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MARKETING
CHRISTMAS TREES
in Alabama

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MARKETING CHRISTMAS TREES

*in Alabama*¹

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THE CHRISTMAS TREE market of the United States is expanding. Total U.S. production and imports was reported to be approximately 28 million trees in 1947 (7) and 38 million trees in 1955 (8), an increase of about 34 per cent. Increase in population during this period was from 144 to 165 million people, or about 15 per cent. Consequently, Christmas tree production and imports per capita increased about 15 per cent.

Production plus imports are not the same as sales. However, in the Nation as a whole, the proportion sold may be expected to be sufficiently constant from year to year for changes in production-imports data to also represent changes in marketing.

Now that electricity is almost universally available to homes and permits reasonably safe Christmas tree lighting, it would seem that the upward trend in use would at least keep pace with population increases. Changes in general economic conditions would, of course, cause fluctuations.

Imports, largely from Canada, accounted for about a fourth of the total Christmas trees offered for sale in 1947 and about a third in 1955. Thus, imports from outside the United States increased by more than 50 per cent and outstripped both domestic production and population increases.

Eastern red cedar, the South's most important contribution to the Christmas tree trade, represented about 10 per cent of domes-

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tic production in 1947 and 12 per cent in 1955. On the other hand, Virginia and other southern pines accounted for about 4 per cent of the production in 1947 and around 2 per cent in 1955. Thus, it appears that some southern trees are gaining in the total Christmas tree market whereas others are losing.

The South³, with about a fourth of the total U.S. population, is furnishing no more than about an eighth of the Nation's total tree production, since not all red cedars are produced in this section. This figure includes production of a number of miscellaneous species.

The difference between southern production and southern use is supplied by imports from Canadian provinces and from various northern states. For instance, it was estimated that Texas and Oklahoma received from Montana around three-fourths million trees in 1954 and again in 1955 (4). Also, it is reported that New England trees supply two-thirds of the New Orleans market, half of the Washington D.C. market,⁴ and 15 per cent of the Atlanta market (2).

This situation prevails despite production advantages and marketing opportunities of the South. "Christmas trees can be grown in the South in a much shorter time and at less cost than in other regions. As a consequence of long growing season and plentiful rainfall trees develop and grow rapidly. Relatively mild weather during the harvesting and marketing season creates added advantages for the production of Christmas trees in the South. In the northern United States and Canada, seasonal severe weather and deep snows frequently hamper harvesting and handling of Christmas trees. If they are harvested far in advance, treated to reduce transpiration, and stored until the shipping season, then cost goes up" (3). In addition to these advantages, the supply of labor is relatively high and wage rates are relatively low in the South.

Part of the reason for the current failure of the South to produce and supply most of its own Christmas trees must be in the market place. To find out more about this question, the study reported herein was developed. Its principal objectives were, in general, to determine kind, size, and quality of Christmas trees marketed, methods of treating and handling trees, variations in

³ The South, as used in this study, includes Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Tennessee, Kentucky, and Virginia.

⁴ Washington, D.C., while not in the South as defined above, borders Virginia.

wholesale and retail prices, and problems encountered by retailers and wholesalers in their Christmas tree operations.

All three Alabama cities having over 100,000 population were included in the study. Chosen at random as samples were: 1 of the 2 cities of about 50,000 population, 1 of the 7 cities of 20,000 to 49,000 population, 1 of the 6 cities of 10,000 to 19,000 population, and 3 of the 30 cities of 5,000 to 9,000 population. In addition, Decatur (about 20,000 population) and Demopolis (about 5,000) were selected arbitrarily because of their location in areas of cedar-producing, lime lands.

An attempt was made to obtain records from all types of retailers in the cities studied. However, they varied from individuals selling for only a day or two or when convenient to long established chain stores. Thus it was not feasible to obtain information from any predetermined portion of the retailers or of retail sales. Records were obtained for the most part during the 2 weeks preceding Christmas. However, additional information was obtained after Christmas where sellers could be readily located.

CHRISTMAS TREES OFFERED for SALE in ALABAMA

The number of Christmas trees offered for sale in Alabama in 1956 is not known. Since Alabama has a higher-than-average percentage of her population in low income brackets, it may be that her Christmas tree-population ratio is likewise below average, since the Christmas tree tends to be a luxury item or at most a "conventional necessity." At the national rate of consumption, the number of trees used would have been about 690,000. Despite the low income influence, it seems probable that over a half million were used in the State. Of course, many trees were cut from the family farm, or obtained by "gift" or "appropriation." In Tuskegee, a city of about 6,000, retailers reported offering for sale 1,211 trees and practically all were sold. Thus, their reported tree-population ratio was near the national average, even though the enumeration of trees was quite incomplete. On the other hand, the total number of trees reported offered in the 3 other small cities was about 1,300. The population sum of these same cities was about 21,000 giving a ratio of the reported trees to population of less than one-fifteenth tree per person. Reports, however, were too incomplete to be used in estimating anything except the minimum tree-population ratio in any city. Undoubtedly, sales within the State in 1956 included at least 60 per cent

of the estimated minimum half-million trees used and may have been considerably more.

