

Business Analysis of Ornamental Plant Nurseries In Florida, 1995

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ABSTRACT

Information is presented on sales, production, costs, assets and liabilities, and efficiency indicators for 50 wholesale ornamental plant nurseries in Florida for the year of 1995. Nursery products represented among the sampled firms included container and field-grown woody ornamentals, tropical foliage and flowering plants. The average firm had annual sales of nursery plants of \$1.54 million (MM), total income of \$1.91MM, production area of 34 acres, employment of 33 fulltime equivalent (FTE) persons, total costs of \$1.74MM, and net firm income of \$163 thousand (M). Total assets, including plant inventory, land, equipment, buildings, supplies, cash on hand, and accounts receivable, averaged \$2.60MM, while total liabilities were \$1.02MM. Value produced per square foot of growing area averaged \$1.18 and total costs per square foot were \$1.17. Value produced per full-time equivalent (FTE) of labor was \$53M and growing space managed per FTE averaged 1.04 acres. Capital managed per FTE and per acre of growing space averaged \$85M and \$82M, respectively. Inventory turnover was 0.94. Costs as a share of value produced were 4.5% for management, 33.8% for labor, 32.0% for materials, 4.9% for equipment/facilities, 16.0% for overhead, 3.8% for depreciation, and 4.4% for interest. Net profit margin averaged 12.6%, rate of return on capital investment was 9.3%, and rate of return on net worth was 10.3%. Compared to previous results for 1990, firms in the Nursery Business Analysis program in 1995 were significantly larger, with production area and employment increased by 71% and 72%, respectively, while sales and net firm income increased by 45% and 52%, respectively, in constant-dollar terms. However, rate of return on net worth decreased by 22 percent. Similar information is presented for each sector of the industry and for large, small and highly profitable firms.

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BUSINESS ANALYSIS OF ORNAMENTAL PLANT NURSERIES IN FLORIDA, 1995

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INTRODUCTION

The Florida Nursery Industry

The state of Florida is the second largest producer of ornamental plants in the U.S., with an industry value of \$1.0 billion in 1992 (Census Bureau, 1993) and over 5000 registered wholesale growers (DPI, 1995). Ornamental crops produced in Florida include woody ornamentals (landscape trees and shrubs), tropical foliage, and flowering plant products. Florida dominates U.S. production of tropical foliage crops with over 90 percent of sales. Growth of the industry in Florida mirrored that in the nation as a whole, with sales of ornamental plant products rapidly increasing in the 1970s and early 1980s, then experiencing slower but steady growth in the latter 1980s and 1990s. During this period of maturation and increasing competition, the ornamental horticulture industry experienced problems common to other parts of U.S. agriculture, including over-production, depressed prices, reduced profitability and an increased rate of business failure (Hodges, Haydu and van Blokland, 1996). For example, rates of return on equity for floricultural and environmental horticulture firms in the United States declined from 6.9 percent in 1987 to 2.3 percent in 1991 (Johnson and Johnson, 1993).

The University of Florida Nursery Business Analysis Program

Information in this report was collected as part of the University of Florida's ongoing Nursery Business Analysis Program. Since the 1960s, this program has gathered confidential production and accounting records from wholesale nurseries in Florida. This report updates the previous official report for 1990 (Hodges, 1992). Information generated by the Nursery Business Analysis is intended for:

1. *Nursery managers* to use physical and economic measures for evaluating the efficiency of individual nurseries and for making more informed management decisions;
2. *Allied trades professionals* to estimate input requirements and revenue potential for wholesale ornamental nurseries;
3. *Industry investors* as a guideline for typical returns on investments;
4. *Extension educators* to use for conducting educational programs with nursery managers;
5. *Researchers* to support research in the ornamental horticulture industry by providing information to assess economic impacts of new technologies and management practices.

Nursery firms that participated in the Nursery Business Analysis Program did so on a strictly voluntary basis. Therefore, this is not a statistically representative sample of firms. However, it is believed to represent firms with above-average management quality, by virtue of their willingness to participate in quality improvement programs such as the Nursery Business Analysis. Managers who participated in this program received a report with information similar to that presented in this paper.

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PROCEDURES

Information Collected and Reported

Information for this report was collected from 50 wholesale ornamental nursery firms in Florida for the 1995 fiscal year. Information gathered included monthly sales, other income, expenses itemized in 25 categories, assets and liabilities, inventory values, value of leased property, production area, and labor hours or number of fulltime persons employed. Information was gathered from company financial statements or income tax forms, and other production records. In most cases, these data were for the calendar year period of January to December, 1995, but in a few instances up to six months data were for 1994 or 1996. Data were taken from company financial statements or tax returns and other production records, and transcribed to standardized worksheets and entered into computer spreadsheets for analysis. Reported results represent weighted averages for firms in each group, so larger firms had greater influence on the results by virtue of their greater values for sales, expenses, etc. Trends in operating results between the 1995 and 1990 were calculated as a percentage change by taking difference between 1995 and 1990 values, then dividing by the 1990 value. Changes in monetary values were adjusted for inflation using the Consumer Price Index (U.S. Dept. Labor), which showed a 16.6% increase between 1990 and 1995.

Industry Groups Analyzed

Records were separately compiled and analyzed for four different groups of crops and production system types in the wholesale ornamental plant nursery industry: containerized woody ornamentals, flowering plants, and tropical foliage plants in Central and South Florida. Production systems for woody ornamentals are characterized by open growing areas, while producers of tropical foliage and flowering plant products typically have weatherized greenhouses or shadehouses. Within each industry group, data were also analyzed by subgroups of large firms, small firms, and highly profitable firms where possible. Large firms were defined as having annual sales of \$1 million or greater, while small firms had sales of less than \$250 thousand. Highly profitable firms were defined as having returns to capital of at least 15 percent. The number of firms sampled in each industry group, and large, small and highly profitable firms are shown in Table 1. Of these 50 firms providing information for 1995, 25 had also previously participated in the program for 1990.

Table 1. Number of Florida ornamental plant nursery firms sampled for the Nursery Business Analysis program, 1995.

Crop Type	Region or Production System	All Firms	Large Firms	Small Firms	Highly Profitable Firms
Tropical foliage	Central Florida	11	3	2*	2*
	South Florida	12	4	2*	1*
Woody ornamentals	Container growing	21	6	8	5
	Field growing	2*	1*	1*	2*
Flowering plants		4	2*	1*	1*
Total		50	16	14	11

* Results not reported separately to avoid disclosure.

In order to assure confidentiality for participating firms, results are reported separately only for those industry groups for which 3 or more firms participated. Therefore, it was not possible to report results specifically for field grown woody ornamentals, or for large, small or highly profitable firms in some other industry groups.

Accounting Conventions

A number of accounting conventions were adopted for the Nursery Business Analysis program in order to standardize the collection of information from different firms and to make possible consistent comparisons among different groups and across years.

Sales of resold or "brokered" plants from other firms were deducted from total sales to give nursery-produced sales. Net returns from brokered sales were included in miscellaneous income. For some firms with a large proportion of brokerage sales, a portion of fixed costs and overhead expenses were charged as nursery production expenses. For firms with diversified operations which contributed records for two or more industry sectors, overhead costs and asset values allocated to each enterprise in proportion to product sales.

Plant inventories were accounted for on an accrual basis, where changes in inventory values were added to sales to calculate total value of production and total income. Inventories were also included among owned capital investments. Plant inventories were normally valued at wholesale market value, based on average actual prices realized, and appropriately discounted for unfinished products. For example, if a crop is normally grown for 8 months and is aged 6 months at the year's end, it would be valued at 75 percent of its normal wholesale value. In the absence of detailed inventory records, plant inventories were evaluated at 50 to 75 percent of finished wholesale value for all plants in production.

