

ECONOMIC AND MARKETING ISSUES FROM A GROWER'S PERSPECTIVE

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Often overlooked in the agricultural sector are agricultural products that enhance the quality of life either through their aesthetic properties or environmental enhancing properties. The U.S. leads the world in the production and marketing of these floriculture and nursery crops also known as the "green" industry. Floriculture includes: bedding/garden plants, cut cultivated greens, cut flowers, flowering potted plants, foliage plants, floriculture propagative material. Flowering potted plants and foliage plants represent only items intended for indoor or patio use. Nursery includes: broadleaf evergreens, coniferous evergreens, deciduous shade trees, deciduous flowering trees, deciduous shrubs and other ornamentals, fruit and nut plants, Christmas trees (cut and to be cut), transplants for commercial truck crop production, and propagation material (except transplants for commercial crop production).

The green industry is the fastest growing sector of U.S. agriculture, representing 11 percent of gross cash farm crop receipts in 1997 (USDA, 1999). In spite of a slow economy, the wholesale value of U.S. expenditures for floriculture and nursery crops still managed to grow, but at less than 1%, to \$14.2 billion in 2001. Grower cash receipts from sales of floricultural and nursery crops (also called the green industry) were \$13.3. While the U.S. exports some floriculture and nursery crops, net imports accounted for slightly less than one billion dollars.

The U.S. green industry is the second most important sector in U.S. agriculture in terms of economic output, according to a University of Georgia study that took into account the value of inputs purchased and returns from product handling, marketing, and distribution. This study also revealed that, among the various agricultural sectors, the green sector is a major employer. Only the combined crop sector including vegetables, fruits, tree nuts, and hay and pasture employed more person-years in 1990 (Johnson and Christensen, 1995).

It has been said that floriculture is immune to shifts in the economy. Even in a recession, people will still plant flowers and forgo a vacation. However, the nursery industry, with higher ticket items, is more susceptible to shifts in the economy than floriculture and is often, linked to housing starts. This theory has been played out recently. While sales of floricultural crops increased in 2001, sales of nursery crops declined. The sales of cut flowers declined, but sales of all of the other floricultural products increased. Thus, the increased sales in the floricultural sector more than offset the decline in the nursery sector, resulting in a net growth in the industry.

Even before the current economic downturn, growth in the green industry was slowing. After years of rapid growth, it appears the industry is now a mature market with slower growth than during its rapid growth phase. After a decade of a phenomenal 10 percent growth per year in the 1980's, the U.S. green industry experienced strong growth during the 1990's of about 5 percent annually (USDA Economic Research Service, 1999 and 2002, Johnson and Christensen, 1995; Johnson, 1988, 1991, and 1992; Johnson and Johnson, 1993).

Many problems in the green industry relate to economic and environmental constraints. Environmental constraints revolve around water and soil quality, weather and pest related stresses, and aesthetic and biological requirements. Economic constraints include changing resources, costs (such as equipment, labor, and chemicals), and demand for plants. Another important consideration is the comparative advantages of producers in some regions of the United States.

Top 10 States

The leading ten states' percentage of total grower cash receipts for greenhouse and nursery crops has remained stable (at between 65 and 70 percent) over the last 40 years, but the composition of these ten states has changed (Johnson, 1990). As average annual gross receipts from greenhouse businesses showed an increasing trend for the nation, changes in receipts in the Northeastern U.S., have not been as robust as other regions over the last decade (Traver, 1998). Production has increased at a faster pace in the West and South. Currently, the top four states: California, Florida, Texas, and North Carolina account for half of the wholesale cash receipts in the green industry.

Table 1. Top 10 States in Cash Receipts

State	Percent	Cumulative Percent
California	21.3	21.3
Florida	1.9	33.2
Texas	9.0	42.2
North Carolina	7.6	49.8
Ohio	5.0	54.8
Oregon	4.3	59.1
Michigan	3.8	62.9
Pennsylvania	2.4	65.3
New Jersey	2.3	67.6
New York	2.3	69.9

Source: Floriculture & Nursery Crops, USDA May 2002.

Unlike farmers who produce field crops, greenhouse firms bear the entire price, market, and production risks because these crops have had no government support programs. The shift from a production-driven to market-driven economy has resulted in numerous niche markets which can be exploited by local producers.