Species and Size of Trees

A total of 47,190 trees were accounted for in interviews with retailers in the 11 cities studied, Table 1. Slightly less than two-thirds were varieties imported mostly from northern states or from Canada. Only one lot of the spruce-fir group was reported

TABLE 1. DISTRIBUTION OF CHRISTMAS TREES REPORTED BY SPECIES AND BY SIZE OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Size of tree		Species			
		Spruce and fir ¹	Cedar and pine ^{2,3}	Arizona cypress ²	All species
Small, less than 4.0 feet.....	<i>number</i>	13,618	4,278	34	17,930
	<i>per cent</i>	45.5	25.2	12.7	38.0
Medium, 4.0-5.9 feet.....	<i>number</i>	11,278	8,210	157	19,645
	<i>per cent</i>	37.6	48.4	58.3	41.6
Large, 6.0-8.9 feet.....	<i>number</i>	4,999	4,482	78	9,559
	<i>per cent</i>	16.7	26.4	29.0	20.3
Very large, 9.0 or more.....	<i>number</i>	56	0	0	56
	<i>per cent</i>	.2	0	0	.1
Total.....	<i>number</i>	29,951	16,970	269	47,190
Distribution by species.....	<i>per cent</i>	63.5	35.9	.6	100.0

¹ Largely imported varieties from northern states or from Canada.

² Largely state-grown varieties or shipped in from southern Tennessee.

³ Less than 5 per cent of this group were pine trees.

from the South. That came from a North Carolina state forest and was reported as balsam fir. There were 2,150 trees in this lot. All cedar, pine, and Arizona cypress reported were either state-grown or shipped in from southern Tennessee.

Small trees accounted for nearly half of the imported trees, one-fourth of the cedar-pine group, and one-eighth of the cypress reported. On the whole, a few more medium-sized trees were on the market than small trees. Large trees accounted for about one-fifth of the total.

Species by Groups of Retailers

Mass sellers interviewed, including chain stores and civic clubs, handled few trees adapted to local production, Table 2. On the contrary, "other" sellers depended on locally produced or adapted trees for about three-fourths of their offerings.

TABLE 2. DISTRIBUTION OF CHRISTMAS TREES REPORTED, BY SPECIES AND BY TYPE OF SELLER, 11 SELECTED MARKETS, ALABAMA, 1956

Species		Type of seller				
		Chain stores	Independent grocers	Civic clubs	Other	All types of sellers
Spruce and fir ¹	<i>number</i>	8,636	1,906	14,080	5,329	29,951
	<i>per cent</i>	97.1	59.3	95.9	26.1	63.5
Cedar and pine ²	<i>number</i>	257	1,281	600	14,832	16,970
	<i>per cent</i>	2.9	39.9	4.1	72.7	35.9
Arizona cypress ²	<i>number</i>	0	25	0	244	269
	<i>per cent</i>	0	.8	0	1.2	.6
Total.....	<i>number</i>	8,893	3,212	14,680	20,405	47,190
Distribution by type of seller.....	<i>per cent</i>	18.9	6.8	31.1	43.2	100.0

¹ Largely imported varieties from northern states and Canada.

² Largely state-grown varieties or shipped in from southern Tennessee.

The sample as shown in Table 2 may overemphasize the importance of civic clubs and underemphasize the chain store group in the retailing of Christmas trees in Alabama because of the inclusion in this table of two especially large selling deals by clubs.

Species by Size of Cities

The retailers interviewed in the small cities depended largely on imported trees, Table 3. In 3 of the 4 cities of this group, the principal sellers interviewed were chain stores that relied almost wholly on trees from the North and from Canada. Cities of the next two larger size groups apparently depended about as much on local or locally adapted trees as on imported trees. Sketchy data from the three largest cities of Alabama indicate nearly two-thirds of their trees were imported. These data plus general observations indicate that the three largest cities differ sharply in the proportion of trees from distant sources. In Mobile, less than one-tenth of the trees offered were locally grown; in Montgomery, about one-fourth of the trees were locally produced; and, in Birmingham, well over half of the trees reported were either grown in Alabama or in nearby areas of Tennessee. Since relatively few chain stores were interviewed in these three cities and since such stores tend to emphasize imported trees, the proportions noted may be too high for local trees, especially in Montgomery and Birmingham. In Mobile, the other principal sellers were also importers, whereas in Montgomery and particularly in Birmingham, lot selling by many types of individuals was common.

