



TuckerHall

The Economic Impact of GrowFL

2009-2011



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Introduction and Summary of Findings

This report presents the results of a formal economic impact analysis of GrowFL. Established in 2009, GrowFL is Florida's official *economic gardening technical assistance* program – a job creation initiative that focuses on assisting established companies which have reached a stage of high growth potential. In July 2011 a census of companies that participated in the GrowFL program was conducted to measure initial outcomes and successes. This report extends the findings from that report to estimate the various impacts on the Florida economy. Based on the job growth figures these companies have reported, we estimate that to date **GrowFL helped to create more than 3,285 direct and indirect local jobs and contribute more than \$510.4 million** (direct and indirect) to Florida's economy, for a total state investment of \$3.5 million. It also helped to generate an additional \$18.17 million in net state and local tax revenues (above and beyond the cost of the program).

Type of Impact	Statewide Impact To Date (2009-2011)
Jobs	3,285
Sales / Output	\$510.4 million
GDP	\$267.4 million

About Economic Gardening and GrowFL

Economic Gardening is an entrepreneurial alternative to traditional economic development strategies. This new approach uses high end corporate level tools and cutting edge scientific concepts to help entrepreneurial growth companies (known as "second stage" companies) identify markets, monitor competitors, track industry trends, locate customer clusters on maps, and use search engine optimization/social media for marketing and various customized research.

In the summer 2009, the Florida Legislature approved funding of \$10M for a statewide economic gardening program. The program was established to create new jobs and build a stronger economy for current and future generations of Floridians. \$1.5 million of the total was set aside for an economic gardening technical assistance pilot program (Section 288.1082, F.S.) while \$8.5 million was allocated for a loan program to support companies that demonstrate high potential for growth and expansion (please note that the costs and impacts of the loan program was not analyzed in this report). In 2010, an additional \$2 million was set aside to continue the GrowFL Technical Assistance pilot program.

The economic gardening technical assistance pilot program's purpose is to stimulate investment in Florida's economy by providing technical assistance to expanding businesses in the state. These technical assistance resources include, but are not limited to: access to informational services, consulting services, including information on markets, consumers and competitors, geographic information systems and search engine marketing. To qualify for the program, companies must be privately held, resident firms employing 10-50 workers, generating \$1



million to \$25 million revenue, within an industry identified on the State of Florida's Qualified Target Industry List, and having revenue and employment growth in three of their last five years.

In the Fall of 2009, the Florida Office of Tourism, Trade, and Economic Development (OTTED) selected the University of Central Florida (UCF) as the administrator of the Economic Gardening Technical Assistance Pilot Program. In November 2009 UCF initiated activities for the program with the formation of the Florida Economic Gardening Institute (FEGI) and the GrowFL Program. FEGI has been operating the GrowFL program under a contract with OTTED with a period of performance from November 1, 2009 through September 1, 2011.

About the GrowFL Outcomes Survey

In July 2011, a census of the participating GrowFL companies was conducted by GrowFL staff with the CEOs who participated in GrowFL Technical Assistance and CEO Roundtables (the most rigorous of the GrowFL services). The CEOs were asked how many positions they had added to their company since first becoming engaged in the GrowFL program. Essentially, this census measured the net *outcomes* (to differentiate from economic impacts) of the GrowFL programs.

Of the 307 companies which participated in GrowFL programs, 173 companies responded and reported a total 898 net jobs created – **an average of 5.2 net new jobs per company**. For the purposes of impact analysis, we proportionally extrapolated the reported jobs to the non-respondents less a statistical error calculation ($\pm 6.49\%$). This error calculation is based on a published formula that takes into consideration the size of the population, the number of responses, and the observed variability between the two. Using this method, we estimate that **by 2011 the GrowFL program has contributed to the generation of approximately 1,431 direct jobs in participating companies**. This figure is utilized as the primary input (detailed by participating companies' reported industry categories) for our economic impact analysis.