In 1997, U.S. consumers spent \$16 billion retail on floriculture (\$59 per capita), which was the 12th highest in the world in terms of per capita expenditures on indoor flowers/plants (Johnson, 1997). Americans, on the other hand, are by far the leading consumers of outdoor landscaping plants. In 1997, U.S. consumers spent \$37 billion retail on nursery crops, or \$138 per capita. Household expenditures for greenhouse and nursery products based on wholesale value of sales and net imports were \$133 or \$50 per capita in 2001. Sixty percent of this was

spent on nursery products, and forty percent on floriculture. The per capita sales in Western states were the highest at \$68, followed by the Southern states at \$55. The North Central states and Northeast, with a shorter growing season, had the lowest per capita sales at \$30 and \$25, respectively. Oregon led the states with the highest per capita value of wholesale cash receipts of \$191. North Carolina was second at \$123 and Florida with third at \$97.

Table 2. Total U.S. Consumption of Floricultural and Nursery Crops.

Crop	Billion dollars*	Per Household	Per Capita	Import Share
Floriculture				
Cut flowers	1.0	\$ 9	\$ 3	60%
Others	4.5	\$ 42	\$ 16	8%
Sub-total	5.5	\$ 51	\$ 20	17%
Nursery	8.7	\$ 81	\$ 30	3%
	14.2	\$133	\$ 50	8%

*Based on wholesale value of sales and net imports.

Source: Floriculture & Nursery Crops, USDA May 2002.

Imports

A strong dollar helped spur imports of cut flowers from South America and nursery products including Christmas trees from Canada. Imports now account for 60% of domestic consumption of cut flowers. Floricultural growers have responded by reducing domestic production of traditional cut flowers including carnations, roses, and chrysanthemums. Instead, they have focused on bedding plants, flowering potted crops, and foliage plants which are heavier and more expensive to ship into the country. They have also switched to specialty cut flowers, often produced outdoors. Smaller growers can produce a diverse array of these unique flowers to find a niche where large, foreign importers who produce large quantities using cheap labor and favorable weather conditions are not competing.

While a strong dollar has brought in more nursery imports, including Christmas trees from Canada, nursery imports are still only 3% of U.S. consumption based on wholesale value of sales and net imports. A strong dollar has also increased imports of bedding plants, flowering potted plants, and foliage plants from Canada, bringing imports of these crops to about 8%.

Floriculture: Size of Industry

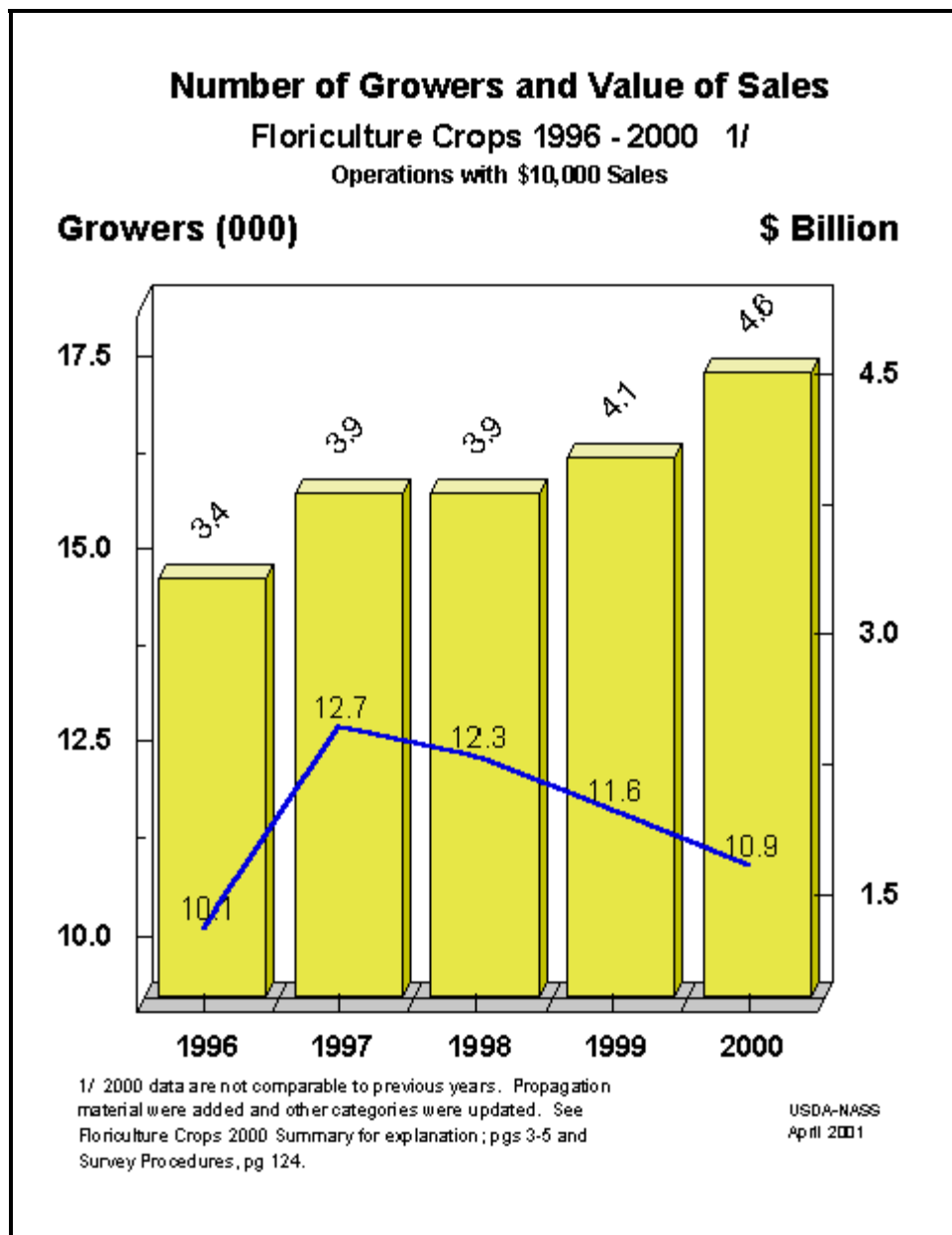
The number of floricultural producers reached a peak of 12,713 in 1997 and has declined steadily, but minimally since then to 10,965 in 2001. This decline can be attributed to the consolidation movement in the industry, the slow economy, and downward price pressures from the increasing prominence of the big box retailers in the mass market as outlets for floricultural products. Nearly 60% of growers had sales of less than \$100,000. These smaller greenhouses, while large in numbers, accounted for only about 18% of the total growing area and only about 8% of the total wholesale value of sales. The number of growers declined in all categories, but the decline was a bit greater among smaller growers. The small growers are more concentrated

