

Zwick Center for Food and Resource Policy

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Economic Impacts of Agriculture and Forestry in Six Northeastern States

A Report for Farm Credit East

By

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EXECUTIVE SUMMARY

Scope and Methodology

At the request of Farm Credit East (FCE), the purpose of this report is to document and ascertain the significance of agricultural and forest industries in the economies of six Northeastern states: Connecticut, Massachusetts, New Hampshire, Rhode Island, New Jersey and New York. Other Northeastern states (Vermont, Maine, Pennsylvania and Maryland) were not included in the request.

The focus is on agricultural production (i.e., crops, livestock, fisheries and forestry) and agricultural and forestry processing closely tied to a state's agricultural and forest production. The study excludes secondary processing sectors that do not use a state's agricultural and forestry production such as bakeries and soft drinks manufacturing, which are economically important but, if included, would overstate economic impacts attributable directly to a state's agriculture and/or forestry. In addition, this study does not include the value of ecosystem services, open space, and other non-market benefits derived from the agricultural and forestry industries, which are significant but beyond the scope of this study.

Because the agriculture and forestry sectors purchase goods and services from other industries in their states and hire local labor, their economic impacts cascade throughout the entire state economy. Using 2010 data (the latest available) on direct sales and employment of 28 agricultural and forest sectors, this study estimates the total economic impact of agriculture and forestry through the use of an input-output IMPLAN model that translates direct sales into statewide output, value added and jobs to account for agriculture and forestry's spillover effects on state economies.

Major Findings

This analysis reveals that in 2010 the total impact of agriculture and forestry in the six Northeastern states was significant, as summarized in the following findings:

- Over \$71 billion impact on state output, measuring the value of agricultural output as statewide sales generated directly from the industries and through spillover 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, i.e., the money left in the hands of residents plus business taxes, both of which stay in the respective states.
- Approximately 379,000 jobs generated across the six states.
- On average, in 2010 the contribution of agriculture to the economies was approximately \$6,000 per acre of farmland and the combined impact of agriculture and forestry per resident was \$1,750.

Zooming in on state-specific results:

- In Connecticut these industries contributed approximately \$4.6 billion to state output, \$2 billion in value added, and nearly 27,000 jobs. About one-third of the output impact (\$1.2 billion) and over half of the jobs impact came from agricultural production, attesting to the value-added nature and relative labor-intensity of these industries.
- In Massachusetts these industries contributed approximately \$13 billion to state output, \$5.7 billion in value added, and slightly over 68,000 jobs. About 60% of the output and over 40% of the jobs impact came from agricultural processing, with fluid milk manufacturing being the largest individual sector in output and jobs impacts.
- In New Hampshire these industries contributed approximately \$2.5 billion to state output, \$1 billion to value added, and over 18,000 jobs. About one-third of the output impact (\$744 million) and over half of the jobs (10,196) came from agricultural production.
- In Rhode Island these industries contributed approximately \$1 billion to state output, \$400 million in value added, and nearly 7,500 jobs, the smallest impacts among the states considered. Agricultural production contributed one-quarter of the output impact but nearly 60% of the job impacts.
- In New Jersey these industries contributed approximately \$11.7 billion to state output, \$4.8 billion in value added, and approximately 62,000 jobs. Nearly 70% of the output impact and 46% of the job impacts came from agricultural processing, with fruit and vegetable canning clearly being the largest sector in output impact but second in job creation after the greenhouse industry.
- In New York these industries contributed approximately \$38 billion to state output, \$15.6 billion in value added, and over 196,000 jobs, the largest impacts among the states

considered. The leading sectors in output and job creation were in the dairy industry, at either the production or manufacturing level.

Summary and Conclusions

The agricultural and forestry industries have a critical, significant impact on the economies of the six Northeastern states included in this study: **\$71 billion in output and approximately 379,000 jobs.**

In addition, they provide significant open space via 9.3 million acres of land in farms and 26.6 million acres of land in forests, covering 70% of the land mass for 41 million residents, providing significant environmental services that improve the quality of life but are not quantified in this study.

Although there is great variability in the distribution of output and job creation across the six Northeastern states considered, reflecting primarily their relative sizes, the findings attest to the value added nature of agriculture and forestry in the region, due in part to proximity to a large consumer base, which creates opportunities for continued economic growth and employment. **On average, in 2010 the economic impact of agriculture was approximately \$6,000 per acre in farmland and the combined impact of agriculture and forestry amounted to \$1,750 per resident,**

Economic Impacts of Agriculture and Forestry in Six Northeastern States

INTRODUCTION

Agriculture and forestry have been a critical component of the Northeast region's economies since Colonial times, when its economy was comprised mainly of agriculture, fishing, and lumber. Today the importance of agriculture and forestry in the state economy is highly visible through not only farms and forests, but also associated primary agricultural and forest-product processing. The Northeast's geographical area, although relatively compact, contains the largest consumer base in the country. In spite of the housing market slowdown in recent years, which has impacted the greenhouse and nursery industries, agriculture and forestry continues to thrive with the renaissance of local agricultural systems.

At the request of Farm Credit East, the purpose of this report is to document and ascertain the significance of the agricultural and forest industries in the economies of six Northeastern states in 2010. These states are Connecticut, Massachusetts, New Hampshire, Rhode Island, New Jersey and New York. These states comprise 50% of the Northeastern region land mass and 75% of its population (USDA, NASS, 2010). Northeastern states not included in the request were Vermont, Maine, Pennsylvania, and Maryland

This study defines agriculture and forestry as encompassing agricultural production (i.e., crops, livestock, fisheries and forestry) as well as agricultural and forestry processing closely tied to a state's agricultural and forestry production. The study excludes secondary processing sectors that do not use a state's agricultural and forestry production such as bakeries and soft drinks manufacturing, which are economically important but, if included, would overstate economic impacts attributable directly to a state's agriculture and/or forestry. In addition, this study does not include the value of ecosystem services, open space, and other non-market benefits derived from the agricultural and forestry industries, which are significant but beyond the scope of this study.

Agriculture and forestry in the six Northeastern states considered is not only economically important but also quite diverse across sectors and states. For instance, in contrast to agricultural production nationwide, grain crops and cattle ranching play a relatively minor roles, while the milk production/dairy cattle, greenhouse/nursery and commercial fishing play leading role (over \$1 billion in direct sales in 2010 in the six states studied; see Appendix Tables A2-A8). At the primary processing level, where value is added through food manufacturing and

preparation, the dairy industries, fruit and vegetable processing, and animal slaughtering lead with sales well over \$2 billion in 2010 across the states considered. In forestry processing, paper mill manufacturing dominates with approximately 75% of the sales in this sector in 2010.

