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Economic Impacts of Agricultural, Food, and Natural Resource Industries in Florida in 2004[1]

Alan W. Hodges, Mohammad Rahmani, and W. David Mulkey[2]

The agricultural, food and natural resource industries are a significant component of the Florida economy. The purpose of this report is to quantify the magnitude of these industries' contributions to the economy of Florida in 2004, updating a previous study for 2003 (Hodges and Mulkey, 2006).

Methods

Data for this analysis were obtained from the *IMPLAN Professional* database (Minnesota IMPLAN Group), which in turn were derived from the National Income and Product Accounts and employment data for the United States (U.S. Department of Commerce). More than 100 individual industry sectors in Florida were identified as related to agriculture, food, and natural resources, including sectors for commodity production, processing and manufacturing, and associated input suppliers and supporting services. However, wholesale and retail distribution of food and kindred products, restaurants, and other food service establishments were excluded from the analysis since these activities are not strictly related to agriculture or natural resources. The total regional economic impacts for each sector were estimated using *IMPLAN* input-output multipliers, which capture the indirect and induced effects of sales outside Florida, that bring new money into the region and generate further economic activity as these dollars circulate through the economy. Indirect effects represent the economic activity generated by businesses that furnish inputs to the agricultural and natural resource industries, while induced effects represent the impacts of industry employee household spending. A brief glossary of economic impact analysis terminology is provided in the Appendix. Impact estimates in this update are expressed in 2006 dollars using the Gross Domestic Product Implicit Price Deflator indices for mid-year 2001 through 2006 (U.S. Department of Commerce), which restated values for 2004 approximately 6.1 percent higher.

Results

As shown in Table 1, total industry output or sales of the agricultural, food, and natural resource industries in Florida was $56.93 billion (Bn) in 2004. Total exports outside the state of Florida amounted to $31.82 Bn. As a result of the indirect and induced

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2. Alan W. Hodges, Associate In; Mohammad Rahmani, Coordinator of Economic Analysis; and W. David Mulkey, Professor, Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

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multipler effects from these exports, the total output impacts were estimated at $97.84 Bn. Direct employment in the industry was 390,184 full-time and part-time jobs, and total employment impacts were estimated at 769,224 jobs (full-time and part-time). The direct value added contribution of agricultural, food, and natural resource industries in 2004 was estimated at $19.79 Bn, and total value added impacts were $43.62 Bn. Value added represents the net value created by the industry, measured as the difference between industry revenues and input purchases from other sectors, and it includes personal and business net income, and capital consumption. The labor (earned) income impact was estimated to be $26.90 Bn. Indirect business taxes paid to local, state and federal governments were $2.85 Bn.

Impacts by Industry Groups and Sectors

The five industry groups with the largest economic impacts in Florida in terms of value added were fruit and vegetable farming and processing ($7.95 Bn), forestry and forest products ($7.35 Bn), agricultural inputs and support services ($6.93 Bn), environmental horticulture ($6.76 Bn), and other food product manufacturing ($5.58 Bn). Value added impacts for the next five largest industry groups were tobacco farming and manufacturing ($3.07 Bn), sugarcane farming and refined sugar manufacturing ($1.80 Bn), mining ($1.91 Bn), and livestock and dairy farming and animal products manufacturing ($1.34 Bn). Relatively smaller industry groups with value added impacts of less than $1 billion included fishing and seafood products at $391 million (Mn); grain and oilseed farming and processing ($114 Mn); other crop farming, including cotton, nuts, and miscellaneous crops ($258 Mn); and wildlife hunting and trapping ($157 Mn). In terms of employment impacts, the largest industry groups were agricultural inputs and services (166,835 jobs); environmental horticulture (160,785); forestry, wood, and paper products (110,823); and fruit and vegetable farming and processing (107,478).

As shown in Table 2, some of the largest individual industry sectors, all with over one billion dollars in value added impacts, were landscape services ($4.40 Bn), soft drink and ice manufacturing ($2.76 Bn), other tobacco product manufacturing ($2.79 Bn), phosphatic fertilizer manufacturing ($2.82 Bn), agriculture and forestry support activities ($2.52 Bn), fruit farming ($2.35 Bn), vegetable and melon farming ($2.37 Bn), greenhouse and nursery production ($2.36 Bn), fruit and vegetable canning and drying ($2.09 Bn), paper and paperboard mills ($1.51 Bn), sugar manufacturing ($1.15 Bn), forest nurseries and timber tracts ($1.21 Bn), frozen food manufacturing ($1.14 Bn), and engineered wood and truss manufacturing ($1.03 Bn).