TABLE 3. DISTRIBUTION OF CHRISTMAS TREES REPORTED, BY SPECIES AND BY SIZE OF CITY, 11 SELECTED MARKETS, ALABAMA, 1956

Number of cities	Size of city		Species			
			Spruce and fir ¹	Cedar and pine ²	Arizona cypress	All species
4	5,000-9,000	<i>number</i>	2,180	278	0	2,458
		<i>per cent</i>	88.7	11.3	0	100.0
3	10,000-49,000	<i>number</i>	2,316	2,240	25	4,581
		<i>per cent</i>	50.6	48.9	.5	100.0
1	50,000-99,000	<i>number</i>	1,517	1,930	0	3,447
		<i>per cent</i>	44.0	56.0	0	100.0
3	100,000 or above	<i>number</i>	23,938	12,522	244	36,704
		<i>per cent</i>	65.2	34.2	.6	100.0
Total		<i>number</i>	29,951	16,970	269	47,190
Montgomery ³		<i>number</i>	7,483	2,450	194	10,127
		<i>per cent</i>	73.9	24.2	1.9	100.0
Mobile ³		<i>number</i>	12,225	225	0	12,480
		<i>per cent</i>	98.2	1.8	0	100.0
Birmingham ³		<i>number</i>	4,200	9,847	50	14,097
		<i>per cent</i>	29.8	69.9	.3	100.0

¹ Largely imported varieties from northern states or from Canada.

² Largely state-grown varieties or shipped in from southern Tennessee.

³ Three large cities with population of about 107,000 in Montgomery, 129,000 in Mobile, and 326,000 in Birmingham.

Tree Grading and Quality

Quality of trees was studied only in a general way and was judged mainly on the basis of comments of retailers. All imported trees observed were graded by size. Bundle tags indicated height of trees in the bundle. Often individual tree tags indicated tree height and carried some promotional message and suggestions on how the trees should be handled at the retail selling point or at the home of the consumer.

Standardization on bases other than height did not seem prevalent for natural-color trees. However, the imported ornamentals⁵ were very uniform in size, density, taper, balance, foliage, and general lack of deformity. No differentiation was made in price on any quality factor. All looked to be about one quality.

⁵ The term ornamentals, as frequently used by the trade and as used in this publication, refers to small (usually 30 to 40 inches) black spruce trees, which were treated by the producer through spraying or dipping the tree in transpiration-retarding and tinting materials, and encasing the base of the tree in a sap-like fluid that tended to lengthen the tree's shelf and home-use life. Other types of trees were sometimes tinted at the market by or for the retailer or on order of the consumer. These were used for ornamental purposes, but they do not fall in the usual definition of "ornamental" Christmas trees.

Some differences in quality of natural-color imported trees were noted. A number of complaints were voiced about sparsity and dryness of foliage, and the long, relatively bare tip of a number of the larger trees. In fact, some retailers clipped the bare tips of some of their trees before offering them for sale.

Local trees were seldom grouped together even by uniformity of size, and apparently little attempt was made to grade them on other bases. Grading done by retailers was seldom noticeable and no uniform standards were used. Each seller independently judged the quality of the trees he sold. Leaf color and some insect damage came in for some criticism among sellers of cedars; sparse foliage, poor balance, poor taper, and some deformities led to many unsold cedars. The few pines that were offered were apparently carefully selected and occasioned little or no complaint from buyers of such trees. Likewise, few complaints on the few Arizona cypress sold were recorded. However, there was some objection to the "stump culture" cypress that were cut with large bases from which several "leaders" grew. They were otherwise tapered and apparently of very good quality.

Tree Condition

Condition of imported natural-color trees occasioned much more complaint than quality. Needle drop brought sharpest and most frequent complaint. The long tip was particularly objectionable. The tips also had least protection, especially among large trees, and were subject to damage in handling. Their long, relatively bare tips became even worse in appearance when needles were brushed off. These tips, as previously noted, were at times clipped off before sale.

The condition of locally produced or "short haul" imported trees was apparently satisfactory, for no serious complaints were recorded by enumerators.

No complaints were heard on condition of the highly standardized imported ornamentals that were protected by a coating to reduce transpiration and by sealing the base of the tree in a container of fluid called "liquid life" by the producers.

Tree Handling

Retailers were able to give little information on the handling and treatment of imported trees prior to their receipt about 15 to

20 days before Christmas. They did know that the trees had been cut and bundled for shipment from 1 to 3 months earlier.

Upon receipt of shipments, lots of trees were prominently displayed. Reserve supplies were usually stored where convenient more as a safeguard against pilferers than as a maintenance of quality. The trees were displayed prominently with relatively little concern for shading or other protection, especially if it were inconvenient to provide such protection. Occasionally, the selling location lent itself to putting the tree stems into dug holes where the earth might supply some moisture. However, the purpose of this practice was to display trees to the customers rather than to lengthen tree life. More protection might well have lessened needle drop in many instances.

Treatment of locally grown and short haul imported trees was essentially the same as for the bulk of imported natural-color trees. Even with this treatment, complaints about needle drop for locally grown trees were negligible.

The small ornamentals were usually suited to display in buildings, and were displayed on shelves by chain stores, which sold the bulk of these trees. They apparently stood this treatment quite well; no complaints were recorded.