Because the agriculture and forestry sectors purchase goods and services from other industries in their states and hire local labor, their economic impacts cascade throughout the entire states' economies. Using 2010 data on direct sales by and employment in the agricultural and forest sectors, this study estimates the total economic impact of agriculture and forestry through the use of an input-output IMPLAN model that translates direct sales into not only statewide sales and jobs but also value added to account for agriculture and forestry's spillover effects on state sectors.

METHODOLOGY

This study uses IMPLAN (IMpact analysis for PLANning: Minnesota IMPLAN Group, Inc.), the most widely used software for the estimation of statewide economic impacts. Using as input direct sales from a sector, IMPLAN looks at incremental impacts as the sector increases or decreases in activity via built-in multipliers based on input-output coefficients describing the interaction among sectors in a state's economy. The multipliers express the change in the level of state output, value added and jobs associated with a unit change in direct sales in a specific sector or industry of the economy. The IMPLAN model uses the values generated through multipliers to calculate economy-wide impacts for 440 economic sectors.

Sectors Included

Following standard practice, this study relies on the U.S. Department of Commerce classification of 440 sectors of the economy. To define the scope of each of each of the six Northeastern states' industries, the analysis takes into consideration 28 of the 440 sectors classified as agricultural and forestry production and primary agricultural and forestry processing (These are described in Appendix Table A1). Sectors not relevant to agriculture and forestry in a state (e.g., sugar cane) were excluded. Agricultural and forestry processing sectors were selected based on the extent of linkages between the commodity being processed and the state's farming and forestry. Some economically important food and beverage processing sectors are also excluded from this study because they do not use agricultural commodities produced in the state in any significant way; examples of such "secondary processing" are chocolate, confectionary, and bakery product manufacturing and distilleries. Including secondary agricultural and forest

processing that do not use state agricultural production would overstate the contribution of agriculture and forestry to a state's economy.

Measures of Impacts

Applying the IMPLAN model to 2010 data from six Northeastern states, this study relies on three indicators of the economic importance of the agricultural and forestry industries, computed for each sector and state:

- *Total impact on state output*, which is measured by statewide sales generated directly from the industries and through spillover effects on other industries impacted.
- *Total impact on value added*, which measures the difference between the value of output and the cost of raw materials, i.e., the money left in the hands of residents and business taxes, both of which stay in the respective states; and
- *Total impact on state employment*, which includes full-time and part-time jobs generated.

Although the primary focus is on the total impacts of agriculture and forestry at the state levels, impacts per subsector for each state are also presented.

For example, the economic importance of the greenhouse, nursery, floriculture and sod production industry (i.e., greenhouse and nurseries for short) in Connecticut is not limited to direct sales by that sector (the *direct* impact). That sector's effect extends to other sectors of the economy (e.g., the transportation and utility sector) because greenhouse and nursery businesses buy goods and services from those other sectors (the *indirect* impact). Also, employees of the greenhouse and nursery establishments likely spend a major portion of their earnings buying goods and services from firms within the state (the *induced* impact). The *total* sales impact of the greenhouse and nursery industry is the sum of the direct, indirect, and induced impacts. However, downstream business (e.g., landscaping, wholesaling and retailing—other than direct sales from the farm to the consumer) are not included. In contrast, Perry and Stack (2009) included downstream landscaping services, wholesaling and retailing sectors in their analysis of New England's horticultural industry. For brevity, this report presents only the total impacts of each of the 28 sectors, encompassing production and primary processing only, on all (440) sectors of the economy.

Finally, it should be noted that the estimated impacts are limited to a state's economy. For example, if an apple orchard in Connecticut purchases pesticides from a firm in Massachusetts, the *indirect* impact of this transaction will not be felt in the Connecticut economy

but will be reflected in the Massachusetts economy and captured in the impact analysis of the latter. However, if the state selling the pesticide is outside the six states considered, the impact will not be taken into account. Finally, to adjust for size, summary impacts are also presented on per capita and per acre bases.

RESULTS

Impacts in All Six Northeastern States

In 2010, the aggregate total impact of agriculture and forestry in the six Northeastern states (CT, MA, NH, RI, NJ and NY) was significant as indicated by:

- \$71 billion impact on regional output,
- \$29.6 billion contribution in value added, and
- Approximately 379,000 jobs generated across the six states

The top three agricultural sectors were:

- Dairy cattle and milk production, topping the agricultural production list with over \$4 billion in output impact, generating nearly 32,000 jobs;
- The greenhouse, nursery and floriculture sector, second with an approximately \$2.6 billion output impact, generating 26,500 jobs; and
- Commercial fishing, with an over \$2 billion output impact, generating 19,500 jobs.

The top three agricultural processing sectors were:

- Fluid milk manufacturing, topping the list, with a nearly \$9.4 billion output impact, over 36,000 jobs;
- Fruit and vegetable canning, picking and drying, second with a \$7.5 billion output impact, generating nearly 24,000 jobs; and
- Animal slaughtering, rendering and processing (other than poultry), third with over \$6 billion in output impact, generating nearly 25,000 jobs.

In 2010, forestry processing was dominated by the paper mill sector, which captured approximately 75% of the output impact, generating 32,000 jobs. More detailed impacts for the 28 sectors are found in Table 1. Adjusting for size, the agricultural output impact (production and processing) amounted to approximately \$6,000 per acre in farmland, and the combined overall forestry and agricultural impact amounted to approximately \$1,750 per resident.

Table 1. Economic Impacts in Six Northeastern States, 2010

Sector	Output	Value Added	Employment
<i>Agricultural production</i>	\$ million	\$ million	Jobs
Oilseed farming	279.1	144.1	3,409
Grain farming	622.3	262.4	9,722
Vegetable and melon farming	1,758.7	1,017.9	13,355
Fruit farming	1,253.4	733.0	11,375
Greenhouse, nursery, and floriculture production	2,587.1	1,709.4	26,525
Tobacco farming	104.3	10.1	1,019
All other crop farming	802.8	390.7	5,768
Cattle ranching and farming	359.6	120.8	3,330
Dairy cattle and milk production	4,055.1	1,792.4	31,961
Poultry and egg production	329.4	99.3	1,242
Animal production, except cattle, poultry and eggs	395.2	214.8	11,366
Forestry, forest products, and timber tract production	149.0	81.9	1,262
Commercial logging	1,102.1	532.1	10,824
Commercial Fishing	2,026.5	1,152.7	19,517
Support activities for agriculture and forestry	1,580.2	1,112.7	24,840
Total for agricultural production	17,405.0	9,373.8	175,509
<i>Primary agricultural processing</i>			
Frozen food manufacturing	3,238.8	1,283.7	13,465
Fruit and vegetable canning, pickling, and drying	7,515.7	3,071.9	23,817
Fluid milk and butter manufacturing	9,379.0	3,302.9	36,167
Cheese manufacturing	5,427.0	1,606.6	20,174
Dry, condensed, and evaporated dairy product manufacturing	1,253.3	401.5	4,061
Ice cream and frozen dessert manufacturing	2,066.7	800.8	7,531
Animal (except poultry) slaughtering, rendering, and processing	6,092.5	1,838.5	24,750
Poultry processing	614.5	204.3	2,989
Seafood product preparation and packaging	2,657.4	1,013.7	12,060
Wineries	1,658.2	632.7	6,389
Total for agricultural processing	39,903.0	14,157.0	151,400
<i>Primary forest processing</i>			
Sawmills and wood preservation	1,341.0	514.9	8,230
Wood container and pallet manufacturing	859.2	432.5	6,227
Paper mills	10,050.0	4,397.2	31,819
Paperboard Mills	1,708.2	711.0	5,692
Total for forest processing	13,958.0	6,055.4	51,967
Total for agriculture and forestry	71,266.10	29,586.10	378,879

