



UNIVERSITY OF
FLORIDA

FE374

EXTENSION

Institute of Food and Agricultural Sciences

Commodity Outlook 2003: U.S. and Florida Ornamental Plant Markets¹

Alan W. Hodges and John J. Haydu²

This paper will briefly review trends in ornamental plant production, consumption, and trade for the United States and Florida, and will also consider a study of the economic impacts of the Florida horticulture industry.

According to official data from USDA, the gross wholesale value of floriculture and nursery crops grown in the United States reached \$13.3 billion in 2001. The nursery-and-greenhouse industry now represents about 12 percent of the total U.S. agricultural product value, and is the fifth largest segment of U.S. agriculture. Between 1989 and 2001, U.S. grower sales increased 29 percent in inflation-adjusted terms, or 2.5 percent annually, and increased 71 percent in nominal-dollar terms.

Regionally, the southern states are now the largest producer of floriculture and nursery crops (with three in the top five states). Total sales in 2001 were \$5.6 billion in the south, \$4.4 billion in the west, \$2.0 billion in the northcentral states, and \$1.4 billion in the northeast states. The leading states are California (\$2.8 billion), Florida (\$1.6 billion), Texas (\$1.2 billion), North Carolina (\$1.0 billion),

Oregon (\$666 million), Ohio (\$565 million), and Michigan (\$500 million). For floriculture products, California and Florida are by far the largest selling states. Other leading states include Texas, Michigan, Pennsylvania, New York, and North Carolina.

Florida grower sales have increased 44 percent over the last 10 years compared to a 41 percent growth for California. In Florida, tropical foliage plants are the largest floricultural commodity, with sales reaching \$361 million in 2001, representing an increase of 4.1 percent over the previous year and 62 percent of the total U.S. market. Cut cultivated florist greens (ferns) are another Florida specialty product. Sales by Florida growers declined significantly to \$87 million, but still held a 78 percent market share.

Demand for floriculture and nursery products in the United States is increasing. Over the last 13 years, per-capita consumption has grown about 13 percent, or one percent annually (inflation-adjusted), to around \$50 per capita, with roughly 61 percent for nursery products and 39 percent for floriculture. Nursery products include ornamental trees, shrubs, and groundcovers primarily for landscaping, while

1. This is EDIS document FE374, a publication of the Department of Food and Resource Economics, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. Published February 2003. Please visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Alan W. Hodges, Assistant-In, Department of Food and Resource Economics, University of Florida, Gainesville, FL; and John J. Haydu, Professor, Mid-Florida Research and Education Center, Apopka, FL, Department of Food and Resource Economics, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

The use of trade names in this publication is solely for the purpose of providing specific information. UF/IFAS does not guarantee or warranty the products named, and references to them in this publication does not signify our approval to the exclusion of other products of suitable composition.

The Institute of Food and Agricultural Sciences is an equal opportunity/affirmative action employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap, or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Service office. Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida/Christine Taylor Waddill, Dean.

the floriculture segment includes products such as flowering plants, bedding plants, tropical foliage, and cut flowers and foliage.

Although international trade still represents a relatively minor portion of this industry, it is growing rapidly. Since 1989, total imports have increased 70 percent, to \$1.15 billion, while exports have increased 66 percent, to \$264 million (inflation-adjusted). However, both imports and exports have decreased in the last two years due to strict phytosanitary controls (Q37) that limit importation of live plants. Under the North American Free Trade Agreement (NAFTA), there are proposals to remove or relax some of these restrictions for certain plant species, which would open the U.S. market to imports from Mexico.

One of the major ornamental plant imports is fresh cut flowers, accounting for 50 percent of U.S. imports. About two-thirds of U.S. ornamental plant imports are shipped through the Port of Miami (Florida). The value of fresh cut flower imports declined in real terms to \$565 million in 2001, down from a level in excess of \$600 million during the latter 1990s. Roses continue to be by far the most important imported fresh cut flower. Traditional fresh cut flowers such as carnations and chrysanthemums have declined in popularity, while newer varieties such as anthuriums and orchids are becoming more popular. The international fresh cut flower market is dominated by Columbia, Ecuador, and the Netherlands, which together account for about 85 percent of U.S. imports.

Prices for most major floriculture commodities in the United States have declined over the past 10 years. Unit prices represent pots, trays, or bunches. Prices have marginally increased in nominal-dollar terms; however, in inflation-adjusted terms, prices have generally fallen by three to 15 percent, with the exception of potted geraniums and petunias. This reflects the increasing competition in the industry from market consolidation as large mass merchandise retailers are able to force lower prices which gives them an ever larger share of the market.

It is interesting to compare the ornamental plant industry to other segments of Florida agriculture in terms of value and growth of output between 1997

and 2001. Foliage and floriculture represented about 12 percent of the total cash receipts in 2001. Ornamentals grew at a rate of 4.1 percent, which was significantly higher than all farm products in general (-0.8%) and higher than other segments such as citrus (-7.1%), vegetables and melons (-0.8%), and field crops (-0.5%). In fact, the only two other segments with positive growth in 2001 were sugarcane (2.9%) and livestock products (1.3%). The point is that the ornamental plant industry has continued to grow in spite of the many pressures of urban expansion, land conversion, and environmental issues that have adversely impacted the other segments of Florida agriculture that require a large land area. Because the value per acre of nursery crops is typically many times higher than any other kind of agricultural crop, these crops are able to compete for scarce land resources with other land uses.