Tinted Trees

Treatment of trees for ornamentation appears to be growing in recent years. However, established retailers reported that the use of tinted trees, at least on a modest scale, has been a custom of some people for a number of years. Nevertheless, ornamentals (normally treated, tinted, sealed at the base in metal stands, and cartoned for shipping) were not sold in many Alabama cities until

TABLE 4. PERCENTAGE OF CHRISTMAS TREES THAT WERE TINTED, BY SPECIES AND BY SIZE OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Species	Size of tree ¹				
	Small	Medium	Large	Very large	All sizes
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Spruce and fir ²	30.6	14.6	1.5	0.0	19.7
Cedar and pine ³	18.0	13.1	8.4	.0	13.1
Arizona cypress ³0	12.7	12.8	.0	11.2
All species.....	27.6	13.9	4.8	0.0	17.3

¹ For description of usual heights of respective size groups, see Table 1.

² Largely imported varieties from northern states or from Canada.

³ Largely state-grown varieties or shipped in from southern Tennessee.

the last few years. These little, standardized, good quality, modest-priced trees seem to be growing in favor for small apartments, families without children, and miscellaneous decorative uses. They represent most of the small tinted trees reported in Table 4. While a sixth of all trees were tinted, over a fourth of the small trees were so treated. No cedar, pine, or cypress trees of any size were reported to have been tinted by producers, nor were any medium-sized or larger spruce or fir tinted before reaching the retailer. Thus, except for ornamentals, tinting became the responsibility of the retailer or of the customer, who at times had his tree tinted by a custom operator.

Since the amount of paint required for tinting trees tends to increase geometrically with the size as determined by height, it seems probable that the costs of tinting may become too great with large trees except for special uses. It is noted that none of the trees classified as very large were reported to have been tinted. Apparently, the larger the tree the more the retailer was inclined to shift the tinting responsibility to the customer, or to perform this service only on the customer's order.

Except for the ornamentals, which were black spruce and tinted on arrival, there seemed to be no particular preference as to the species used when tinting was sought. Silver tinting was the most common color used by retailers. However, some instances were noted of other tints being used. Ornamentals usually came in green, silver, white, or pink, with silver the most common and pink the most rare.

No chain store retailer was found who tinted trees after receiving them, even though chain stores, in general, were the most important retailers of tinted ornamentals, Table 5. Other food

TABLE 5. PERCENTAGE OF ALL CHRISTMAS TREES SOLD THAT WERE TINTED, BY TYPE OF RETAILER AND BY SIZE OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Type of retailer	Size of tree ¹				
	Small	Medium	Large	Very large	All sizes
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Chain stores.....	60.1	0.0	0.0	0.0	31.2
Other food stores.....	23.9	3.4	1.3	.0	7.5
Civic clubs.....	16.7	24.1	.7	.0	17.5
Other sellers.....	15.0	12.6	9.1	.0	12.5
Total.....	27.6	13.9	4.8	0.0	17.3

¹ For description of usual heights of respective size groups, see Table 1.

stores did little tinting. Some handled the pretinted ornamentals. This accounts largely for the rather large percentage of small trees that were listed in the tinted groups by "other" food store operators. Tinting of trees sold by civic groups was largely done on a custom basis by an independent group of operators and was ordered and paid for by the customer. "Other" sellers did more actual on-the-spot tinting than did any other retailer group. They frequently sprayed a substantial number of trees with silver colored tinting material to attract customers and expand sales. Many trees, especially smaller sizes, were sold already sprayed. However, some were sprayed on order, particularly the larger trees. A few retailers admitted that they sprayed some trees to hide off-color foliage.

Specialty Trees

Unusual trees of various kinds found a limited market. One seller specialized in using rayon waste fibers along with tinting materials to make specialty trees. These moved at a good price. One lot of 200 pines from a plantation in Maryland had been pruned and shaped during growth. Despite numerous small twisted branches that developed in the pruning process this lot found a good market at above average prices in a store of a high-income area. The venture paid off and the chain store handling them plans to reorder the same type of trees next year. Other ventures of this type were not noted, but Christmas trees appear to lend themselves to a limited extent to rewarding special treatment when the innovator correctly predicts consumer desires.

CHRISTMAS TREE MARKETING *in* ALABAMA

Many different arrangements are made to channel Christmas trees from the stump to the consumer. Some individuals produce their own trees, take them to the market, and sell them to the consumer. Others limit their activities largely to those of producer, retailer, wholesaler, trucker, or broker.

The Sellers

Instances were noted of farmers who sold trees from a plot at a round figure or at a price per tree and took no further interest

in the trees. Other farmers produced, cut, hauled, and sold to consumers. Some truckers merely hauled trees for producers or dealers. For chain stores, the organizations with which they were affiliated performed the wholesale function.

One trucking company took no title to trees, but apparently served both as transfer and broker for retailers. An oil company added trees to its December activities and wholesaled several cars from its regular place of business.

Imported trees came largely from three shippers in the producing areas. Two of these had representatives in Alabama after Christmas to call on the retailers to settle for one year's trees and take orders for the next year's business. Regular commercial transportation companies moved the trees. Commission merchants as such were not found in this survey.