About Economic Impact Analysis

Economic analysis can be confusing, even to experts. However, the way our economic software models economic impacts can be very intuitive if we use the metaphor of a tree. There's a lot more to a tree than you can see above the surface; in much the same way, a company's activities touch the local economy on different levels. There are three types of impacts we consider – *direct*, *indirect*, and *induced* – and we will relate each of these to how a tree connects to the earth and surrounding landscape.

First, *direct impacts* represent the actual jobs and business expenditures that take place in the company's industry sector. Just as it's easy to see a tree's trunk, branches, and leaves, it's relatively easy for most people to see and understand how these direct economic activities are a source of economic activity.

Indirect activities are like the roots of a tree, which reach unseen into the ground. Indirect impacts constitute the local demand for products and services from other companies and service providers (goods, materials, supplies). They are the local vendors and suppliers that receive money from the company for goods and services provided; like roots, they are the feeder system in which local goods and services support the company or project.

Trees have leaves, branches, trunks and roots; but if you have ever pulled a tree or shrub from the ground, you pull up a lot more than clean roots – you also get earth, weeds, grass, bugs and



worms and everything else that makes up healthy soil. All of this additional earth and life that depends on the tree is similar to what we call *induced economic impacts* of a company or project. Induced impacts reflect every person, company, or organization which relies on spending generated by direct and indirect activity. This includes restaurants, retail stores, service providers, schools, real estate, etc. They are job losses and gains by people who have no direct connection to the company, but benefit from the money the company introduces into the local economy.

Thus, when we speak of economic impact, we speak about the combined contributions of all three types: *direct*, *indirect*, and *induced* together. Thus, our metaphor of economic impact includes not just the tree, but everything that is connected to and dependent upon it.



We use the Minnesota IMPLAN Group (MIG) IMPLAN software to calculate our impacts; it is one of the most widely used and validated tools available for this type of research. This software works by using documented *direct* impacts as inputs to calculate *indirect* and *induced* impacts over time. It is based upon federally published industry-by-industry buy-sell (input-output) relationships; how much each industry sells to each other industry to create the total national product. Using this national data, IMPLAN is able to create a national average profile of how much a typical company in each industry must buy, sell, and hire to do its business. It then calibrates its profile with state and local economic, business, tax, labor, and demographic information to generate local models of typical companies in each industry, and how much they must buy, sell, import, export, and hire locally or externally to do their business. As a result, IMPLAN can estimate how direct changes in a local industry trickle through the web of local buy, sell, and hire relationships. The result is a widely accepted and well published model of the spending, employment, exporting, sales and production activities of typical companies in every industry sector, such as medical device manufacturing. This model is calibrated even further by information we can collect on a given company, project, or program's activities, expenditures, and operations.



Detailed Impact Findings, Statewide

GrowFL’s activities have generated an economic impact of \$510.4 million in the State of Florida, roughly \$255.2 million per year. It has also created an impact of more than \$267.4 million on the State’s gross regional product (GDP), and has supported an estimated 3,285 direct and indirect local jobs. This combined impact also generated a net positive \$18.17 million in local and state tax revenue (including the cost of the GrowFL program).

Impact Overview

Impact Type	Employment	Labor Income	GDP / IValue Added	Output
Direct Effect	1,419	\$80,199,470	\$119,955,628	\$262,232,043
Indirect Effect	823	\$41,824,383	\$68,713,678	\$118,809,220
Induced Effect	1,043	\$43,311,748	\$78,818,212	\$129,389,425
Total Effect	3,285	\$165,335,602	\$267,487,518	\$510,430,688

Please note that the 1,419 direct jobs listed in the above table are job-year-equivalents calculated by the IMPLAN software based upon documented investment and spending levels, and may not directly equal the actual number of direct jobs reported by GrowFL companies. Refer to the appendices to view the direct input categories for this study.

