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The "Phantom Costs" of Florida's Citrus Industry[1]

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Introduction

Regulatory compliance is an increasingly important fact of life for U.S. agricultural producers. In an environment characterized by increasing global competition, not only are growers required to produce commodities of the highest quality, but they are also expected to produce them at reasonable prices comparable to prices being charged elsewhere. U.S. agricultural producers, being some of the most efficient in the world, are increasingly being placed at a disadvantage because of the increasing burden to comply with government regulations. To remain competitive, growers must now either absorb most of the compliance costs, further reducing an already small profit margin, or ignore them entirely when computing their costs and returns.

"Phantom Costs"

Despite being faced with burdensome paperwork, growers seldom account for the cost of regulatory compliance. Growers normally do not write checks for time-consuming costs (the time spent completing numerous regulatory forms each year, attending training classes, and learning the regulatory requirements and compliance process), nor for miscellaneous costs (stamps to send in reports, photocopying forms, and telephone calls to government agencies for helpful instructions and guidance in meeting regulatory obligations). These cost items are known as the “phantom costs” of citrus production. A grower's time, therefore, is devoted to both growing citrus and completing a myriad of paperwork in the bureaucratic process.

Some contend that these phantom costs are part of the cost of doing business. If they are, then there should be an accounting for them. This is particularly useful when comparing Florida's citrus costs with foreign competitors' costs. Government officials often are unaware of the regulatory requirements imposed on Florida citrus growers or the costs associated with regulations compliance. For an agricultural industry, such as citrus, where Florida's primary competitors are highly integrated in production, harvesting, processing/packaging, and

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export/shipping, these regulatory “phantom costs” become an important negotiating item to consider in areas of foreign trade policy.

Methodology/Approach

A group of growers from Florida's Peace River Valley citrus growing region posed the question: “What are the total costs of governmental regulatory compliance?” In researching other agricultural crops produced in the United States, no compliance cost information was found. Therefore, a working group of growers and UF/IFAS personnel had to start from scratch to develop and implement a survey to enumerate regulatory compliance costs.

The first step was to identify the local, regional, state, and federal government agencies and the specific departments to which growers had to report. A total of sixty-one regulatory items were identified and grouped under six regulatory categories. The six regulatory categories selected were payroll and administration (11 items), chemicals (17 items), water (15 items), DEP/department of environmental protection (8 items), citrus canker decontamination (5 items), and other compliance regulations (5 items). A copy of the compliance cost survey, which lists each regulation item under the six regulatory categories, is available via the Citrus Research and Education Center (CREC) web page at http://www.crec.ifas.ufl.edu/extension/economics/ccs.htm.

An Excel compliance cost survey questionnaire was designed to make data entry as simple as possible. Four employee categories were identified whose time would likely be required to comply with the regulations: owner/operator, manager, labor, and clerical. The average per hour cost for each of these employee categories along with the total number of employees within each category can be entered onto the Excel worksheet. Other descriptive information requested on the worksheet questionnaire included the net planted acreage (not total land area) in the predominant counties where citrus was owned or managed.

To inform citrus growers about the compliance cost survey, an article was published in the trade magazine *Citrus Industry*. The article explained the purpose of the survey and that a copy of the Excel compliance cost survey questionnaire and instructions could be obtained from the UF/IFAS Citrus Research and Education Center's web page. Coinciding with the release of the magazine article, the questionnaire, along with a personalized letter, was mailed to a select number of citrus growers. After a couple of weeks, the growers were contacted to answer questions about the survey instrument and to arrange an appointment to further explain the information being requested and assist growers with completing the survey questionnaire.

When completing the questionnaire, it was suggested that someone in charge of an employee category assist with completing that portion of the questionnaire. For example, under "Payroll and Administration", clerical staff would most likely be able to provide the best estimate of time expended annually for each regulatory item listed. An example of the data collection form for the Payroll/Administration Regulatory category is shown in Table 1. Reading across the line titled IRS, the first column suggests which data source would likely provide the information: clerical (C); manager (M); and/or professional, such as accountants and attorneys (P). Under each employee category column, the estimated annual hours expended on the regulatory item would be entered. Under the other five regulatory categories (e.g., citrus canker), both the cost of the disinfectant materials and the capital costs of the decontamination spray equipment were included under the “materials cost” column. For all capital expenditures, a ten-year useful life was assumed and only one-tenth of the total capital cost was reported under the materials cost column.