Impacts in Florida Regions

Regional value added impacts of agricultural, food and natural resource industries are shown in Table 3 for the nine economic regions of Florida, which were defined based on employee commuting patterns (Johnson and Kort, 2004). A map of the counties included in these regions is shown in Figure 1. Total value added impacts for the nine regions, ranked in descending order, were Miami-Ft. Lauderdale ($11.84 Bn), Orlando ($10.61 Bn), Tampa-St. Petersburg-Clearwater ($6.87 Bn), Jacksonville ($6.14 Bn), Sarasota-Bradenton ($4.27 Bn), Gainesville ($1.49 Bn), Tallahassee ($1.08 Bn), Pensacola ($856 Mn), and Panama City ($492 Mn).

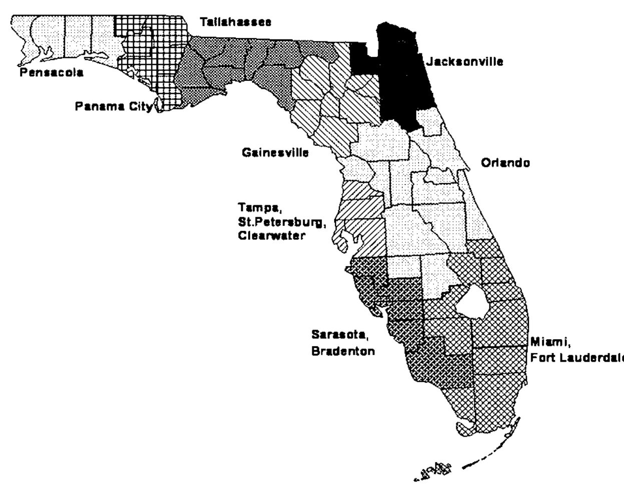

Figure 1. Economic regions of Florida.

Impact Trends during 2001-2004

Trends in economic impacts of the agricultural, food, and natural resource industries in Florida between 2001 and 2004 are shown in Table 4 and Figure 2. Total value added impacts grew from $34.94

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Bn in 2001 to $43.61 Bn in 2004 (adjusted for inflation to express in 2006 dollars), representing an overall growth of 25 percent, or an average of 8.3 percent per annum. Total output impacts grew by an average of 13.7 percent annually, and total employment impacts increased by 0.7 percent annually. During the most recent period (2003 to 2004), there was somewhat more rapid growth in employment (1.6%) but slower growth for output (8.1%) and value added (0.7%). Note that these trends in value added impacts may reflect changes in the structure of the Florida economy as well as changes in industry activity and commodity prices.

$100 million between 2001 and 2004. Other tobacco product manufacturing increased by $1.75 Bn, or average annual growth of 49 percent; vegetable and melon farming increased by $1.19 Bn (34%); landscape services increased by $1.10 Bn (11%); and phosphatic fertilizer manufacturing increased by $1.03 Bn (19%). Very rapid growth during this period was also seen for forest nurseries and timber tracts ($641 Mn, 37%), engineered wood member and truss manufacturing ($482 Mn, 29%), paper and paperboard mills ($397 Mn, 12%), sanitary paper product manufacturing ($396 Mn, 34%), fruit farming ($339 Mn, 6%), wood window and door

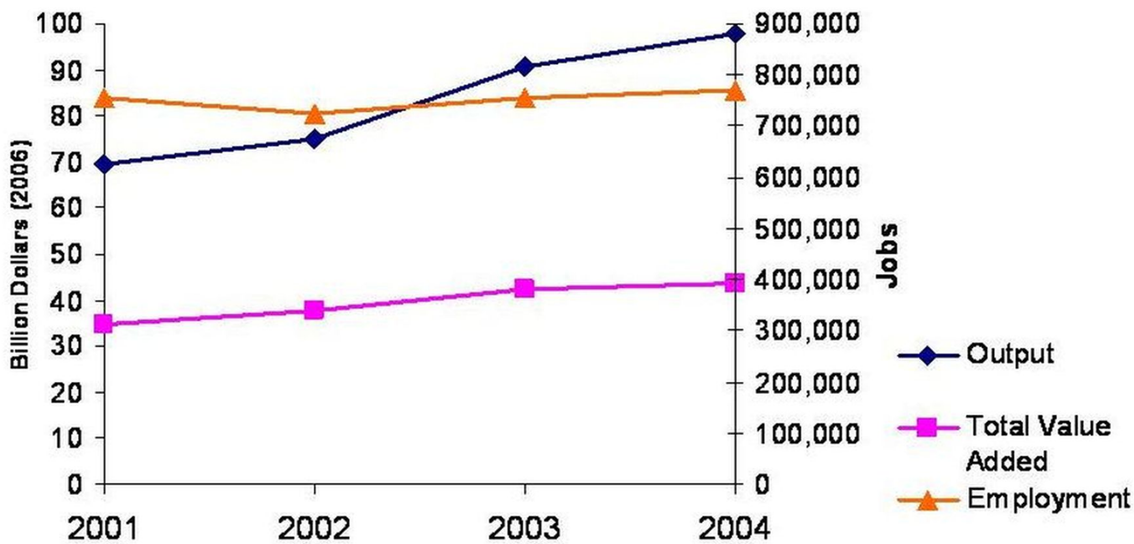

Figure 2. Trend in output, value added, and employment impacts of agricultural, food, and natural resource industries in Florida, 2001-2004.