As previously noted, retailers were arranged roughly into four groups, i.e., chain stores, other retail grocery stores, civic clubs, and "other" types of sellers. The first two groups frequently looked upon handling of trees as a "must" service to customers. While hoping to make direct profits from this item they would probably handle trees as long as such handling seemed to increase profits of the whole store business.

The third group offered Christmas trees for sale to raise money for charity projects. The point was emphasized that purchase of a tree would not only do the customer good but would serve a worthwhile project at the same time.

The fourth group of retailers included such businesses as nurseries, filling stations, florists, drugstores, and many individuals. Some of the individuals were experienced at selling trees, having regularly "picked up money" at Christmas time by selling trees for as much as 10 years. Most of the individual sellers were short-time operators, many selling for the first time. Children attempting their first business venture were found. Some sellers were unemployed; others were temporarily idle because of the time of discharge from the armed forces, or because of waiting for induction. A considerable number in Birmingham, at least, was taking earned leave from regular employment to sell trees. Others continued regular work, which occurred at hours that did not conflict seriously with the best tree-selling time of the day. This fourth group had a variety of levels of experience, ability, need for added income, financing, and, as would be expected, success in selling trees.

Advertising

Christmas trees lend themselves particularly well to advertising through display. This means was universally used and was the only advertising in about half of the instances observed. Some displays augmented by lights and well-placed shining tinted trees were very effective. Newspaper advertising was used to some extent by grocers. Very few gave the trees separate advertising space, but included the tree announcement in the regular week-end grocery "spread." Radio and TV were used in rare instances. Apparently such sellers as nurseries, who were somewhat separated from large streams of potential customers, were more inclined to advertise through the usual media than were sellers in more favorable locations.

Most intensive advertising was done by civic clubs. In addition to displays, newspapers, radio, TV, posters, and even pre-Christmas season solicitation of advance deposits on trees were utilized. Much of the advertising was donated in these cases and the "do good" appeal was prominent. The mass of sales realized indicates that in such instances advertising by a number of means was effective. Two instances of advertising in appropriate newspapers by the parent organization in behalf of the several outlets of chains were noted. The effectiveness of such central advertising was not estimated.

Pricing

Ornamentals were sufficiently standardized as to size, condition, color, and packaging that they were sold much like any other standardized product. Two large processors and shippers quoted identical prices at wholesale in 1956 f.o.b. shipping point as follows:

<i>Color</i>	<i>Price per carton of 12 trees</i>
Green	\$10.65
Silver	11.50
White	16.35
Pink	19.80

All ornamentals were black spruce, 30 to 40 inches tall, with the stems sealed in metal stands containing a sap-like fluid that prolonged life of the trees. Retail prices of these trees varied considerably, Table 6. The range in pricing was substantial, but still small relative to that of other groups of trees. The average

TABLE 6. RETAIL AND WHOLESALE PRICES OF ORNAMENTALS, BY COLOR OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Color	Quotations <i>Number</i>	Retail price per tree		Wholesale price per tree <i>Dollars</i>
		Range		
		<i>Dollars</i>	<i>Dollars</i>	
Green	13	1.25-1.69	1.35	0.89
Silver	13	1.35-1.99	1.61	.96
White	10	1.75-2.49	1.99	1.36
Pink	5	2.19-2.98	2.38	1.65

markup from the quoted f.o.b. shipping point price was not far from 50 per cent, which is relatively low for such a perishable commodity.

Similar general wholesale and retail quotations covering the bulk of natural-color imported trees were not available. One company that served as a wholesaler of Christmas trees in southern Alabama bought trees at \$1.90 per bundle f.o.b. Vermont, and incurred a freight cost averaging \$1.33 per bundle, making a total cash cost of \$3.23 per bundle f.o.b. destination. This company sold 95 per cent of the shipments at \$4.95 per bundle, realizing a gross markup of about 50 per cent. The wholesaler representative indicated that his retailer customers tried to double their money, i.e., sell at a markup of 100 per cent. One civic club paid about \$5,300 for its trees delivered and grossed \$12,700. Another paid an estimated \$7,200 for delivered trees and grossed about \$20,000. These exceeded by a considerable margin the 100 per cent markup. However, the purchase price probably included much "good will" for the civic projects and would not have been realized by private sellers. Furthermore, prices paid by these clubs were 15 to 25 per cent less than that paid by the average retailer.