All assets and liabilities were evaluated to represent a mid-year position by averaging the beginning and ending values for the period. Investments in buildings, site improvements, machinery and equipment were taken at book value, i.e. original cost less accumulated depreciation. Leased capital assets in land, buildings, and equipment were estimated at current market value. Investments in land were generally valued at the original purchase price, which did not reflect the current appreciated value of landholdings for many older firms. In cases where assets were personally owned by corporate officers and leased exclusively to the company, these assets were taken at book value rather than market value, and debts to corporate officers were not included among company liabilities when there was no intention to repay these debts. In some cases, lease payments for land were taken as compensation for management.

RESULTS

Basic information on income, productive resources, assets and liabilities, expenses, and net returns are presented for each industry group in Tables 2 through 6. Analytical measures of productivity, efficiency, profitability, financial solvency and liquidity are given in Tables 7 through 10. Complete results for large, small, and highly profitable firms and the container woody ornamental, Central and South Florida foliage industry groups, are given in Appendix Tables 1 through 4. Changes in all results for the Florida Nursery Business Analysis between 1990 and 1995 are given in Appendix Table 5.

Income and Value Produced

Annual Sales

Nursery plant sales averaged \$1.54 million (MM) for all firms and ranged from \$688 thousand (M) for Central Florida foliage nurseries to \$2.70MM for South Florida foliage firms, as shown in Table 2. Large firms had average sales of \$3.96MM (Appendix Table 1). These sales values represent only plants produced by the participating nursery firms; sales of plants purchased for immediate resale or "brokered" were deducted from total sales to give the net value of nursery-produced plant sales.

Average sales per firm in 1995 were 45 percent higher than in 1990 for all nurseries, and were 81% higher for container nurseries in inflation-adjusted terms (Appendix Table 5). This large change in sales between 1990 and 1995 may be attributed to growth in the industry and a changing sample of firms.

Table 2. Income and value produced, Florida ornamental plant nurseries, 1995.

Income Measure	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
<i>Thousands Dollars</i>					
Nursery plant sales	1,535	1,144	2,624	688	2,696
Change in plant inventory value	219	276	16	(18)	362
Value produced	<u>1,754</u>	<u>1,420</u>	<u>2,640</u>	<u>670</u>	<u>3,058</u>
Miscellaneous income	152	155	644	9	128
Total income	1,906	1,575	3,284	679	3,186

Monthly Sales

The distribution of monthly sales as a percentage of total sales is shown in Figure 1. All industry groups generally followed similar trends: peak sales during the spring months (Mar.–May), followed by declining summertime sales, then a smaller second peak in November. Flowering plant nurseries had dramatically more seasonal sales with nearly 50% of annual sales during the spring months and less than 5% monthly during the summer. Presumably this pattern was related to the market for holiday crops. Central Florida foliage firms had strong sales in January, which were nearly as great as March and May. Sales were least seasonal for South Florida foliage nurseries with all months comprising less than 10% of annual sales. December was the month of lowest sales for all groups except flowering plants, representing only 6% to 7% of annual sales.

Percent of Annual Sales

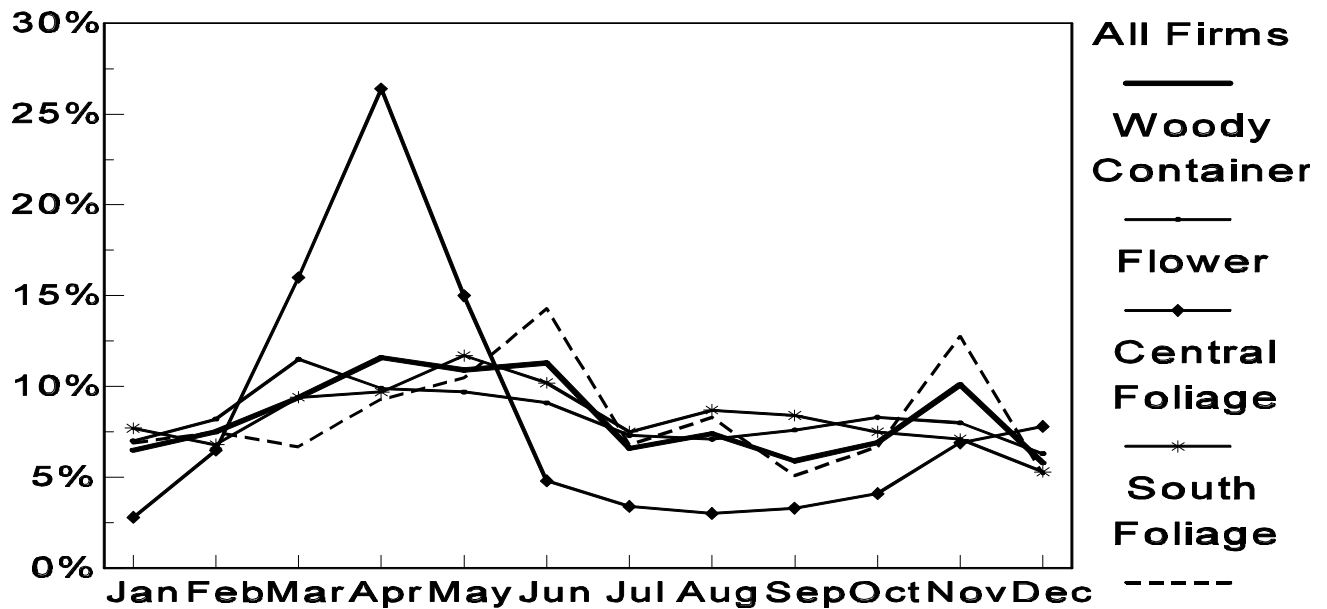


Figure 1. Monthly sales as a percentage of annual sales for Florida ornamental plant nurseries, 1995.

Plant Inventory Change and Total Value Produced

Changes in plant inventory values over the year (Jan. 1–Dec. 31) averaged \$219M for all firms, which represented 14% of annual sales (Table 2). Inventory change was positive for all industry groups except Central foliage which declined slightly. Total value produced is a measure of productive effort by a nursery, calculated as the sum of own plant sales and change in plant inventory value. It averaged \$1.49MM for all firms, which was an increase of 53% from that in 1990 in inflation-adjusted terms. Value produced ranged from \$670M for Central foliage to \$3.06MM for South Florida foliage (Table 2). Large firms had an average value produced of \$4.56MM (Appendix Table 1).

Total Income

Total income was the sum of plant sales, changes in plant inventory values, and miscellaneous income from brokerage services, interest on accounts, rents, and other charges. It averaged \$1.91MM for all firms, which represented a 65% increase from 1990 in inflation-adjusted terms. Total income ranged from \$679M for Central foliage firms to \$3.28MM for flowering plant firms (Table 2), and averaged \$5.01MM for large firms (Appendix Table 1).

Assets, Liabilities and Net Worth

Assets and liabilities were taken to represent the mid-year financial position of firms, calculated as an average of beginning and ending balance sheet figures. These results are summarized in Table 3.

Assets

Total assets averaged \$2.60MM for all firms, which was a 107% increase from 1990 (inflation-adjusted). Assets ranged from \$630M for Central foliage firms to \$3.91MM for South foliage firms (Table 3), and averaged \$6.84MM for large firms.

Current Assets consisted of cash on hand, accounts receivable, and plant and supply inventories. Current assets averaged \$1.96MM for all firms and ranged from \$520M for Central foliage firms to \$2.57MM for South foliage nurseries (Table 3).

Long-term Assets included owned investments in buildings, machinery and land, all taken at book value. Long-term assets averaged \$638M for all firms, and ranged from \$31 for field nurseries to \$1.34MM for South foliage nurseries (Table 3).