Connecticut

In 2010, the aggregate total impact of agriculture and forestry in Connecticut was significant, as indicated by approximately:

- \$4.6 billion impact on state output;
- \$2 billion contribution to state value added; and
- Over 26,700 jobs generated statewide.

The top three agricultural sectors were:

- Greenhouse, nursery, and floriculture production topping the list at \$457 million in output impact and generating nearly 4,800 jobs and continuing to be the dominant sector in spite of a decline in housing and construction in recent years;
- Dairy cattle and milk production, with nearly \$100 million in output impact, generating nearly 1,000 jobs; and
- Support activities for agriculture and forestry, with \$92 million in output impact, generating nearly 2,000 jobs.

The top three agricultural processing sectors were:

- Fluid milk manufacturing, topping the list with nearly a \$352 million output impact, generating 1,300 jobs;
- Fruit and vegetable canning, picking and drying, second with a nearly \$272 million output impact, generating 870 jobs; and
- Animal slaughtering, rendering and processing (other than poultry), third with nearly \$227 million in output impact, generating nearly 1,100 jobs statewide.

In 2010, forest processing was dominated by the paper mill sector, which nearly \$1.15 billion in output impact, generating nearly 3,600 jobs statewide.

The agricultural output impact amounted to approximately \$7,600 per acre in farmland, and the overall combined agricultural and forestry impact amounted to approximately \$1,300 per state resident. In addition, the industries provided significant open space: 400,000 acres of land in farms and 1.5 million acres of land in forests.

Table 2. Economic Impacts of Connecticut's Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
	\$ million	\$ million	Jobs
<i>Agricultural production</i>			
Oilseed farming	0.0	0.0	0
Grain farming	4.9	2.1	79
Vegetable and melon farming	63.4	37.0	552
Fruit farming	61.2	36.0	616
Greenhouse, nursery, and floriculture production	456.9	307.9	4,782
Tobacco farming	81.1	2.4	776
All other crop farming	57.1	35.2	456
Cattle ranching and farming	13.6	4.5	147
Dairy cattle and milk production	99.7	45.0	976
Poultry and egg production	63.9	19.2	248
Animal production, except cattle, poultry and eggs	64.1	35.3	1,858
Forestry, forest products, and timber tract production	38.4	21.7	325
Commercial logging	58.2	25.6	662
Commercial Fishing	65.0	34.7	832
Support activities for agriculture and forestry	92.1	64.2	1,992
Total for agricultural production	1,219.7	670.8	14,300
<i>Primary agricultural processing</i>			
Frozen food manufacturing	133.5	55.1	538
Fruit and vegetable canning, pickling, and drying	271.7	102.8	870
Fluid milk and butter manufacturing	352.3	120.9	1,302
Cheese manufacturing	162.0	44.8	554
Dry, condensed, and evaporated dairy product manufacturing	0.0	0.0	0
Ice cream and frozen dessert manufacturing	491.2	190.1	1,791
Animal (except poultry) slaughtering, rendering, and processing	226.8	62.5	1,083
Poultry processing	36.8	12.7	178
Seafood product preparation and packaging	45.1	16.4	220
Wineries	88.8	34.6	342
Total for agricultural processing	1,808.2	640.0	6,876
<i>Primary forest processing</i>			
Sawmills and wood preservation	56.4	21.2	366
Wood container and pallet manufacturing	76.5	38.3	574
Paper mills	1,159.5	535.8	3,581
Paperboard Mills	313.1	131.7	1,048
Total for forest processing	1,605.4	727.0	5,568
Total for agriculture and forestry	4,633.3	2,037.8	26,744

Massachusetts

In 2010, the aggregate total impact of agriculture and forestry in Massachusetts was significant, as indicated by approximately:

- \$13 billion impact on state output;
- \$5.6 billion contribution to state value added; and
- Over 68,000 jobs generated statewide.

The top three agricultural production sectors were:

- Commercial fishing, accounting for half of the agricultural output impact at \$1.5 billion and generating 12,293 jobs;
- Greenhouse, nursery, and floriculture production with a nearly \$300 million in output impact, generating 3,793 jobs; and
- fruit farming with a nearly \$216 million in output impact, 2,371 jobs statewide.

The top three agricultural processing sectors were:

- Seafood product preparation and packaging, topping the list with a nearly \$1.8 billion output impact, generating 8,258 jobs;
- Fluid milk manufacturing, second with a nearly \$1.6 billion output impact, generating 5,386 jobs; and
- Animal slaughtering, rendering and processing, third with nearly \$1.5 billion in output impact, generating 5,881 jobs statewide.

In 2010, forestry processing was dominated by the paper mill sector, which captured approximately 77% of the output impact at approximately \$1.9 billion, generating over 6,000 jobs statewide.

The agricultural output impact amounted to approximately \$20,000 per acre in farmland, and the overall combined agricultural and forestry impact amounted to approximately \$2,000 per state resident, the highest per acre or per capita impacts among the states considered. In addition, the industries provided significant open space: 520,000 acres of land in farms and 2.6 million acres of land in forests.

