

# Economic Contributions of Agriculture, Natural Resources, and Food Industries in Florida in 2015<sup>1</sup>

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## Executive Summary

Agriculture, natural resources, and food industries remain a significant force in the economy of Florida, and it is important to recognize the economic contributions of these industries to ensure informed public policy. The economic contributions of these industries were evaluated for calendar year 2015 to update previous reports and provide current information on economic trends.

This analysis was conducted using the *Implan* regional economic modeling system and associated state and county databases (*IMPLAN* Group LLC) to estimate economic multipliers and contributions for over 500 different industry sectors. Multipliers capture the indirect and induced economic activity generated by re-spending of income or sales revenues in a regional economy. The analysis included 121 industry sectors that represent the broad array of activities encompassed by agricultural and natural-resource commodity production, manufacturing, distribution, and supporting services in Florida. Economic contributions can be measured in terms of employment, industry output, value added, exports, labor income, other property income, and business taxes. A glossary of economic terms used in this report is available in the full report.

The economic contributions of Florida agriculture, natural resources, and food industries for 2015 are summarized in Table ES1, and include the following:

- Industry output or sales revenues were \$160.714 billion.
- Foreign and domestic exports were \$60.529 billion.
- Agriculture, natural resources, and food industries had 1,616,235 full-time and part-time direct jobs, representing 14.1 percent of all jobs in the state.
- An additional 655,877 jobs were indirectly connected to these industries for a total employment impact of 2,272,113 jobs, representing 19.8 percent of total state employment.
- Direct value added was \$78.586 billion and total value added impact (including multiplier effects) was \$132.035 billion, representing 14.7 percent of Gross State Product.
- Total labor income impact was \$81.038 billion, including employee wages, fringe benefits, and proprietor income.
- Total property income impact was \$37.997 billion, representing rents, dividends, interest, royalties, etc.
- Taxes on production and imports paid to local, state, and federal governments totaled \$13.000 billion.

Across the various industry groups, total employment and value added impacts were largest for Food and Kindred Products Distribution (1.47 million jobs; \$78.833 billion), which includes food service establishments (restaurants) and retail food stores, followed by Agricultural Inputs and Services (271,940 jobs; \$15.053 billion); Crop, Livestock, Forestry, and Fisheries Production (212,959 jobs; \$12.715 billion); Food and Kindred Product Manufacturing

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(151,432 jobs; \$13.898 billion); Forest Product Manufacturing (73,040 jobs; \$6.550 billion); Mining (48,826 jobs; \$2.651 billion); and Nature-Based Recreation (42,475 jobs; \$2.336 billion). Excluding the Food and Kindred Products Distribution industry group, total value added impacts represented 5.94 percent of Gross State Product and employment contributions were 6.99 percent of total state employment.

Information on economic contributions was also evaluated for seven agricultural commodity groups that have identifiable market-chain linkages between production and processing/manufacturing sectors. The total employment and value added contributions were highest for the Environmental Horticulture group (182,546 jobs; \$8.661 billion), followed by Fruit and Vegetable Farming and Processing (90,050 jobs; \$6.032 billion); Forestry and Forest Products (80,849 jobs; \$7.010 billion); Livestock Farming and Animal Products Manufacturing (34,442 jobs; \$1.921 billion); Sugarcane Farming, Refined Sugar, and Confections (18,765 jobs; \$1.644 billion); Fishing and Seafood Products (13,745 jobs; \$730 million); and Grain and Oilseed Farming and Processing (3,702 jobs; \$332 million).

Geographically, the size and composition of agriculture, natural resources, and related food industries varies dramatically across the state of Florida due to differences in climate, natural resource endowments, and population and settlement patterns. The largest economic contributions occurred in the major metro areas of Miami-Ft. Lauderdale, Orlando, Tampa-St. Petersburg, Sarasota-Bradenton, and Jacksonville, where there are large demands for food and kindred products, and a large workforce available for the industry (Table ES1). The eight largest counties in terms of total employment and value added impacts were Miami-Dade (273,336 jobs; \$17.325 billion), Orange (199,200 jobs; \$12.748 billion), Broward (188,484 jobs; \$10.913 billion), Hillsborough (180,161 jobs; \$12.695 billion), Palm Beach (172,133 jobs; \$10.600 billion), Duval (122,095 jobs; \$8.612 billion), Polk (108,340 jobs; \$7.898 billion), and Pinellas (89,083 jobs; \$4.442 billion). Additional detailed information on economic contributions in individual Florida counties is available in the Appendix of the full report.