manufacturing ($228 Mn, 98%), breweries ($223 Mn, 10%), and poultry and egg production ($214 Mn, 41%). Some other sectors that increased very dramatically in percentage terms, although not necessarily in absolute value, were cigarette manufacturing (563%), cheese manufacturing (150%), rice milling (59%), fats and oils refining and blending (57%), miscellaneous wood product manufacturing (43%), and wineries (38%).

Strong average annual growth in value added impacts between 2001 and 2004 was seen for the industry groups of tobacco products (51.2%), wildlife hunting (31.7%), other crop farming (14.7%), and forest products (14.7%). Moderate average growth occurred in environmental horticulture (4.5%), fruits and vegetables (7.4%), agricultural inputs and supporting services (6.8%), mining (9.3%), and other food product manufacturing (4.5%). Negative growth occurred for grains and oilseeds (-16.7%); fishing and seafood (-1.4%); and livestock, dairy, and animal products (-0.5%).

The fastest-growing individual industry sectors in terms of value added impacts are shown in Table 5 for those sectors that increased in value by at least

Implications

The relative importance of the agricultural, food, and natural resource industries in Florida can be gauged by its share of overall economic activity in the state. The Gross State Product (GSP), which is

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the sum of value added for all industries in the state, was $625.87 Bn in 2004 (expressed in 2006 dollars), and the total employment in the state was 9,710,846 jobs (Table 6). The direct value added contributed by agricultural, food, and natural resource industries in Florida for 2004 represented about 3.2 percent of GSP, and direct employment represented 4.0 percent of total state employment. However, when the indirect and induced multiplier effects from export sales are included, the total value added impacts of agricultural, food, and natural resource industries represented 7.4 percent of GSP, and the total employment impacts accounted for 7.9 percent of all jobs in the State. Among all industry groups in Florida, the agricultural, food and natural resource industries ranked fourteenth in their contribution to GSP.

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Appendix: Glossary of Economic Impact Terms

Terms are presented in groups within a logical rather than alphabetical order.

Region defines the geographic area for which impacts are estimated. Regions are generally an aggregation of one or more counties. Economic regions identified in this paper were defined based on worker commuting patterns.

Sector is a grouping of industries that produce similar products or services. Most economic reporting and models in the United States are based on the Standard Industrial Classification system (SIC code) or the North American Industrial Classification System (NAICS).

Impact analysis estimates the impact of a change in output or employment resulting from a change in final demand to households, governments, or exports.

Input-output (I-O) model. An input-output model is a representation of the flows of economic activity between industry sectors within a region. The model captures what each business or sector must purchase from every other sector to produce its output of goods or services. Using such a model, flows of economic activity associated with any change in spending may be traced backwards (e.g., purchases of plants that lead growers to purchase additional inputs such as fertilizers and containers). Multipliers for a region may be derived from an input-output model of the region's economy.

IMPLAN is a micro-computer-based input output modeling system and Social Accounting Matrix (SAM). With IMPLAN, one can estimate I-O models of up to 528 sectors for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model. The current version of the software is *IMPLAN Pro* 2.0.

Final Demand is the term for sales to final consumers such as households or government, or to exports outside of the region. Sales between industries are termed **intermediate sales**. Economic impact analysis generally estimates the regional economic impacts of final demand changes.

Direct effects are the changes in economic activity during the first round of spending.

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Secondary effects are the changes in economic activity from subsequent rounds of re-spending. There are two types of secondary effects: **Indirect effects** are the changes in sales, income or employment within the region in backward-linked industries supplying goods and services to businesses. For example, the increased sales in input supply firms resulting from more nursery industry sales is an indirect effect. **Induced effects** are the increased sales within the region from household spending of the income earned in the direct and supporting industries. Employees in the direct and supporting industries spend the income they earn on housing, utilities, groceries, and other consumer goods and services. This generates sales, income and employment throughout the region's economy. **Total effects** are the sum of direct, indirect and induced effects.