Table 3. Assets, liabilities and net worth of Florida ornamental plant nurseries, 1995.

Item	All Firms	Container Woody Ornam.	Flowering Plants	Central Foliage	South Foliage
<i>Thousands Dollars</i>					
Assets					
Plant inventory	1,628	2,165	718	331	2,035
Supply inventory	54	40	57	31	100
Cash & acc. receivable	279	239	407	158	430
Total current assets	<u>1,961</u>	<u>2,444</u>	<u>1,182</u>	<u>520</u>	<u>2,565</u>
Land	221	286	30	26	378
Machinery & equipment	129	80	124	22	317
Buildings & installations	288	208	348	62	646
Total long-term assets	<u>638</u>	<u>574</u>	<u>502</u>	<u>110</u>	<u>1,341</u>
Total assets	<u>2,600</u>	<u>3,018</u>	<u>1,685</u>	<u>630</u>	<u>3,906</u>
Liabilities & Net Worth					
Current liabilities	265	173	107	60	646
Long-term liabilities	759	894	216	96	1,315
Total liabilities	<u>1,024</u>	<u>1,067</u>	<u>323</u>	<u>156</u>	<u>1,961</u>
Net worth	1,576	1,951	1,362	474	1,945

Liabilities

Total liabilities averaged \$1.02MM for all firms, which was an increase of 221% from 1990. Liabilities ranged from \$156M for Central foliage firms to \$1.96MM for South foliage nurseries (Table 3), and averaged \$2.74MM for large firms.

Current Liabilities, including accounts payable and other liabilities payable within one year, averaged \$264M for all firms and ranged from \$60M for Central foliage to \$646M for South foliage firms (Table 3).

Long-term Liabilities, including notes payable and mortgages, averaged \$759M for all firms and ranged from \$96M for Central foliage to \$1.31MM for South foliage nurseries (Table 3).

Net Worth

Net worth or equity is the difference between total assets and total liabilities and represents the value of the owners' share of assets. It averaged \$1.58 MM for all firms, which represented a 69% increase from 1990. Net worth ranged from \$474M for Central foliage firms to \$1.94MM for South foliage firms (Table 3), and averaged \$4.10MM for large firms (Appendix Table 1).

Productive Resources Used

Productive resources of land, labor and capital used by Florida ornamental nurseries are summarized in Table 4. Land and capital used represent averages of beginning and ending values for the year.

Land

Space available for growing plants was measured in acreage of net usable growing area, taken as an average of the amounts in use at the beginning and end of the year. Net usable growing area included only space within growing beds and fields; aisles, driveways and other service areas were excluded. Growing space averaged 34.12 acres for all firms, which was a 71% increase since 1990 (Appendix Table 5). Growing area varied from 3.59 acres for Central Florida foliage nurseries to 54 acres for container nurseries (Table 4), and averaged 90.4 acres for all large firms (Appendix Table 1). Growing space increased by 522% for container firms.

Table 4. Productive resources of Florida ornamental plant nurseries, 1995.

Resource	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Production Area (acres)	34.12	54.07	15.27	3.59	24.81
Employees (FTE persons)	32.92	26.22	53.29	12.31	57.60
<i>Capital Managed (Including leased assets) in Thousands Dollars</i>					
Land	384	478	239	90	542
Equipment	142	85	124	66	321
Buildings	323	221	413	156	649
Inventories	1,682	2,205	776	362	2,135
Cash and accounts receivable	279	239	407	158	430
Total capital managed	2,810	3,227	1,959	832	4,077

Labor

Physical labor resources used were measured in terms of fulltime equivalent (FTE) persons, including production, administrative, sales, and management personnel. In most cases, this was calculated by dividing total labor hours by 2,080 hours per worker-year (52 weeks at 40 hours per week). The number of full-time equivalent persons averaged 32.9 for all firms, which represented a 72% increase from 1990. The number of FTEs ranged from 12.3 for Central foliage nurseries to 57.6 for South Florida foliage firms (Table 4) and averaged 85.0 for all large firms (Appendix Table 1).

Capital Managed

All forms of both owned and leased assets in land, buildings, equipment and working capital represented capital resources for nursery operations. Owned capital in buildings, improvements and equipment were assessed at book value, while leased assets were taken at market value. Total capital managed averaged \$2.81MM for all firms, which was a 106% increase from 1990. Capital managed ranged from \$831M for Central Florida foliage firms to \$4.08MM for South foliage nurseries (Table 4) and averaged \$7.3MM for all large firms.

The proportions of total capital managed in land, buildings, equipment, inventories, cash, and accounts receivable varied considerably among industry groups. Growing plants represented the largest share of capital managed for all industry groups, ranging from 37% for flowering plant firms to over 68% for woody container nurseries. Land was second in importance as a share of total capital managed for woody container (20%) and South foliage nurseries (21%). Buildings and installations were the second largest category for Central foliage (20%), and flowering plant firms (18%). Machinery and equipment represented less than 10% of total capital managed, except for flower firms (15%). Cash and accounts receivable ranged from 7% (woody container) to 18% (Central foliage) of managed capital.

Expenses

Operating expenses were grouped into the following categories: management's compensation, employees' wages and benefits, materials, facility and equipment, administrative overhead, depreciation, and interest. Costs for each industry group are summarized in Table 5 and a listing of expenses for all 25 itemized expense categories is given in Appendix Table 6. Expenses for income taxes were not considered in this analysis.

Table 5. Expenses for Florida ornamental plant nurseries, 1995.

Expense Category	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
<i>Thousands Dollars</i>					
Management's compensation	79	105	71	51	61
Employees' wages and benefits	593	462	969	212	1,053
Materials	561	376	1,158	261	977
Facility and equipment	87	78	189	37	117
Overhead	280	204	235	94	593
Depreciation	67	55	75	18	139
Interest	78	85	39	9	147
Total expenses	1,743	1,367	2,734	681	3,088

Management's Compensation represented salaries and benefits paid to owners and top management. These expenses averaged \$79M for all firms, which was a 25 percent increase from 1990. Management's compensation ranged from \$51M for Central Florida foliage nurseries to \$104M for container firms (Table 5) and averaged \$156M for large firms (Appendix Table 1).

Employees' Wages and Benefits was the largest expense category in the ornamental plant industry. In addition to wages and salaries, this category included payroll taxes (social security), workman's insurance, health insurance, bonuses, and other benefits paid. Expenses averaged \$593M for all firms, which was a 82 percent increase from 1990. Expenses ranged from \$206M for field firms to \$1.05MM for South foliage firms (Table 5) and averaged \$1.58MM for large firms.

Materials included expenses for plants and seeds, containers, peat and soil, fertilizer and lime, pesticides and chemicals, packaging materials, heating fuel, and other production supplies such as tags, and small tools. All of these items would normally be considered "direct" expenses or "cost of goods sold". Expenses for materials averaged \$560M for all firms, which was increased 40 percent from 1990. Expenses ranged from \$172M for field nurseries to \$1.16MM for flowering plant firms (Table 5) and averaged \$1.46MM for large firms. Shrinkage in supply inventories was also included in this category, but was an insignificant amount in all cases.

Facility and Equipment included repairs and maintenance for nursery facilities and equipment operating costs such as fuel. Expenses averaged \$87M for all firms, up 66 percent from 1990. Expenses ranged from \$18M for field nurseries to \$188M for flower nurseries (Table 5) and averaged \$221 for large firms.

Administrative and Overhead included travel and entertainment, property insurance, telephone, electric power, advertising, property taxes and business licenses, rent and other cash expenses such as professional services, trade association memberships, office expenses and miscellaneous. Expenses averaged \$280M for all firms, and ranged from \$58M for field nurseries to \$593M for South foliage firms (Table 5) and averaged \$750M for large firms. These expenses increased by 132 percent since 1990.

