

# U.S. Production Trends and the Impact of the Florida Fresh Market Tomato Industry to the Economy of Florida<sup>1</sup>

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## Introduction

Tomatoes have long been an important produce item demanded by consumers. Advances in production and transportation technology and improvements in quality have helped to grow the demand for fresh market tomatoes. U.S. consumption of fresh tomatoes grew 71 percent from 15.4 pounds per person in 1991 to 20.7 pounds per person in 2006 (Table 1). U.S. total domestic utilization increased over this period from 3.87 billion pounds in 1991 to 5.79 billion pounds in 2006, an increase of 1.91 billion pounds. Imports claimed 56 percent of that growth in domestic utilization by increasing 1.08 billion pounds. Exports from the United States have been fairly flat, ranging from a low of 286 million pounds in 1998 to a high of 410 million pounds in 2000.

U.S. production of fresh market tomatoes declined from 1992 to 1996, but increased after 1996 when U.S. growers successfully petitioned the U.S. International Trade Commission for relief from imported tomatoes that were unfairly dumped on U.S. markets. That agreement led to greater

discipline of imports from Mexico and it appears to have benefited both U.S. and foreign growers (VanSickle 1997). U.S. producers of fresh market tomatoes have been fortunate to be part of a growing market for their commodity over the last 16 years, but much of that growth is greenhouse-grown tomatoes. Greenhouse tomatoes overtook field-grown tomatoes in 2005 as the largest segment of imported fresh market tomatoes. This is indicative of the changing market for fresh market tomatoes where consumers are demanding more vine ripe and specialty type tomatoes at the retail market. Mature green tomatoes, primarily supplied by U.S. growers, still command a larger share of the food service trade.

## U.S. Production, Imports, Exports, and Domestic Utilization of Fresh Market Tomatoes

U.S. production of fresh market tomatoes increased 25 percent from 1991 to 2007 (Table 1). Net trade in tomatoes (imports less exports) shows that international trade in tomatoes added an additional two billion pounds to the U.S. market in 2007, increasing by 306 percent since 1991.

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1. This is EDIS document FE749, a publication of the Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. Published September 2008. Please visit the EDIS website at <http://edis.ifas.ufl.edu>.
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Producers have been fortunate to see a growing market for their product, with domestic utilization increasing from 3.89 billion pounds in 1991 to 6.12 billion pounds in 2007, a 57 percent increase. Imports claimed roughly half the increase in domestic utilization.

U.S. production of fresh market tomatoes is concentrated in the southeastern United States and California (Table 2). Alabama, Florida, Georgia, North Carolina, South Carolina, Tennessee, and Virginia produced 2.11 million pounds of fresh market tomatoes in 2006, or roughly 57 percent of all fresh market tomatoes produced in the United States. California produced 1.23 million pounds, or roughly 33 percent of the U.S. total production. The rest of the nation produced less than 10 percent of all fresh market tomatoes grown in 2006. These data highlight the concentration of production of fresh market tomatoes in the southeastern United States and California. The Southeast concentrates its production in the fall, winter, and spring months while California concentrates its production in the spring, summer, and fall months.

While Florida is the single largest producer of fresh market tomatoes, with 1.45 billion pounds produced in 2007, the state has lost market share to other U.S. producers, who have increased their production by 305.6 million pounds since 1991 (Table 3). Imports, however, have taken a far greater share of the market from Florida producers, increasing by 1.565 billion pounds since 1991.

## The Economic Impact of the Florida Tomato Industry

The Florida tomato industry produces more fresh market tomatoes than any other state in the United States. The Florida tomato industry produced 1.455 billion pounds of fresh tomatoes in 2007 on 38,200 acres, with a total value of \$464.24 million. An estimated 90 percent of Florida tomatoes are shipped out of state.

Total regional economic impacts for the Florida tomato industry were estimated using regional input-output multipliers developed from *IMPLAN*.<sup>3</sup> Multipliers capture the indirect and induced effects of sales outside Florida (exports), which bring new

money into the region and generate further economic activity as these dollars circulate through the economy (Miller and Blair 1985). Indirect effects represent the economic activity generated by businesses that furnish inputs to the industry being evaluated, while induced effects represent the impacts of industry employee household spending. The total economic impacts are the sum of direct, indirect, and induced effects.