Multipliers capture the total effects, both direct and secondary, in a given region, generally as a ratio of the total change in economic activity in the region relative to the direct change. Multipliers may be expressed as ratios of sales, income, or employment, or as ratios of total income or employment changes relative to direct sales. Multipliers express the degree of interdependency between sectors in a region's economy and therefore vary considerably across regions and sectors. **Type I** multipliers include only direct and indirect effects. **Type II** multipliers also include induced effects. **Type SAM** multipliers used by IMPLAN additionally account for capital investments and transfer payments such as welfare and retirement income. A **sector-specific multiplier** gives the total changes to the economy associated with a unit change in output or employment in a given sector**.**

Purchaser prices are the prices paid by the final consumer of a good or service. **Producer prices** are the prices of goods at the factory or production point. For manufactured goods, the purchaser price equals the producer price plus a retail margin, a wholesale margin, and a transportation margin. For services, the producer and purchaser prices are equivalent.

Margins. The retail, wholesale and transportation margins are the portions of the purchaser price accruing to the retailer, wholesaler, and grower, respectively. Only the retail margins of many goods purchased by consumers accrue to the local region, as the wholesaler, shipper, and manufacturer often lie outside the local area.

Measures of economic activity. Sales or output is the dollar volume of a good or service produced or sold. **Final Demand** is sales to final consumers, including households, governments, and exports. **Intermediate sales** are sales to other industrial sectors. **Income** is the money earned within the region from production and sales. Total income includes personal income (wage and salary income, including income of sole proprietors profits and rents). **Jobs** or employment is a measure of the number of jobs required to produce a given volume of sales/production, usually expressed as full time equivalents, or as the total number including part time and seasonal positions. **Value Added** is the sum of total income and indirect business taxes. Value added is the most commonly used measure of the contribution of a region to the national economy, as it avoids double counting of intermediate sales and captures only the “value added” by the region to final products.

Table 1. Economic impacts of agricultural, food, and natural resource industry groups in Florida in 2004.

Industry Group	Industry Output (Mn$)*	Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*	Labor Income Impacts (Mn$)*	Indirect Business Tax Impacts (Mn$)*
Agricultural Inputs & Services (fertilizers, pesticides, veterinary, support activities, equipment manufacturing)	9,516.5	6,322.7	17,091.6	166,835	6,928.7	5,274.4	417.5
Environmental Horticulture (nursery & greenhouse, landscape services)	7,180.5	2,873.4	11,487.3	160,785	6,764.4	4,756.8	346.3
Fishing & Seafood Products	899.2	288.8	1,261.4	12,364	391.2	324.6	24.1
Forestry, Wood & Paper Product Manufacturing	9,459.7	6,208.1	17,037.0	110,823	7,347.0	4,614.5	432.0
Fruit & Vegetable Farming & Processing	6,964.5	5,625.0	14,191.3	107,478	7,954.0	4,285.5	446.7
Grain & Oilseed Farming & Processing	117.8	119.1	259.3	1,644	114.4	67.3	9.1
Livestock & Dairy Farming & Animal Products Manufacturing	4,498.1	854.7	5,402.6	33,030	1,341.8	756.7	91.7
Mining	3,414.1	1,050.2	4,739.5	25,444	1,910.3	1,047.3	144.1
Other Crop Farming	210.7	172.6	426.7	3,350	258.3	121.5	14.3
Other Food Product Manufacturing	9,035.1	4,730.0	14,602.7	67,998	5,584.1	3,146.9	573.4
Sugarcane Farming, Refined Sugar & Confections	2,263.2	1,397.3	4,556.5	47,022	1,795.3	1,071.7	139.5
Tobacco Farming & Manufacturing	3,156.7	2,093.3	6,435.5	29,342	3,074.4	1,358.2	189.1
Wildlife (hunting)	210.7	83.4	344.3	3,110	156.9	77.2	18.6
Grand Total	56,926.7	31,819.0	997,835.6	769,224	43,621.0	26,902.8	2,846.5

* Values expressed in 2006 dollars using GDP implicit price deflator (U.S. Department of Commerce).
Source: IMPLAN data for Florida (MIG, Inc., 2006).

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Table 2. Economic impacts of agricultural, food, and natural resource industry sectors in Florida in 2004.