Interest for borrowed capital in the form of mortgages, promissory notes, and charge accounts averaged \$78M for all firms. This represented an increase of 227 percent from 1990, more than any other expense category. Interest expenses ranged from less than \$1M for field firms to \$147M for South foliage firms (Table 5) and averaged \$213M for large firms.

Depreciation is a non-cash costs that is not paid directly but is nonetheless a real costs of business over the long term. Depreciation allowances taken on buildings and equipment represent the decreasing value of these assets. Depreciation expenses were usually taken from company income tax returns, computed according to the ACRS method (3, 5, or 7 years) for equipment, and straight-line or double declining balance methods (10 to 20 years) for buildings and improvements. Expenses averaged \$66M for all firms, which was up 44 percent from 1990. Depreciation ranged from \$10M for field firms to \$139M for South foliage firms (Table 5) and averaged \$164M for large firms.

Total Costs for all expenses categories averaged \$1.74MM for all firms, a 69 percent increase from 1990. Total costs were \$681M for Central foliage firms, \$1.37MM for container growers, \$541M for field nurseries, \$2.73MM for flowerering plant producers, \$3.08MM for South Florida foliage nurseries (Table 5) and averaged \$4.55MM for large firms.

Net Returns

Net returns to nursery producers were evaluated with three measures that represent different aspects of profitability in relation to different groups of costs, as summarized in Table 6. Net returns as a percentage of total income or capital owned are presented in the section "Profitability" and in Table 9.

Net Firm Income

This measure was calculated as the difference between total income and total costs except management and interest costs, and excluding income taxes. Net income averaged \$320M for all firms, a 52 percent increase from 1990. Net income was \$659M for Central Florida foliage nurseries, \$398M for woody ornamental container growers, \$659M for flowering plant firms, and \$306M for South foliage nurseries (Table 6). Net income averaged \$835M for large firms and \$742M for highly profitable firms (Appendix Table 1).

Table 6. Net returns for Florida ornamental plant nurseries, 1995.

Measure	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
<i>Thousands Dollars</i>					
Net firm income	320	398	659	58	306
Return to capital	241	293	588	7	245
Return on net worth	163	208	550	(2)	97

Return on Capital

This measure represented profits after management expenses were deducted from net firm income (above) to give the net returns attributable to the capital investment. Return to capital averaged \$241M for all firms, a 63 percent increase from 1990. It ranged from \$7M for Central foliage firms to \$588M for flowering plant firms (Table 6) and averaged \$679M for large firms (Appendix Table 1).

Return on Net Worth

This is the most comprehensive measure of net returns attributable to the owner's equity. It was calculated as total income minus total costs, which is equivalent to return to capital less interest expenses. Return on net worth averaged \$163M for all firms, which was a 32 percent increase from 1990. It ranged from negative \$2M for Central foliage firms to \$549M for flowering plant nurseries (Table 6). It averaged \$466M for large firms and \$619M for highly profitable firms (Appendix Table 1).

Productivity, Efficiency and Resource-Use Intensity Indicators

The basic data presented in Tables 2 through 6 were analyzed with a number of indicators of productivity, efficiency, resource-use intensity, profitability, and financial risk. These indicators express relationships in the level of use of the three major productive resources — nursery growing space, labor, and capital — as ratios together with key monetary values. These ratios provide a measure of the relative importance of each resource towards achieving profitable operations in different types of production systems. Results are summarized by industry group in Tables 7, 8 and 9; detailed results for subgroups of large, small, and highly profitable firms are given in Appendix Tables 1 through 4.

Value Produced per Square Foot

The productivity of nursery space was measured by value of production (annual sales plus inventory change) per square foot of growing space. For all firms, it averaged \$1.18 per square foot or \$51M per

acre, which represented a 1 percent decrease from 1990. This measure varied widely among industry groups. Central foliage and flowering plant nurseries had significantly higher space productivities because of their highly intensive production systems, while woody container firms had much lower values (Table 7). In all industry groups, larger firms and highly profitable firms had above-average nursery space productivity, while small firms had below-average values, indicating the importance of this indicator for profitable nursery operations. Nursery space productivity is affected by nursery layout and space utilization efficiency (vacancy), plant growth rates and survival, and inventory turnover (see below).

Table 7. Physical productivity, efficiency and resource use intensity indicators for Florida ornamental plant nurseries, 1995.

Measure	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Value produced per sq. foot growing area	\$1.18	\$0.60	\$3.97	\$4.29	\$2.83
Growing area per person (acres/ FTE)	1.04	2.06	0.29	0.29	0.43
Plant inventory turnover	0.94	0.53	3.65	2.08	1.32
Asset turnover	0.59	0.38	1.56	1.09	0.69
	<i>Thousands Dollars</i>				
Capital managed per acre	82	60	128	232	164
Capital managed per FTE	85	123	37	68	71
Value produced per FTE	53	54	50	54	53

Plant Inventory Turnover

This is an indicator of productivity that expresses the rate at which inventory is replaced on an ongoing basis, calculated by dividing annual sales by average inventory value. This measure accounts for the inherent value of different nursery crops. It can be interpreted as the number of "crops" per year. Inventory turnover averaged 0.94 for all firms, which means there was an average of 0.94 crops per year or a crop cycle of 1.06 years. This value fell by 35 percent from 1990. Inventory turnover generally followed a pattern among industry groups similar to that for value produced per square foot: high values for flowering plant and foliage nurseries, lower values for woody ornamental firms (Table 7). Highly profitable Central Florida foliage firms had above-average inventory turnover, but highly profitable firms in other groups did not. Large firms tended to have lower inventory turnover. Low inventory turnover is common for new and rapidly expanding firms because of large inventories of immature plants. The inventory turnover measure must be applied carefully or it can be misleading.

Asset Turnover

This indicator is analogous to inventory turnover except that it expresses the ratio of annual sales to total assets. Asset turnover averaged 0.59 for all firms, or in other words, annual sales were 59% of total owned assets (Table 7). This figure was down by 30 percent from 1990 for all groups. Flowering plant growers and Central Florida foliage nurseries had higher asset turnover rates, while woody ornamental container nurseries had lower turnover rates. In general, high asset turnover is desirable, indicating greater sales per dollar of investment. Low asset turnover rates may result from low labor or space productivity or excessive capital investment.

Value Produced per Worker

Labor productivity was measured in terms of value produced per fulltime equivalent (FTE) worker, or per 2080 labor hours per year. Over all firms, labor productivity averaged \$53M per FTE, which was down by 11 percent from 1990. Labor productivity varied among industry groups relatively less than other resource productivity measures, ranging from \$50M per FTE for flowering plant growers to \$54M for container and Central foliage nurseries (Table 7). Small firms had below average labor productivity. Highly profitable firms did not necessarily have above-average labor productivity. Variations in labor productivity may result from differences in investment for labor-saving equipment, labor management practices, and practices affecting crop turnover.

Growing Area Managed per Worker

The intensity of labor use was evaluated in terms of production area (acres) per FTE person. For all firms, growing space per FTE averaged 1.04 acres (Table 7) or 0.96 FTE persons per acre. This value was unchanged since 1990. Woody ornamental nursery firms had a much higher ratio of growing space to labor, averaging 2.1 acres per FTE, while Central foliage and flowering plant firms had about 0.29 acres per FTE. Highly profitable container and foliage nursery firms had a lower ratio of growing space to employees (Appendix Tables 2–4).

