

# Production & Marketing Reports

## Opinions and Perceptions of Having a Live-cut Leyland Cypress as a Christmas Tree

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**Summary.** Leyland cypress (*Cupressocyparis Leylandii*) is becoming increasingly important as a live-cut Christmas tree yet it differs from trees currently familiar to most customers. Results of a consumer survey provide an opportunity for growers to adjust planting and marketing decisions. Questionnaires were completed while respondents displayed the tree at their residences. Opinions about the tree referred to tree features and compared them with features of other types of Christmas trees and inquired about the care given to the tree and its disposal. In general, respondents were consistent in their favorable assessment of Leyland cypress as a live Christmas tree with respect to several characteristics including tree shape twig density, and maintenance of fresh appearance over time. Recycling was the primary form of tree disposal.

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Leyland cypress (*Cupressocyparis Leylandii*) is becoming increasingly popular in the southeastern United States as a live-cut Christmas tree (Fig. 1). Growers in Georgia reported increased plantings over the past few years (Lindstrom et al., 1991). The wholesale price of Leyland cypress was reported in 1994 to be \$2.5/foot. (Georgia Dept. of Agriculture, 1994). Leyland cypress has many desirable characteristics from the standpoint of managing a plantation compared to other commonly



Fig. 1. A 3-year-old Leyland cypress.

grown live Christmas trees in the southern United States (Lindstrom, 1992; Lindstrom et al., 1989; Haynes et al., 1992). Leyland cypress is disease resistant and cold hardy, tolerates poor soils, is drought tolerant, propagates easily, and has few insect problems (Dirr, 1990; Dirr and Frett, 1982). Given its natural shape, it requires less shearing than pine trees and it retains a better color than other tree species at the height of the marketing season (Schoenike, 1977).

Leyland cypress differs from Christmas trees currently familiar to most consumers. Leyland cypress is visually similar to red cedar, which has traditionally been popular in the southern United States. However, if growers expand Leyland cypress sales north, consumers are likely to compare it to spruces, firs, and Scotch pines. The most noticeable differences between Leyland cypress and other live-cut Christmas trees are the lack of distinct needles and an upward, rather than horizontal or downward, branching habit. To date, no information about consumer acceptance of Leyland cypress has been published. This paper

reports the results of a consumer opinion survey on the use of a Leyland cypress as a live-cut Christmas tree. Because the production and marketing of Leyland cypress as a live Christmas tree at choose-and-cut plantations is a recent phenomenon, this study provides a unique opportunity for growers to adjust their planting and marketing decisions in response to consumer preferences. Growers can respond quickly to consumer preferences for Leyland cypress by increasing the supply, because these trees grow as fast or faster than other trees sold as live Christmas trees in the southeastern United States (3-5 years in the field) (Brown, 1992). The knowledge from this study of preferences for a live Leyland cypress combined with

earlier surveys about Christmas tree buyer characteristics (Chafin, 1988; Hildebrandt et al., 1991; Hinson et al., 1992) will serve as the basis for making improved decisions about the expansion of Christmas tree operations.

**Materials and methods**

The data were collected from Georgia residents during December 1992 and January 1993. The participants were volunteers who, in exchange for a live Leyland cypress Christmas tree, completed a questionnaire providing their opinions about the tree and how they cared for and disposed of it.

Seventy-five trees were distributed among full- and part-time employees of a large research facility in December 1992. The number of participants was limited by the number of available trees. In January 1993, 62 participants (83%) returned completed, usable questionnaires. Among nonrespondents were individuals who

relocated during that period, lacked permanent employment, or those who simply failed to complete the questionnaire. The respondents were divided into two groups: those who previously had a Leyland cypress as a Christmas tree (74%) and those who had never had a Leyland cypress (26%). It was expected that individuals who did not have a history of owning a live Leyland cypress would differ in their perceptions from those who had one in the past. This expectation was based on the fact that volunteering participants who were familiar with Leyland cypress as a live tree might have shown preference for this type of a tree; conversely, participants who lacked experience with Leyland cypress could be expected to be more critical than the other group.