Direct employment in agriculture, natural resources, and food industries in Florida grew from 1.252 million jobs in 2001 to a peak of 1.351 million jobs in 2008, declined during the Great Recession of 2009-10, then recovered to 1.616 million jobs in 2015, which was 29 percent higher than 2001, representing an average annual growth rate of 2.1 percent. Overall growth in industry contributions during this period reflected an increase in exports of Florida

products to domestic and world markets. Average annual growth in employment contributions during 2001-15 was highest for Mining (10.5%), followed by Agricultural Inputs and Services (7.5%) and Food and Kindred Products Distribution (2.6%), while industry groups that had negative growth in employment contributions were Forest Products Manufacturing (-3.3%); Crop, Livestock, Forestry, and Fisheries Production (-1.6%); and Nature-Based Recreation (-1.3%).

Full Report available online at <http://fred.ifas.ufl.edu/economicimpactanalysis/publications/2015-ag-natural-resources-and-food-industries/>.

Table E51. Summary of economic contributions of agriculture, natural resources, and food industries in Florida in 2015 by industry groups and Florida regions

Industry Group	Direct Employment (Jobs)	Direct Industry Output (M\$)	Foreign and Domestic Exports (M\$)	Industry Output Impacts (M\$)	Employment Impacts (Jobs)	Value Added Impacts (M\$)	Labor Income Impacts (M\$)	Other Property Income Impacts (M\$)	Tax on Production and Imports Impacts (M\$)
<b>Industry Group</b>									
Crop, Livestock, Forestry & Fisheries Production	130,327	11,276.6	7,220.2	22,429.4	212,959	12,714.7	7,861.3	4,274.6	578.9
Agricultural Inputs & Services	180,252	18,562.9	10,361.2	32,311.0	271,940	15,052.9	9,826.6	4,364.3	862.0
Food & Kindred Products Manufacturing	59,323	26,828.9	11,134.9	40,865.5	151,432	13,898.0	7,574.6	5,071.5	1,251.9
Forest Products Manufacturing	22,239	8,877.6	5,940.8	16,306.8	73,040	6,549.8	3,922.9	2,188.6	438.4
Mining	28,874	4,254.6	1,958.2	7,118.9	48,826	2,650.7	1,677.7	729.5	243.6
Food & Kindred Products Distribution	1,167,295	89,000.3	22,818.4	130,443.9	1,471,440	78,832.8	48,698.8	20,639.3	9,494.7
Nature-based Recreation	27,925	1,912.9	1,095.4	3,894.6	42,475	2,336.2	1,476.7	729.4	130.1
Total All Industries	1,616,235	160,713.8	60,529.1	253,370.2	2,272,113	132,035.1	81,038.4	37,997.2	12,999.5
<b>Florida Economic Region</b>									
Miami-Fort Lauderdale	46,937	4,701.1	2,139.2	6,359.2	60,033	2,627.1	1,652.9	716.1	258.2
Orlando	122,183	15,398.3	8,153.9	23,533.1	178,302	11,675.8	6,495.7	3,983.1	1,197.1
Tampa-St. Petersburg	508,614	49,554.4	20,543.0	74,022.6	686,828	40,678.2	25,855.8	10,763.4	4,059.0
Sarasota-Bradenton	411,608	41,808.5	20,468.0	60,751.9	553,441	30,549.3	18,246.0	9,288.4	3,014.9
Jacksonville	25,828	2,268.0	1,156.9	3,208.5	33,540	1,610.8	959.7	484.1	167.1
Pensacola	58,639	4,421.0	1,766.4	5,885.6	70,103	3,066.2	1,945.6	773.0	347.6
Gainesville	179,938	14,552.9	5,751.1	20,324.4	225,416	11,031.7	7,276.4	2,698.0	1,057.3
Tallahassee	42,104	4,987.5	2,946.7	6,456.2	53,949	2,549.5	1,506.9	785.8	256.8
Panama City	219,281	22,967.9	9,866.0	33,758.3	291,909	17,286.8	10,449.9	5,046.2	1,790.7

Employment represents full-time and part-time jobs. Monetary values are given in millions of dollars.

Total impact estimates include regional multiplier effects.

Florida regions are multi-county functional economic areas defined by the U.S. Bureau of Economic Analysis.

Source: IMPLAN model and state/county data for Florida (IMPLAN Group LLC).