Industry Group	Industry Sector	Industry Output (Mn$)*	Total Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*
Agricultural Inputs & Services	Agriculture & forestry support activities	2,367.4	1,427.5	4,330.6	96,077	2,519.7
	Farm machinery & equipment manufacturing	141.8	29.0	170.2	660	48.6
	Fertilizer (mixing only) manufacturing	439.1	0.0	439.1	963	87.7
	Food product machinery manufacturing	60.8	12.6	76.2	511	25.6
	Lawn & garden equipment manufacturing	27.4	3.3	30.4	101	6.1
	New farm housing units	0.0	0.0	0.0	0	0.0
	Nitrogenous fertilizer manufacturing	591.4	363.2	974.7	3,251	265.6
	Paper industry machinery manufacturing	7.2	2.1	9.6	57	3.2
	Pesticide & other agricultural chemical manufacturing	517.4	357.3	935.2	3,915	373.2
	Phosphatic fertilizer manufacturing	4,089.1	3,817.0	8,491.9	38,910	2,822.5
	Sawmill & woodworking machinery	8.2	1.4	9.7	66	3.4
	Veterinary services	1,266.7	309.3	1,623.9	22,323	773.1
	Total	9,516.5	6,322.7	17,091.6	166,835	6,928.7
Environmental Horticulture	Greenhouse & nursery production	1,821.4	1,199.3	3,494.7	34,861	2,360.6
	Landscape services	5,359.1	1,674.1	7,992.6	125,924	4,403.8
	Total	7,180.5	2,873.4	11,487.3	160,785	6,764.4
Fishing & Seafood Products	Fishing	213.9	184.1	455.1	8,693	203.8
	Seafood product preparation & packaging	685.3	104.7	806.3	3,671	187.5
	Total	899.2	288.8	1,261.4	12,364	391.2

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Industry Group	Industry Sector	Industry Output (Mn$)*	Total Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*
Forestry, Wood & Paper Product Manufacturing	All other converted paper product manufacturing	64.6	71.1	147.3	971	70.2
	Coated & laminated paper & packaging material	146.2	170.0	327.7	1,983	145.5
	Coated & uncoated paper bag manufacturing	137.2	127.4	270.2	1,624	115.8
	Cut stock (resaing lumber) & planing	23.5	0.0	23.5	162	5.7
	Engineered wood member & truss manufacturing	1,226.0	592.9	1,966.9	13,748	1,028.6
	Forest nurseries (forest products) & timber tracts	847.1	1,065.2	2,580.5	29,901	1,211.8
	Logging	715.9	90.8	824.1	3,835	281.9
	Miscellaneous wood product manufacturing	58.1	24.8	90.8	726	47.1
	Other millwork (including flooring)	318.2	8.7	329.2	1,929	95.7
	Paper & paperboard mills	1,377.7	1,533.0	3,334.0	18,617	1,506.5
	Paperboard container manufacturing	1,151.7	1,128.4	2,100.1	12,118	860.5
	Pulp mills	396.6	457.3	1,053.5	6,006	454.2
	Reconstituted wood product manufacturing	43.5	3.1	47.1	246	22.5
	Sanitary paper product manufacturing	1,102.0	861.8	1,986.4	9,266	787.5
	Sawmills	643.9	44.3	707.2	2,896	234.7
	Surface-coated paperboard manufacturing	7.3	0.7	8.0	28	1.3
	Veneer & plywood manufacturing	192.1	15.5	215.0	1,170	67.7
	Wood container & pallet manufacturing	159.9	2.9	163.8	1,455	63.4
	Wood preservation	208.9	3.5	213.4	718	40.1
	Wood windows & door manufacturing	639.5	6.9	648.3	3,423	306.3
	Total	9,459.7	6,208.1	17,037.0	110,823	7,347.0

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Table 2. Economic impacts of agricultural, food, and natural resource industry sectors in Florida in 2004.

Industry Group	Industry Sector	Industry Output (Mn$)*	Total Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*
Fruit & Vegetable Farming & Processing	Frozen food manufacturing	1,118.5	1,043.9	2,424.9	14,914	1,140.7
	Fruit & vegetable canning & drying	2,086.5	1,926.1	4,487.3	24,918	2,094.6
	Fruit farming	1,921.0	1,511.1	3,895.1	41,762	2,349.9
	Vegetable & melon farming	1,838.5	1,143.9	3,384.0	25,883	2,368.9
	Total	6,964.5	5,625.0	14,191.3	107,478	7,954.0
Grain & Oilseed Farming & Processing	Flour milling	71.2	51.8	131.3	600	50.0
	Grain milling	11.7	10.5	24.8	330	15.0
	Malt manufacturing	0.0	0.0	0.0	0	0.0
	Oilseed farming	4.0	30.0	42.2	412	25.9
	Other oilseed processing	1.5	1.2	2.8	12	0.9
	Rice milling	29.4	24.8	58.2	289	22.5
	Soybean processing	0.0	0.8	0.0	0	0.0
	Wet corn milling	0.0	0.0	0.0	0	0.0
	Total	117.8	119.1	259.3	1,644	114.4
Livestock & Dairy Farming & Animal Products Manufacturing	Animal (except poultry) slaughtering	378.0	28.2	412.1	1,367	59.6
	Animal production (except cattle and poultry)	285.7	18.6	300.5	7,996	47.6
	Cattle ranching & farming	973.1	458.6	1,434.5	13,208	415.4
	Cheese manufacturing	144.3	1.0	145.4	198	13.7
	Creamery butter manufacturing	0.0	0.0	0.0	0	0.0
	Dry (condensed) & evaporated dairy products	33.4	4.6	39.0	94	7.8
	Fluid milk manufacturing	680.0	2.2	682.6	1,185	88.1
	Ice cream & frozen dessert manufacturing	288.2	1.6	290.2	659	62.1
	Meat processed from carcasses	595.8	12.7	609.4	1,487	74.2
	Poultry & egg production	464.9	244.4	711.6	3,280	389.5
	Poultry processing	497.6	20.1	518.5	2,524	90.9
	Rendering & meat byproduct processing	157.2	62.7	258.8	1,031	93.0
	Total	4,498.1	854.7	5,402.6	33,030	1,341.8