The survey consisted of several parts. The first set of questions focused on tree characteristics that consumers consider important. These include tree shape, density, scent, twig strength, texture of needles, and difficulty in

hanging ornaments. Next, individuals were asked to compare a live-cut Leyland cypress with other types of live and artificial Christmas trees common in the southeastern United States. Participants were asked to report the level of care the tree received after it was removed from the plantation. This required monitoring the tree appearance while the tree was displayed at home. The study participants also provided information about the method of disposing of the tree after the holidays.

**Results and discussion**

**Leyland cypress evaluation.**

The tree characteristics of shape, needle prickliness, and density revealed strong and similar reactions from repeat and first-time users of Leyland cypress (Table 1). About 96% of first-time users liked the shape of Leyland cypress and about 80% of all users was pleased with its density. This indicates that most consumers liked the shape and density of Leyland cypress. It has

*Table 1. Opinions about Leyland cypress characteristics.*

Characteristic	Agree		Somewhat agree		Disagree	
	First*	Had it before	First	Had it before	First	Had it before
Excellent shape	78.4	82.4	17.6	17.6	3.9	0.0
Needles too prickly	4.0	11.8	18.0	17.6	78.0	70.0
Is too dense	4.0	5.9	12.0	11.8	84.0	82.0
Twigs too weak	21.6	12.5	31.4	25.0	47.1	62.0
Is difficult to hang ornaments inside	22.0	29.4	32.0	29.4	46.0	41.0
Does not have a scent like a Christmas tree	37.3	41.2	25.5	29.4	37.3	29.0

\*Respondent who had a Leyland cypress for the first time as a Christmas tree. The percentage of those respondents listed in categories "agree," "somewhat agree," and "disagree" adds up to 100%; any discrepancy is due to a rounding error. Similarly, the sum of percentage shares of respondents who had a live Leyland cypress before also adds to 100%.

*Table 2. Comparisons and opinions of Leyland cypress to other Christmas trees.*

Characteristic	Agree		Somewhat agree		Disagree	
	First*	Had it before	First	Had it before	First	Had it before
Comparison to other trees						
Like pine better	18.4	5.9	22.4	11.8	59.2	82.0
Like spruce better	23.9	17.6	17.4	17.6	58.7	64.0
Would buy artificial	4.1	0.0	4.1	5.9	91.8	94.0
Comparison to other tree characteristics						
Better shape than pine <sup>†</sup>	69.4	70.6	14.3	29.4	16.3	<b>0.0</b>
Too dense	5.9	5.9	15.7	0.0	78.4	94.0
Sheds fewer twigs/needles	86.0	94.1	6.0	5.9	8.0	0.0
Lasts longer	74.0	88.2	18.0	11.8	8.0	0.0
General impression and future purchase decision						
No significant difference	9.8	<b>0.0</b>	11.8	5.9	78.4	94.0
Consider buying it next year	58.8	75.0	25.5	18.8	15.7	6.0

\*Respondents who had a Leyland cypress for the first time as a Christmas tree. The percentage of those respondents listed in categories "agree," "somewhat agree," and "disagree" adds up to 100%; any discrepancy is due to a rounding error. Similarly, the sum of percentage shares of respondents who had a live Leyland cypress before also adds to 100%.

<sup>†</sup>A chi-square test for differences in three types of opinions between the two groups of respondents indicated significant differences at  $\alpha = 11\%$ . However, tests conducted for differences in opinions between the two groups could be biased due to limited number of responses classified as "agree," "somewhat agree," and "disagree."

been reported previously that shape and density are two of the most important factors to consumers when choosing a Christmas tree (Florkowski et al., 1992).

Among previous Leyland cypress users, 70% did not perceive the Leyland cypress as too prickly compared to 78% of first-time users. This result was not surprising, because Leyland does not have typical sharp needles as do pines and spruces. Growers may want to emphasize the different feeling of limbs by displaying other trees next to a Leyland cypress at the point of sale.