Total industry output or sales of fresh market tomatoes in Florida in 2007 were about \$464 million. As a result of the indirect and induced multiplier effects from these sales, the total output impacts were estimated at \$997 million (Table 4). Direct employment in the industry was estimated at 2,987 full-time and part-time jobs, and total employment impacts were estimated at 8,231 jobs. The direct value-added contribution of the Florida tomato industry was \$298 million, and total value-added impacts from multiplier effects were \$619 million. Value added is a broad measure of economic contribution that is comparable to the Gross Domestic Product (GDP) at the national level, and represents the net income created by an industry, or the difference between industry revenues and input purchases from other sectors; it includes personal and business net income, and capital consumption. The labor (earned) income impact of employee wages and benefits and business proprietor income was estimated to be \$299 million. Indirect business tax impacts to local, state, and federal governments were \$30 million.

## Conclusions

The tomato industry is an important commodity in the U.S. agricultural sector. U.S. producers supply more than 4.1 billion pounds of fresh market tomatoes in the domestic market. Florida is the largest producer of fresh market tomatoes in the United States, producing 1.45 billion pounds in 2007. The Florida tomato industry is important to the state economy, contributing total value of \$997 million, and total employment of 8,231 jobs, worth \$299 million in labor income.

## References

Miller, R.E. and P. Blair. 1985. *Input-Output Analysis: Foundations and Extensions*. Upper Saddle River, NJ: Prentice Hall, Inc.

VanSickle, J.J. 1997. A compromise in the fresh tomato trade dispute. *Florida Journal of International Law* XI(2): 399-408.

### Additional Notes:

3. *IMPLAN* is a microcomputer-based input output modeling system and Social Accounting Matrix (SAM). With *IMPLAN*, one can estimate I-O models of up to 509 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*.

**Table 1.** U.S. production, imports, exports, and domestic utilization of all fresh market tomatoes, 1990 to 2007.

Year	Production*	Imports	Exports	Net Trade	Domestic Utilization	Per Capita Utilization
	(million pounds)					(pounds per person)
1991	3,398.8	795.5	301.9	493.6	3,894.0	15.4
1992	3,903.3	432.2	369.0	63.2	3,968.0	15.5
1993	3,666.3	922.4	345.8	576.6	4,242.9	16.3
1994	3,738.7	873.0	340.7	523.3	4,270.9	16.2
1995	3,409.8	1,368.9	289.1	1,079.8	4,489.5	16.8
1996	3,363.4	1,625.1	295.4	1,329.7	4,693.1	17.4
1997	3,424.8	1,636.8	341.6	1,295.2	4,719.9	17.3
1998	3,535.6	1,868.0	286.3	1,581.7	5,107.3	18.5
1999	4,026.9	1,633.1	334.3	1,298.8	5,325.6	19.1
2000	4,162.0	1,609.4	410.3	1,199.1	5,361.0	19.0
2001	4,061.1	1,815.6	397.8	1,417.8	5,478.8	19.2
2002	4,289.3	1,894.9	332.3	1,562.6	5,851.8	20.3
2003	3,909.8	2,071.1	314.2	1,756.9	5,666.7	19.5
2004	4,181.4	2,054.2	369.2	1,685.0	5,866.3	20.0
2005	4,220.4	2,098.1	326.4	1771.7	5,992.0	20.2
2006	4,094.6	2,187.7	317.8	1,869.9	5,964.5	19.9
2007	4,122.0	2,360.7	354.5	2,006.2	6,128.2	20.3

\* Production includes estimates by USDA Economic Research Service for production of greenhouse tomatoes, 1993 to 2007.  
Source: USDA/ERS.

**Table 2.** Regional production (million pounds) of fresh market tomatoes (excluding greenhouse tomatoes), by region and total in the United States, 1991 to 2007.