Capital Managed per Worker

The intensity of capital use in relation to labor was measured as the ratio of managed capital (owned plus leased) to number of persons employed. This measure averaged \$85M per FTE for all firms, which was a 20 percent increase from 1990. It ranged from \$36M for flowering plant firms to \$181M for field firms (Table 7). The substantially higher capital-labor intensity for field nurseries was due to their greater mechanization and investment in land and plant inventory. There was no clear pattern in capital managed per FTE in relation to firm size or profitability.

Capital Managed per Acre

The intensity of capital use in relation to nursery space was measured as the ratio of capital managed to growing area (acres). Capital managed per acre of growing area averaged \$82M for all firms, an increase of 20 percent since 1990. This measure ranged from \$60M for woody ornamental container firms to \$231M for Central Florida foliage firms (Table 7). Small firms had above-average capital managed per acre for container and foliage nurseries (Appendix Tables 2–4). Highly profitable firms had slightly below-average capital managed per acre for container nurseries, but it was above-average for Central Florida foliage firms.

Cost Efficiency

Costs per square foot of growing area and costs per unit revenue were used as measures of cost efficiency, as summarized in Table 8.

Cost per Square Foot

The cost per unit of growing space is a useful measure for estimating individual plant growing costs or comparing cost efficiencies of different production systems. Total costs per square foot of growing area averaged \$1.17 for all firms, which was a 1 percent decrease from 1990. Costs per square foot varied from \$0.16 for field nurseries to \$4.36 for Central Florida foliage (Table 8). These results paralleled

those for value of production per square foot and inventory turnover. Highly profitable firms had lower costs per square foot, except for Central Florida foliage firms. Small firms had above-average costs per square foot in all groups.

Table 8. Cost efficiency Indicators for Florida ornamental plant nurseries, 1995.

Measure	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Total cost per square foot of growing area	\$1.17	\$0.58	\$4.11	\$4.36	\$2.86
<i>Costs Per Dollar Value Produced</i>					
Management	4.5%	7.4%	2.7%	7.5%	2.0%
Employee labor	33.8%	32.6%	36.7%	31.6%	34.4%
Materials	32.0%	26.5%	43.8%	38.9%	31.9%
Facility and equipment	4.9%	5.5%	7.2%	5.5%	3.8%
Administrative overhead	16.0%	14.4%	8.9%	14.1%	19.4%
Depreciation	3.8%	3.9%	2.8%	2.7%	4.6%
Interest	4.4%	6.0%	1.5%	1.4%	4.8%
Total	99.4%	96.3%	103.6%	101.6%	101.0%

Cost As a Share of Value Produced

Analysis of expenses in relation to the value of production has proven to be one of the most reliable measures of cost efficiency in many industries. Costs per dollar value produced are discussed for each cost category below. Changes in costs between 1990 and 1995 represent percentage changes from the 1990 levels. For example, if costs as a share of value produced were 10% (.10) in 1990 and 15% (.15) in 1995, this change would be a 50 percent increase $[(0.15 - 0.10) / 0.10 = 0.50]$.

Management cost per dollar value produced averaged 4.5% for all firms which was a decrease of 18 percent since 1990. It ranged from 2.7% for flowering plant firms to 7.5% for Central foliage firms (Table 8) and averaged 3.4% for large firms, 15.2% for small firms, and 4.2% for highly profitable firms (Appendix Table 1). Because of economies of scale, differences in management cost efficiency among industry groups are partly due to differences in average size of firms.

Employee Wages and Benefits averaged 33.8% of value produced for all firms and increased 19 percent since 1990. It ranged from 31.6% for Central foliage nurseries to 36.7% for flowering plant growers (Table 8). Large firms had labor costs slightly above-average at 34.7%, while small firms had costs well below average at 23.4% (Appendix Table 1). Labor costs were strongly related to profitability: in each industry group highly profitable firms had below-average labor costs, and across all firms the most profitable ones had labor costs of 30.4% of value produced.

Materials costs represented 32.0% of value produced for all firms, which was a decrease of 8 percent from 1990. Costs ranged from 26.5% for woody container firms to 43.8% for flower growers (Table 8). Highly profitable firms and small firms had below-average supply costs of 24.3% and 27.3%, respectively (Appendix Table 1).

Facilities and Equipment costs averaged 4.9% of value produced for all firms, an increase of 8 percent from 1990. These costs ranged from 3.8% for South Florida foliage nurseries to 7.2% for flowering plant nurseries, which were highest because of greater equipment costs (Table 8). Highly profitable firms had slightly below-average costs of 4.4%.

Administrative and Overhead costs averaged 16.0% of value produced for all firms, a 51 percent increase from 1990. These costs ranged from 8.9% for flowering plant firms to 19.4% for South foliage firms (Table 8). Within each industry group, overhead costs were below average for the smallest firms. Highly profitable firms also had substantially below-average overhead costs of 9.0% (Appendix Table 1).

Interest for borrowed capital averaged 4.4% of value produced for all firms. This represented a 114% increase from 1990, the highest of any cost category. Costs ranged from 1.4% for Central Florida foliage firms to 4.8% for South foliage firms (Table 8). Large firms had interest costs of 4.7% and highly profitable nurseries has costs averaging 3.7% of value produced (Appendix Table 1).

Depreciation costs averaged 3.8% of value produced for all firms, which was a 6 percent decrease from 1990. Cost ranged from 2.7% for Central Florida foliage nurseries to 4.6% for South Florida foliage firms (Table 8), and were 3.5% of value produced for highly profitable firms (Appendix Table 1).

Profitability

Profitability measures express net returns as a proportion of their business indicators, such as total income, assets or net worth. These measures are summarized in Table 9.

Table 9. Profitability indicators for Florida ornamental plant nurseries, 1995.

Measure	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Net Margin	12.6%	18.6%	17.9%	1.1%	7.7%
Rate of Return to Capital	9.3%	9.7%	34.9%	1.2%	6.3%
Rate of Return on Net Worth	10.3%	10.7%	40.4%	-0.4%	5.0%

Net Margin

Net margin is the ratio between net nursery income and total income (Tables 6 and 2, respectively), or in other words, the share of total income that is net income. Net margin averaged 12.6% for all firms, a 1 percent decrease from 1990. Net margin ranged from 1.1% for Central foliage to 18.6% for woody container nurseries (Table 9). Highly profitable firms had net margins averaging 36.3%. Over all groups, both large and small firms had slightly above-average net margins of 13.5% and 16.6%, respectively (Appendix Table 1). Small Central Florida foliage firms had a negative net margin.

Rate of Return on Capital

This measure is a common indicator for evaluating alternative investments and is calculated by dividing return to capital by the value of total assets (Tables 6 and 3, respectively). Rate of return on capital averaged 9.3% percent for all firms, a decrease of 21 percent from 1990. It ranged from 1.2% for Central foliage to 34.9% for flowering plant growers (Table 9). Highly profitable firms, i.e. those having

at least 15% rate of return on capital, had an average rate of return on capital of 28.0%. Large firms had average rates of return of 9.9% and small firms had returns of 10.7%, but firm size was not consistently related to this measure of profitability.

Rate of Return on Net Worth

This is the most comprehensive measure of profitability and is calculated by dividing return on net worth by net worth (Tables 6 and 3). This measure takes into account the financial risk embodied in the leverage factor (see below) and is comparable to annualized yields on stocks, bonds, or savings deposits. Return on net worth averaged 10.3% for all firms, a 22 percent decrease from 1990. Returns ranged from minus 0.4% for Central foliage to 40.4% for flower firms (Table 9). Highly profitable firms averaged 36.9% rate of return on net worth. Both large and small firms had returns on net worth slightly above average (Appendix Table 1).

Financial Risk

Financial solvency and liquidity were summarized with two financial ratios, the quick ratio and the leverage ratio, as shown in Table 10.

Table 10. Financial ratios for Florida ornamental plant nurseries, 1995.

