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Retail Garden Outlets: Plant Material Purchases and Trends[1]

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Abstract

A Georgia survey indicated that retail garden outlets purchased about 86% of plant material directly from growers. The estimated wholesale value of plants purchased by retail garden outlets represented in this survey was about $30M. The mean wholesale value of plants purchased by garden centers ($99K) greatly exceeded that of feed and seed ($22K) and hardware($24K) stores. The most important factor in selection of a plant supplier by a retail garden outlet was plant quality. The mix of plant material purchased varied with the type of retail outlet as did the information sources used to determine which plants to purchase. The marketing implications of these results for growers are discussed.

Index words: plant purchase, garden center, retail, marketing, ornamentals, landscape crops, nursery crops.

Significance to the Nursery Industry

This study identifies where retail garden outlets purchase plants, factors affecting selection of the plant supplier, and information sources used to determine which plants to purchase. The information can be used by growers and other suppliers to develop better marketing plans and perhaps be viewed as a preferred supplier. The plant material mix purchased by retailers could be used by growers to determine their product line and specific cultivars/varieties. Garden centers represent the best opportunity for the highest average sales. The information sources used by retailers to determine which plants to purchase differ from those used by landscapers and suggest that growers would need a different approach for influencing retail purchase decisions.

Introduction

Development of effective marketing plans by growers, rewholesalers and other suppliers to the landscape and retail trades requires an understanding of buying habits and decision making criteria of the customer (1, 12). The plant purchasing habits, factors affecting selection of plant suppliers and trends that affect plant purchases have been studied for landscape installation (8) and landscape maintenance firms (10). Landscape installation and landscape maintenance firms purchase over 50% of their plant material directly from growers. However, installation firms (25%) and maintenance firms (35%) also purchase a significant volume of plant material from rewholesalers. The criteria for selection of suppliers and the service requirements varied with the size and the type of landscape firm (6, 9). Landscape firms also purchased some plant material from retail garden centers. Purchases from retail outlets varied substantially with the size and the type of landscape firm (8).

Market research has identified the role of landscape architects in the demand for plant material (2, 3, 4). Although landscape architects may not purchase plant material directly, they do influence which plants will be in demand. Approximately 76% of the plant material purchased by Georgia landscape installers was specified by landscape architects (7). Design-build firms have design and installation functions and also purchase plant material. An understanding of the influence of landscape architects on plant material purchases by landscapers has resulted in a closer working relationship between landscape architects and growers.

A better understanding of the plant material purchasing patterns of retail garden outlets could also lead to a more effective working relationship between growers and retailers. The objectives of this study were to obtain information regarding source of plant material purchases, factors affecting selection of suppliers, information sources that influence purchase decisions, type of plants purchased, five-year forecast of plant purchases and opportunities for plant producers to help retail garden outlets merchandise plant material. This study examined these factors according to the type of retail garden outlet so that suppliers could develop targeted marketing plans.

Materials and Methods

Survey questionnaires were mailed to 421 firms listed as licensed retail nurseries by the Georgia Department of Agriculture. The initial mailing was sent in July 1996, with follow-up mailings to non-respondents in August and September, 1996. Forty-three percent of the firms (182 respondents) completed the survey. The survey did not include the mass merchants, home stores or the large, multi-store garden chain in Atlanta, Pike's Family Nurseries. Each of these groups is worthy of a separate survey, and the method of survey and the content of the survey would probably vary.

Responses were analyzed for all retail garden outlets as a group and by type of retail outlet (garden centers, feed and seed stores, and hardware stores). For analysis by type of outlet, the responses for independent garden centers with multiple outlets were combined with independent garden centers in one location. The supermarket/grocery store category had nine respondents and was not analyzed separately. The category 'other' was not analyzed separately but, as with supermarkets, was included in the category 'all firms.' For this reason, the number of respondents represented by 'all firms' exceeds the total number of respondents for garden centers, feed and seed stores, and hardware stores. The dif-

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Table 1. Preference for plant material suppliers by retail garden outlets in Georgia.