After entering the total annual hours expended across each regulatory item under the six regulatory categories along with the professional fees and materials costs reported, each column is summed. The total hours expended for each employee category are then multiplied by the respective average hourly cost to determine the total cost for each employee category. Then total employee costs along with the total cost for professional fees and materials are summed to estimate the total annual cost to comply with the regulations. The estimated per acre costs are

calculated by dividing the total costs by the total net planted acres reported.

Summary of 2003-2004 Florida Citrus Grower Compliance Cost Survey

A total of 27 citrus firms provided data for the 2003-2004 compliance cost survey. As shown in Table 2, the compliance survey participants represented all major citrus production regions in Florida: Central Florida/Ridge, Southwest Florida, Indian River/East Coast, and Peace River Valley. The total net tree acreage reported was 140,020 acres, or 19.2 percent of the total 2004 Florida citrus acreage. The compliance cost data was summarized into four categories: all surveys; up to 1,000 acres; 1,001 acres to 7,500 acres; and greater than 7,500 acres. The number of farms in each size category was 4, 15, and 8 firms, respectively. Average farm acreage for all surveys was 5,334 acres. Average farm acreage for the other three categories was 738 acres, 3,025 acres and 11,961 acres, respectively.

The summary totals for all surveys, by regulatory category, are shown in Table 3. Payroll and Administration averaged 0.31 hour expended per net tree acre at a cost of $9.34 per acre. Similar in the amount of time and costs was the Chemicals category, with 0.30 hour expended at a cost of $9.52 per acre. Complying with citrus canker regulations (decontamination spraying of workers and equipment) required 0.13 hour at a cost of $6.67 per acre. The three regulatory categories with the lowest costs were Water, Department of Environmental Protection (DEP)–Fuel Tanks, and Other Regulations. The total annual time expended and per acre costs were 0.09 hour at $3.68 per acre, 0.01 hour at $3.10 per acre, and 0.01 hour at $0.43 per acre, respectively. The total time expended and costs for all the regulatory categories were 0.86 hour and $32.74 per net tree acre.

A comparison of the total time expended and cost per acre for the four summary groups of firms is shown in Table 4. The Up to 1,000 Acres acreage group had the highest time expended and cost per tree acre to comply, with 1.52 hours at a cost of $54.43 per acre. The intermediate acreage group, 1,001 Acres to 7,500 Acres, expended 1.34 hours per tree acre at a cost of $39.61 per acre. The Greater Than 7,500 Acres group had the lowest time expended and lowest costs, with 0.62 hours per tree acre at a cost of $28.82 per acre. Due to the size of the firms within the larger acreage size group, more efficient use of people and equipment resources occurred.

Concluding Remarks

The Florida citrus grower/production compliance cost survey was the first attempt to document the “phantom costs” of growing citrus. While most of the costs are embedded within the total operating costs of a citrus firm, as presented in this paper, the annual time expended along with the per acre costs required to comply to regulations are substantial. If the summary information for all the surveys is used to estimate the time expended to comply to regulations, a total time of 643,757 hours; 80,470 days (8 hours per day); and 309 full-time employee equivalents would be required annually to comply with citrus grower/production regulations. The total cost (labor, professional/consultant fees, chemical and other materials, and amortized capital investment costs) to Florida's citrus industry for complying with grower/production-related regulations is estimated to be over $24.5 million dollars annually.

The Excel work sheet developed to collect and summarize the compliance cost data can be used as an annual tool by citrus firms in Florida and other citrus-producing states. The set of data collected in the compliance cost survey was for the grower/production level only. The survey can also be used to collect similar costs and time expended for the other citrus sectors: harvesting, fresh packing, and juice processing. Furthermore, the authors are exploring how the compliance cost survey can be adapted for other agricultural crops grown in Florida.

References

Carlton, Pat, and Ron Muraro. 2003. Compliance Costs: The Phantom Costs of Florida's Citrus Industry. *Citrus Industry* 84(5):16-17.

Citrus Compliance Cost Survey. CREC Web Page. http://www.crec.ifas.ufl.edu/.

Table 1. Example data from a compliance cost survey submitted for the payroll–administrative category.

Payroll–Administration Description Abbreviation		Owner/ Operator (O)	Manager (M)	Labor (L)	Clerical (C)	Professional Fees (P) or (F)	Materials (MAT)
	Codes	Hours	Hours	Hours	Hours	Dollars	Dollars
IRS[a]	C,M,P	18.5	10.0	8.5	102.0	1,662.25	200.00
SS Administration[a]	C	8.0	2.0	1.5	13.5	160.70	43.00
Wage and Hour	C,M,O,F	1.5	0.5	0.0	10.0	0.00	45.70
CIS (was INS)[a]	C	3.0	16.5	8.5	81.5	0.00	71.50

[a]IRS = Internal Revenue Service; SS Administration = Social Security Administration; CIS = Citizenship and Immigration Services; and INS = Immigration and Naturalization Service.