The following table shows which economic sectors in Florida counties have experienced the greatest economic benefit from the existence of the GrowFL program. The category receiving the highest impact is “technical and scientific consulting”, which has some of the highest salaries of Florida’s industry sectors.

Description	Employment	Labor Income	GDP / IValue Added	Output
Management, scientific, and technical consulting services	151.7	\$8,746,186	\$9,830,948	\$16,086,482
Wholesale trade businesses	144.1	\$10,733,801	\$18,559,919	\$26,316,877
Employment services	140.8	\$3,802,993	\$4,533,084	\$5,591,770
Business support services	139.0	\$4,229,716	\$4,492,658	\$7,620,046
Food services and drinking places	135.7	\$3,413,139	\$4,804,201	\$8,861,469
Real estate establishments	115.2	\$1,711,680	\$12,808,418	\$17,461,414
Plate work and fabricated structural product manufacturing	114.4	\$6,261,859	\$10,894,334	\$30,906,381
Other computer related services, including facilities management	85.1	\$5,092,936	\$9,807,590	\$14,549,618
Management of companies and enterprises	77.3	\$7,529,276	\$9,173,068	\$15,253,774
Advertising and related services	71.5	\$3,113,844	\$4,498,659	\$7,471,472



Detailed Impact Findings by Region

The survey results were categorized by the eight major Florida regions (as defined by Enterprise Florida Inc. and detailed in the appendices), and the economic impacts were then estimated by each region. All eight Florida regions were represented by GrowFL companies and survey respondents, although the largest participation and response has been focused in the East Central (metro Orlando), Southeast (Miami-Dade) and Tampa Bay regions. Nearly a third of the impacts of the GrowFL program's impacts (in terms of both jobs and economic output) were reported in the East Central region, and the East Central and Southeast regions reported disproportionately high job growth relative to the number of participating GrowFL companies. This effect cannot be attributed to any particular industry sector, and multiple companies contributed significant growth in both regions.

Florida Jobs Impact by Geographic Region

Jobs / Region	Direct Effect	Indirect Effect	Induced Effect	Total Effect	% of State Impact
East Central	495	269	335	1,099	39.0%
North Central	2	1	2	5	0.2%
Northeast	95	36	56	187	6.6%
Northwest	76	33	49	158	5.6%
South Central	5	3	4	11	0.4%
Southeast	285	215	238	738	26.2%
Southwest	57	29	38	124	4.4%
Tampa Bay	216	126	158	500	17.7%

Florida Economic Output Impact by Geographic Region

Output / Region	Direct Effect	Indirect Effect	Induced Effect	Total Effect	% of State Impact
East Central	\$84,034,603	\$39,146,003	\$41,588,546	\$164,769,151	37.6%
North Central	\$252,951	\$122,471	\$185,455	\$560,877	0.1%
Northeast	\$12,137,196	\$4,775,983	\$6,910,801	\$23,823,980	5.4%
Northwest	\$11,503,495	\$4,158,364	\$6,115,905	\$21,777,764	5.0%
South Central	\$685,364	\$295,812	\$433,286	\$1,414,462	0.3%
Southeast	\$65,326,316	\$30,948,030	\$29,535,816	\$125,810,162	28.7%
Southwest	\$9,135,919	\$4,255,593	\$4,727,304	\$18,118,815	4.1%
Tampa Bay	\$42,924,519	\$19,071,696	\$19,613,720	\$81,609,934	18.6%

Please note that for this section, the sum of regional impacts will not equal the total reported state impact reported in the previous section. This is due to how we calculated sampling error and extrapolated to non-responding companies; the smaller the sample and subgroup, the higher the potential sampling error and consequently the more conservative our resulting impact calculation. In other words, as we examine smaller survey response samples in smaller geographic regions, we are forced to be even more conservative in our impact estimates.