Supplier	All firms (n = 170)	Firm type[z] Garden centers (n = 52)	Feed and seed (n = 27)	Hardware (n = 53)
Direct from grower	85.9	86.7a[y]	84.8a	1.9a
Broker	4.0	5.3a	1.7b	2.6ab
Rewholesaler	7.7	3.5b	11.3a	5.1ab
Wholesale florist	1.8	2.9a	2.2a	0.1a
Other	0.6	1.6a	0a	0.3a

[z]Expressed as mean percent of plant material obtained from each supplier.
[y]Means, within a row, followed by different letters differ ($P < 0.05$).

ference is also true for total sales and other factors evaluated.

Respondents were asked to provide information regarding the wholesale value of the plant material they purchased, percentages of the wholesale value spent for purchasing various types of plant material, a 5-year forecast for plant material demand by category of plants, suggestions for growers to help merchandise plant material and preferences for suppliers of plant material to retail outlets. Respondents were also asked to rank several factors on a 1–5 scale to show the degree of importance to which their selection as a plant supplier is based. To rate information sources used as the basis for decision making on which plants to purchase, respondents were asked to use a 3-point scale ranging from 1 = don't use a source to 3 = use a lot. Data were tabulated and analyzed using the PROC GLM and PROC FREQ of SAS (13). The open end questions were coded, tabulated and analyzed as previously described (4).

Results and Discussion

The primary supplier of plant material to retail plant outlets is the grower (Table 1). The mean percentage of plant material obtained directly from growers was about 86% for all retail firms and was similar among garden centers (86.7%), feed and seed (84.8%) and hardware (91.9%) stores. The rewholesalers supply about 8% of the plant material purchased by retail outlets, and the feed and seed stores (11.3%) purchased a significantly higher percentage of plant material from rewholesalers, followed by hardware stores (5.1%) and garden centers (3.5%). Brokers supply about 4% of the plant material to all retail outlets. Wholesale florists supply about 2% of the plant material, primarily to garden center (2.9%) and feed and seed stores (2.2%). The retail garden outlets do not utilize distributors (brokers, wholesale florists, rewholesalers) very much and seem to have a strong preference for direct purchasing from plant producers.

The mean annual wholesale value of plant material purchased by a retail garden outlet from all sources was $54K (Table 2). The total wholesale value of plant material purchased by the respondents answering this question was about $6.1M. With a 27% response rate for this question, the estimated total value of plant material purchased by retail firms represented in this survey was about $30M. To estimate the total wholesale value of plant material purchased by all retail outlets in Georgia, an estimate of plant purchases for mass merchants, home centers and Pike's Nurseries is required. The estimated $30M value of plants purchased by the firms in this survey represents about 20% of the value of nursery and greenhouse crops produced in Georgia in 1994.

The mean percentage of plant material purchased directly from growers by a retail garden outlet was similar for the three types of retail outlets (Table 1). However, the mean wholesale value of plant material purchased by a retail outlet (Table 2) varied substantially with garden centers ($99K) purchasing significantly more than feed and seed ($22K) and hardware stores ($24K). The higher value of plant material purchased by garden centers is not surprising since plant material represents a higher percentage of retail sales at garden centers (11). The relatively high mean annual plant material purchases for garden centers (4–5 times that of the feed and seed or hardware outlet) would make them an attractive customer for growers.

For all firms, plant quality (about 74%) received the highest rating in selection of a plant supplier by a retail garden outlet, followed by much less important factors of price (35.8%), delivery capabilities (29.1%), and plant availability (20.0%) (Table 3). Proximity of grower to the retail store (10.3%) was the least important factor affecting selection of a supplier. The quality of plant material supplied (Table 3) was rated as the most important factor in selection of a plant supplier by garden centers (80.0%), feed and seed stores (78.6%), and hardware stores (66.0%). Although important in their decision making, hardware stores were not as influ-

Table 2. Wholesale value of plant material supplied to different retail garden outlets in Georgia.