Ratio	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Quick Ratio	1.05	1.38	3.81	2.65	0.67
Leverage Ratio	1.65	1.55	1.24	1.33	2.01

Quick Ratio

The quick ratio is a measure of a firm's ability to meet short-term debts. It is calculated by dividing cash and accounts receivable by current liabilities (Table 3). Cash and accounts receivable are the most liquid of current assets, which are usually available on short notice, but inventories are not included in this measure because they may not be immediately salable. A value for this ratio below 1.0 would indicate an illiquid position. The quick ratio averaged 1.05 for all firms, which was a 57 percent decrease from 1990. It ranged from 0.67 for South foliage to 3.81 for flower firms (Table 10). Highly profitable firms had quick ratios averaging 1.30, and large firms averaged 0.96 (Appendix Table 1).

Leverage

This measure expresses the ratio between total assets and net worth (Table 3), and is an indicator of long-term solvency. Higher values indicate greater risk, with potential for greater returns and greater losses. The leverage ratio averaged 1.65 for all firms, a 23 percent increase from 1990. It ranged from 1.22 for field nurseries to 2.01 for South Florida foliage firms (Table 10). There was no consistent trend in leverage with respect to firm size or profitability. Generally, leverage factors below 2.0 are considered to represent a very safe financial position. The impact of financial leverage on profitability can be understood as a multiplier: leverage multiplied by the rate of return to capital assets equals the rate of return on net worth. Since leverage is always greater than or equal to one, return on net worth is always greater than rate of return on capital assets, either positively or negatively.

Summary of Key Factors Affecting Profitability

The most profitable firms in each industry may be characterized by outstanding performance on a number of the productivity and efficiency indicators. Highly profitable firms generally had a high value produced per square foot and low costs per dollar value produced for labor, materials and overhead expenses. Highly profitable container woody ornamental nurseries had a low value for capital managed per acre and per FTE employee. Highly profitable Central Florida foliage firms had above average turnover measures, and were low on capital managed per FTE, but high in capital managed per acre. Highly profitable South Florida foliage firms were above average on both capital managed per acre and per FTE employee.

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APPENDIX TABLES

Appendix Table 1. Results for participating large, small, and highly profitable Florida ornamental plant nurseries, 1995. See Table 1 for industry group composition of large, small and highly profitable firms.

Measure		Units	Large Firms	Small Firms	Highly Profitable Firms
Number of Firms		Number	16	14	11
Physical Resources	Production Area	Acres	90.44	2.33	54.21
	Employees	FTEs	84.86	3.80	30.76
Income	Own Plant Sales	Thous. \$	3,955	111	1,118
	Change Plant Inventory Value	Thous. \$	604	34	443
	Value Produced	Thous. \$	4,559	145	1,561
	Total Income	Thous. \$	5,013	152	1,860
Assets	Plant Inventory	Thous. \$	4,465	112	1,802
	Supply Inventory	Thous. \$	151	2	28
	Cash & Accounts Receivable	Thous. \$	725	28	222
	Land	Thous. \$	454	67	187
	Machinery/Equipment	Thous. \$	323	11	54
	Buildings & Installations	Thous. \$	725	15	119
	Total Assets	Thous. \$	6,843	237	2,413
Liabilities & Net Worth	Current Liabilities	Thous. \$	751	13	171
	Long-Term Liabilities	Thous. \$	1,984	68	563
	Total Liabilities	Thous. \$	2,735	81	734
	Net Worth	Thous. \$	4,108	156	1,679
Other Capital Managed	Land Leased	Thous. \$	377	13	188
	Equipment Leased	Thous. \$	25	0	7
	Buildings Leased	Thous. \$	70	1	17
	Total Capital Managed	Thous. \$	7,315	251	2,624
Expenses	Management	Thous. \$	156	22	66
	Employee Wages & Benefits	Thous. \$	1,580	34	475
	Materials	Thous. \$	1,463	40	380
	Facility/Equipment	Thous. \$	221	7	69
	Overhead	Thous. \$	750	20	141
	Depreciation	Thous. \$	164	5	54
	Interest	Thous. \$	213	5	57
	Total Costs	Thous. \$	4,547	132	1,242
Net Returns	Net Nursery Income	Thous. \$	835	47	742
	Return to Capital	Thous. \$	679	25	676
	Return on Net Worth	Thous. \$	466	20	619
Physical Productivity & Efficiency Indicators	Capital Managed Per FTE	Thous. \$	86	66	85
	Capital Managed Per Acre	Thous. \$	81	108	48
	Value Produced per FTE	Thous. \$	54	38	51
	Area Per FTE	Acres	1.07	0.61	1.76
	Value Produced Per Square Foot	\$	1.16	1.43	0.66
	Inventory Turnover	ratio	0.89	0.99	0.62
	Asset Turnover	ratio	0.58	0.47	0.46
	Total Cost per Square Foot	\$	1.15	1.30	0.53
Cost Per \$ Value Produced	Management	%	3.4%	15.2%	4.2%
	Labor	%	34.7%	23.4%	30.4%
	Materials	%	32.1%	27.3%	24.3%
	Facility/Equipment	%	4.9%	4.8%	4.4%
	Overhead	%	16.4%	13.6%	9.0%
	Depreciation	%	3.6%	3.3%	3.5%
	Interest	%	4.7%	3.5%	3.7%
Cash Cost/Sales	%	109.6%	113.9%	105.9%	
Profitability	Net Margin	%	13.5%	16.6%	36.3%
	Rate of Return to Capital	%	9.9%	10.7%	28.0%
	Rate of Return on Net Worth	%	11.3%	12.9%	36.9%
Financial Ratios	Quick Ratio	ratio	0.96	2.14	1.30
	Leverage Ratio	ratio	1.67	1.52	1.44

Appendix Table 2. Results for all, large, small and highly profitable container woody ornamental nurseries in Florida, 1995.