Background and Sources

This study was conducted by Tucker/Hall on behalf of GrowFL. Tucker/Hall is a national public relations and communications consulting firm. Through the PROI network, Tucker/Hall is connected to more than 3,000 consultants in 90 cities around the world. We specialize in strategic communications, crisis management and public affairs. Our counselors have experience in areas such as digital communications, research and measurement, investor relations, competitive strategy development for fast-growing companies, research-based business-to-business marketing solutions, and public policy plan development and implementation.

Since our founding in 1990, we have grown to become one of the largest public relations/public affairs firms in the Southeastern United States. Our growth is a result of teaming with clients to help them achieve their corporate objectives. Our methods stress creative problem-solving, and we depend on such tools as traditional and online media, proprietary research and innovative thinking to get measurable results. We work in a broad range of industry sectors from financial services, to construction, healthcare, and energy and the environment to municipalities and nonprofits.

The leading researcher for this report, Guy Hagen, has authored dozens of economic impact assessments and has over 15 years of experience leading high-profile economic, market, and technology research projects. His work has been published in peer-reviewed academic journals, and his leadership in economic research has been leveraged by major corporations and state and local governments. He has been a leader in promoting objective and transparent economic analysis, including co-chairing a state task force to provide guidelines for consistent and transparent economic measurement for public policy (the Florida Governor's Office Cluster Metrics Task Force).

Economic impact forecasting was performed on the Minnesota IMPLAN Group (MIG) IMPLAN software (version 3, social accounts model) using a 2009 Florida statewide data model. Primary input sources were collected by survey from the GrowFL company participants, with additional industry category classification data of GrowFL companies provided by GrowFL staff.

Research Considerations

It is our practice to utilize a conservative research framework when conducting economic impact studies. Further, we strive to utilize a transparent, replicable methodology that can be verified by any competent economist utilizing the same inputs and same models. However, information of a proprietary or business sensitive nature may be anonymized, aggregated or withheld in order to protect individual research participants and companies. Specific input categories are listed in the appendices.

The impact estimates described in the "Impacts" section were structured as *subtractive* analyses; in other words, the IMPLAN model was executed by *removing* the direct inputs from the economy. This is the most common and widely accepted method for documenting the impact of an *existing* industry sector, community, or activity. For editorial consistency and to reduce confusion, however, all impact figures are presented as non-negative. All dollar figures are adjusted for inflation and presented in 2011 US dollars.

A review of potential economic substitution effects was undertaken during the research for this project. Substitution effects often are relevant in economic impact studies when the impact of a



project is considered *without also considering the impact of returning the funds that supported the development, and their potential impact if they had been spent elsewhere*. For example, the construction of a hypothetical new government building can be shown to have a strong economic impact, but government funds that paid for that building could have potentially had a greater or lesser impact if invested in educational programs, loans, or even returned as a tax rebate to taxpayers. In this case, part of the impacts we calculated for this report included the results of returning the GrowFL program funding to general state revenue for investment in other programs.

100% participation is never possible with any kind of survey or census. Even the Federal government must resort to partial estimation of research populations (some US Census instruments had response rates as low as 50%). There are few clear guidelines regarding estimation and confidence intervals in such applied research situations, though in the end it comes down to a common-sense understanding of how likely respondent data actually is representative of the entire population. Where estimations are used in this report, they are clearly indicated and based upon a very conservative application of a confidence formula which is informed by application profiles of participating companies. The formula we use to estimate confidence in this report is widely utilized, and documented in both Wikipedia (8/2011, "Confidence Intervals") and *Mail and Internet Surveys by Don Dillman, John Wiley and Sons (2000)*, and follows below. All error estimates for this study utilized maximum variability at the 99% statistical confidence level to provide the most conservative estimates.

$$N_s = \frac{(N_p) (p) (1-p)}{(N_p-1) (B/C)^2 + (p) (1-p)}$$

Where:

- N_s = Computed sample size needed for a desired level of precision.
- N_p = Size of population
- p = predicted variability in responses (using the most conservative variability estimate)
- B = Estimated amount of sampling error
- C = Z statistic associated with the confidence level (2.58=99% high statistical confidence)



Appendix: Inputs (Direct Company Job Impacts)

Inputs for this study were modeled with the following IMPLAN industry categories, and based upon survey responses of net job growth (change) by participating GrowFL companies as marked from the time they started with GrowFL until July, 2011.