The range in quoted retail prices for natural-color imported spruce and fir was very great, Table 7. There was an average in-

TABLE 7. RETAIL PRICES OF NATURAL COLOR SPRUCE AND FIR¹ CHRISTMAS TREES, BY SIZE OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Size of tree	Usual height <i>Feet</i>	Quotations <i>Number</i>	Retail price per tree	
			Range	
			<i>Dollars</i>	<i>Dollars</i>
Small	Less than 4.0	45	0.70-3.00	1.28
Medium	4.0-5.9	51	1.00-6.00	2.29
Large	6.0-8.9	48	1.00-7.00	3.28
Very large	9.0 or more	15	1.98-12.50	6.37

¹ Largely imported varieties from northern states or from Canada.

crease in retail price of about 50 cents per 1-foot increase in height for small to medium size and 33 cents per foot for medium to large size trees. These figures are fairly close to the spreads by size recently reported in California (6) and Michigan (5). There were few quotations on the very large trees, which of course varied considerably in size. Premiums for tinting trees varied, but a limited number of quotations indicated a tendency to charge about \$0.40 per foot in height for tinting the small and medium "popular sized" trees.

No meaningful wholesale quotations were obtained on cedar, pine, and Arizona cypress trees of local growth or "short haul" from Tennessee. Most handlers "dickered" with retailers, disposing of their load at what they considered the best bid, or breaking the load into parts and selling each part the most advantageously. Some retailers reported paying an average of over \$1 per tree for those of medium size. Others reported buying trees for a few cents per tree. Some said cedars were given them for the cutting. One retailer paid 10 cents each for suitable trees provided he cut and left in the fields those he did not want. Of course, harvesting costs were involved. Thus, the retailer's "delivered" cost was substantially higher.

Retail price quotations on cedars were numerous and quite variable, Table 8. Cedars were priced lower than imported trees of the same height. Small and medium cedars were priced about 25 per cent lower and large trees about 15 per cent lower than imported trees. While no grading was undertaken, it appeared that a higher proportion of cedars were essentially culls, quality-wise, than were imported trees. The relative ease with which cedars could be obtained must have encouraged some haulers to move many poorly shaped and otherwise low quality trees to market. They were in some instances included in a purchase of

TABLE 8. RETAIL PRICES OF NATURAL COLOR CEDAR¹ CHRISTMAS TREES, BY SIZE OF TREE, 11 SELECTED MARKETS, ALABAMA, 1956

Size of tree	Usual height	Quotations	Retail price per tree	
			Range	Average
	<i>Feet</i>	<i>Number</i>	<i>Dollars</i>	<i>Dollars</i>
Small	Less than 4.0	38	0.50-2.00	0.98
Medium	4.0-5.9	52	.75-5.00	1.72
Large	6.0-8.9	43	1.25-7.00	2.84
Very large	9.0 or more	0	----	----

¹ Largely state-grown varieties or shipped in from southern Tennessee.

all trees in a location for a lump sum. Thus, nothing was saved, except the labor of harvesting, by leaving any in the location. These trees would, of course, lower the average price and perhaps would have a depressing effect on prices of first quality trees.

Quoted premiums on tinted cedar trees were not numerous and were puzzling. A considerable portion of these were around \$1 per tree. Some tinted trees were sold at no premium. This lack of margin may have been related to a practice reported by one retailer who sprayed off-color trees to make them saleable. Thus, a practically worthless tree might be sold for \$2 or more if tinted, making in effect a substantial premium for tinting that would not appear in the quotations.

No quotations were obtained on the few locally produced pine trees that were offered for sale. The few quotations on Arizona cypress suggested that they moved at about the same prices as imported trees of similar height.

Unsold Trees

Quoted prices and margins lose much of their significance when large numbers of trees are left unsold. In fact unsold trees actually have a negative value, because they must be cleared from the location, hauled away, and/or burned. This adds to the significance of their role.

Reports of unsold ornamentals were practically non-existent. Shifting some of these trees from one store to another for sale was reported, however. The experience with other imported trees was less favorable. A few stores reported high percentages unsold. On the average, however, the proportion of imported spruce and fir Christmas trees reported unsold by those who attempted to make estimates was 9 per cent. This compared with a figure of 31 per cent for cedars on which such information was obtained. No report of leftover pine and Arizona cypress was obtained from the few retailers handling them.

Price Cutting

A related problem was price cutting which some retailers did when sale prospects were poor.

No instances of price cutting on ornamentals came to the attention of enumerators. Price cutting was fairly common for near

end-of-season sales of imported trees. Price cutting was even more prevalent in the sale of cedar trees as the season neared a close. Of course, no two trees can be said to have exactly the same quality and consumers pick trees that they consider best on a first-come, first-serve basis. The end-of-season trees tend to be of poorer quality than those sold earlier, unless the retailer's stock is constantly renewed. Thus, price cutting was in many instances an adjustment to reduced quality.

CHRISTMAS TREE PRODUCTION *and* MARKETING POTENTIAL

Despite recent interest in "plantation production" of Christmas trees in Alabama, the 1956 crop, particularly the cedar portion of it, was largely obtained from trees grown from nature's seedings. In general, such trees are poorly spaced with respect to other trees of the same or different species. Heavily shaded trees too often develop open, thin growth and crowded trees have poor shapes. Vine competition results in deformities, and trees in pas-



Hundreds of cedars are growing in this woodlot but only one is a saleable Christmas tree (inset). Bad growing conditions caused others to be poorly shaped.



