

Operational Characteristics of Nurseries and Greenhouses in the Northern Gulf of Mexico Region

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Significance to the Industry: As the real value of horticulture production in the northern Gulf of Mexico region increases over time, it is expected that nursery/greenhouse growers will intensify efficient input use, increase adoption of mechanized/automated production technologies, improve working conditions and workers' safety, and enhance markets of horticulture products. The specific objectives of this paper were to compare the socioeconomic characteristics of managers or operators of nurseries and greenhouses in the northern Gulf of Mexico region and to compare the economic and technical characteristics of nurseries and greenhouses in the region. It is expected that this information on the operational characteristics of nurseries and greenhouses will be used by researchers, specialists, growers, lenders and investors in updating enterprise and partial budgets for nursery and greenhouse operations.

Nature of Work: A socioeconomic survey of nurseries and greenhouses was conducted among wholesale nurseries and greenhouses located in the northern Gulf of Mexico region: Mississippi, Alabama and Louisiana (1). The nursery and greenhouse survey which was conducted between Dec. 2003 and Mar. 2005, lasted from 30 min to 1 h. Official lists of certified nurseries were requested from the Mississippi Department of Agriculture and Commerce (2), the Alabama Department of Agriculture and Industries (3) and the Louisiana Department of Agriculture and Forestry (4). From these official lists of nursery growers, industry associations buyers' guides (5), online buyers' guides (6), and extension service reference guides (7), the wholesale growers in every state were identified and numbered from 1 to N. Using Excel (8), 50 random integers were individually generated from 1 to N, where N = the number of wholesale growers in each state. Individual letters of introduction were sent to the 50 selected nurseries and greenhouses in each state in advance. Follow-up telephone calls were made with each of the nurseries and greenhouses selected to determine their willingness to participate and their availability for the interviews. All personal interviews were conducted by the Research Associate hired for this purpose by the Mississippi State University-Coastal Research and Extension Center (1). The respondents to the survey were the owners or operators of the selected nurseries and greenhouses.

Results and Discussion: A total of 87 nursery automation survey forms were completed from personal interviews with nurseries and greenhouses. The socioeconomic characteristics of managers or operators included in this paper were gender, marital status, ethnic origin, age, educational attainment, length of nursery experience, level of satisfaction with current lifestyle, perception of labor availability, perception of long-term availability of capital, and perception of operating capital availability (Table 1). The selected technical characteristics of nurseries and greenhouses were total acreage, acreage under production, acreage used in open field production, greenhouse production area, number of greenhouses for production, number of greenhouses for overwintering, and number of greenhouses heated (Table 2). The selected economic characteristics of nurseries and greenhouses were years operating since establishment, type of business organization, number of workers, annual gross sales, and types of products produced (Table 3-4). The operational characteristics of nurseries/greenhouses were compared by type of operation by using the General Linear Model multivariate procedure and Chi square test (9). Nursery type consisted of nursery only, greenhouse only and mixed nursery and greenhouse operations. Majority of the managers or operators of nurseries and greenhouses who participated in the socioeconomic survey were male (81%), married (87%) and of Caucasian origin (97%, Table 1). Half of them were between 40 and 49 years old, more than two-thirds had at least some college education, and had been with the nursery and greenhouse industry during the past 19 years. Majority of the respondents were satisfied with their current lifestyle (87%), believed that labor was available (73%), and that long-term (76%) and operating capital (82%) were available or highly available. The typical nursery and greenhouse operation occupied an average 20.9 acres per operation with 60% or 12.6 acres under production (Table 2). The acreage devoted to container production, in-ground field production, and pot-in-pot production and the greenhouse production area and number of greenhouses by type of operation are presented in Table 2. The average nursery and greenhouse had been in operation for the past 23 years (Table 3). Most of them were organized either as sole proprietorships (54%) or corporations (30%). Majority of the participating nurseries and greenhouses (57%) reported annual gross sales less than \$250,000. The most commonly sold plant products included liners in 2, 4, 6, and 8-inch pots, liners in 18 and 36# trays, plants in 1 and 3-gal pots, and plants in 12-inch baskets (Table 4). In some cases, the most common types of plant products sold by the participating nurseries and greenhouses varied by type of operation.

Literature Cited

1. Posadas, B.C., G.B. Fain, C.H. Coker, P.R. Knight, C.D. Veal, and R.Y. Coker. 2004. Socioeconomic survey of nursery automation. Proc. Southern Nursery Assn. Res. Conf. 49:306-309.
2. Mississippi Department of Agriculture and Commerce. 2003. Directory of Mississippi certified nurseries and nursery dealers. Bureau of Plant Industry, Mississippi State, MS.
3. Alabama Department of Agriculture and Industries. 2004. Certified nurseries. Bureau of Plant Industry, Montgomery, AL.
4. Louisiana Department of Agriculture and Forestry. 2008. Nursery certificate listing. Horticulture and Quarantine Programs, Baton Rouge, LA.
5. Louisiana Nursery and Landscape Association. 2005. Louisiana wholesale nursery buyer's guide. Baton Rouge, LA.
6. Alabama Nursery and Landscape Association. 2008. Buyers' guide. 17 Apr. 2008. <http://www.alnla.org/Publications/bg1.pdf>
7. Johnson, K. and W. Wells. 2007. A quick reference guide to wholesale nurseries and commercial sod producers, Publication 2348. Mississippi State University Extension Service, Mississippi State, MS.
8. Microsoft Corp. Office 2003. Redmond, WA.
9. SPSS 14.0 for Windows. 2005. Chicago, IL.