IMPLAN Category		% of Job Inputs
374	Management, scientific, and technical consulting services	8%
186	Plate work and fabricated structural product manufacturing	8%
386	Business support services	7%
373	Other computer related services, including facilities management	5%
380	All other miscellaneous professional, scientific, and technical services	4%
132	Medicinal and botanical manufacturing	4%
322	Retail - Electronics and appliances	4%
377	Advertising and related services	4%
320	Retail - Motor vehicle and parts	3%
382	Employment services	3%
395	Home health care services	3%
319	Wholesale trade	3%
376	Scientific research and development services	2%
416	Electronic and precision equipment repair and maintenance	2%
381	Management of companies and enterprises	2%
211	Optical instrument and lens manufacturing	2%
369	Architectural, engineering, and related services	2%
141	All other chemical product and preparation manufacturing	2%
355	Nondepository credit intermediation and related activities	2%
114	Support activities for printing	2%
n/a	All other categories	29%

Appendix: Inputs (Program Costs)

Year	Investment	IMPLAN Category
2010	-\$1,500,000	432 Other state and local government enterprises
2011	-\$2,000,000	432 Other state and local government enterprises

Appendix: General Impact Definitions

- **Output:** Output represents the value of industry production. In IMPLAN these are annual production estimates for the year of the data set and are in producer prices. For manufacturers this would be sales plus/minus change in inventory. For service sectors production = sales. For Retail and wholesale trade, output = gross margin and not gross sales. Economic impact figures, without definition, usually refer to *Output*.
- **Labor Income:** All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.
- **Direct Impacts:** take place only in the industry sector immediately affected, such as direct jobs and investments.
- **Indirect Impacts:** concern inter-industry transactions: if an analyzed sector is removed from the economy, sector companies will no longer have a demand for locally produced materials needed to produce their product. This will affect all of their suppliers.
- **Induced Effects:** measure the effects of the changes in household income: employees laid-off by removing the analyzed sector from the economy may reduce their expenditures in restaurants and shops since they are no longer employed. These changes effect the related industries.
- **GDP:** Industry **Gross Domestic Product** is the contribution of each private industry and of government to the nation's output, or GDP. An industry's GDP, or its "value added," is equal to its gross output (which consists of sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (which consist of energy, raw materials, semi-finished goods, and services that are purchased from domestic industries or from foreign sources). It can also be measured as the sum of incomes related to production, such as wages and salary accruals and gross operating surplus. (BEA)

Sources: Implan.com; Wikipedia.com



Appendix: Enterprise Florida Regions of Innovation

Source: <http://www.eflorida.com/FloridasRegionsSubpage.aspx?id=54> (August 15, 2011)

Northwest Region

Bay, Jefferson, Calhoun, Leon, Escambia, Liberty, Franklin, Okaloosa, Gadsden, Santa Rosa, Gulf, Wakulla, Holmes, Walton, Jackson, Washington

North Central Region

Alachua, Levy, Bradford, Madison, Columbia, Marion, Dixie, Suwannee, Gilchrist, Taylor, Hamilton, Union, Lafayette

Northeast Region

Baker, Nassau, Clay, Putnam, Duval, St_Johns, Flagler

East Central Region

Brevard, Lake, Orange, Osceola, Seminole, Sumter, Volusia

Tampa Bay Region

Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk, Sarasota

Southwest Region

Charlotte, Collier, Lee

South Central Region

Desoto, Glades, Hardee, Hendry, Highlands, Okeechobee

Southeast Region

Broward, Indian River, Martin, Miami-Dade, Monroe, Palm Beach, St. Lucie



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