Supplier	All firms (n = 114) Mean	All firms (n = 114) Total	Firm type: Garden centers (n = 39) Mean	Garden centers (n = 39) Total	Feed and seed (n = 15) Mean	Feed and seed (n = 15) Total	Hardware (n = 40) Mean	Hardware (n = 40) Total
Grower	47[z]	5405	99a[y]	3860	22b	329	24b	960
Broker	3	394	8a	33	0.3a	4	0.7a	27
Rewholesaler	2	246	2a	92	0.7a	10	1.5a	62
Wholesale florist	0.9	98	2a	73	0.9a	13	0.1a	4
Other	<0.1	5	<1a	1	0a	0	0.1a	4
TOTAL	54	6148	112a	4059	24b	356	26b	1057

[z]Expressed in $000.
[y]Means,within a row, followed by different letters differ ($P < 0.05$).

Table 3. Factors affecting selection of a plant supplier by retail garden outlets in Georgia.

Factor	All firms	Firm type: Garden centers	Feed and seed	Hardware
	percent response[z]			
Price	35.8	34.0	35.7	32.7
Latest supplier availability	20.0	17.4	16.0	14.6
Plant quality	73.9	80.0	78.6	66.0
Delivery capabilities	29.1	18.7	40.7	29.8
Proximity to retail stores	10.3	2.3	16.0	17.1

[z]percentage of respondents rating each factor 'very important'.

enced by plant quality as were garden centers or feed and seed stores. Price of plant material was rated second (garden centers and hardware stores) or third (feed and seed stores) in importance in selection of a plant supplier among the five factors included in this survey. About one-third of the firms in each retail category rated price as a very important factor in plant selection. There was a wide variation (18.7 to 40.7%) among retail outlets in the importance associated with the delivery capabilities. The feed and seed stores (40.7%) placed the greatest importance on delivery capabilities, followed by hardware stores (29.8%). Garden centers (18.7%) regarded delivery capabilities much less important than other retail outlets. This could be an indication that feed and seed and hardware stores require smaller, more frequent deliveries. This is also consistent with feed and seed (16.0%) and hardware (17.1%) stores placing more importance than garden centers (2.3%) on the proximity of the grower to their retail outlet.

The percentage of plant types purchased, across eight categories of plants, varied widely (Table 4). For all firms, the greatest mean percentage of plant material for eight categories of plants was bedding plants (40.6%). Perennials and ground covers (14.4%), potted flowering and flowering baskets (13.5%), and coniferous and broadleaf shrubs (13.1%) were similar and ranked a distant second. Tropical foliage, including baskets (6.5%), container trees (6.3%), ball and burlap trees (2.9%), and sod (1.0%), accounted for less than 17% of the value of all plants purchased. The mix of plants purchased by feed and seed stores and hardware stores were similar and varied substantially from the mix purchased by garden centers. The feed and seed stores (59.6%) and hardware stores (56.5%) purchased primarily bedding plants. The next largest category of plants purchased were potted flowering and flowering baskets (13.2% and 16.1%, respectively), perennials and ground covers (9.9% and 11.6%, respectively), and coniferous and broadleaf shrubs (6.1% and 7.2%, respectively). The feed and seed stores and hardware stores primarily purchased flowering categories of plants (bedding plants, potted flowering and hanging baskets), which accounted for about 73% of total plant material purchased. This does not include shrubs, trees, or perennials that may be in flower at the time of purchase.

Garden centers purchase a more balanced mix of plant material (Table 4) than do feed and seed or hardware stores. The top three categories of plants purchased, with about equal percentages, were bedding plants (22.9%), coniferous and broadleaf shrubs (22.7%), and perennials and ground covers (18.3%). The flowering herbaceous plant categories, bedding plants and potted flowering, accounted for about 32% of garden center purchases, compared to about 73% for feed and seed and hardware stores. The three plant categories, coniferous and broadleaf shrubs, ball and burlap trees, and container trees are a much larger portion of the garden center mix (41.2%) compared to feed and seed (12.2%) and hardware stores (10.0%).

Additional insight into the plant purchases of retail garden outlets was obtained by calculating the value of plants purchased and taking into account the mean annual volume of purchases for each firm (Table 5). For all retail firms, bedding plants ($15K) and coniferous and broadleaf shrubs ($13K) represented the highest mean annual wholesale value of plants purchased. This was followed by perennials and ground covers ($9K) and potted flowering and hanging baskets ($6K).