Measure		Units	All Firms	Large Firms	Small Firms	Highly Profitable Firms
Number of Firms		Number	21	6	8	5
Physical Resources	Production Area	Acres	54.07	162.42	2.83	87.32
	Employees	FTEs	26.22	71.55	4.19	47.05
Income	Own Plant Sales	Thous. \$	1,144	3,093	116	1,679
	Change Plant Inventory Value	Thous. \$	276	954	17	812
	Value Produced	Thous. \$	1,420	4,047	133	2,491
	Total Income	Thous. \$	1,575	4,567	140	2,623
Assets	Plant Inventory	Thous. \$	2,165	7,019	87	3,206
	Supply Inventory	Thous. \$	40	119	2	46
	Cash & Accounts Receivable	Thous. \$	239	728	6	331
	Land	Thous. \$	286	739	69	353
	Machinery/Equipment	Thous. \$	80	173	16	71
	Buildings & Installations	Thous. \$	208	671	6	143
	Total Assets	Thous. \$	3,018	9,450	185	4,151
Liabilities & Net Worth	Current Liabilities	Thous. \$	173	484	19	237
	Long-Term Liabilities	Thous. \$	894	2,782	40	898
	Total Liabilities	Thous. \$	1,067	3,265	58	1,135
	Net Worth	Thous. \$	1,951	6,184	127	3,016
Other Capital Managed	Land Leased	Thous. \$	192	497	0	297
	Equipment Leased	Thous. \$	5	12	0	15
	Buildings Leased	Thous. \$	13	9	0	5
	Total Capital Managed	Thous. \$	3,227	9,968	185	4,467
Expenses	Management	Thous. \$	105	263	24	85
	Employee Wages & Benefits	Thous. \$	462	1,304	33	734
	Materials	Thous. \$	376	1,020	32	520
	Facility/Equipment	Thous. \$	78	211	8	96
	Overhead	Thous. \$	204	593	19	235
	Depreciation	Thous. \$	55	156	4	101
	Interest	Thous. \$	85	270	3	99
	Total Costs	Thous. \$	1,367	3,818	124	1,870
Net Returns	Net Nursery Income	Thous. \$	398	1,282	44	937
	Return to Capital	Thous. \$	293	1,019	19	852
	Return on Net Worth	Thous. \$	208	749	16	754
Physical Productivity & Efficiency Indicators	Capital Managed Per FTE	Thous. \$	123	139	44	95
	Capital Managed Per Acre	Thous. \$	60	61	66	51
	Value Produced per FTE	Thous. \$	54	57	32	53
	Area Per FTE	Acres	2.06	2.27	0.67	1.86
	Value Produced Per Square Foot	\$	0.60	0.57	1.08	0.66
	Inventory Turnover	ratio	0.53	0.44	1.34	0.52
	Asset Turnover	ratio	0.38	0.33	0.63	0.40
	Total Cost per Square Foot	\$	0.58	0.54	1.00	0.49
Cost Per \$ Value Produced	Management	%	7.4%	6.5%	18.4%	3.4%
	Labor	%	32.6%	32.2%	25.0%	29.5%
	Materials	%	26.5%	25.2%	24.2%	20.9%
	Facility/Equipment	%	5.5%	5.2%	5.8%	3.9%
	Overhead	%	14.4%	14.6%	14.3%	9.4%
	Depreciation	%	3.9%	3.9%	3.3%	4.1%
	Interest	%	6.0%	6.7%	2.4%	4.0%
Profitability	Cash Cost/Sales	%	112.0%	114.7%	103.9%	105.5%
	Net Margin	%	18.6%	22.3%	13.9%	32.5%
	Rate of Return to Capital	%	9.7%	10.8%	10.5%	20.5%
	Rate of Return on Net Worth	%	10.7%	12.1%	12.8%	25.0%
Financial Ratios	Quick Ratio	ratio	1.38	1.51	0.33	1.40
	Leverage Ratio	ratio	1.55	1.53	1.46	1.38

Appendix Table 3. Results for all and large Central Florida foliage nurseries, 1995.

Measure		Units	All Firms	Large Firms
Number of Firms		Number	11	3
Physical Resources	Production Area	Acres	3.59	4.05
	Employees	FTEs	12.31	27.44
Income	Own Plant Sales	Thous. \$	688	1,502
	Change Plant Inventory Value	Thous. \$	(18)	(42)
	Value Produced	Thous. \$	670	1,460
	Total Income	Thous. \$	679	1,481
Assets	Plant Inventory	Thous. \$	331	735
	Supply Inventory	Thous. \$	31	87
	Cash & Accounts Receivable	Thous. \$	158	368
	Land	Thous. \$	26	12
	Machinery/Equipment	Thous. \$	22	35
	Buildings & Installations	Thous. \$	62	106
	Total Assets	Thous. \$	630	1,343
Liabilities & Net Worth	Current Liabilities	Thous. \$	60	134
	Long-Term Liabilities	Thous. \$	96	87
	Total Liabilities	Thous. \$	156	222
	Net Worth	Thous. \$	474	1,121
Other Capital Managed	Land Leased	Thous. \$	64	79
	Equipment Leased	Thous. \$	43	108
	Buildings Leased	Thous. \$	94	213
	Total Capital Managed	Thous. \$	832	1,744
Expenses	Management	Thous. \$	51	60
	Employee Wages & Benefits	Thous. \$	212	513
	Materials	Thous. \$	261	590
	Facility/Equipment	Thous. \$	37	88
	Overhead	Thous. \$	94	226
	Depreciation	Thous. \$	18	43
	Interest	Thous. \$	9	13
	Total Costs	Thous. \$	681	1,532
Net Returns	Net Nursery Income	Thous. \$	58	23
	Return to Capital	Thous. \$	7	(37)
	Return on Net Worth	Thous. \$	(2)	(50)
Physical Productivity & Efficiency Indicators	Capital Managed Per FTE	Thous. \$	68	64
	Capital Managed Per Acre	Thous. \$	232	431
	Value Produced per FTE	Thous. \$	54	53
	Area Per FTE	Acres	0.29	0.15
	Value Produced Per Square Foot	\$	4.29	8.28
	Inventory Turnover	ratio	2.08	2.04
	Asset Turnover	ratio	1.09	1.12
Cost Per \$ Value Produced	Total Cost per Square Foot	\$	4.36	8.68
	Management	%	7.5%	4.1%
	Labor	%	31.6%	35.1%
	Materials	%	38.9%	40.4%
	Facility/Equipment	%	5.5%	6.0%
	Overhead	%	14.1%	15.4%
	Depreciation	%	2.7%	3.0%
	Interest	%	1.4%	0.9%
Profitability	Cash Cost/Sales	%	97.7%	101.1%
	Net Margin	%	1.1%	-2.5%
	Rate of Return to Capital	%	1.2%	-2.8%
Financial Ratios	Rate of Return on Net Worth	%	-0.4%	-4.5%
	Quick Ratio	ratio	2.65	2.74
Financial Ratios	Leverage Ratio	ratio	1.33	1.20

Appendix Table 4. Results for all and large South Florida foliage nurseries, 1995.

Measure		Units	All Firms	Large Firms
Number of Firms		Number	13	4
Physical Resources	Production Area	Acres	24.81	63.94
	Employees	FTEs	57.60	156.92
Income	Own Plant Sales	Thous. \$	2,696	7,399
	Change Plant Inventory Value	Thous. \$	362	896
	Value Produced	Thous. \$	3,058	8,294
	Total Income	Thous. \$	3,186	8,663
Assets	Plant Inventory	Thous. \$	2,035	5,491
	Supply Inventory	Thous. \$	100	302
	Cash & Accounts Receivable	Thous. \$	430	1,125
	Land	Thous. \$	378	688
	Machinery/Equipment	Thous. \$	317	886
	Buildings & Installations	Thous. \$	646	1,537
	Total Assets	Thous. \$	3,906	10,029
Liabilities & Net Worth	Current Liabilities	Thous. \$	646	2,034
	Long-Term Liabilities	Thous. \$	1,315	3,464
	Total Liabilities	Thous. \$	1,961	5,498
	Net Worth	Thous. \$	1,945	4,531
Other Capital Managed	Land Leased	Thous. \$	165	432
	Equipment Leased	Thous. \$	4	0
	Buildings Leased	Thous. \$	3	4
	Total Capital Managed	Thous. \$	4,077	10,465
Expenses	Management	Thous. \$	61	100
	Employee Wages & Benefits	Thous. \$	1,053	2,974
	Materials	Thous. \$	977	2,718
	Facility/Equipment	Thous. \$	117	322
	Overhead	Thous. \$	593	1,714
	Depreciation	Thous. \$	139	334
	Interest	Thous. \$	147	411
	Total Costs	Thous. \$	3,088	8,574
Net Returns	Net Nursery Income	Thous. \$	306	600
	Return to Capital	Thous. \$	245	500
	Return on Net Worth	Thous. \$	98	89
Physical Productivity & Efficiency Indicators	Capital Managed Per FTE	Thous. \$	71	67
	Capital Managed Per Acre	Thous. \$	164	164
	Value Produced per FTE	Thous. \$	53	53
	Area Per FTE	Acres	0.43	0.41
	Value Produced Per Square Foot	\$	2.83	2.98
	Inventory Turnover	ratio	1.32	1.35
	Asset Turnover	ratio	0.69	0.74
Cost Per \$ Value Produced	Total Cost per Square Foot	\$	2.86	3.08
	Management	%	2.0%	1.2%
	Labor	%	34.4%	35.9%
	Materials	%	31.9%	32.8%
	Facility/Equipment	%	3.8%	3.9%
	Overhead	%	19.4%	20.7%
	Depreciation	%	4.6%	4.0%
	Interest	%	4.8%	5.0%
Profitability	Cash Cost/Sales	%	109.1%	110.3%
	Net Margin	%	7.7%	5.8%
	Rate of Return to Capital	%	6.3%	5.0%
Financial Ratios	Rate of Return on Net Worth	%	5.0%	2.0%
	Quick Ratio	ratio	0.67	0.55
Financial Ratios	Leverage Ratio	ratio	2.01	2.21

Appendix Table 5. Percentage changes in results for Florida ornamental plant nurseries, 1990 to 1995. Changes were calculated as the difference between 1995 and 1990 values, divided by the 1990 value, and monetary values were adjusted for inflation according to changes in the Consumer Price Index for 1990–95.