Table 3. Economic Impacts of Massachusetts' Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
	\$ million	\$ million	Jobs
<i>Agricultural production</i>			
Oilseed farming	0.0	0.0	0
Grain farming	4.2	1.9	64
Vegetable and melon farming	136.1	78.8	1,297
Fruit farming	215.7	126.0	2,371
Greenhouse, nursery, and floriculture production	300.6	198.2	3,792
Tobacco farming	23.2	7.7	244
All other crop farming	60.9	29.1	536
Cattle ranching and farming	10.1	3.4	135
Dairy cattle and milk production	63.8	29.4	795
Poultry and egg production	13.5	4.1	61
Animal production, except cattle, poultry and eggs	70.0	38.8	2,649
Forestry, forest products, and timber tract production	31.0	17.1	254
Commercial logging	149.0	75.1	1,380
Commercial Fishing	1,485.5	878.0	12,293
Support activities for agriculture and forestry	416.2	300.3	5,027
Total for agricultural production	2,979.6	1,787.9	30,897
<i>Primary agricultural processing</i>			
Frozen food manufacturing	426.2	174.4	1,760
Fruit and vegetable canning, pickling, and drying	1,181.3	525.4	3,784
Fluid milk and butter manufacturing	1,644.9	559.5	5,386
Cheese manufacturing	43.8	10.7	128
Dry, condensed, and evaporated dairy product manufacturing	121.2	34.9	320
Ice cream and frozen dessert manufacturing	693.2	282.9	2,488
Animal (except poultry) slaughtering, rendering, and processing	1,478.0	447.3	5,881
Poultry processing	5.8	1.9	29
Seafood product preparation and packaging	1,823.9	702.4	8,258
Wineries	48.1	17.4	199
Total for agricultural processing	7,466.3	2,756.9	28,233
<i>Primary forest processing</i>			
Sawmills and wood preservation	97.5	37.3	579
Wood container and pallet manufacturing	187.3	99.1	1,295
Paper mills	1,926.6	862.2	6,085
Paperboard Mills	299.3	116.9	1,022
Total for forest processing	2,510.7	1,115.4	8,980
Total for agriculture and forestry	12,956.5	5,660.3	68,110

New Hampshire

In 2010, the aggregate total impact of agriculture and forestry in New Hampshire was significant as indicated by approximately:

- \$2.5 billion impact on state output;
- \$1.0 billion contribution to state value added; and
- 18,500 jobs generated statewide.

The top three agricultural production sectors were:

- Commercial logging, with a \$313 million output impact, accounting for over 40% of the agricultural production impact, and generating over 2,800 jobs for approximately 28% of the jobs generated;
- Greenhouse, nursery, and floriculture, with a nearly \$83 million output impact, generating 1,590 jobs; and
- Dairy cattle and milk production, with \$76 million in output impact, generating 1,309 jobs statewide.

The top three agricultural processing sectors were:

- Fluid milk manufacturing, accounting for 70% of the output impact at over \$600 million, generating over 2,600 jobs;
- Seafood product preparation and packaging, second with a nearly \$149 million output impact, generating 779 jobs; and
- Animal slaughtering, third with a nearly \$63 million output, generating 400 jobs.

In 2010, forestry processing was led by paper mills at \$527 million in output impact, generating nearly 1,850 jobs, although sawmills and wood preservation was also significant with an output impact of \$344 million though being the greatest job contributor by generating 2,200 jobs.

The agricultural output impact amounted to approximately \$3,400 per acre in farmland, and the overall combined agricultural and forestry impact was approximately \$1,900 per resident. In addition, the industries provided significant open space: 470,000 acres in land in farms and approximately \$4.7 million acres of land in forests.

Table 4. Economic Impacts of New Hampshire's Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
<i>Agricultural production</i>	\$ million	\$ million	Jobs
Oilseed farming	0.0	0.0	0
Grain farming	1.3	0.5	24
Vegetable and melon farming	16.3	8.9	228
Fruit farming	20.5	11.2	338
Greenhouse, nursery, and floriculture production	82.5	52.9	1,590
Tobacco farming	0.0	0.0	0
All other crop farming	35.7	15.5	460
Cattle ranching and farming	11.6	3.4	230
Dairy cattle and milk production	75.9	32.6	1,309
Poultry and egg production	22.5	6.1	129
Animal production, except cattle, poultry and eggs	12.9	6.9	740
Forestry, forest products, and timber tract production	28.7	16.1	195
Commercial logging	313.4	162.8	2,844
Commercial Fishing	64.0	34.5	767
Support activities for agriculture and forestry	58.3	41.1	1,340
Total for agricultural production	743.7	392.5	10,196
<i>Primary agricultural processing</i>			
Frozen food manufacturing	28.8	9.1	136
Fruit and vegetable canning, pickling, and drying	7.4	2.3	27
Fluid milk and butter manufacturing	602.8	190.1	2,628
Cheese manufacturing	0.0	0.0	0
Dry, condensed, and evaporated dairy product manufacturing	0.0	0.0	0
Ice cream and frozen dessert manufacturing	8.2	2.0	35
Animal (except poultry) slaughtering, rendering, and processing	63.4	15.8	400
Poultry processing	0.0	0.0	0
Seafood product preparation and packaging	149.0	50.0	779
Wineries	1.9	0.6	9
Total for agricultural processing	861.5	269.9	4,014
<i>Primary forest processing</i>			
Sawmills and wood preservation	344.1	133.9	2,197
Wood container and pallet manufacturing	27.7	13.5	215
Paper mills	527.7	220.4	1,859
Paperboard Mills	0.0	0.0	0
Total for forest processing	899.4	367.8	4,272
Total for agriculture and forestry	2,504.7	1,030.2	18,481

Rhode Island

In 2010, the aggregate total impact of agriculture and forestry in Rhode Island was significant, as indicated by approximately:

- \$1.1 billion impact on state output;
- \$ 403 million contribution to state value added; and
- 7,500 jobs generated statewide.

The top three agricultural production sectors were:

- Commercial fishing, substantially leading agricultural production with a \$172 million output impact, generating over 2,400 jobs;
- Greenhouse, nursery, and floriculture production, second with a \$53 million output impact, generating 830 jobs, reflecting the importance of the turfgrass/sod subsector; and
- Vegetable and melon farming with a \$16 million in output impact, generating 190 jobs.

The top three agricultural processing sectors were:

- Animal slaughtering, rendering and processing, leading with an output impact of \$139 million, generating over 550 jobs;
- Seafood product preparation and packaging, with an output impact of \$102 million, generating 500 jobs; and
- Fluid milk manufacturing with output impacts of approximately \$94 million, generating 326 jobs.

In 2010, forestry processing was led and dominated by paperboard mills at \$228 million in output impact, generating over 760 jobs.

The agricultural output impact amounted to was approximately \$11,000 per acre in farmland, and the overall combined agricultural and forestry impact was approximately \$1,000 per resident. In addition, the industries provided significant open space: 70,000 acres of land in farms and 326,000 of land in forests.