Coniferous and broadleaf shrubs was the plant category with the highest mean annual wholesale value for garden centers ($32K). The plant categories bedding plants ($22K) and perennial and ground covers ($21K) had the next highest mean annual wholesale value. Although the portion of product mix represented by bedding plants was higher for feed and seed stores and hardware stores than for garden

Table 4. Categories of plants purchased by different types retail garden outlets in Georgia.

Plant type	All firms (n = 164)	Firm type: Garden centers (n = 50)	Feed and seed (n = 26)	Hardware (n = 52)
	percent[z]			
Container trees	6.3	11.4a[y]	5.3b	2.8b
Ball and burlap trees	2.9	7.2a	0.8b	<0.1b
Coniferous and broadleaf shrubs	13.1	22.7a	6.1b	7.2b
Perennials and ground covers	14.4	18.3a	9.9b	11.6ab
Bedding plants (annuals)	40.6	22.9b	59.6a	56.5a
Potted flowering and flowering baskets	13.5	9.4b	13.2ab	16.1a
Tropical foliage, including fern baskets	6.5	6.1a	2.1b	5.4a
Turf (sod)	1.0	2.0a	0.8ab	0.3b

[z]Expressed as mean percentage of the value of plants purchased during the preceeding twelve months .

[y]Means,within a row, followed by different letters differ ($P < 0.05$).

Table 5. Value of plant types purchased by different retail garden outlets in Georgia.

Plant type	All firms (n = 112)		Firm type: Garden centers (n = 39)		Feed and seed (n = 15)		Hardware (n = 39)	
	Mean	Total	Mean	Total	Mean	Total	Mean	Total
Container trees	5[z]	543	12a[y]	476	1b	18	0.9b	34
Ball and burlap trees	3	293	7a	275	0.1b	3	<0.1b	0.3
Coniferous and broadleaf shrubs	13	1419	32a	1241	0.5b	7	3b	115
Perennials and ground covers	9	1057	21a	816	3b	50	4b	144
Bedding plants (annuals)	15	1638	22a	849	13a	199	13a	503
Potted flowering and flowering baskets	6	620	9a	344	3b	42	4ab	172
Tropical foliage, including fern baskets	4	468	8a	295	0.8b	13	2b	76
Turf (sod)	1	132	3a	115	0.2a	3	0.3a	13
TOTAL	56	6170	114a	4411	22b	335	27b	1057

[z]Expressed in $000.

[y]Means,within a row, followed by different letters differ (P < 0.05).

centers (Table 4), the mean annual wholesale value of bedding plants purchased by garden centers ($22K) was not different than that of feed and seed ($13K) and hardware stores ($13K). The results suggest that growers supplying feed and seed stores, hardware stores, and garden centers should emphasize color items.

The primary information sources used by retail garden outlets to determine which plants to purchase could be used by growers to direct marketing resources. The source of information most frequently used by all retail outlets (78%) was customer requests for plants (Table 6). This suggests that growers can influence the purchases of retail garden outlets by influencing the consumer. For all firms, the three most frequently used sources of information, following customer requests, for plant purchase decisions were sales records/previous purchase history (52.0%), availability lists from growers (43.0%), and consultation with local grower (42.1%). The top four sources of information used by garden centers were customer requests (76.6%), availability lists from growers (56.5%), consultation with local grower (54.2%), and sales records/previous purchase history (48.9%). The garden centers rely more on consultation with and information from growers to make purchase decisions than do feed and seed stores or hardware stores. The feed and seed stores rely more on sales records/purchase history than communications with growers to make purchase decisions. However, this study suggests that growers might enhance sales to all outlets by providing a detailed summary of plant purchase history. This information could also be a useful production planning guide for growers. Information sources such as nursery catalogs (17.1%, for all firms), trade journals (13.1%), and plants observed at public and botanical gardens (17.7%) were not very influential in plant purchase decisions of retail garden outlets (Table 6). However, these same three sources were among the most influential in the plant purchase decisions of landscape installers (6), landscape maintenance firms (10), and landscape architects (5). This suggests that influencing plant purchases decisions in the retail market would require a different approach than for the landscape market.