The three main economic drivers of demand for the environmental horticulture industry are population growth, disposable personal income, and building activity. Projections by the Bureau of Economic and Business Research (which considers the existing demographic structure of Florida's population together with anticipated economic conditions) are that by the year 2015, Florida's population is expected to grow 17 percent (from 16.7 to 19.5 million persons), with most of the growth in the larger metropolitan areas of Tampa, Orlando, Ft. Lauderdale, and Miami.

The demand for plants is also driven by disposable personal income. The long-term outlook in Florida is for real per-capita income to increase from \$27 thousand annually at present to around \$35 thousand in 2015, roughly a 29 percent increase. Increasing disposable personal income likely means there will be greater discretionary purchases of luxury consumer goods such as ornamental plants, particularly floriculture products. A number of studies have shown that the income elasticity for the purchase of ornamental plants is rather high. Plants play a significant role in the quality and type of amenity-based development that we have in Florida. Some studies suggest that a well-landscaped home may enjoy a seven percent premium in value compared to average landscaping.

The market for landscape plants is strongly tied to building activity. Single-family housing starts in Florida averaged 113,000 units annually during 2000-01. During the period 2002-15, annual housing starts are forecasted to average 101,000 units, a decrease of 11 percent, reflecting a slower growth rate in Florida and greater development of multi-family housing. Areas with expected above-average housing growth include West Palm Beach-Boca Raton MSA, Monroe County, Ft. Walton Beach MSA, Ft. Pierce-Port St. Lucie MSA, Daytona Beach MSA, and the Northeast nonmetropolitan area. Areas with expected lower growth of at least 20 percent below recent levels include Jacksonville MSA, Sarasota-Bradenton MSA, Ocala MSA, Ft. Myers-Cape Coral MSA, and the Central and Northwest nonmetropolitan areas.

The Florida Nursery and Growers Association (FNGA) recently sponsored an economic impact study of Florida's environmental horticulture industry for the years 1997 to 2000, with telephone surveys of over 2,200 businesses and households. The study was designed to evaluate the environmental horticulture industry, which was broadly defined to include production, associated landscape services, retailing, and trade activities. The study found that Florida has about 4,000 wholesale nurseries, 8,500 landscape businesses, and 8,000 plant retailers, with total industry sales of \$9.91 billion in 2000. Total industry output increased 20 percent between 1997 and 2000, or 6.7 percent annually in inflation-adjusted terms.

This study also found that plant producers, including nurseries, sod farms, and cut flower/foilage growers, managed a production area of 173,000 acres and sold plants valued at \$2.25 billion. The largest groups of plant commodities produced \$490 million, including trees (17%), shrubs (16%), tropical foliage (15%), turfgrass (14%), and flowering plants (14%). Landscape businesses provided services such as landscape design, construction, maintenance, and related plants and supplies valued at \$3.11 billion. Horticultural retailers managed 82 million square feet of retail sales space and had total sales of plants and related horticultural goods valued at \$3.64 billion. Floral importers in Miami-Dade County had sales of \$904 million.

For economic impact analysis, it is important to determine not only the value of production and sales, but also where the products and services are distributed. The wholesale nursery industry has a large export base, with about 43 percent of total sales made to customers outside the state of Florida in national and international markets. In contrast, the landscape services and retailing sectors serve mainly local and state markets, with less than 15 percent of sales shipped outside the state. The total value of shipments outside Florida was around \$1.4 billion. In addition, within-state shipments have important regional impacts in certain areas. International sales from Florida have decreased in recent years, but domestic sales to other southern states and the northeast United States have increased. The industry in Florida is concentrated in the major metro areas, close to the markets and labor supply, and takes advantage of agglomeration economies for material inputs and services.

Employment in the Florida environmental horticulture industry in 2000 was about 150,000 persons, including 38,000 in plant production; 61,000 in landscape services; 53,000 in retailing; and 6,100 in floral imports. The average firm employed 15 to 26 persons. Unlike many other agricultural industries, about two-thirds of these jobs were full-time positions.

Total economic impacts were estimated using a regional economic model called Implan™, a software program that enables the calculation of the multiplier effects for an industry due to purchases from associated businesses and employee spending. Total output impact of all the horticulture industry sectors was estimated at \$9.2 billion. The output impact was highest for the producer sector because of the large export base that brings new money into Florida's economy, which is then respent by other businesses and employees to generate additional economic activity. The landscape services sector also had a total output impact in excess of \$3.0 billion.

Another measure of economic impact is value added, or the net increase in value to the economy generated by an industry. It is the difference in value between what an industry buys from other businesses and what it sells. Total value added impact was \$6.40

billion, including \$4.12 billion in labor income and \$462 million in indirect business taxes paid to local, state, and federal governments. Total employment impact for the production, landscape, and retail sectors was nearly 190,000 jobs. Allied suppliers of inputs to the horticulture sector had sales of \$363 million and employment of nearly 5,000 jobs. In addition, personal consumption expenditures by employees in the horticulture industry and allied businesses generated \$1.23 billion in value added income and provided nearly 25,000 jobs.

In addition, the FNGA study also evaluated the effect of the ongoing severe drought and water-use restrictions in Florida. It found that drought can affect the horticulture industry both positively and negatively. On the one hand, nurseries and landscape firms experienced a net decrease in sales of \$245 million in 2000, presumably due to water use restrictions that largely prevented new landscape installations in some areas. On the other hand, retailers reported increased sales, particularly for large-volume outlets. This may reflect a demand for the replacement of plants that died due to drought. The majority of these impacts were reported in the South and Southwest Florida Water Management Districts.