Table 2. Economic impacts of agricultural, food, and natural resource industry sectors in Florida in 2004.

Industry Group	Industry Sector	Industry Output (Mn$)*	Total Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*
Mining	Coal mining	64.3	44.7	118.8	698	68.5
	Copper, nickel, lead, & zinc mining	0.2	0.1	0.3	2	0.2
	Drilling oil & gas wells	88.8	69.8	176.6	1,117	96.4
	Gold, silver, & other metal ore mining	82.3	36.6	129.1	570	76.1
	Iron ore mining	0.0	0.0	0.0	0	0.0
	Oil & gas extraction	2,124.3	34.1	2,166.9	7,861	369.0
	Other nonmetallic mineral mining	503.6	280.7	857.3	5,417	494.0
	Sand, gravel, clay, & refractory mining	199.5	234.1	498.2	3,906	315.1
	Stone mining & quarrying	330.6	330.6	744.9	5,413	459.5
	Support activities for oil & gas operations	15.2	13.0	33.1	333	23.5
	Support activities for other mining	5.4	6.5	14.2	126	8.1
	Total	3,414.1	1,050.2	4,739.5	25,444	1,910.3
Other Crop Farming	All other crop farming	176.1	139.0	348.0	2,650	211.6
	Cotton farming	33.7	32.8	76.7	682	45.3
	Tree nut farming	0.9	0.8	2.0	18	1.4
	Total	210.7	172.6	426.7	3,350	258.3
Other Food Product Manufacturing	All other food manufacturing	123.9	16.2	144.1	660	31.5
	Bread & bakery product (except frozen) manufacturing	1,294.2	11.9	1,309.3	10,058	539.3
	Breakfast cereal manufacturing	0.0	0.0	0.0	0	0.0
	Breweries	926.2	733.1	1,880.0	9,695	961.4
	Coffee & tea manufacturing	289.9	19.0	317.7	788	54.1
	Cookie & cracker manufacturing	300.6	0.0	300.6	854	88.3
	Distilleries	309.4	249.0	702.8	4,411	432.7
	Dog & cat food manufacturing	36.4	1.4	37.5	47	2.4
	Dry pasta manufacturing	15.9	0.4	16.4	55	3.9
	Fats & oils refining & blending	79.3	53.5	110.4	317	28.3
	Flavoring syrup & concentrate manufacturing	534.1	8.9	544.9	427	166.7
	Frozen cakes & other pastries manufacturing	5.8	0.4	6.2	47	1.5

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Table 2. Economic impacts of agricultural, food, and natural resource industry sectors in Florida in 2004.