The top five trends that could change the type of plants purchased (Table 7), for all firms, in descending order were population growth and demographics (22.8%), increased interest in perennials (14.9%), availability of new varieties (13.2%), increased interest in low maintenance plants/landscapes (10.5%), and a more upscale group of customers (9.6%). Apparently retailers anticipate increased population growth leading to increased sales and the aging baby boom

Table 6. Information sources for decision on which plants to purchase.

Information source	All firms	Firm type: Garden centers	Feed and seed	Hardware
	percent response[z]			
Consultation with garden centers	1.4	2.1	0.0	0.0
Consultation with local grower	42.1	54.2	29.6	37.5
Customer requests for plants	78.0	76.6	89.2	86.0
Nursery catalogs	17.1	27.1	16.0	10.2
Sales records/previous purchase history	52.0	48.9	50.0	60.9
Extension service publications	10.3	15.6	19.2	6.4
Trade journals	13.1	15.6	8.3	4.3
Availability lists from growers	43.0	56.5	34.6	40.8
Plants observed at public and botanic gardens	17.7	21.3	20.0	13.3
Plants observed in commercial landscapes	25.7	31.2	34.6	17.8

[z]Percentage of respondents indicating each source is 'used a lot'. Other options in survey question were 'use a little' and 'don't use/not very important'.

Table 7. Trends that may change type of plant material purchased by retail garden outlets in Georgia.

Trend	All firms (n = 114)	Firm type		
		Garden centers (n = 40)	Feed and seed (n = 15)	Hardware (n = 31)
	percent response			
Increased interest in perennials	14.9	20.0	13.3	16.1
Interest in low maintenance plants/landscapes	10.5	10.0	6.7	9.7
Population growth and demographics	22.8	15.0	33.3	35.5
Availability of new varieties	13.2	25.0	6.7	3.2
Interest in specialty plants	7.9	7.5	0	3.2
Better educated consumer	7.0	0	0	12.9
Competition, including low priced chains	3.5	7.5	0	3.2
Upscale customers	9.6	7.5	6.7	16.2
Customer needs	5.3	0	20.0	0
Smaller areas to landscape	5.3	7.5	13.3	0

generation with greater disposable income for activities such as gardening. The trends associated with increased interest in perennials and low maintenance plants/landscapes suggest that the consumer is interested in gardening but wants less troublesome and less labor intensive plants. New varieties that address these two trends would be one way to attract customers.

Other trends identified to be less influential in bringing about change in the type of plants purchased by retailers (Table 7) included interest in specialty plants (7.9%), better educated consumer (7.0%), customer needs (5.3%), smaller areas to landscape (5.3%), and competition at the retail level (3.5%). The interest in specialty plants may include container gardening, water gardening, or butterfly attracting plants. Retail outlets suggested that their future customers are likely to be better educated (7%) and more affluent (9.6%).

The importance of each of the ten identified trends as identified by the type of retail garden outlet (Table 7) provides greater insight into their needs. The three types of retail garden outlets generally agree on the high level of importance associated with population growth/demographics and increased interest in perennials. The trend population growth/demographics was rated first (feed and seed and hardware stores) or third (garden centers) while the increased interest in perennials was rated second (garden centers and hardware stores) or third (feed and seed stores) by retail outlets.

The need for new varieties (25%) and increased interest in perennials (20%) were the trends most frequently identified by garden centers (Table 7). This suggests that sales to garden centers could be strongly influenced by the availability of new plant varieties, especially perennials. The importance placed on population growth/demographics (15%) and low maintenance landscapes (10%) trends were consistent with the projected increased interest in perennials.

The feed and seed stores placed the greatest emphasis (Table 7) on population growth/demographics (33.3%) followed by customer needs (20%). The feed and seed stores were the only retail group to identify customer needs as a factor influencing future demand. The feed and seed stores also relied heavily on past sales records to determine which plants they should purchase. The top trend identified by hardware stores (Table 7) was population growth/demographics (35.5%). Other closely rated trends were increased interest in perennials (16.1%), upscale customers (16.2%) and better educated customers (12.9%).

