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#### Literature Cited

1. Anonymous. 1990. NCTA/Gallup Poll gives insight into consumer use of Christmas trees. Amer. Christmas Tree J. 34(2):20-22.

2. Florkowski, W.J. and O.M. Lindstrom. 1989. Marketing trends in the natural and artificial Christmas tree industries. Univ. of Georgia Div. Agr. Econ. Publ. FS-89-18.

3. Hamlett, C.A., R.O. Hermann, R.M. Warland, and F. Zhao. 1989. Christmas tree consumption behavior: natural vs. artificial. Northeastern J. Agr. Res. Econ. 18(2):135–139. 4. Lindstrom, O.M., W.J. Florkowski, and D.J. Moorhead. 1990. Quality standards for Christmas trees: harmful or helpful. Univ. of Georgia Div. Agr. Econ. Publ. FS-90-10.

5. Maddala, G.S. 1983. Limited-Dependent and Quantitative Variables in Econometrics. New York, Cambridge: Cambridge University Press. pp. 401.

6. Pelsue, N.H., Jr. 1991. Marketing Christmas trees: some thoughts for tomorrow. Christmas Trees 19(2):14-17.

# Opportunities for Cooperation between Landscape Contractors and Landscape Architects<sup>1</sup>

M.P Garber<sup>2</sup> and K. Bondari<sup>3</sup>

University of Georgia P.O. Box 1209 Tifton, Georgia 31793

#### - Abstract -

Landscape architects identified the most common complaints they receive regarding plant material installed in the landscape. The 54 responses from a survey of landscape architects in Georgia were grouped into four categories relating to plant size, plant quality, site preparation and installation, and plant maintenance. Specific opportunities are identified for landscape contractors to help landscape architects address these customer concerns. In addition, landscape architects identified several areas for landscape contractors to assist them in supplying better products and services. These areas include plant material care and availability, close supervision of the installation process, and a closer working relationship between the two groups.

Index words: market research, nursery crops, site preparation, plant specifications, plant availability.

#### Significance to the Nursery Industry

This study identifies opportunities for landscape contractors and landscape architects to work together more effectively and to achieve a higher quality installed landscape. Since their business success is dependent on a satisfied landscape customer, landscape contractors and landscape architects could use this information as a basis for future cooperative efforts directed to this important customer group.

#### Introduction

Landscape contractors and landscape architects play an important role in the establishment of landscapes for commercial, governmental, and homeowner clients. The value of these landscapes is substantial. For instance, it is reported that the urban forest in the U.S. consists of 61 million street trees with an estimated aggregate value of between 18 and \$30 billion (7). The same study reports that an estimated

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<sup>2</sup>Associate Professor and Extension Horticulturist.

<sup>3</sup>Professor, Department of Statistical and Computer Services, Coastal Plain Experiment Station, Tifton, GA.

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600 million trees exists in yards and parks. It has been estimated that about \$425 million are spent each year on management of these trees (9). Landscape contractors and landscape architects can significantly affect the economic importance of these and other landscape plantings through selections and installation procedures.

A formal exchange of information between landscape architects and landscape contractors could enhance their working relationship and the quality of installed landscapes. The American Society of Landscape Architects has initiated an effort to foster a closer working relationship among landscape architects, landscape contractors, and nurserymen through formation of the "New Alliance" (1). Recent research identifies opportunities for landscape architects and nurserymen to work together more effectively (2, 5, 6). However, relatively little information is available to help landscape contractors and landscape architects achieve their mutual goal (3). This study provides quantitative information on opportunities for landscape contractors and landscape architects to: a) improve the quality of installed landscapes and satisfy the landscape customer and b) improve the effectiveness of interaction between the two groups.

#### **Materials and Methods**

The survey instrument was mailed to landscape architects in Georgia who are members of the American Society of Landscape Architects (ASLA). The ASLA members represent 168 landscape architectural firms. The initial mailing was sent in May, 1991, with a follow-up to non-respondents in June, 1991. Completed surveys were received from 62 firms for a 37% response.

All responses are analyzed by size of firm. Firm size was based on the 1990 wholesale value of plant material specified; large ( $\geq$  \$1 M), medium (200–\$999 K), small (< \$200 K). The large firms represent 21% of the respondents and 67% of the plant material specified. Corresponding percentages for medium firms are 37% and 28% and, small firms are 42% and 6%, respectively (4). Data were tabulated and analysis of response conducted using the frequency procedure (PROC FREQ) of SAS (8).