Table 5. Economic Impacts of Rhode Island's Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
<i>Agricultural and forest production</i>	\$ million	\$ million	Jobs
Oilseed farming	0.0	0.0	0
Grain farming	0.0	0.0	0
Vegetable and melon farming	16.0	8.8	190
Fruit farming	7.5	4.2	105
Greenhouse, nursery, and floriculture production	53.3	34.4	830
Tobacco farming	0.0	0.0	0
All other crop farming	5.9	2.6	66
Cattle ranching and farming	0.9	0.3	14
Dairy cattle and milk production	4.9	2.1	70
Poultry and egg production	2.0	0.6	10
Animal production, except cattle, poultry and eggs	4.5	2.4	205
Forestry, forest products, and timber tract production	0.0	0.0	0
Commercial logging	1.8	0.9	17
Commercial Fishing	172.0	87.4	2,422
Support activities for agriculture and forestry	13.1	8.9	411
Total for agricultural and forest production	281.9	152.4	4,339
<i>Primary agricultural processing</i>			
Frozen food manufacturing	0.0	0.0	0
Fruit and vegetable canning, pickling, and drying	18.9	5.2	69
Fluid milk and butter manufacturing	93.7	26.0	326
Cheese manufacturing	43.0	9.2	131
Dry, condensed, and evaporated dairy product manufacturing	0.0	0.0	0
Ice cream and frozen dessert manufacturing	10.3	3.8	39
Animal (except poultry) slaughtering, rendering, and processing	139.2	36.8	553
Poultry processing	78.1	25.2	402
Seafood product preparation and packaging	102.3	34.1	500
Wineries	9.6	2.9	41
Total for agricultural processing	495.0	143.3	2,059
<i>Primary forest processing</i>			
Sawmills and wood preservation	22.0	8.0	122
Wood container and pallet manufacturing	24.7	11.9	195
Paper mills	0.0	0.0	0
Paperboard Mills	228.4	87.2	760
Total for primary forest processing	275.1	107.1	1,077
Total for agriculture and forestry	1,052.0	402.7	7,475

New Jersey

In 2010, the aggregate total impact of agriculture and forestry in Massachusetts was significant as indicated by approximately:

- \$11.7 billion impact on state output;
- \$4.8 billion contribution to state value added; and
- Over 61,000 jobs generated statewide.

The top three agricultural sectors were:

- Greenhouse, nursery, and floriculture production, accounting for one-third of the total agricultural output impact at \$919 million, generating nearly 8,900 jobs;
- Vegetable and melon farming, with an output impact of \$464 million, generating nearly 3,700 jobs; and
- Fruit farming (particularly blueberries and cranberries), with an output impact of \$319 million, generating over 2,900 jobs.

The top three agricultural processing sectors were:

- Fruit and vegetable canning, pickling and drying, accounting for over \$2.3 billion in output impact, generating 7,460 jobs;
- Animal slaughtering, rendering and processing with an output impact of approximately \$1.9 billion, generating over 7,600 jobs; and
- Fluid milk manufacturing with an estimated statewide output impact of \$1 billion, generating over 3,000 jobs.

In 2010, forestry processing was still an important activity in New Jersey given the degree of urbanization of the state, though relatively less important than in the other states, the sector was dominated by paper milling, with an output impact of 800 million, generating over 2,500 jobs.

The agricultural output impact amounted to approximately \$14,570 per acre in farmland, and the overall combined agricultural and forestry impact amounted to approximately \$1,300 per resident. In addition, the industries provided significant open space: 730,000 of land in farms and \$1.47 million acres of land in forests.

Table 6. Economic Impacts of New Jersey's Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
<i>Agricultural production</i>	\$ million	\$ million	Jobs
Oilseed farming	48.4	24.6	658
Grain farming	66.5	27.4	1,157
Vegetable and melon farming	464.1	263.8	3,691
Fruit farming	318.6	183.5	2,918
Greenhouse, nursery, and floriculture production	918.7	595.0	8,864
Tobacco farming	0.0	0.0	0
All other crop farming	61.1	28.3	452
Cattle ranching and farming	10.8	3.5	108
Dairy cattle and milk production	36.4	16.0	326
Poultry and egg production	37.9	11.3	142
Animal production, except cattle, poultry and eggs	107.5	57.6	2,879
Forestry, forest products, and timber tract production	32.6	17.0	340
Commercial logging	30.1	11.4	382
Commercial Fishing	185.3	92.7	2,244
Support activities for agriculture and forestry	303.8	207.9	5,401
Total for agricultural production	2,621.9	1539.8	29562
<i>Primary agricultural processing</i>			
Frozen food manufacturing	858.4	334.5	3,632
Fruit and vegetable canning, pickling, and drying	2,323.4	971.2	7,461
Fluid milk and butter manufacturing	1,001.9	334.5	3,094
Cheese manufacturing	939.4	246.6	2,590
Dry, condensed, and evaporated dairy product manufacturing	206.1	61.4	520
Ice cream and frozen dessert manufacturing	112.2	44.2	397
Animal (except poultry) slaughtering, rendering, and processing	1,945.0	607.8	7,635
Poultry processing	180.9	59.5	894
Seafood product preparation and packaging	298.0	114.1	1,341
Wineries	148.8	56.4	600
Total for agricultural processing	8,014.1	2,830.4	28,162
<i>Primary forest processing</i>			
Sawmills and wood preservation	24.6	10.3	140
Wood container and pallet manufacturing	177.4	88.8	1,290
Paper mills	806.9	348.8	2,524
Paperboard Mills	54.7	22.9	178
Total for forest processing	1,063.6	470.7	4,132
Total for agriculture and forestry	11,699.6	4,841	61,855

New York

In 2010, the aggregate total impact of agriculture and forestry in New York State was significant, as indicated by approximately:

- \$38 billion impact on state output;
- \$15.6 billion contribution to state value added; and
- Over 196,200 jobs generated statewide.

The top three agricultural sectors were:

- Dairy cattle and milk production, leading the agricultural sector with a \$3.8 billion output impact, accounting for 40% of the total agricultural output impact, generating nearly 28,500 jobs;
- Vegetable and melon farming with an estimated output impact of \$1.1 billion, generating nearly 7,400 jobs; and
- Support activities for agriculture and forestry, with an estimated output impact of \$697 million, generating nearly 10,700 jobs.

The top three agricultural processing sectors were:

- Fluid milk and butter manufacturing, mirroring agricultural production, with an output impact of \$5.7 billion, generating over 23,400 jobs;
- Cheese manufacturing with an output impact of \$4.2 billion, generating over 16,771 jobs; and
- Fruit and vegetable canning, with an output impact of \$3.7 billion, generating 11,608 jobs.

In 2010, forestry processing was dominated by paper mills with an estimated output impact of \$5.6 billion (70% of the total impact of the sector), generating nearly 18,000 jobs.

The agricultural output impact amounted to \$4,300 per acre in farmland, and the overall combined agricultural and forestry impact was approximately \$2,000 per state resident. In addition, the industries provided significant open space: 7.1 million acres of land in farms and 16 million acres of land in forestry, overall being significantly the largest state included in the study.