Table 2. Florida citrus compliance cost survey summary of total net planted acreage owned/managed by predominant production regions.

Region	All Surveys	Up to 1,000 Acres	1,001 to 7,500 Acres	7,500+ Acres
		Net Tree Acres		
Central Florida/Ridge	23,697	250	18,158	4,000
Southwest Florida	54,694	993	14,194	39,507
Indian River/East Coast	43,120	0	4,960	38,160
Peace River Valley	22,509	1,707	8,068	14,023
Total Tree Acres Owned/Managed[a]	144,020	2,950	45,380	95,690
Total Citrus Firms Reporting by Category	27	4	15	8
Average Acreage Per Firm	5,334	738	3,025	11,961

[a]Represents 19.24% of total tree citrus acreage in 2004. Tree acreage is the area planted with citrus trees, excluding roadways, water drainage ditches and canals, reservoirs, and any unplantable acreage.

Table 3. Florida citrus grower/producer compliance cost survey summary results according to regulatory category.

Regulatory Category	Total	Owner/ Operator	Manager	Labor	Clerical	Professional Fees	Materials
Payroll–Administration							
Average hours per net tree acre reported	0.31	0.03	0.09	0.01	0.18	--	--
Cost per net tree acre reported	$9.34	$1.90	$3.08	$0.08	$3.06	$1.10	$0.12
DEP–Fuel Tanks							
Average hours per net tree acre reported	0.014	0.003	0.004	0.005	0.002	--	--
Cost per net tree acre reported	$3.10	$0.17	$0.13	$0.06	$0.04	$0.46	$2.24
Chemicals							
Average hours per net tree acre reported	0.30	0.02	0.12	0.13	0.03	--	--
Cost per net tree acre reported	$9.52	$0.85	$3.86	$1.58	$0.54	$0.38	$2.31
Water							
Average hours per net tree acre reported	0.09	0.01	0.01	0.06	0.01	--	--
Cost per net tree acre reported	$3.68	$0.73	$0.47	$0.67	$0.18	$0.88	$0.75
Citrus Canker							
Average hours per net tree acre reported	0.13	0.005	0.04	0.086	0.001	--	--
Cost per net tree acre reported	$6.67	$0.28	$1.34	$1.03	$0.02	$0.16	$3.84
Other Regulations							
Average hours per net tree acre reported	0.014	0.004	0.004	0.001	0.005	--	--
Cost per net tree acre reported	$0.43	$0.22	$0.12	$0.01	$0.08	$0.001	$0.001
Summary Totals							
Average hours per net tree acre reported	0.86	0.07	0.27	0.29	0.23	--	--
Cost per hour per employee category	--	$55.53	$32.53	$12.05	$16.89	--	--
Cost per net tree acre reported	$32.74	$4.15	$9.00	$3.43	$3.92	$2.98	$9.26

Table 4. Florida citrus compliance cost survey results according to total acreage category.

Description	Total	Owner/ Operator	Manager	Labor	Clerical	Professional Fees	Materials
All Surveys							
Average hours per net tree acre reported	0.86	0.07	0.27	0.29	0.23	--	--
Cost per hour per employee category	--	$55.43	$32.53	$12.05	$16.89	--	--
Cost per net tree acre reported	$32.74	$4.15	$9.00	$3.43	$3.92	$2.98	$9.26
Up to 1,000 Acres							
Average hours per net tree acre reported	1.52	0.22	0.53	0.39	0.38	--	--
Cost per hour per employee category	--	$41.05	$22.45	$9.38	$12.37	--	--
Cost per net tree acre reported	$54.43	$9.00	$11.84	$3.67	$4.68	$7.47	$17.77
1,001 to 7,500 Acres							
Average hours per net tree acre reported	1.34	0.16	0.39	0.40	0.39	--	--
Cost per hour per employee category	--	$44.44	$23.10	$9.84	$14.27	--	--
Cost per net tree acre reported	$39.61	$7.16	$9.00	$3.97	$5.62	$4.63	$9.23
7,500+ Acres							
Average hours per net tree acre reported	0.62	0.03	0.21	0.23	0.15	--	--
Cost per hour per employee category	--	$88.62	$42.58	$14.09	$20.50	--	--
Cost per net tree acre reported	$28.82	$2.57	$8.92	$3.17	$3.10	$2.05	$9.01