An Economic Analysis of the Impacts of Agriculture in the Northeastern U.S.

RIGOBERTO A. LOPEZ
DIRECTOR OF THE ZWICK CENTER FOR FOOD AND RESOURCE POLICY
PROFESSOR & DEPARTMENT HEAD
DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS
UNIVERSITY OF CONNECTICUT

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Overview of Presentation

I. Production Agriculture in the Northeast at a Glance
II. Economic Impact Methodology
III. Total Impacts of Agriculture in the Eight Northeastern States
IV. Impacts by State
V. Conclusions

- 11.6% cropland
- 4.2% grassland pasture and range
- 60% forestland
- In 2012, because farmland contains cropland, pastures and forestlands, 20% of the land area was devoted to agricultural production.

Total Land Area=111.4 million acres
I. Agriculture in the Northeast at a Glance

2. Percent Growth of Farm Sales and Number of Farms

- From 2002-2012 the number of farm sales increased by 31%, while the number of farms increased by about 3%.

Initial interpretation:
Growth in farm sales outpacing growth in farm numbers implies there is an undercurrent of change associated with the structure of agricultural production in the region.

• The number of small and large farms increased, while the size of mid-sized farms decreased
• The median farm size also decreased

Initial interpretation:
• Northeastern farm structure is changing as the number of mid-sized farms is being reduced.
• Small farms are emerging to capture niche markets, while the number of large farms continues to increase to remain nationally competitive in commodity markets.

I. Agriculture in the Northeast at a Glance

4. Agriculture Processing & the Forestry Sector

Between 2004 and 2011, sales of manufactured food products (A) remained approximately flat. In the same time period, sales of processed forest products (B) remained approximately flat as well.

Note: New England: CT, ME, MA, NH, RI, and VT. Other Mid-Atlantic States: DE, MD, and PA

(A). Sales of Manufactured Food Products, 2004 and 2011

(B). Sales of Processed Forest Products, 2004 and 2011

5. Value of commercial fishery landings decreases, while market value of aquaculture products sales increase

- The value of Northeast commercial fishery landings declined by 33% from 2002 to 2012.
  - This is partly due to fewer federally licensed groundfishing boats in the region, as well as increased regulation.

- The market value of aquaculture products sold increased by 38% from 2002 to 2012.

Note: New England (CT, ME, MA, NH, and RI). Other Mid-Atlantic States: DE, MD, and PA.
Purpose:

• To gain a better understanding of the economic impact of agriculture on state and Northeastern regional economies focusing on eight Northeastern states (CT, MA, ME, NH, NJ, NY, RI and VT), excludes Pennsylvania, Maryland, and Delaware.

Scope:

• Agriculture is defined to include agricultural, forestry, and fishery industries

• There are 35 sectors using the North American Industrial Classification System (NAICS)

• Excluding:
  • Landscape service sector (included separately as a special sector)
  • Secondary processing sectors that do not use a state’s agricultural and forestry production
  • The value of ecosystem services, open space, and other non-market benefits derived from agriculture

II. Economic Impact Methodology
II. Methodology

Year: 2012

Data Sources: IMPLAN (Federal sources) supplemental with USDA data

Model: Input-output IMPLAN model that converts a sector’s direct sales input into
  • Statewide sales
  • Statewide jobs

Total impacts in the eight Northeastern states are simply the sum of impacts in each state
1. Economic Impact of Agriculture in the Eight Northeastern States:

Nearly 80,000 farms and over 12 million acres in farmland

$103.4 billion in economic impact

483,375 jobs

Top industries:
- Dairy
- Forest products
- Fruits and vegetables
- Commercial fishing

### Impacts of agriculture, commercial fishing, forestry and related businesses in eight northeast states

<table>
<thead>
<tr>
<th>STATE</th>
<th>ECONOMIC IMPACT ($ BILLION)$</th>
<th>NUMBER OF FARMS$</th>
<th>ACRES IN FARMLAND$</th>
<th>JOBS SUPPORTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECTICUT</td>
<td>4.8</td>
<td>5,977</td>
<td>436,539</td>
<td>25,495</td>
</tr>
<tr>
<td>MAINE</td>
<td>13.9</td>
<td>8,173</td>
<td>1,454,104</td>
<td>79,011</td>
</tr>
<tr>
<td>MASSACHUSETTS</td>
<td>12.7</td>
<td>7,755</td>
<td>523,517</td>
<td>60,760</td>
</tr>
<tr>
<td>NEW HAMPSHIRE</td>
<td>3.1</td>
<td>4,391</td>
<td>474,065</td>
<td>18,773</td>
</tr>
<tr>
<td>NEW JERSEY</td>
<td>12.8</td>
<td>9,071</td>
<td>715,057</td>
<td>58,006</td>
</tr>
<tr>
<td>NEW YORK</td>
<td>48.2</td>
<td>35,537</td>
<td>7,183,576</td>
<td>197,745</td>
</tr>
<tr>
<td>RHODE ISLAND</td>
<td>1.1</td>
<td>1,243</td>
<td>69,589</td>
<td>6,591</td>
</tr>
<tr>
<td>VERMONT</td>
<td>6.6</td>
<td>7,338</td>
<td>1,251,713</td>
<td>36,994</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103.4$</td>
<td>79,485</td>
<td>12,108,160</td>
<td>483,375</td>
</tr>
</tbody>
</table>
III. Total Impacts of Agriculture in the Eight Northeastern States