Table 7. Economic Impacts of New York's Agriculture and Forestry, 2010

Sector	Output	Value Added	Employment
<i>Agricultural production</i>	\$ million	\$ million	Jobs
Oilseed farming	230.7	119.5	2,752
Grain farming	545.4	230.5	8,399
Vegetable and melon farming	1,062.8	620.6	7,396
Fruit farming	629.9	372.1	5,026
Greenhouse, nursery, and floriculture production	775.1	521.0	6,666
Tobacco farming	0.0	0.0	0
All other crop farming	582.1	280.0	3,799
Cattle ranching and farming	312.6	105.7	2,696
Dairy cattle and milk production	3,774.4	1,667.3	28,485
Poultry and egg production	189.6	58.0	653
Animal production, except cattle, poultry and eggs	136.2	73.8	3,035
Forestry, forest products, and timber tract production	18.3	10.0	148
Commercial logging	549.6	256.3	5,540
Commercial Fishing	54.7	25.4	958
Support activities for agriculture and forestry	696.7	490.3	10,669
Total for agricultural production	9,558.2	4,830.4	86,220
<i>Primary agricultural processing</i>			
Frozen food manufacturing	1,791.9	710.6	7,400
Fruit and vegetable canning, pickling, and drying	3,713.0	1,465.0	11,608
Fluid milk and butter manufacturing	5,683.4	2,071.9	23,432
Cheese manufacturing	4,238.8	1,295.3	16,771
Dry, condensed, and evaporated dairy product manufacturing	926.0	305.2	3,220
Ice cream and frozen dessert manufacturing	751.6	277.8	2,781
Animal (except poultry) slaughtering, rendering, and processing	2,240.1	668.3	9,199
Poultry processing	312.9	105.0	1,487
Seafood product preparation and packaging	239.1	96.7	962
Wineries	1,361.0	520.8	5,199
Total for agricultural processing	21,257.7	7,516.6	82,058
<i>Primary forest processing</i>			
Sawmills and wood preservation	796.4	304.2	4,827
Wood container and pallet manufacturing	365.6	180.9	2,658
Paper mills	5,629.2	2,430.0	17,769
Paperboard Mills	812.7	352.3	2,685
Total for forest processing	7,603.9	3,267.4	27,938
Total for agriculture and forestry	38,419.8	15,614.4	196,216

CONCLUSION

The agricultural and forestry industries have a critical, significant impact on the economies of the six Northeastern states (CT, MA, NH, RI, NJ and NY) studied in this report: **\$71 billion in output and approximately 379,000 jobs.** In addition, these industries provide significant open space and ecosystem services that improve the quality of life. Together, the six states considered keep 9.3 million acres of open space in farmland and 26.6 million acres in forests.

Although there is great variability in the distribution of output and job creation across these six Northeastern states, reflecting primarily their relative sizes, the findings attest to the value added nature of agriculture and forestry in the region, due in part to proximity to a large consumer base, which creates opportunities for continued economic growth and employment.

Even though the Northeastern region contains some of the smallest states in the nation in size or population, when the contributions of agriculture are put on a per capita or per acre basis, it is clear that their relative role is significant in the lives of the region's residents. **On average, in 2010 the economic impact of agriculture was approximately \$6,000 per acre in farmland and the combined impact of agriculture and forestry amounted to \$1,750 per resident,**

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APPENDIX TABLES

Table A1: Description of Sectors Included in the Study

Sector	Description
<i>Agricultural production</i>	
Oilseed farming	Growing soybeans, fibrous oilseed producing plants and/or producing oilseed seeds, such as sunflower, flax, canola and sesame.
Grain farming	Raising dry peas and beans or corn; other grain farming
Vegetable and melon farming	Growing root and tuber crops or edible plants and/or producing root and tuber or edible plant seeds
Fruit farming	Apple orchards; grape vineyards; strawberry farming; berry (except strawberry) farming
Greenhouse, nursery, floriculture, and sod	Growing crops of any kind under cover and/or growing nursery stock and flowers
Tobacco farming	Tobacco farming, field and seed production
All other crop farming	Hay farming; all other miscellaneous crop farming (e.g. aloe)
Cattle ranching and farming	Raising cattle for both milking and meat production
Dairy cattle and milk production	Milking dairy cattle
Poultry and egg production	Breeding, hatching, and raising poultry for meat or egg production
Animal production, except cattle and poultry and eggs	Raising bees, horses and other equines, rabbits and other fur-bearing animals, and producing products such as honey and other bee products
Forest nurseries, forest products, and timber tracts	Operating timber tracts for the purpose of selling standing timber; forest nurseries and gathering of forest product
Commercial logging	Cutting timber; cutting and transporting timber; producing wood chips in the field
Commercial fishing	Commercial catching or taking of finfish, shellfish, or miscellaneous marine products from a natural habitat
Hunting and trapping	Commercial hunting and trapping; operating commercial game preserves, such as game retreats; operating hunting preserves
Support activities for agriculture and forestry	Crop harvesting primarily by machine, soil preparation, farm labor contracting, farm management services

Table A2 continued

Sector	Description
<i>Primary agricultural processing</i>	
Frozen food manufacturing	Manufacturing frozen fruit, frozen juices, frozen vegetables, and frozen specialty foods (except seafood)
Fruit and vegetable canning, pickling, and drying	Manufacturing canned, pickled, and dried fruits, vegetables, and specialty foods
Fluid milk and butter manufacturing	Manufacturing processed milk product, such as pasteurized milk or cream and sour cream and/or manufacturing fluid milk dairy substitutes from soybeans and other nondairy substances; creamery butter manufacturing
Cheese manufacturing	Manufacturing cheese products (except cottage cheese) from raw milk and/or processed milk products and/or manufacturing cheese substitutes from soybean and other nondairy substances
Dry, condensed and evaporated dairy product manufacturing	Manufacturing dry, condensed, and evaporated milk and dairy substitute products
Ice cream and frozen dessert manufacturing	Manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products)
Animal (except poultry) slaughtering, rendering, and processing	Slaughtering animals (except poultry and small game); meat processing from carcasses; rendering and meat byproduct processing
Poultry processing	(1) Slaughtering poultry and small game and/or (2) preparing processed poultry and small game meat and meat byproducts
Seafood product preparation and packaging	Canning seafood (including soup); smoking, salting, and drying seafood; eviscerating fresh fish by removing heads, fins, scales, bones, and entrails; shucking and packing fresh shellfish; processing marine fats and oils; and freezing seafood
Wineries	Growing grapes and manufacturing wines and brandies; manufacturing wines and brandies from grapes and other fruits grown elsewhere; blending wines and brandies
<i>Primary forest processing</i>	
Sawmills and wood preservation	Logs or bolts transforming into boards, dimension lumber, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips; cutting and treating round wood and/or treating wood products made in other establishments to prevent rotting
Wood container and pallet manufacturing	Manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers
Paper mills	Manufacturing paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments

	may convert the paper they make.
Paperboard mills	Manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