According to this survey, the hardware (35.5%) and the feed and seed (33.3%) stores predict that population growth/demographics would have a greater influence on future plant requirements than do garden centers (15%). Garden centers place greater emphasis on availability of new varieties (25%) than do feed and seed (6.7%) and hardware (3.2%) stores.

The retail outlets were asked to project demand over the next five years for eight categories of plants (Table 8). About 71% of all respondents indicated that future demand for all categories of plants would be as high or higher than current levels. This suggests an expanding retail market for green-

Table 8. Five-year forecast for categories of plant material by retail garden outlets in Georgia.

Plant category	Future demand[z]				
	Much less	Less	About same	More	Much more
	percent response				
Container trees	5.9	3.9	49.0	38.3	2.9
Ball and burlap trees	18.7	6.6	59.3	14.3	1.1
Coniferous and broadleaf shrubs	7.8	6.8	41.7	36.9	6.8
Perennials and ground covers	1.6	3.1	41.4	45.3	8.6
Bedding plants (annuals)	0.6	2.8	47.2	43.1	6.3
Potted flowering and flowering baskets	2.4	2.4	48.8	40.9	5.5
Tropical foliage, including fern baskets	5.5	2.7	49.5	37.8	4.5
Turf (sod)	21.3	8.0	57.4	13.3	0.0

[z]Quantitative change for each category was 'much less' and 'much more', >50%; 'less' and 'more', 10% to 50%; 'about the same'; ±10%.

Table 9. Five-year forecast for garden center plant material requirements in Georgia.

Plant category	Future demand[z]				
	Much less	Less	About same	More	Much more
	percent response				
Container trees	2.3	0.0	44.2	46.5	7.0
Ball and burlap trees	18.4	7.9	60.5	13.2	0.0
Coniferous and broadleaf shrubs	4.7	2.4	40.5	42.9	9.5
Perennials and ground covers	0.0	2.3	22.7	63.6	11.4
Bedding plants (annuals)	2.3	2.3	27.2	56.8	11.4
Potted flowering and flowering baskets	4.7	4.7	37.1	46.5	7.0
Tropical foliage, including fern baskets	4.9	4.9	43.8	41.5	4.9
Turf (sod)	18.8	18.8	56.1	6.3	0.0

[z]Quantitative change for each category was 'much less' and 'much more', >50%; 'less' and 'more', 10% to 50%; 'about the same'; ±10%.

house and nursery crops within the next 5 years. Based on the percent response for 'much more' and 'more', the categories of plants with greatest future demand, in descending order, were perennials and ground covers (53.9%), bedding plants (49.4%), potted flowering and flowering baskets (46.4%), coniferous and broadleaf shrubs (43.7%), tropical foliage (42.3%), container trees (41.2%), ball and burlap trees (15.4%), and turf (13.3%). Between 5 to 9% of respondents expected future demand for perennials and ground covers, coniferous and broadleaf shrubs, bedding plants, and potted flowering and flc wering baskets to grow more than 50% over the next five years (Table 8).

The five-year forecast for plant material requirements varied with the type of retail garden outlet. Based on the respondents indicating 'more' or 'much more' demand, the garden centers and hardware stores expect a greater demand for plant material over the next five years than do the feed and seed stores.

The garden centers (Table 9) projected strongest future demand ('more' and 'much more' combined) for perennial and ground covers (75%) and bedding plants (68.2%). Three other categories of plants where over 50% of the respondents projected 'more' or 'much more' demand were container trees (53.5%), potted flowering and flowering baskets (53.9%), and coniferous and broadleaf shrubs (52.4%). Garden centers also projected a positive outlook for tropical foliage plants (46.4% projected 'more' or 'much more' demand). The two plant types, ball and burlap trees and turf, may experience decreased demand by garden center as the percent response for 'less' or 'much less' exceeded the response for 'more' or 'much more' (Table 9).