in the Northeast and Midwest where the growing season for gardeners is shorter and per capita sales from nursery and floricultural products are lower than in the west and south.

Table 1. Number, size, and sales of floricultural growers by size category.

Year	Wholesale sales category (\$.)	Total greenhouses		Growing area		Total sales	
		No.	Percent	(acres)	percent	1,000 dollars	percent
1997	\$10,000-\$99,999	7,473	58.8	10,204	17.9	306,285	7.9
2001	\$10,000-\$99,999	6,243	56.9	8,794	14.1	372,132	7.7
	Change	-1,230	-1.9	-1,410	-3.9	65,847	-0.2
1997	\$100,000 or more	5,244	41.2	46,659	82.1	3,557,545	92.1
2001	\$100,000 or more	4,722	43.1	53,696	85.9	4,435,368	92.3
	Change	-522	1.9	7,037	3.9	877,823	0.2
1997	Total	12,717	100.0	56,863	100.0	3,700,000	100.0
2001	Total	10,965	100.0	62,489	100.0	4,848,000	100.0

Source: Floriculture & Nursery Crops, USDA May 2002.



Market Trends

The green industry is clearly still a bright sector of U.S. agriculture. The industry has shifted as has the rest of the economy to a consumer-driven, rather than producer-driven economy. The world is a global marketplace. Competition from other countries with lower costs or more favorable exchange rates is putting downward price pressure on products. In an age of surplus rather than shortages, producers can no longer produce the nursery and floriculture crops that they like to grow because they are easy to grow and profitable. They have to take into account consumer demands for quality, convenience, service, and low prices. Many producers are farmers at heart and have a hard time thinking of marketing from a consumer prospective. However, the industry is becoming more market oriented. Producers are developing their own

web pages, creating valued added products, considering direct retailing to capture more of the consumer dollar, and moving toward year-round production.

The 1990's saw the introduction of national branding and advertising campaigns within the industry. Greenhouse Grower Magazine called the leaders in the area "The Big Three". Proven Winners was established as a marketing cooperative in 1992 to introduce specialty annuals from all over the world and create a premium market. Proven Winners began by advertising to producers, but once sales grew, they went directly to the consumers with their advertising. They license propagators and sell liners to protect their brand. They have now introduced Proven Selections that allows partners to brand all the products they sell outside of the Proven Winners brand. Their customers include independents and mass merchandisers.

After Proven Winners was formed, four leading breeders in the industry (Paul Ecke Ranch, Yoder Brothers, Fisher USA, and Goldsmith Seeds) formed an alliance called Flower Fields. They recently formed an alliance with gardening celebrity P. Allen Smith. They plan to offer the largest selection of annuals and perennials and to educate consumers on color matching and contrasting and gardening success.