Notes: The following agricultural production sectors were excluded from the analysis because no direct sales were reported for these sectors in 2010: (1) oilseed farming, (2) cotton farming, and (3) sugar cane and sugar beet farming. Only the agricultural processing sectors shown in the table above were included in the analysis because these processing activities have strong linkages with agricultural production in the state. Thus the following food processing industries were excluded from this study even though these industries are active in the state as of 2010: (1) other animal food manufacturing, (2) fats and oils refining and blending, (3) breakfast cereal manufacturing, (4) chocolate and confectionery manufacturing from cacao beans, (5) confectionery manufacturing from purchased chocolate, (6) non-chocolate confectionery manufacturing, (7) bread and bakery product manufacturing, (8) cookie, cracker, and pasta manufacturing, (9) snack food manufacturing, (10) coffee and tea manufacturing, (11) flavoring syrup and concentrate manufacturing, (12) seasoning and dressing manufacturing, (13) all other food manufacturing, (14) soft drink and ice manufacturing, (15) breweries, (16) distilleries, and (17) tobacco product manufacturing (e.g., cigarettes and chewing tobacco). Similarly, the following forest processing sectors were excluded from the study: (1) veneer and plywood manufacturing, (2) engineered wood members and truss manufacturing, (3) wood windows, door and millwork, (4) manufactured home (mobile home) manufacturing, (5) pulp mills, and (6) all other converted paper manufacturing (e.g., paperboard container, stationery, sanitary paper).

Table A2. Input Data for all Six Northeastern States, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	160.9	2557
Grain farming	306.7	7,523
Vegetable and melon farming	896.0	6,693
Fruit farming	637.9	6,150
Greenhouse, nursery, and floriculture production	1,369.8	17,160
Tobacco farming	58.3	615
All other crop farming	409.6	2,930
Cattle ranching and farming	208.5	2,307
Dairy cattle and milk production	2,447.8	22,996
Poultry and egg production	206.2	597
Animal production, except cattle, poultry and eggs	254.4	10,180
Forestry, forest products, and timber tract production	84.4	446
Commercial logging	603.9	6,906
Commercial Fishing	1,138.2	13,516
Support activities for agriculture and forestry	794.5	19,786
Total for agricultural production	9,576.7	120,361
<i>Primary agricultural processing</i>		
Frozen food manufacturing	1,810.0	5,428
Fruit and vegetable canning, pickling, and drying	4,269.2	7,595
Fluid milk and butter manufacturing	4,858.9	7,760
Cheese manufacturing	2,705.7	3,544
Dry, condensed, and evaporated dairy product manufacturing	653.2	599
Ice cream and frozen dessert manufacturing	1,106.5	2,548
Animal (except poultry) slaughtering, rendering, and processing	3,802.3	8,289
Poultry processing	392.3	1,696
Seafood product preparation and packaging	1,501.8	4,195
Wineries	939.0	2,523
Total for agricultural processing	22,039.0	44,174
<i>Primary forest processing</i>		
Sawmills and wood preservation	681.9	3,207
Wood container and pallet manufacturing	485.9	3,976
Paper mills	5,909.4	8,065
Paperboard Mills	985.4	1,396
Total for forest processing	8,062.4	16,644
Total for agriculture and forestry	39,678.2	181,179

Table A3. Input Data for Connecticut's Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	0.0	0
Grain farming	2.5	58
Vegetable and melon farming	33.8	278
Fruit farming	32.3	321
Greenhouse, nursery, and floriculture production	241.9	3,010
Tobacco farming	45.3	447
All other crop farming	32.0	244
Cattle ranching and farming	8.7	1010
Dairy cattle and milk production	66.8	743
Poultry and egg production	43.6	129
Animal production, except cattle and poultry and eggs	41.5	1,633
Forestry, forest products, and timber tract production	22.1	88
Commercial logging	28.5	410
Commercial Fishing	38.0	654
Support activities for agriculture and forestry	47.9	1,696
Total for agricultural production	684.7	9,822
<i>Primary agricultural processing</i>		
Frozen food manufacturing	80.4	230
Fruit and vegetable canning, pickling, and drying	165.3	316
Fluid milk and butter manufacturing	206.0	331
Cheese manufacturing	100.6	131
Dry, condensed, and evaporated dairy product manufacturing	0.0	0
Ice cream and frozen dessert manufacturing	278.1	643
Animal (except poultry) slaughtering, rendering, and processing	146.2	332
Poultry processing	23.7	100
Seafood product preparation and packaging	26.4	76
Wineries	54.1	140
Total for agricultural processing	1,080.9	2,299
<i>Primary forest processing</i>		
Sawmills and wood preservation	28.4	139
Wood container and pallet manufacturing	45.4	379
Paper mills	705.7	881
Paperboard Mills	182.8	256
Total for forest processing	962.3	1,656
Total for agriculture and forestry	2,728.0	13,776

Table A4. Input Data for Massachusetts' Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	0.0	0
Grain farming	2.1	49
Vegetable and melon farming	73.4	811
Fruit farming	114.2	1,528
Greenhouse, nursery, and floriculture production	163.0	2,725
Tobacco farming	13.0	168
All other crop farming	32.0	328
Cattle ranching and farming	6.6	113
Dairy cattle and milk production	44.3	663
Poultry and egg production	9.4	38
Animal production, except cattle and poultry and eggs	46.1	2,439
Forestry, forest products, and timber tract production	16.2	109
Commercial logging	79.2	859
Commercial Fishing	819.9	7,791
Support activities for agriculture and forestry	210.4	3,631
Total for agricultural production	1,629.8	21,250
<i>Primary agricultural processing</i>		
Frozen food manufacturing	240.5	696
Fruit and vegetable canning, pickling, and drying	708.6	1,125
Fluid milk and butter manufacturing	995.4	1,581
Cheese manufacturing	29.3	39
Dry, condensed, and evaporated dairy product manufacturing	76.3	71
Ice cream and frozen dessert manufacturing	374.8	810
Animal (except poultry) slaughtering, rendering, and processing	948.9	2,061
Poultry processing	3.7	16
Seafood product preparation and packaging	1,004.4	2,817
Wineries	27.5	78
Total for agricultural processing	4,409.3	9,293
<i>Primary forest processing</i>		
Sawmills and wood preservation	51.9	248
Wood container and pallet manufacturing	105.6	793
Paper mills	1,133.9	1,496
Paperboard Mills	168.5	261
Total for forest processing	1,459.8	2,798
Total for agriculture and forestry	7,498.9	33,341