Table 1. Selected socioeconomic characteristics of managers/operators of nurseries and greenhouses which participated in the socioeconomic survey in the northern Gulf of Mexico region from Dec. 2003 to Mar. 2005.

Characteristic	Nursery only	Greenhouse only	Mixed operation	Total
Gender (%):				
Male	90	68	83	81
Marital status (%):				
Married	100	77	86	87
Separated/Divorced/Widowed	0	9	5	5
Single	0	4	9	8
Respondent's ethnic origin (%):				
Caucasian	100	100	93	97
Age group (%):				
30-39 years old	10	0	7	6
40-49 years old	43	68	44	50
50-59 years old	19	23	28	24
60-69 years old	19	0	16	13
70 years old and above	10	9	5	7
Educational attainment (%):				
High school	10	9	12	11
Some college	15	23	30	25
Associate degree	5	18	12	12
College degree	65	46	30	42
Advanced degree	5	5	16	11
Years of nursery experience	16	18	21	19
Percent satisfied or very satisfied with current lifestyle	95	100	76	87
Percent who said that labor was available or highly available	75	65	77	73
Percent who said that long-term capital was available or highly available	72	85	73	76
Percent who said that operating capital was available or highly available	89	90	74	82

Table 3. Selected economic characteristics of nurseries and greenhouses which participated in the socioeconomic survey in the northern Gulf of Mexico region from Dec. 2003 to Mar. 2005

Characteristic	Nursery only	Greenhouse only	Mixed operation	Total
Number of years since establishment	19	19	27	23
Type of business organization (%):				
Corporations	18	36	33	30
Partnerships	14	14	2	8
Sole proprietorship	68	50	48	54
Limited liability corporations	0	0	10	5
Cooperatives and others	0	0	7	4
Number workers per operation:				
Full-time	3.1	2.7	6.2	4.5
Part-time	0.8	0.8	3.9	2.3
Annual gross sales (%):				
Below \$250,000	71	68	44	57
\$250,000-\$499,999	24	18	17	19
\$500,000-\$999,999	0	14	17	12
\$1,000,000 and above	5	0	22	12

Table 2. Selected technical characteristics of nurseries and greenhouses which participated in the socioeconomic survey in the northern Gulf of Mexico region from Dec. 2003 to Mar. 2005.

Characteristic	Nursery only	Greenhouse only	Mixed operation	Total
Total acres per operation	34.5	3.8	21.9	20.9
Total acres under production per operation	22.0	1.5	12.9	12.6
Acres under container production per operation	0.9	0.0	8.5	4.4
Acres in-ground field production per operation	21.3	0.0	0.2	5.7
Acres under pot-in-pot production per operation	0.1	0.0	1.2	0.6
Total acres used in open field production per operation	22.2	0.0	9.9	10.8
Total greenhouse production area per operation ^a	0.0 a	27,227.0 ab	48,910.5 b	30,721.3
Production greenhouses per operation	0.0	6.9	14.0	8.6
Overwintering greenhouses per operation	0.1	3.5	9.3	5.4
Heated greenhouses ^a	0.1 a	6.5 b	7.0 b	5.1

Table 4. Types of products sold by nurseries and greenhouses which participated in the socioeconomic survey in the northern Gulf of Mexico region from Dec. 2003 to Mar. 2005

Product	Nursery only	Greenhouse only	Mixed operation	Total
Percent selling liners in 2-inch pots	5	41	31	27
Percent selling liners in 3-inch pots	5	23	10	12
Percent selling liners in 4-inch pots ^z	9	86	41	44
Percent selling liners in 5-inch pots	0	0	5	1
Percent selling liners in 6-inch pots ^z	23	68	52	49
Percent selling liners in 8-inch pots	18	36	36	31
Percent selling liners in 10-inch pots	0	18	10	9
Percent selling liners in 12-inch pots	0	0	5	2
Percent selling liners in 6# trays	0	0	5	2
Percent selling liners in 18# trays ^z	5	23	36	24
Percent selling liners in 20# trays	0	0	2	1
Percent selling liners in 32# trays	0	0	2	1
Percent selling liners in 36# trays ^z	5	36	36	28
Percent selling liners in 48# trays	0	5	0	1
Percent selling liners in 72# trays	0	5	14	8
Percent selling plants in 1-gal pots ^z	46	14	57	43
Percent selling plants in 2-gal pots	0	0	0	0
Percent selling plants in 3-gal pots ^z	32	5	41	29
Percent selling plants in 5-gal pots ^z	27	0	19	16
Percent selling plants in 7-gal pots	18	0	17	13
Percent selling plants in 15-gal pots	14	0	21	14
Percent selling plants in 30-gal pots	0	0	12	6
Percent selling plants in 45-gal pots	0	0	7	4
Percent selling plants in 65-gal pots	0	0	2	1
Percent selling plants in 8-inch baskets	0	0	2	1
Percent selling plants in 10-inch baskets ^a	5	73	43	41
Percent selling plants in 12-inch baskets	0	5	5	4
Percent selling plants in 16-inch baskets	0	0	0	0
Percent selling in bonsai	0	0	2	1
Percent selling palms in ground	5	0	0	1