The newest of the "Big Three" is Simply Beautiful, launched last year by Ball Horticultural Company with products exclusive to their company. After three years of consumer research, they plan to make gardening less complicated to the average consumer and make it fun.

In addition to these national brands, local growers sometimes promote their own brands or form alliances with other local growers to do so. Specific products have also reached national brand status like the Wave Rave petunia campaign by Pan American Seed. Martha Stewart has her Everyday Collection of gardening products and plants.

National check-off programs to promote collectively have not been successful in the green industry. The American in Bloom campaign is the latest national effort to promote floriculture. It is a national beautification competition and campaign with 38 communities participating last year.

The producers are becoming more segmented into those producing for the big chain stores, and those who direct market or sell to independent, upscale garden centers. Big box stores and home improvement chain stores have included floricultural and nursery plants to their product line and have become a major force in the industry. Many large wholesale producers sell to the big four: Home Depot, Lowe's, Wal-Mart and Kmart. Many growers lost money on their poinsettia crops when Kmart filed Chapter 11 and worried about reliance on so few buyers. Most of these large retailers sell on consignment. Growers who want to survive the tough competition of this market are putting employees in the stores to maintain the plants and create attractive displays. They are also focusing on quality, service, and more frequent deliveries.

Independent garden centers are enjoying resurgence. They can offer experience shopping and event marketing and one-on-one relationships with their customers that the big retailers can't. They offer differentiated products like custom-made wreaths, grass baskets for Easter, and pots of ornamental barley that the more sophisticated gardener can't find in the big

box chain stores. Small and mid-sized producers get involved in the community and offer services such as speaking at local garden clubs. This gives a personal touch that the big box stores can't offer. Many of them are offering money back guarantees so that consumers are willing to take a risk with live plants.

Frank's Nursery and Crafts successfully came out of Chapter 11 last year. It has reduced its operation to 170 stores and is attempting to fill a niche between the large box stores and independent garden centers. The plan to upgrade quality, increase selection, and price between the box stores and independent garden centers.

New Jersey as a Case Study

New Jersey is one of the top 10 states in floriculture and nursery crops. The greenhouse and nursery industry is the number one agricultural commodity in New Jersey with a value of cash receipts of \$297,392,000, totaling 36.6% of the state's total farm receipts and 2.3% of the total US value for this commodity (USDA, ERS, 2002). Currently, there are approximately 350 greenhouse and 600 nursery operations in New Jersey. New Jersey benefits from a high income and a highly educated population. However, producers in New Jersey face high land and labor costs, and some of the toughest regulations, and one of the most challenging business climates in the country. The growth of the mass market has reduced costs and resulted in consolidation, but the shift from a production-driven to market-driven economy has also resulted in numerous niche markets which can be exploited by local producers. We surveyed the industry in 2001 to explore the drivers of the greenhouse industry in New Jersey: its strengths, weaknesses, opportunities, and threats. Some brief survey results from this New Jersey study are given below and may give some indicators for producers in the rest of the country.

New Jersey producers indicated that the top three factors that would impact their business are production costs, market demand, and their own managerial expertise. In a competitive market, a slow economy, and the downward price pressure coming from the big box stores, producers are being squeezed. They are looking for ways to cut costs and stay competitive. Floriculture is a family business, so their own managerial ability is usually more important than hiring outside management.

Table 3. Number of New Jersey respondents ranking factors according to how much they impact business.

Factor	Ranking					
	Very Minor	Minor	Neutral	Important	Very Important	No Answer
Ability to attract and retain competent management	69	11	19	19	46	21
Ability to attract and retain hourly employees	37	6	19	51	54	18
Own managerial expertise	33	11	27	24	70	20

Estate planning/transfer of ownership	46	16	53	17	30	23
Market demand	13	6	24	46	79	17
Capital	17	10	35	46	58	19
Production costs	7	5	24	49	84	16
Competition	17	9	46	53	44	16
Zoning regulations	26	14	40	29	57	19
Environmental regulations	14	10	34	45	62	20
Other governmental regulations	20	5	32	49	57	22
Weather uncertainty	17	10	36	48	56	18
Other (gas and electric costs)	5	1	5	6	7	161

When asked to rank a list of factors which impact production (the traditional area extension programs emphasize), the uncontrollable factors such as insects, disease, and weather were most important. Crops scheduling, and cultural requirements are more in the hands of the manager than insects, disease, and weather, and were not considered to have much impact on their business. In focus groups, producers expressed concern about increasing environmental and other regulations. They are concerned that legislation requiring recycling water that exists in other countries may be passed in the U.S. They fear the loss of minor use pesticides and are moving toward IPM systems. They are recycling plastic and other materials and promoting environmental friendly chemicals and drought tolerant plants.