These Arizona cypress show effects of production practices. Well shaped tree at left had proper care and would sell in the competitive Christmas tree market. The poor quality trees at right were not pruned and would bring low prices or even remain unsold.

tured areas are often damaged by livestock. Of course, such chance seeding results in a percentage of the trees growing in favorable spots and developing into satisfactory products. Even though this percentage may be small, the number of usable trees may be quite large because of the total number of trees in the natural stand.

Most, if not all, Arizona cypress on the markets were transplants. No such information was obtained on the few pines of local growth. Many "old field" pines have ample space in which to grow. Selections could be made from either natural seedings or transplants to supply the few pine trees offered on the Christmas market.

Reports of seedlings distributed in Alabama from nurseries of the State and of nearby states indicate that slightly over 1 million each of Arizona cypress and red cedar have been transplanted in the past 10 years. The growth of interest is suggested by the fact that about two-thirds of these were distributed in the past 5 years (1952-56) and about one-third in the previous 5 years (1947-51).

The average number of these trees distributed in the past 5 years was about 280,000 per year.

Tree survival rates vary greatly depending on handling seedlings, planting techniques, and growth conditions. Survival rates of around 50 per cent were found on several private plantations of Arizona cypress (3). Some foresters believe that these trees are more exacting in their planting requirements than pines (9). There is also the question of marketability of surviving trees. Furthermore, a considerable number of trees are planted as ornamentals and for other purposes. Thus, it seems that not more than half of these trees could be expected to figure in the Christmas tree market.

Based on the foregoing, it appears that present plantation plantings might take care of about a third of the State's Christmas tree needs. More intensive tree culture including careful farming, "limb" or "stump" culture, cultivation, fertilization to speed growth, and protection of trees from insects and diseases would, of course, increase the number of trees available. Likewise, pines could conceivably increase in popularity and saleability as Christmas trees. However, there was little indication that plantation trees were a major factor in the cedar tree market in 1956. Apparently, plantation trees were the sole factor in the Arizona cypress market. Prices quoted for these trees, as well as lack of complaints of leftover trees, indicate that they are finding an acceptable place in the entire Christmas tree market.

The Alabama Christmas tree producer should give attention to the full market potential within the State. However, his interest should not stop there when the national market potential represents about 40 million trees of all kinds. Of course, there are costs to be considered.

Assuming trees of equal consumer appeal, the producing area that can produce, harvest, and place trees in the hands of the consumer at least cost would be expected to dominate the market. The South, in which Alabama is centrally located, has production and harvesting advantages as previously noted. Furthermore, it has marketing advantages, for at least a large segment of the consuming population, particularly in costs of moving trees to market. To be sure, costs of local assembly may not be greatly different in the North and South. Established producing areas, which tend to group on both sides of the northern border of the United States, may have some freight advantage to population

centers of the Great Lakes, the northeast, and the far west. Nevertheless, a great market still remains that offers, from a freight equality standpoint, a substantial advantage in marketing.

The following rates and mileages indicate transportation cost variations from two northern producing areas to designated selected points (1):

<i>Origin</i>	<i>Destination</i>	<i>Approx. mileage</i>	<i>Freight per car</i>
Fredericton, N.B.	Long Island, N.Y.	600	\$314
Fredericton, N.B.	Dallas, Texas	2,250	855
Fredericton, N.B.	St. Petersburg, Fla.	1,850	753
Duluth, Minn.	Chicago, Illinois	500	144
Duluth, Minn.	St. Petersburg, Fla.	1,650	720

It will be noted that cost per mile varies substantially, depending on competition of water transportation and variations in terminal and other costs. Nevertheless, costs of the shorter hauls (500 and 600 miles) resulted in around \$400 to \$700 lower freight costs per car of about 1,500 trees as compared with the longer hauls. Nearly all of the South and Midwestern area as far north as St. Louis and Cincinnati are well within the "shorter haul" range of most of Alabama. These areas would probably include over a third of the national population. The estimated saving of 25 to 50 cents per tree is very substantial. If most of it goes to the producer, even a small producer benefits substantially since about 1,200 to over 2,000 usually grow on each acre.

It must be realized that farmers of other Southern states are also interested in the possibilities of Christmas tree production; the extent of this interest is illustrated in some of the following statements:⁶

North Carolina — "We are hoping to give out-of-state suppliers considerable . . . competition. At present our farmers are planting over a half million red cedar seedlings per year."

Virginia — "We encourage Christmas tree planting near large towns" and "I presume that most of our Christmas trees will be cut locally in a few years."

Mississippi — "We are beginning to get into research comparing various species by production and marketing."

⁶ Information in these statements was obtained from unpublished opinions expressed by extension foresters in 1954 in reply to an inquiry about competition of locally grown trees with Douglas fir. This information was supplied to the author by A. M. Sowder, Extension Forester, U.S. Department of Agriculture.

Oklahoma — “Douglas fir . . . can expect an increasing amount of competition.”

Missouri — “Many of our farmers are beginning to grow Jack and Scotch pine for local (Christmas tree) markets.”