2. Agriculture Farm Sales in the Eight Northeastern States

Top 3 Farm Sectors:
1. Dairy
2. Greenhouse & Nursery
3. Fishing
III. Total Impacts of Agriculture in the Eight Northeastern States

3. Economic Impact by Farm Sectors: 2010 vs. 2012

This chart compares the economic impact of agricultural industries in Conn., Mass., N.H., N.J., N.Y. and R.I. from our 2012 report (2010 data) and this report (2012 data). Maine and Vermont were not included in our previous report.
IV. Impacts by State

1. Connecticut: $4.8 billion, 25,500 jobs

Nearly 6,000 farms and more than 400,000 acres in farmland
Connecticut: Top Sectors

**Top Farm Sector:**
Greenhouse, nursery and floriculture production:
- $376.7 million in impact
- 3,876 jobs

**Top Agricultural Production and Processing Sector:**
Dairy:
- $1.3 billion in impact
- 4,286 jobs

**Top Processing Sector:**
Forest Products:
- $1.5 billion in impact
- 5,247 jobs
2. **Maine**: $13.9 billion, 79,000 jobs

Over 8,000 farms and approximately 1.5 million acres in farmland
Maine: Top Sectors

Top Agricultural Production Sector: Commercial fishing:
- $659 million in impact
- 9,618 jobs

Top Processing Sector: The forest products industry:
- $8.8 billion in impact
- Over 40,000 jobs

Top Farm Sector: Vegetable production:
- $307 million in impact
- 2,710 jobs
3. **Massachusetts**: $12.7 billion, 60,760 jobs

7,755 farms and 523,517 acres in farmland
Massachusetts: Top Sectors

Top Agricultural Production Sector:
Commercial fishing:
◦ $958 million in impact
◦ 9,247 jobs

Top Farm Sector:
Greenhouse & Nursery:
◦ $255 million in impact
◦ 3,244 jobs

Top Processing Sector:
Forestry products:
◦ $2.7 billion in impact
◦ 9,441 jobs
IV. Impacts by State

4. New Hampshire: $3.1 billion, 9,000 jobs

4,391 farms and 474,065 acres in farmland
New Hampshire: Top Sectors

**Top Farm Sector:**
Forestry & Logging:
- $216 million in impact
- 2,790 jobs

**Top Agricultural Production & Processing:**
Dairy:
- $1.3 billion in impact
- 4,791 jobs

**Top Processing Sector:**
Forest products:
- $985 million in impact
- 4,434 jobs
IV. Impacts by State

5. New Jersey: $12.8 billion, 58,000 jobs

9,071 farms and 715,057 acres in farmland
New Jersey: Top Sectors

**Top Farm Sectors:**
Greenhouse and nursery production:
- 772 million in impact
- 7,130 jobs

Fresh fruit and vegetables:
- $804 million in impact
- 4,743 jobs

**Top Processing Sector:**
Dairy:
- 3.3 billion in impact
- 7,578 jobs
IV. Impacts by State

6. New York: $48.2 billion, 198,000 jobs

35,537 farms and 7,183,576 acres in farmland
New York: Top Sectors

**Top Farm Sectors:**

**Dairy:**
- $4.1 billion in impact
- 26,000 jobs

**Vegetables:**
- $1.2 billion in impact
- 7,750 jobs

**Top Processing Sector:**

**Dairy:**
- $19.1 billion in impact
- 49,112 jobs
IV. Impacts by State

7. Rhode Island: $1 billion, 6,500 jobs

1,243 farms and 69,589 acres in farmland
Rhode Island: Top Sectors

Top Agricultural Production:
Commercial Fishing:
- $163 million in impact
- 2,120 jobs

Greenhouse and nursery production:
- $46.9 million in impact

Top Agricultural Processing:
Dairy:
- $276 million in impact
- 664 jobs

Animal Slaughtering:
- $194 million in impact
- 770 jobs
IV. Impacts by State

8. Vermont: $6.6 billion, $37,000 jobs

7,338 farms and 1,251,713 acres in farmland
Vermont: Top Sectors

**Top Farm Sector:**
Dairy production:
- $878 million in impact
- 7,443 jobs supported

**Top Processing Sectors:**
Dairy Processing:
- $3.5 billion in impact
- 13,311 jobs generated

Forest products:
- $1.2 billion in impact
- 5,528 jobs generated
V. Conclusions

As measured in the eight states under study using data from 2012, agriculture:

• Contributed $103.4 billion to regional total sales
• Generated 483,375 jobs
• The regional impact of agriculture was $8,540 per acre in farmland, or $2,405 per resident

These findings attest to the value added nature of agriculture, due partly to proximity to a large consumer base that creates opportunities for continued and sustainable economic growth as well as employment.

Thank you!

For more information:
Access the full report on the Zwick Center website at
http://zwickcenter.uconn.edu/outreach_reports_10_1981703122.pdf