Table 4. Number of New Jersey respondents ranking factors according to how much they impact their ability to grow healthy.

Factor	Ranking					
	Very Minor	Minor	Neutral	Important	Very Important	No Answer
Controlling insects	11	17	22	54	67	14
Controlling diseases	8	11	22	57	71	16
Controlling weeds	25	11	31	54	49	15
Water quality	26	13	40	42	48	16
Weather	9	13	28	63	57	15
Cultural requirements of new crops	22	17	46	53	28	19
Scheduling crops in the greenhouse	26	15	36	51	37	20
Incorporating new technologies for growth	17	12	42	56	39	23
Other	4	1	4	4	4	168

Price Determination

In pricing their crops, producers considerer cost of production to be the most important factor

by far. This indicates a need for extension education. In a consumer-driven economy, the most important factor in determining price is market demand. With the increased competition from industry consolidation and imports, producers do need to focus on cost control. Many are taking an interest in cost accounting and are looking to computer programs to help them (Brumfield, 2003).

Table 5. Number of New Jersey respondents ranking factors according to level of importance in price determination.

<i>Factor</i>	Ranking					
	Very Minor	Minor	Neutral	Important	Very Important	No Answer
Cost of production	4	2	5	51	112	11
Inflation	5	11	51	64	40	14
Other grower's prices	12	13	33	68	48	11
Grade of plants	9	4	28	47	85	12
Market demand	7	2	24	58	81	13
Product uniqueness	11	8	22	53	76	15
Inventory levels	19	9	48	59	35	15
Last year's price	18	14	46	58	35	14
Other	1	0	3	3	2	176

Factors Limiting Business Expansion

We asked respondents to rank the importance of a list of factors according to level of importance in limiting expansion. Capital was the most important factor limiting expansion by a wide margin. The second most important factor was personnel.

The green industry is more capital intensive than other sectors of U.S. agriculture. Producers feel they need to invest in modern equipment and facilities to remain competitive. Anything that can be done by machinery rather than labor is being automated. The turn-over of crops is very rapid, so they need operating capital for short periods until sales are made while crops are being produced.

Finding, training, and retaining motivated employees with the skills they need at wages and salaries the nursery industry can afford to pay is a persistent problem. Many producers in New Jersey use guest workers from Mexico. Immigration restrictions are making it difficult to get the same workers back each year. Producers are constantly looking at mechanization to save labor. Machinery and equipment that was once available only to large producers has been miniaturized and is now available for smaller producers as well.

Table 6. Number of respondents ranking factors according to level of importance in

limiting expansion.

Factor	Ranking					
	Very Minor	Minor	Neutral	Important	Very Important	No Answer
Capital	13	15	25	38	75	19
Marketing	12	20	38	53	44	18
Personnel	16	14	27	51	57	20
Production	14	17	47	49	37	21
Transportation	24	26	60	24	28	23
Plant Selection	22	14	55	35	36	23

Summary

The green industry has become a major sector within U.S. agriculture and is of major importance to farmers, rural communities, and consumers. The green industry is clearly still a bright sector of U.S. agriculture. But it is no longer in the heydays of the 1980's when producers could grow whatever they wanted and still make a profit. The industry has shifted as has the rest of the economy to a consumer-driven, rather than producer-driven economy. The obvious prospect is for continued growth within the green industry. With increased growth projections, production and marketing of landscape crops provide an alternative for some farmers who have produced traditional agricultural crops, e.g., corn, soybeans, and vegetables. Tremendous opportunity for growth still exists in the green industry. Unlike other agricultural commodities, which are limited by the size of the consumer's stomach, the growth potential for the green industry is almost unlimited.

Producers of all sizes are focusing on marketing and carefully looking at the national brands to boost their sales. Smaller growers are looking for niches and value added products. Many of them are retailing directly to consumers. If they have rainy spring weather, consumers are not buying many bedding plants. Producers respond by potting-up bedding plants that aren't selling into planter boxes and bowls. This gives producers a ready made garden and keeps some of the value added dollars for producers. All growers are concerned about costs of production and are looking for ways to reduce labor and other costs, as well as how to improve their own business management skills to control costs. Machinery once available only to large producers is now affordable for smaller growers. Small growers are adopting it and mechanizing. Some smaller producers are buying the "commodity-type" plants from larger producers rather than producing these low cost plants themselves. Instead, they are focusing on specialty items in their own production. The industry is still growing, but is feeling the multiple impacts of a weak economy. In the past, producers focused their concerns almost exclusively on production issues. No more. The reality today is that the market decides. Accordingly, producers must focus on marketing and business management.

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