About 22% of respondents who had a Leyland cypress as a Christmas tree for the first time agreed that twigs were too weak (Table 1). A total of 53% of first-time users agreed to some extent with this statement, whereas 62% of repeat users thought that Leyland cypress twigs were sufficiently strong. The perception of twigs' being too weak may discourage repeated purchase of Leyland cypress because buyers may have a problem hanging desired types of ornaments. Growers may consider methods of strengthening twigs by methods such as selective pruning.

Opinions gathered regarding ease of hanging ornaments inside the tree and the tree scent were distributed among the three listed categories (Table 1). About 29% of the first-time Leyland cypress users and repeated users agreed that it was difficult to hang ornaments inside the tree. Overall, 46% of first-time users and 41% of those who had experience with a live Leyland cypress did not think that it was difficult to hang ornaments inside the tree.

The perception of tree scent varies among buyers of live Christmas trees. It was observed that Leyland cypress has no aroma typical of a live

traditional pine Christmas tree. According to survey respondents, only about 37% of first-time users and 29% of repeated users of a live Leyland cypress perceived its scent as typical for a live Christmas tree. The perception of tree scent by relatively few respondents did not seem to outweigh other positive features of a live Leyland cypress, such as the excellent shape.

**Leyland cypress and other live Christmas trees.** A comparison of Leyland cypress to pine, spruce, and artificial Christmas trees revealed a general tendency among respondents to disagree that those types of trees are better than a live-cut Leyland cypress (Table 2). About 40% of first-time users, compared to about 18% of repeat users, agreed or somewhat agreed that they liked a pine better than a Leyland cypress as a Christmas tree (Table 2). Although the differences were not as great between the two groups in response to whether they liked a spruce Christmas tree better than a Leyland cypress, most respondents preferred a Leyland cypress over a live spruce. However, because such a comparison was likely done without side-by-side comparisons, this result must be treated with caution.

Respondents of both groups overwhelmingly rejected the preference for an artificial trees; more than 90% of respondents would not consider buying an artificial Christmas tree. This result suggests that respondents in this sample did not compare a Leyland cypress to an artificial tree, but only to other natural trees available at marketing outlets.

The next set of comparisons focused on specific tree characteristics. The four characteristics referred to tree appearance (shape and density) and measured the enjoyment derived from having a live-cut Christmas tree. Par-

ticipants who previously had a Leyland cypress generally agreed that a Leyland cypress has a better shape than a pine (Table 2). This result is consistent with the response summary from Table 1. Almost 84% of first-time users also agreed that the shape of Leyland cypress was better than that of pine. About 78% of first-time users and 94% of repeat users perceived the density of a Leyland cypress as acceptable (Table 2).

Almost all participants who had a Leyland cypress for the first time agreed that a Leyland cypress sheds fewer twigs or needles than other Christmas trees. This result suggests that Leyland cypress growers may have an important marketing advantage over the growers of other "messier" Christmas trees.

Most respondents (74% first-time users, about 88% repeat users) agreed that Leyland cypress lasted longer in the home than other trees (Table 2). Given this opinion, a Leyland cypress can be marketed to customers who like to display a tree for a long period.

Up to 75% of respondents who previously had a Leyland cypress compared to about 59% of first-time users agreed that they would purchase a Leyland cypress the following year (Table 2). The high percentage of previous users willing to purchase another Leyland cypress suggests a loyalty developing to this tree species.

**Caring for a live Leyland cypress.** Responses about ways of caring for a live Leyland cypress are summarized in Table 3. Survey participants were provided with a list of choices and an option to write in a specific form of tree care used.

About 56% of respondents placed a tree in water at home on the day they received the tree (Table 3). About another 18% kept the tree outside but

Table 3. Frequency of watering a tree by the type of care given.