Industry Group	Industry Sector	Industry Output (Mn$)*	Total Exports (Mn$)*	Output Impacts (Mn$)*	Employment Impacts (Jobs)	Total Value Added Impacts (Mn$)*
Other Food Product Manufacturing (continued)	Mayonnaise, dressing, & sauce manufacturing	156.0	10.5	168.5	515	42.4
	Mixes & dough made from purchased flour	1.7	0.1	1.8	5	0.4
	Other animal food manufacturing	416.4	392.0	711.2	2,865	198.8
	Other snack food manufacturing	432.4	5.6	439.7	795	129.0
	Roasted nuts & peanut butter manufacturing	24.4	7.1	29.7	96	8.0
	Soft drink & ice manufacturing	3,767.1	3,168.1	7,497.0	35,059	2,763.1
	Spice & extract manufacturing	279.9	22.9	309.7	869	103.8
	Tortilla manufacturing	1.7	0.0	1.7	12	0.5
	Wineries	39.7	29.8	73.4	423	28.1
	Total	9,035.1	4,730.0	14,602.7	67,998	5,584.1
Sugarcane Farming, Refined Sugar & Confections	Confectionery manufacturing from cacao beans	11.1	1.9	13.2	45	2.6
	Confectionery manufacturing from chocolate	141.3	58.4	211.5	1,101	65.4
	Nonchocolate confectionery manufacturing	142.4	52.1	213.6	1,132	83.1
	Sugar manufacturing	1,329.7	995.5	3,117.3	22,793	1,147.4
	Sugarcane & sugar beet farming	638.7	289.9	1,000.9	21,951	496.9
	Total	2,263.2	1,397.7	4,556.5	47,022	1,795.3
Tobacco Farming & Manufacturing	Cigarette manufacturing	281.8	7.6	293.5	225	114.2
	Other tobacco product manufacturing	2,852.7	2,066.2	6,093.9	28,483	2,926.5
	Tobacco farming	22.3	19.6	48.0	634	33.7
	Tobacco stemming & redrying	0.0	0.0	0.0	0	0.0
	Total	3,156.7	2,093.3	6,435.5	29,342	3,074.4
Wildlife (hunting)	Hunting & trapping	210.7	83.4	344.3	3,110	156.9
Grand Total		56,926.7	31,819.0	97,835.6	769,224	43,621.0

* Values expressed in 2006 dollars using GDP implicit price deflataor (U.S. Department of Commerce).
Source: IMPLAN data for Florida (MIG, Inc., 2006).

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Table 3. Value added impacts of agricultural, food, and natural resource industry groups in economic regions of Florida in 2004.

Industry Group	Miami-Fort Lauderdale	Orlando	Tampa–St. Petersburg	Sarasota–Bradenton	Jacksonville	Gainesville	Tallahassee	Panama City	Pensacola	Grand Total
					Million Dollars*					
Agricultural Inputs & Services	1,309.0	3,218.1	1,283.8	591.5	180.7	44.3	250.4	14.1	36.8	6,928.7
Environmental Horticulture	2,394.9	1,893.8	867.2	790.6	433.7	116.8	97.9	43.8	125.7	6,764.4
Fishing & Seafood Products	62.8	58.3	158.3	17.5	50.9	15.0	9.2	3.4	15.7	391.2
Forestry, Wood, & Paper Products Manufacturing	1,651.9	1,248.7	640.6	296.7	1,634.8	552.8	531.5	277.4	512.6	7,347.0
Fruit & Vegetable Farming & Processing	2,633.7	1,930.3	824.9	2,196.4	179.2	130.0	34.0	18.3	7.2	7,954.0
Grain & Oilseed Farming & Processing	57.0	4.9	28.3	1.5	0.5	2.9	9.2	5.8	4.3	114.4
Livestock & Dairy Farming & Animal Products Manufacturing	205.3	202.7	256.3	47.8	65.6	419.2	64.3	46.4	34.1	1,341.8
Mining	291.3	591.1	548.3	222.8	86.2	69.0	42.2	10.1	49.3	1,910.3
Other Crop Farming	19.6	47.8	15.1	4.9	1.9	51.5	7.5	56.1	54.0	258.3
Other Food Products Manufacturing	1,193.9	1,315.5	1,214.2	83.7	1,700.5	46.1	8.8	4.9	16.5	5,584.1
Sugarcane Farming, Refined Sugar & Confections	1,642.9	54.9	70.5	11.0	13.8	1.1	0.7	0.2	0.1	1,795.3
Tobacco Farming & Manufacturing	297.2	0.0	954.6	0.4	1,794.2	20.0	8.0	0.0	0.0	3,074.4
Wildlife (hunting)	48.4	43.6	5.3	2.6	2.6	23.8	18.8	11.7	0.0	156.9
Total	11,808.1	10,609.5	6,867.5	4,267.4	6,144.6	1,492.6	1,082.7	492.3	856.3	43,621.0

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Table 4. Value added and employment impacts of agricultural, food, and natural resource industry groups in Florida, 2001–2004.

