation and packaging generated $149 million in output and 779 jobs.
- Dairy processing produced $603 million in products and created some 2,628 jobs.
- Forest products processing was even more significant: Sawmills produced $344 million in output and provided 2,197 jobs. Paper mills produced $528 million in output, creating 1,859 jobs.

The combined agricultural and forestry impact amounted to approximately $1,900 per resident. In addition, these industries provide significant open space: 470,000 acres in farmland and 4.7 million acres in forests.
Young Farmers: The Future of Northeast Agriculture

Over the past decade, the number of farmers under the age of 35 has slowly been on the rise. Young and beginning farmers are the future of Northeast agriculture. These young individuals are coming back to become the next generation on the farm or are new entrees that are utilizing new marketing techniques, such as social media and direct marketing.

To help this growing customer segment get started in the industry, Farm Credit East’s Young, Beginning, Small (YBS) Farmer Incentive program was established in 1995. This program provides incentives, including discounts on services, such as farm accounting software, tax preparation, consulting and appraisal for up to five years. These customers also receive discounts on FSA guaranteed loan fees and interest rate assistance.

In addition, Farm Credit East started FarmStart, LLP in 2005 for those beginning farmers that do not have the credit history to apply for a traditional loan. FarmStart assists startup operations by providing working capital investments of up to $50,000. A FarmStart advisor also works one on one with each recipient to help develop business skills during the first few years.
New Jersey has a long history of farming and fishing, as indicated by the approximately $11.5 billion impact on state economic output and 61,000 jobs generated statewide (24,161 on-farm jobs and 37,695 off-farm jobs).

- Greenhouse and nursery production, with an impact of $919 million and 8,864 jobs was by far the largest sector. After all, it is The Garden State!

- Vegetable and melon farming was second, at $464 million in output and 3,691 jobs.

- Fruit farming produced $319 million in output and 2,918 jobs.

- Off-farm support activities for agriculture and forestry, from greenhouse supplies, to construction and equipment repair, generated $304 million in output and more than 5,400 jobs.

- Fruit and vegetable canning, pickling and drying produced $2.3 billion in output and created almost 7,500 jobs. Dairy processing generated $2.3 billion in output and provided 6,600 jobs.

- Forest products processing was significant. Forest products processing, including sawmills, pallet manufacturing and paper mills produced $1.1 billion in output and created more than 4,000 jobs.

The agricultural output impact amounted to approximately $1,300 per resident. In addition, the industries provided significant open space: 730,000 acres of land in farms and 1.5 million acres of forest land.
Over the past few years, consumer demand for food that is produced locally has greatly increased across the United States. More consumers want to know where their food comes from. According to the USDA, the United States has seen nearly a 50 percent increase in farm markets and more than a 60 percent growth in community-supported agriculture (CSA) over the past decade. The growth of these farmers markets, farm stands, wineries, CSAs and pick-your-own farms has provided consumers with the opportunity to go directly to the farm or market and purchase, or sometimes even pick-their-own products, straight from the hands of the producer.

For many consumers, the ability to purchase products straight from the producer provides the peace of mind that they are consuming the freshest and safest food.

In addition to the benefit of knowing where your food comes from, buying locally benefits the local economy. When you buy local, more money stays within the community. The income generated by consumers’ agriculture purchases, filters back into the local economy, contributing to local jobs and local tax revenue.

Many Farm Credit East members are involved in “local foods” efforts and continue to serve their markets in innovative ways with a greater variety of products.
The Empire State has tremendously productive agriculture and forestry industries, as indicated by its approximately $38 billion impact on state economic output and 196,200 jobs generated statewide. Of that $38 billion in total output, $15.6 billion is value-added that stays within the community.

- Milk and cattle production led the agricultural sector with a $3.8 billion output, accounting for 40 percent of the total agricultural output impact and generating nearly 28,500 jobs.
- Fruit production and wineries totaled nearly $2 billion in output and generated more than 10,000 jobs.
- Vegetable farming came in second with an impact of $1.1 billion and 7,396 jobs.
- Greenhouse and nursery production was third, at $775 million in output and 6,700 jobs.
- Commercial logging generated $550 million in output and generated 5,540 jobs.
- Off-farm support activities for agriculture and forestry, everything from fertilizer, to construction and equipment repair, generated $697 million in output and more than 10,600 jobs.
- Dairy processing generated $11.6 billion in output and created over 46,200 jobs.
- Forest products processing was significant: Sawmills produced $796 million in output and provided 4,827 jobs. Paper mills produced $5.6 billion in output, creating 17,769 jobs.
- Altogether, farming, fishing and forestry produced a total of $8.9 billion in direct output and created 75,551 on-farm jobs, while support activities and primary processing of agricultural products created $29.6 billion in output and generated 120,665 off-farm jobs.

The agricultural output impact amounted to $2,000 per state resident. In addition, the industries provided significant open space: 7.1 million acres of farmland and 16 million acres of forest land.
NEW YORK EMPLOYMENT IN FARM RELATED SERVICES BUSINESSES*

*Employed in either support industries to agriculture or primary processing businesses.