The survey questions addressed in this study are: (a) "What is the most common complaint you experience regarding plant material installed?" and (b) "Please list up to three ways that the landscape contractor can help you supply better products and services." The open-end questions were coded, tabulated, and analyzed as previously described (6).

### **Results and Discussion**

Opportunities for landscape contractors and landscape architects to achieve higher quality installed landscapes are identified from the response of landscape architects to the question, "What is the most common complaint you experience regarding plant material installed?" (Table 1). When all firm sizes were combined, the four categories of complaints and percent response were: plants below specified size (44.4%), plants below specified quality (24.1%), poor installation or site preparation (22.2%), and post-plant maintenance (9.3%).

Based on the comments of respondents, it appears that landscape contractors could help address the four categories of complaints received by landscape architects. The primary problem with installed plant material is that it is often below specified size (Table 1). Specific comments suggest that landscape architects expect plant material to meet or exceed the specifications. As the purchaser of plant material for the landscape project, the landscape contractor could help remedy the situation through enforcement of size specifications at the time of purchase. A closely related category of complaints which could also be addressed at the time of plant purchase is "plants below specified quality" (Table 1). Most of the quality comments relate to misshapen or less than adequate branching of plant material. Quality attributes can be more difficult to describe on landscape plans and may require a greater interaction between landscape contractors and landscape architects to avoid mistakes. Landscape architects could facilitate the process by: (1) ensuring that the specifications meet customer expectations, (2) indicating minimum acceptable size and quality, and (3) working with the landscape contractor and the landscape customer when plant substitutions are necessary.

Installation and site preparation (22% of respondents, Table 1) is another opportunity to improve the quality of installed landscapes. Most of the comments in this category relate to preparation of the planting site whether for individual plants or a bed of plants. If specifications for bed preparation are not clearly stated, the landscape contractor might take the initiative to clarify. In some cases the landscape contractor may suggest potential improvements to landscape architects.

A less important problem, but still the subject of approximately 10% of all responses, is post-plant maintenance (Table 1). Several comments relate to the extensive use of hoses and guy wires on trees and their removal after plant establishment. Landscape architects and landscape contractors should try to clarify responsibility for these and similar tasks prior to landscape installation.

Variation existed among respondents from different firm sizes regarding the categories of complaints. The most frequently cited complaint regarding plant material installed, plants below specified size, varied from 35% for small firms to 60% for large firms (Table 1). The medium and large firms represent about 94% of the value of plant material specified and over half of the complaints they experience are in this one category. The much lower response of large firms (10%) to plants below specified quality, as compared to small (25%) and medium (30%) firms, may be an indication that larger firms are more actively involved in defining quality expectations. Landscape installation or site preparation was either the second (small and large firms) or third (medium firms) most frequent complaint.

Landscape architects were also requested to identify opportunities for landscape contractors to work more effectively with their profession (Table 2). The five areas of interaction identified by landscape architects are: (a) the specification process; (b) site preparation, installation, and post-installation care; (c) current plant availability; (d) project schedules and pricing; and (e) cultural information on plants. When all firm sizes were combined, the most frequently listed need of landscape architects is knowledge of current plant availability (30.1%), followed by more involvement in the specification process and adherence to specifications (24.1%), and adherence to schedules and pricing (20.5%). Proper site preparation and installation (13.2%) and cultural information on plants (10.8%) were listed by a much smaller percentage of respondents.

The needs identified by landscape architects provide an opportunity for landscape contractors to develop a closer working relationship with this group. Based on specific

Table 1. Response of landscape architects to the question, "What is the most common complaint you experience regarding plant material installed?"

Customer complaints	Firm size <sup>z</sup>					
	Small	Medium	Large	All firms		
	response (%)					
Plants below specified size	35.0	50.0	60.0	44.4		
Poor installation or site preparation	30.0	20.0	20.0	22.2		
Plants below specified quality	25.0	30.0	10.0	24.1		
Post-plant maintenance	10.0	0.0	10.0	9.3		

<sup>2</sup>Firm size is based on 1990 wholesale value of plant material specified: Large ( $\geq$  \$1,000,000), Medium (\$200,000-\$999,000), Small (< \$200,000).