The feed and seed stores projected a generally positive and balanced view for future demand of potted flowering, perennials and ground covers, bedding plants, and coniferous and broadleaf shrubs. Two other plant categories with a slightly less positive outlook were container trees and tropical foliage. As with garden centers, feed and seed store responses suggested a potential decline in demand for ball and burlap trees and turf.

The hardware stores had a very positive outlook for potted flowering, bedding plants, perennials and ground covers, tropical foliage, and coniferous and broadleaf shrubs. Two other plant categories with a slightly less positive outlook were container trees and turf. The response for the ball and burlap tree category suggested constant sales as the percent response for 'less' or 'much less' was about equal to 'more' or 'much more' with the highest expectation for 'about same'. Over 50% of the hardware respondents projected increased demand for the five plant categories, potted flowering, bedding plants, perennials and ground covers, tropical foliage, and coniferous and broadleaf shrubs. However, 16–19% of the respondents also indicated decreased demand for coniferous and broadleaf shrubs, container trees, and ball-and-burlap trees.

The retail garden outlets identified 10 opportunity areas for growers to assist with merchandising of plant material

Table 10. Opportunities identified by retail garden outlets in Georgia for growers to help retailers merchandise plant material.

Opportunity	All firms (n = 131)	Firm type		
		Garden centers (n = 58)	Feed and seed (n = 19)	Hardware (n = 29)
	percent response			
Plant tags/better labeling	22.1	24.1	10.5	34.5
Sufficient plant availability	4.5	5.2	5.2	0
Point-of-purchase (pop) material/displays	9.2	10.3	5.3	13.9
Improved quality of plants	13.0	15.5	15.8	10.3
More cultural information	11.5	6.9	5.2	13.8
Better packaging and delivery	8.4	3.4	21.1	6.9
Increased advertising assistance	9.9	13.8	15.8	0
Competititive prices for small retailers	9.2	12.2	21.1	0
Pricing on pots, bar codes	3.8	3.4	0	10.3
Greater variety of plants	8.4	5.2	0	10.3

(Table 10). For all firms, the most frequently listed opportunity for growers to assist with retail merchandising was better plant labeling, especially plant tags (22.1%). Two other highly rated opportunities were providing quality plants (13.0%) and additional cultural information (11.5%). Four other important opportunities, identified by a similar number of respondents, were increased advertising (9.9%), point-of-purchase material/displays (9.2%), competitive prices for small retailer (9.2%), better packaging and delivery (8.4%), and greater variety of plants (8.4%). Two other less frequently listed opportunities were sufficient plant availability (4.5%) and pricing on pots, especially using bar codes (3.8%). If growers could address these merchandising opportunities they may be able to increase sales volume at the retail level.

The three retail garden outlets differed in which opportunities they would like for growers to emphasize (Table 10). The top five merchandising opportunities for growers identified by 10% or more of the garden centers, in descending order, were better labeling, especially plant tags (24.1%), improved quality of plants (15.5%), increased advertising assistance (13.8%), competitive prices for small retailer (12.2%), and point-of-purchase material/displays (10.3%). The primary merchandising opportunity identified by hardware stores was better labeling/plant tags (34.5%), which is a concern similar to that of garden center respondents. The other opportunities identified by at least 10% of the hardware stores, in descending order, were point-of-purchase material/display (13.9%), more cultural information (13.8%), quality of plants (10.3%), pricing on pots (10.3%), and greater variety of plants (10.3%). The two primary merchandising opportunities identified by feed and seed stores were better packaging and delivery (21.1%) and competitive prices for small retailers (21.1%). Three other merchandising opportunities, identified by at least 10% of the feed and seed stores, were improved quality of plants (15.8%), increased advertising assistance (15.8%), and better labeling/tags (10.5%). The two areas of greatest agreement among the retail outlets were the need for better labeling/tags and improved quality of plants.

Retail garden outlets represent an important market for greenhouse and nursery crops. The information in this study should help growers to formulate future product lines and to assist with the merchandising of plant material. The survey results suggest that plant sales could be increased if retailers provide better value. Growers could help retailers achieve better value through a combination of steps including better plant quality, better variety of plants and improved labeling.

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