	Measure	Units	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Physical Resources	Production Area	Acres	71%	522%	244%	50%	-35%
	Employees	FTEs	72%	70%	98%	-7%	74%
Income	Own Plant Sales	Thous. \$	45%	81%	60%	12%	17%
	Change Plant Inventory Value	Thous. \$	140%	268%	-84%	-298%	102%
	Value Produced	Thous. \$	53%	101%	51%	7%	23%
	Total Income	Thous. \$	65%	121%	88%	7%	27%
Assets	Plant Inventory	Thous. \$	126%	249%	110%	66%	66%
	Supply Inventory	Thous. \$	159%	106%	207%	2%	327%
	Cash & Accounts Receivable	Thous. \$	91%	180%	109%	54%	32%
	Land	Thous. \$	13%	90%	-76%	-56%	-6%
	Machinery/Equipment	Thous. \$	109%	69%	60%	4%	126%
	Buildings & Installations	Thous. \$	169%	416%	131%	-32%	139%
	Total Assets	Thous. \$	107%	213%	86%	25%	63%
Liabilities & Net Worth	Current Liabilities	Thous. \$	339%	247%	-18%	193%	456%
	Long-Term Liabilities	Thous. \$	193%	350%	-7%	-44%	193%
	Total Liabilities	Thous. \$	221%	330%	-11%	-19%	247%
	Net Worth	Thous. \$	69%	173%	151%	52%	6%
Other Capital Managed	Land Leased	Thous. \$	78%	75%	780%	997%	18%
	Equipment Leased	Thous. \$	275%	349%	-93%	na	-39%
	Buildings Leased	Thous. \$	130%	-57%	40%	na	609%
	Total Capital Managed	Thous. \$	106%	193%	100%	63%	61%
Expenses	Management	Thous. \$	25%	87%	29%	-5%	-34%
	Employee Wages & Benefits	Thous. \$	82%	95%	132%	-8%	72%
	Materials	Thous. \$	40%	100%	67%	14%	0%
	Facility/Equipment	Thous. \$	66%	101%	97%	44%	22%
	Overhead	Thous. \$	132%	175%	87%	79%	99%
	Depreciation	Thous. \$	44%	112%	4%	-38%	45%
	Interest	Thous. \$	227%	407%	91%	3%	188%
	Total Costs	Thous. \$	69%	114%	85%	9%	39%
Net Returns	Net Nursery Income	Thous. \$	52%	169%	90%	-21%	-27%
	Return to Capital	Thous. \$	63%	219%	102%	-63%	-26%
	Return on Net Worth	Thous. \$	32%	177%	102%	-118%	-65%
Physical Productivity & Efficiency Indicators	Capital Managed Per FTE	Thous. \$	20%	72%	1%	76%	-8%
	Capital Managed Per Acre	Thous. \$	20%	-53%	-42%	8%	148%
	Value Produced per FTE	Thous. \$	-11%	18%	-24%	16%	-29%
	Area Per FTE	Acres	0%	265%	73%	62%	-63%
	Value Produced Per Square Foot	\$	-11%	-68%	-56%	-28%	90%
	Inventory Turnover	ratio	-35%	-48%	-24%	-33%	-29%
	Asset Turnover	ratio	-30%	-42%	-14%	-10%	-28%
	Total Cost per Square Foot	\$	-1%	-66%	-46%	-27%	114%
Cost Per \$ Value Produced	Management	%	-18%	-7%	-15%	-12%	-46%
	Labor	%	19%	-3%	53%	-14%	40%
	Materials	%	-8%	-1%	11%	7%	-19%
	Facility/Equipment	%	8%	0%	31%	34%	-1%
	Overhead	%	51%	37%	24%	67%	62%
	Depreciation	%	-6%	6%	-31%	-43%	18%
	Interest	%	114%	152%	26%	-4%	134%
	Cash Cost/Sales	%	14%	14%	16%	-2%	16%
Profitability	Net Margin	%	-1%	45%	7%	-66%	-42%
	Rate of Return to Capital	%	-21%	2%	8%	-71%	-54%
	Rate of Return on Net Worth	%	-22%	2%	-19%	-112%	-67%
Financial Ratios	Quick Ratio	ratio	-57%	-19%	154%	-47%	-76%
	Leverage Ratio	ratio	23%	15%	-26%	-18%	53%

Appendix Table 6. Itemized expenses as a percentage of total expenses for Florida ornamental plant nurseries, 1995. Note: to derive dollar amounts for any item multiply by the total expense shown in Table 5.

Expense Category	Expense Item	All Firms	Container Woody Ornam.	Flowering Plants	Central Florida Foliage	South Florida Foliage
Management	Operator Salary	4.5%	7.6%	2.6%	7.4%	2.0%
Employee Labor	Employee Wages & Salaries	29.1%	28.9%	30.7%	25.9%	29.4%
	FICA	2.4%	2.2%	2.6%	2.3%	2.5%
	Unemployment Tax	0.1%	0.1%	0.0%	0.2%	0.2%
	Workman's Insurance	1.0%	1.4%	1.3%	0.8%	0.5%
	Other Employee Expenses	1.1%	0.8%	0.9%	1.9%	1.2%
Materials	Plants & Seeds	13.0%	12.2%	19.0%	20.1%	10.5%
	Containers	6.0%	6.2%	6.1%	5.1%	6.0%
	Heating Fuel	0.6%	0.1%	0.6%	2.7%	0.6%
	Soil Media	3.4%	3.6%	4.6%	2.8%	3.0%
	Fertilizer & Lime	2.4%	2.6%	3.1%	1.4%	2.1%
	Chemicals	2.2%	2.2%	3.0%	1.6%	2.0%
	Packaging	2.9%	0.5%	5.1%	3.9%	4.1%
	Other Production Supplies	2.3%	1.2%	0.9%	0.8%	3.7%
Facilities and Equipment	Facility Repair & Maintenance	2.7%	2.1%	2.8%	4.3%	2.7%
	Vehicle & Equipment	2.3%	3.5%	4.1%	1.2%	1.1%
Administrative Overhead	Travel & Entertainment	1.1%	1.2%	0.4%	1.1%	1.2%
	Insurance (property)	1.9%	1.2%	0.5%	1.5%	2.8%
	Telephone	0.8%	0.9%	0.4%	1.0%	0.7%
	Electric	0.5%	0.5%	0.7%	1.3%	0.4%
	Taxes & Licenses	0.8%	0.7%	0.6%	0.9%	1.0%
	Advertising	0.4%	0.6%	0.0%	0.4%	0.4%
	Rent	1.9%	2.4%	2.5%	3.0%	0.9%
Other Expenses	8.5%	7.2%	3.5%	4.7%	11.5%	
Interest	Interest	4.4%	6.2%	1.4%	1.4%	4.7%
Depreciation	Depreciation	3.8%	4.0%	2.7%	2.6%	4.5%