Opportunity for landscape contractors	Firm size <sup>z</sup>				
	Small	Medium	Large	All firms	
	response (%)				
More involvement in the specification process and adherence to specifications	29.6	24.1	23.8	24.1	
Proper site preparation, installation, and post- installation care	7.4	13.8	19.0	13.2	
Knowledgeable about current plant availability	37.0	34.5	19.0	30.1	
Adhere to schedules and pricing	11.1	17.2	33.4	20.5	
Cultural information on plants	14.8	10.3	4.8	10.8	

## Table 2. Opportunities for landscape contractors to help the landscape architects supply better goods and services. Response of landscape architects by size of firm.

<sup>2</sup>Firm size is based on 1990 wholesale value of plant material specified; Large ( $\geq$  \$1,000,000), Medium (\$200,000-\$999,000), Small (\$< \$200,000).

comments in the survey, landscape contractors might maintain an availability schedule from several growers and share this information with landscape architects on a regular basis. If substitutions are required, the landscape contractor could identify potential alternatives and review these with the landscape architect. The two extremes, (a) making substitutions without consulting the landscape architect or (b) placing the full burden of substitution on the landscape architect, should be avoided.

The next two most frequently mentioned areas for interaction are related to design specification, pricing, and schedules. Specific comments regarding "more involvement in the specification process and adherence to specifications during installation" (Table 2) suggest a need for exchange of information between landscape contractors and landscape architects during project development and installation. Landscape architects recognize that occasional changes may be necessary but wish to be consulted or involved before the landscape plan is altered, especially when a radical alteration is involved. Landscape architects value realistic schedules and prices during the bidding process and expect landscape contractors to meet the original deadlines and cost estimates. Landscape contractors should try to minimize change-orders.

The last two closely rated opportunities for landscape contractors to help landscape architects relate to installation of plants and supply of cultural information to landscape architects (Table 2). The comments were included statements such as "better site preparation", "proper installation", and "more post-plant care." Landscape contractors might consider consulting with landscape architects on specific ways to improve in these areas or request more specific guidance in the landscape plan.

Landscape architects are also interested in additional cultural information on plants. This includes: (a) photographs of currently available plants, (b) information on plants that perform well under specific site conditions, and (c) highlighting particular shortcomings of available plants. Landscape architects seek greater assistance from landscape contractors to select the most appropriate plants. This is an opportunity for landscape contractors to influence which plants landscape architects specify by providing appropriate educational information on a regular basis.

The priority opportunities for landscape contractors vary slightly with size of the landscape architectural firm (Table 2). Respondents from the small (37.0%) and medium (34.5%) firms rate "knowledge of current plant availability" most frequently; whereas, large firms (33.4%) rate "adherence to schedules and pricing" most often. All size firms rate "involvement in the specification process and adherence to specification" with the second highest frequency (large, 23.8%; medium, 24.1%; small, 29.6%).

In summary, there are several opportunities for landscape contractors and landscape architects to work together and to enhance the quality of landscape projects. Hopefully, landscape contractors can use this information to develop a closer, more effective working relationship with landscape architects. With a closer working relationship, the two groups should be able to identify ways to address the concerns raised by landscape customers.

#### Literature Cited

1. Benjamin, P.C. 1990. ASLA and industry leaders hammer out "New Alliance." Nursery News. Chicago, IL. 5(12):1.

2. Garber, M.P. 1991a. Have you hugged your landscape architect today? Georgia Green Industry Newsletter 2(1):12-18.

3. Garber, M.P. 1991b. "New Alliance" to survey needs of landscape architects. Nursery News. Chicago, IL. 6(4):20.

4. Garber, M.P. and K. Bondari. 1992a. Landscape architects as related to the landscape/nursery industry: I. Impact on demand for plant material. J. Environ. Hort. 10:69–72.

5. Garber, M.P. and K. Bondari. 1992b. Landscape architects as related to the landscape/nursery industry: II. Selection of the production nursery and plant availability. J. Environ. Hort. 10:73–77.

6. Garber, M.P. and K. Bondari. 1992c. Landscape architects as related to the landscape/nursery industry: III. Sources of plant material information. J. Environ. Hort. 10:78–80.

7. Kielbaso, J.J. 1990. Trends and issues in city forests. J. Aboric. 16:69-75.

8. SAS Institute, Inc. 1985. SAS User's Guide: Statistics, Ver. 5 edition. Cary, NC. pp 956.

9. Wu, Z., Jamieson, S., Kielbaso, J.J. 1991. Urban forest pest management. J. Aboriculture 17:150-158.