Industry Group	Total Value Added Impacts (Mn$)*				Average Annual Percent Change	Employment Impacts (Jobs)				Average Annual Percent Change
	2001	2002	2003	2004	2001-04	2001	2002	2003	2004	2001-04
Agricultural Inputs & Services (fertilizers, pesticides, veterinary, support activities, equipment manufacturing)	5,750	5,825	6,720	6,928	6.8%	172,460	157,100	166,670	166,835	–1.1%
Environmental Horticulture (nursery & greenhouse, landscape services)	5,962	6,611	7,048	6,763	4.5%	159,572	154,205	152,820	160,785	0.3%
Fishing & Seafood Products	408	451	427	391	–1.4%	14,619	14,530	13,905	12,364	–5.1%
Forestry, Wood, & Paper Product Manufacturing	5,100	6,049	6,720	7,346	14.7%	93,542	96,929	105,111	110,823	6.2%
Fruit & Vegetable Farming & Processing	6,511	7,897	7,741	7,953	7.4%	109,221	124,990	110,222	107,478	–0.5%
Grain & Oilseed Farming & Processing	229	106	96	114	–16.7%	5,875	1,573	1,455	1,644	–24.0%
Livestock & Dairy Farming & Animal Products Manufacturing	1,360	1,148	1,197	1,342	–0.5%	45,088	32,244	31,118	33,030	–8.9%
Mining	1,495	1,586	1,618	1,910	9.3%	25,924	22,043	20,583	25,444	–0.6%
Other Crop Farming	179	197	247	258	14.7%	4,466	3,184	3,533	3,350	–8.3%
Other Food Products Manufacturing	4,915	5,017	5,682	5,583	4.5%	66,840	59,168	68,273	67,998	0.6%
Sugarcane Farming, Refined Sugar, & Confections	1,736	1,746	1,900	1,795	1.1%	39,573	48,038	52,778	47,022	6.3%
Tobacco Farming & Manufacturing	1,212	1,029	3,048	3,074	51.2%	13,522	10,084	28,411	29,342	39.0%
Wildlife (hunting)	80	56	47	157	31.7%	2,675	1,818	2,062	3,110	5.4%
Grand Total	34,937	37,718	42,492	43,614	8.3%	753,377	725,906	756,942	769,224	0.7%

*Values expressed in 2006 dollars using GDP implicit price deflator (U.S. Department of Commerce).
Source: IMPLAN data for Florida (MIG, Inc., 2006).

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Table 5. Fastest growing sectors of the agricultural, food, and natural resource industries in Florida, 2001–2004.

Industry Sector	Change in Value Added Impacts 2001-04* (Mn$)	Average Annual Percent Change 2001-04 (%)
Other tobacco product manufacturing	1,746.4	49.4%
Vegetable & melon farming	1,187.3	33.5%
Landscape services	1,095.8	11.0%
Phosphatic fertilizer manufacturing	1,030.9	19.2%
Forest nurseries, forest products, & timber tracts	640.5	37.4%
Soft drink & ice manufacturing	572.8	8.7%
Engineered wood member & truss manufacturing	482.0	29.4%
Paper & paperboard mills	397.1	11.9%
Sanitary paper product manufacturing	396.4	33.8%
Fruit farming	338.6	5.6%
Wood windows & door manufacturing	228.3	97.6%
Breweries	222.8	10.1%
Poultry & egg production	214.3	40.8%
Pesticide & other agricultural chemical manufacturing	178.1	30.5%
Oil & gas extraction	177.8	331.0%
Paperboard container manufacturing	127.0	5.8%
Stone mining & quarrying	122.8	12.2%
Sawmills	115.4	32.3%
Cigarette manufacturing	107.8	562.9%
Veterinary services	102.3	5.1%
Sand, gravel, clay, & refractory mining	101.5	15.9%

* Values expressed in 2006 dollars using GDP implicit deflator (U.S. Department of Commerce).
Source: IMPLAN data for Florida (MIG, Inc., 2006).

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Table 6. Value added and employment of all industry groups in Florida in 2004.

Industry Group	Employment (Jobs)	Total Value Added (Mn$)*
Real Estate & Financial Services	871,754	89,283
Professional & Technical Services	1,536,601	79,226
Private Households	148,282	46,586
Health Care	774,462	43,413
Retail Trade	929,430	41,974
Construction	800,907	41,542
Wholesale Trade	371,397	40,188
Government	411,116	39,675
Travel, Food, & Entertainment Services	1,011,025	35,387
Education	816,919	35,117
Information & Communications	267,527	30,343
Manufacturing	321,123	26,662
Consumer Services	468,846	21,800
Agricultural, Food, Natural Resources, & Related Manufacturing & Services**	**390,184**	**19,795**
Transportation	314,768	19,308
Utilities	29,518	10,653
Social Services & Organizations	246,986	5,328
Miscellaneous Residual Accounts	0	–410
Grand Total	9,710,846	625,870

* Values expressed in 2006 dollars using GDP implicit price deflator (U.S. Department of Commerce).
** Values for some manufacturing and service sectors within agricultural, food, and natural resources were netted out of other industry groups.
Source: IMPLAN data for Florida (MIG, Inc., 2006).