SUMMARY

The Christmas tree market of the United States is expanding slightly faster than the population is increasing. Production and imports of Christmas trees were estimated to be 15 per cent higher in 1955 than in 1947 on a per capita basis.

Much of the South's Christmas tree market was supplied by trees imported from Canada and northern states in 1956, even though the South has a number of advantages in growing and harvesting trees that are adapted for use as Christmas trees.

This study was designed to determine the kind, size, and quality of Christmas trees marketed in Alabama and the methods of marketing, together with prices obtained and problems met in marketing these trees.

Christmas trees sold in Alabama far exceeded the number “produced” and offered for sale in 1956.

Alabama's markets for Christmas trees were generally poorly organized with many sellers of various ages, interests, and abilities taking part. Chain stores, some independent stores, and some civic groups had much better organization than did the bulk of retailers.

Locally produced trees plus those imported from an adjoining state accounted for only a little over a third of the tree offerings recorded. The remainder came from northern states and from Canada.

Mass sellers, including chain stores and civic organizations, relied almost entirely on shipped in trees which were graded by size and bundled or cartoned. Thus they were arranged for a degree of orderly handling, pricing, and selling. Individual sellers tended to handle locally produced or “short haul” imported trees, which were neither graded nor sorted.

Mobile depended largely on imported spruce or fir, whereas Montgomery obtained about three-fourths, Gadsden about one-half, and Birmingham about one-third from such sources.

Complaints on a quality basis were not recorded for ornaments; for other trees of the spruce-fir group, complaints centered

on needle drop and bare tips; complaints related to shape, deformities, and lack of uniformity were recorded for trees of the cedar group. No complaints were given for the Arizona cypress and pines.

About a sixth of all trees were pre-tinted "ornamentals," trees tinted by the seller, or trees tinted on a custom basis. More than a fourth of the small trees were "ornamentals" or other tinted trees, whereas only about one-twentieth of the large and none of the very large trees were reported to have been tinted.

Ornamentals were highly standardized as to size, treatment, and pack. Other shipped in trees were largely grouped by size. Local and other "short haul" trees were not consistently handled in any standardized way.

Displays were the predominant means of advertising, although all general advertising media were used to some extent. Intensive advertising by philanthropic groups appeared to be quite successful.

Wholesale and retail prices were well standardized for "ornamentals." They were less standardized for other imported trees, and showed little or no standardization for locally grown and "short haul" trees.

In general, cedars seemed to be priced at around three-fourths the level of imported trees of comparable height. They probably fared even worse when leftover trees are considered.

Alabama has a definite freight advantage over the present principal producing areas in marketing local Christmas trees in most cities of the South.

Interest in plantation production of Christmas trees is increasing. In Alabama about twice as many cedars and Arizona cypress were transplanted in 1952-56 as in the 1947-51 period. These trees might be adequate to supply a third of the State's Christmas tree market if normal plantation care is used.

CONCLUSIONS

1. There seems little doubt that the Christmas tree business justifies further attention by potential producers of trees. In Alabama alone it may, at reported prices, represent about a million dollar business at retail and half that amount at wholesale.

2. The potential demand for quality, locally produced trees (well-shaped, full, good color, and without substantial deformities or defects) is good. It appears to exceed the current supply of such trees at prices comparable with those of trees of similar height from distant sources.

3. While tastes for species of Christmas trees vary, a number of customers who did not buy cedars in 1956 expressed a preference for them. These buyers can be expected to reconsider their purchase plans when local trees of satisfactory quality are available at competitive prices.

4. Usually, a very large percentage of locally grown unsold trees had such obvious quality weaknesses that they should never have been harvested.

5. Trees can be protected to preserve quality in the market, but actual quality improvement must come largely in production. Tinting, however, will hide certain color defects in otherwise good trees.

6. Lack of order and organization in harvesting and marketing Christmas trees appears to be a serious general handicap, particularly with regard to cedars. That needs to be overcome to increase their market acceptance.

7. A paramount need in harvesting and marketing is standardization, grading, and grouping of trees to permit producers, wholesalers, retailers, and consumers to understand each other when dealing with and pricing trees.

8. Standardization, grading, grouping, and probably packaging would be a boon to, if not essential to, moving trees through the great established mass markets as typified by chain grocery stores.

9. Development of processing, packaging, and grading that would result in local trees equal in shelf life, ease of handling, and attractiveness, at prices competitive with those of imported "ornamentals" might lead to a sharp expansion of sales, especially among mass sellers.

10. Christmas trees to many purchasers and potential purchasers are luxuries or conventional necessities. Therefore, quantity of sales should respond to price and appearance appeals. Thus, extra effort and care in producing desirable trees and in moving them at reasonable prices could mean much in added sales even though some of these trees merely replace those "appropriated" along the countryside.

11. If producers of Christmas trees can assure volume and standardization, they can interest both chain and independent wholesalers in their product. Without this assurance, they are likely to have to sell direct to consumers or to various kinds of independent retailers.

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