Year	West <sup>a</sup>	Southwest <sup>b</sup>	Southeast <sup>c</sup>	Mid-U.S. <sup>d</sup>	Northeast <sup>e</sup>	Other	Total U.S.
	(million pounds)						
1991	940.0	36.3	2,134.2	119.4	153.2	15.7	3,398.8
1992	1,008.0	43.5	2,567.2	95.6	169.0	20.0	3,903.3
1993	1,012.5	32.2	2,176.6	133.5	174.0	21.1	3,549.9
1994	1,100.0	51.7	2,249.5	127.0	209.0	21.0	3,758.2
1995	1,026.0	54.8	2,076.5	105.2	172.8	18.2	3,453.5
1996	1,047.2	43.8	1,927.0	149.0	177.9	18.5	3,363.4
1997	986.0	49.1	1,907.1	127.8	186.0	21.7	3,277.7
1998	984.0	47.6	1,856.7	145.8	207.3	21.4	3,262.8
1999	1,144.0	53.0	2,099.6	176.2	175.0	25.7	3,673.5
2000	1,160.0	33.2	2,136.5	178.1	234.7	24.0	3,766.5
2001	1,026.0	47.9	1,999.3	260.6	199.7	19.2	3,552.7
2002	1,260.0	57.6	2,128.6	314.7	197.9	00.0	3,958.8
2003	1,020.0	55.3	2,140.3	188.7	153.5	00.0	3,557.8
2004	1,302.0	25.3	2,110.8	192.4	176.1	00.0	3,806.6
2005	1,120.0	56.4	2,222.1	281.0	147.3	00.0	3,826.8
2006	1,148.0	41.6	2,079.1	260.5	151.7	00.0	3,680.9
2007	1,230.0	29.2	2,112.1	164.1	167.8	00.0	3,703.2
<sup>a</sup>	Includes California.						
<sup>b</sup>	Includes Arkansas and Texas.						
<sup>c</sup>	Includes Alabama, Florida, Georgia, North Carolina, South Carolina, Tennessee, and Virginia.						
<sup>d</sup>	Includes Indiana, Ohio, and Michigan.						
<sup>e</sup>	Includes Maryland, New Jersey, New York, and Pennsylvania.						

**Table 3.** Production of fresh market tomatoes in California, Florida, and the rest of the United States, with imports of fresh market tomatoes from all origins, 1991 to 2007.

Year	California	Florida	Rest of United States	Imports
	(million pounds)			
1991	940.0	1,617.0	841.8	795.4
1992	1,008.0	2,085.8	809.5	432.1
1993	1,012.5	1,716.0	821.4	922.4
1994	1,100.0	1,699.5	958.7	872.9
1995	1,026.0	1,503.5	924.0	1,368.9
1996	1,047.2	1,448.4	867.8	1,625.1
1997	986.0	1,372.0	919.7	1,636.8
1998	984.0	1,395.2	883.6	1,868.0
1999	1,144.0	1,582.0	947.5	1,633.0
2000	1,160.0	1,576.0	1,030.5	1,609.3
2001	1,026.0	1,490.8	1,035.9	1,815.6
2002	1,260.0	1,397.5	1,301.3	1,894.8
2003	1,020.0	1,419.0	1,118.8	2,071.1
2004	1,302.0	1,512.0	992.6	2,054.2
2005	1,192.8	1,554.0	1,152.8	2,098.1
2006	1,148.0	1,347.5	1,185.4	2,187.7
2007	1,230.0	1,455.3	1,017.9	2,360.7

**Table 4.** Economic impacts of the Florida tomato industry, 2007.

Impact Measure		Direct	Indirect	Induced	Total
Output	(million dollars)	464.2	87.5	445.0	996.7
Value Added	(million dollars)	298.3	50.3	269.9	618.5
Labor Income	(million dollars)	92.7	33.4	173.2	299.2
Indirect Business Taxes	(million dollars)	4.4	4.4	20.9	29.7
Employment	(jobs)	2,987	1,191	4,054	8,231