NEW YORK AGRICULTURE BY OUTPUT VALUE

Livestock 3%
Logging 6%
Fruit 7%
Support businesses 7%
Greenhouse & nursery 8%
Grains & oilseeds 8%
All other 10%

Dairy 40%
Vegetable 11%

*Employed in either support industries to agriculture or primary processing businesses.
Big agricultural impact in a small state

The Ocean State has vital farming and fishing industries, as indicated by approximately $1.1 billion impact on state economic output and 7,500 jobs generated statewide.

- Commercial fishing was the largest sector with $172 million in output and 2,400 jobs.
- Greenhouse, nursery and sod production was second with a $53 million output and 830 jobs generated.
- Vegetable and melon farming produced $16 million in output and 190 jobs.
- Altogether, production agriculture is responsible for $282 million in output and 4,339 jobs.
- In processing: animal slaughtering, rendering and processing was the leading sector, with $139 million in output and 553 jobs.
- Seafood preparation and packaging was second with $102 million in output and 500 jobs.
- Agricultural processing generated $495 million in output and 2,059 jobs.

The agricultural output impact amounted to approximately $1,000 per resident. In addition, the industries provided significant open space: 70,000 acres of farmland and 326,000 acres of forest land.
IN SUMMARY, AGRICULTURE IN THE NORTHEAST

Many types of businesses

Agriculture, for the purposes of this study, is defined as farming, commercial fishing and forestry. It also includes the impact of primary processing activities closely related to agricultural production.

This study encompasses the impact of all types of farming, fishing and forestry, from the small roadside farm stand in Rhode Island to the large-scale dairy in New York; from the scalloper in Massachusetts to the logger in New Hampshire. It also includes the impact of processing activities that would not exist if the underlying agricultural production were not there to support it. Examples include yogurt plants, paper mills and seafood processing businesses. The study excludes secondary sectors, such as landscaping and food retailing, which are economically important, but, if included, would overstate the projected output and job impacts directly attributable to agriculture.

Provider of many jobs

Natural resource-based businesses provide many jobs both on and off the farm. All told, agriculture is responsible for providing approximately 379,000 jobs across our six-state region. Of those 379,000, 175,500 were in agricultural production and 203,400 were in off-farm processing. These jobs represent many types of positions, from workers in the fields, ships and forests to managers in farm offices and every profession from veterinarians to truck drivers and sawmill workers.

Supports the local economy

Of the $71 billion in output attributable to farming, fishing and forestry, $29.6 billion represents value-added activity; that is, money spent on payroll, state and local taxes and at local businesses. It is money that stays within a community. The income generated by agriculture cascades throughout the local economy, contributing to local jobs and local tax revenue.

Protects open land and green space

Not quantified in this report, but nonetheless important, is the value of ecosystem stewardship, open space, tourism, quality of life and other nonmarket benefits derived from agriculture and the natural resource base it maintains. Rolling hills dotted with dairy farms, well-maintained forests and fields of fresh vegetables are a legacy that agriculture contributes to the Northeast.
Farm Credit East is the largest financial services cooperative for Northeast agriculture, serving more than 12,000 customers throughout the six-state territory of Connecticut, Massachusetts, New Hampshire, New Jersey, New York and Rhode Island. Farm Credit East provides a full range of credit and financial services to agriculture, commercial fishing and forest products businesses throughout the Northeast. This includes accounting, consulting and appraisal services, benchmarking programs, crop insurance and programs for new and beginning farmers, such as the Young, Beginning, Small Farmer program and FarmStart, LLP. Through our consulting program we help farm businesses improve profitability and our grant writing program works closely with farms seeking grants from state and federal programs.

Farm Credit East is part of the national Farm Credit System, which has been providing a reliable source of credit to farmers throughout the United States for more than 96 years (for more information on the history of the Farm Credit System visit farmcreditnetwork.com/newsroom/blog/tag/history). Farm Credit East extends more than $4.35 billion in loans and is governed by a 15-person board of directors. For more information visit FarmCreditEast.com.
## Economic Impacts in Six Northeastern States, 2010

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<td>Paper mills</td>
<td>10,050.0</td>
<td>4,397.2</td>
<td>31,819</td>
</tr>
<tr>
<td>Paperboard mills</td>
<td>1,708.2</td>
<td>711.0</td>
<td>5,692</td>
</tr>
<tr>
<td><strong>TOTAL FOR FOREST PROCESSING</strong></td>
<td>13,958.4</td>
<td>6,055.6</td>
<td>51,968</td>
</tr>
<tr>
<td><strong>TOTAL FOR AGRICULTURE AND FORESTRY</strong></td>
<td>71,266.3</td>
<td>29,586.5</td>
<td>378,886</td>
</tr>
</tbody>
</table>
Rigoberto Lopez is professor and head of the Department of Agricultural and Resource Economics and director of the Zwick Center for Food and Resource Policy at the University of Connecticut. He earned a Ph.D. in food and resource economics from the University of Florida in 1979. His areas of expertise include agricultural and food policy, agribusiness marketing and economic development. He led the research team on the economic and fiscal impact of the Connecticut dairy industry in 2008 and the economic impact of Connecticut’s agricultural industry in 2010.

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