Table A5. Input Data for New Hampshire' Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	0.0	0
Grain farming	0.8	18
Vegetable and melon farming	10.6	166
Fruit farming	13.4	252
Greenhouse, nursery, and floriculture production	55.0	1,295
Tobacco farming	0.0	0
All other crop farming	22.6	327
Cattle ranching and farming	7.6	183
Dairy cattle and milk production	53.7	1,131
Poultry and egg production	16.1	91
Animal production, except cattle and poultry and eggs	9.3	694
Forestry, forest products, and timber tract production	19.0	55
Commercial logging	173.3	1,646
Commercial Fishing	40.5	576
Support activities for agriculture and forestry	32.8	1,120
Total for agricultural production	454.5	7,553
<i>Primary agricultural processing</i>		
Frozen food manufacturing	19.0	63
Fruit and vegetable canning, pickling, and drying	5.0	11
Fluid milk and butter manufacturing	375.8	603
Cheese manufacturing	0.0	0
Dry, condensed, and evaporated dairy product manufacturing	0.0	0
Ice cream and frozen dessert manufacturing	4.9	14
Animal (except poultry) slaughtering, rendering, and processing	41.3	94
Poultry processing	0.0	0
Seafood product preparation and packaging	93.3	269
Wineries	1.3	4
Total for agricultural processing	540.6	1,058
<i>Primary forest processing</i>		
Sawmills and wood preservation	169.3	787
Wood container and pallet manufacturing	15.8	128
Paper mills	336.6	463
Paperboard Mills	0.0	0
Total for forest processing	521.7	1,377
Total for agriculture and forestry	1,516.8	9,988

Table A6. Input Data for Rhode Island's Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	0.0	0
Grain farming	0.0	0
Vegetable and melon farming	10.3	126
Fruit farming	4.8	71
Greenhouse, nursery, and floriculture production	34.6	639
Tobacco farming	0.0	0
All other crop farming	3.7	42
Cattle ranching and farming	0.6	12
Dairy cattle and milk production	3.6	59
Poultry and egg production	1.5	7
Animal production, except cattle and poultry and eggs	3.3	191
Forestry, forest products, and timber tract production	0.0	0
Commercial logging	1.1	11
Commercial Fishing	106.4	1,900
Support activities for agriculture and forestry	7.4	365
Total for agricultural production	177.5	3,421
<i>Primary agricultural processing</i>		
Frozen food manufacturing	0.0	0
Fruit and vegetable canning, pickling, and drying	11.7	27
Fluid milk and butter manufacturing	62.9	107
Cheese manufacturing	30.6	41
Dry, condensed, and evaporated dairy product manufacturing	0.0	0
Ice cream and frozen dessert manufacturing	6.4	14
Animal (except poultry) slaughtering, rendering, and processing	97.7	215
Poultry processing	51.5	218
Seafood product preparation and packaging	63.4	183
Wineries	6.3	19
Total for agricultural processing	330.6	824
<i>Primary forest processing</i>		
Sawmills and wood preservation	14.5	65
Wood container and pallet manufacturing	15.2	127
Paper mills	0.0	0
Paperboard Mills	146.3	213
Total for forest processing	175.9	405
Total for agriculture and forestry	684.0	4,651

Table A7. Input Data for New Jersey's Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	27.40	490
Grain farming	31.80	888
Vegetable and melon farming	231.82	1,770
Fruit farming	157.63	1,456
Greenhouse, nursery, and floriculture production	476.52	5,505
Tobacco farming	0.00	0
All other crop farming	29.57	210
Cattle ranching and farming	7.05	83
Dairy cattle and milk production	23.70	245
Poultry and egg production	24.80	68
Animal production, except cattle and poultry and eggs	70.10	2,563
Forestry, forest products, and timber tract production	16.97	136
Commercial logging	17.46	277
Commercial Fishing	102.93	1,790
Support activities for agriculture and forestry	146.64	4,421
Total for agricultural production	1364.39	19902
<i>Primary agricultural processing</i>		
Frozen food manufacturing	469.07	1,433
Fruit and vegetable canning, pickling, and drying	1,243.14	2,165
Fluid milk and butter manufacturing	605.31	976
Cheese manufacturing	586.49	767
Dry, condensed, and evaporated dairy product manufacturing	124.20	115
Ice cream and frozen dessert manufacturing	59.29	134
Animal (except poultry) slaughtering, rendering, and processing	1,223.77	2,636
Poultry processing	112.92	496
Seafood product preparation and packaging	169.34	469
Wineries	82.51	225
Total for agricultural processing	4,676.03	9,414
<i>Primary forest processing</i>		
Sawmills and wood preservation	13.88	59
Wood container and pallet manufacturing	100.08	829
Paper mills	462.38	627
Paperboard Mills	30.95	43
Total for forest processing	607.29	1,557
Total for agriculture and forestry	6,647.98	30,874

Table A8. Input Data for New York's Agriculture and Forestry, 2010

Sector	Output	Employment
<i>Agricultural production</i>	\$ million	Jobs
Oilseed farming	133.48	2,067
Grain farming	269.45	6,510
Vegetable and melon farming	536.11	3,542
Fruit farming	315.53	2,522
Greenhouse, nursery, and floriculture production	398.74	3,985
Tobacco farming	0.00	0
All other crop farming	289.75	1,778
Cattle ranching and farming	177.92	1,808
Dairy cattle and milk production	2,255.73	20,155
Poultry and egg production	110.82	264
Animal production, except cattle and poultry and eggs	84.06	2,660
Forestry, forest products, and timber tract production	10.09	58
Commercial logging	304.30	3,702
Commercial Fishing	30.43	807
Support activities for agriculture and forestry	349.37	8,553
Total for agricultural production	5,265.78	58,412
<i>Primary agricultural processing</i>		
Frozen food manufacturing	1,001.02	3,006
Fruit and vegetable canning, pickling, and drying	2,135.49	3,951
Fluid milk and butter manufacturing	2,613.51	4,162
Cheese manufacturing	1,958.73	2,566
Dry, condensed, and evaporated dairy product manufacturing	452.68	413
Ice cream and frozen dessert manufacturing	382.99	932
Animal (except poultry) slaughtering, rendering, and processing	1,344.44	2,951
Poultry processing	200.49	866
Seafood product preparation and packaging	144.94	381
Wineries	767.32	2,059
Total for agricultural processing	11,001.60	21,286
<i>Primary forest processing</i>		
Sawmills and wood preservation	403.90	1,909
Wood container and pallet manufacturing	203.81	1,721
Paper mills	3,270.79	4,598
Paperboard Mills	456.89	623
Total for forest processing	4,335.39	8,851
Total for agriculture and forestry	20602.76	86,483