Type of care	Watering frequency (% reporting respondents)					Total
	Every day	Every other day	Twice per week	Once per week	Other <sup>a</sup>	
Tree brought inside						
Immediately in water	24.6	15.8	1.8	14.0		56.2
Not placed in water	1.8					1.8
Tree kept outside						
Inside later, watered	8.8	8.8	1.8	1.8	1.8	23.0
Water, inside later	8.8	5.3			3.6	17.7
Inside, water and preservatives		1.8	...	...		1.8
Total	44.0	31.7	3.6	15.8	5.4	100.5 <sup>b</sup>

<sup>a</sup>The category "other" includes respondents who reported watering every 3 days, only once, or did not know the watering frequency.

<sup>b</sup>Total exceeds 100 due to rounding.

**Table 4. Number of days a tree was kept outside following its harvest.<sup>2</sup>**

Days (no.)	Respondents (%)
1	17.9
2	17.9
3	21.4
4-6	14.2
7-8	14.2
<sup>3</sup> 9	14.4

<sup>2</sup>Results based on answers provided only by respondents who kept the tree outside.

placed it in water, and about one in four participants delayed placing the tree in water.

No preservatives or advice about preservatives were offered to the study participants, and only about 4% of respondents repotted using a preservative (Table 3). The preservatives listed were corn syrup and a commercial preservative used for cut flowers. The preservatives were used as an additive to water. The limited use of preservatives indicates that, although consumers may be familiar with some methods of prolonging the freshness of a live tree, the actual use of preservatives is uncommon. The behavior of survey respondents was consistent with findings about the impact of preservatives on needle retention by other types of Christmas trees (Hinesley and Blankenship, 1991).

Many respondents kept the tree outside (42%) for a period. Table 4 shows the number of days between the day a tree was harvested and the day it was brought into the home. About 57% of respondents who kept the tree outside brought their trees inside within 3 days of receiving the tree. However, 43% of respondents kept their tree outside for 4 days or more.

About 73% of all respondents who brought the tree inside watered it at least every other day (Table 3). Interestingly, none of the participants reported problems with trees' drying or

**Table 5. Methods of live Christmas tree disposal by respondents.**

Disposal method	Respondents (%)
Landfill	23.5
Recycling or shredding	51.4
Pasture or wooded area	13.2
Yard bird shelter	1.5
Erosion control	2.9
Burn	5.9
Fish pond	1.5

dropping needles, regardless of the watering frequency; however, an unwatered tree may be a fire hazard.

Among respondents who kept the tree outside, some did not water the tree until it was brought inside. In general, the importance of watering the tree is recognized by consumers, since they placed the tree in water on the pick-up day and watered frequently while the tree was displayed in the home.

**Tree disposal.** Disposing of the tree by shredding was the method reported by about 51 % of the respondents (Table 5). Consumers purchasing a live tree often are encouraged by local media and civic institutions to bring used trees to a central location in exchange for a small tree seedling. Accumulated trees often are shredded by the municipal sanitation department and used as mulch.

Survey respondents reported other forms of disposal as well. About 13% of respondents placed the used tree in a pasture or wooded area. A few individuals used the tree as a shelter, for soil erosion control, or as a fish habitat. About 6% of respondents reported burning the tree, and about 24% disposed of the tree by taking it to a landfill.

**Concluding remarks**

According to the survey results, Leyland cypress has desirable characteristics as a Christmas tree. Based on their recollections, respondents indicated that the Leyland cypress has an excellent shape and compares favorably with other Christmas tree species. In particular, Leyland cypress lasts longer, sheds fewer needles or twigs, and is not too dense. Leyland cypress was favored over spruce or pine by most respondents, and most users considered buying a Leyland cypress as a Christmas tree next season. This consistency suggests that respondents answered the posed questions rationally, increasing the confidence in the results and the expectation of an increase in Leyland cypress sales in the future.

Respondents in this study volunteered their participation and, therefore, the results may not be representative of the general population of the region. Additional research is needed to determine opinions about Leyland cypress among the general public and in different regions. If the tree is as popular among customers in other

areas, Leyland cypress may be marketed in more southern states and perhaps in some neighboring northern states.

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