

# Texas Wholesale Market for Christmas Trees

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## Summary

Wholesale Christmas tree markets for Dallas, Houston and San Antonio were investigated during the 1962 Holiday Season to determine potential outlets for locally grown trees. The investigation was limited to species which could be grown in at least a part of the state, but it did not include those that cannot be grown in Texas such as Douglas fir, Scotch pine or balsam fir. Personal interviews were conducted with buyers in these three cities and a questionnaire was sent to service clubs in these three metropolitan areas and to Fort Worth. The study was performed at the request of the Texas Forest Service to provide information about the feasibility and direction of Christmas tree management research.

### *Findings*

A market exists in the wholesale trade in the three surveyed cities for Christmas trees that can be grown in Texas. Principal interest was expressed in shortleaf pine followed by redcedar and slash pine. Cultural practices, including pruning techniques, will need to be developed to improve the Christmas tree quality of these species before they can compete with the two principal imported trees, Douglas fir and Scotch pine.

Most wholesale produce buyers in these cities indicated they would be willing to purchase a small quantity of these locally grown trees to test their marketability. If tree quality could be improved and maintained, these buyers estimated that local

trees might capture as much as one-half of the more than 2 million Texas evergreen tree market.

Almost half of the Christmas trees ordered by wholesalers were 5 to 6 feet in height, with those 7 to 8 feet accounting for one-fourth, and those trees 3 to 4 feet in height accounting for 15 percent of the orders. The remainder or about one-tenth of the orders were represented in such sizes as 2 to 3 feet, 8 to 11 feet and 11 feet and over. Buyers indicated they wanted to receive their first trees about 25 days before Christmas and their last shipment about 20 days before Christmas. Orders were placed as early as January or February for tree sales the following Christmas, but some buyers preferred to wait until mid-summer. The usual terms of trade among wholesalers were direct purchases and f.o.b. delivered. Service clubs reported that direct purchases, delivered consignment and charge accounts were the most important terms of trade.

Most of the wholesale buyers indicated that representatives of tree growers or distributors carried out very aggressive sales programs. Sales people would contact buyers shortly after the Holiday Season to take orders for the following Christmas and would offer a wide variety of trade terms to satisfy the desires of the buyer.

The principal retail outlets were chain food stores, service clubs, supermarkets and other retail grocery stores. Wholesalers reported selling trees to an average of 80 different retail outlets. The tree markup by wholesalers was about 20 to 25 percent and they estimated the retail markup to be 100 percent or more with higher quality trees.

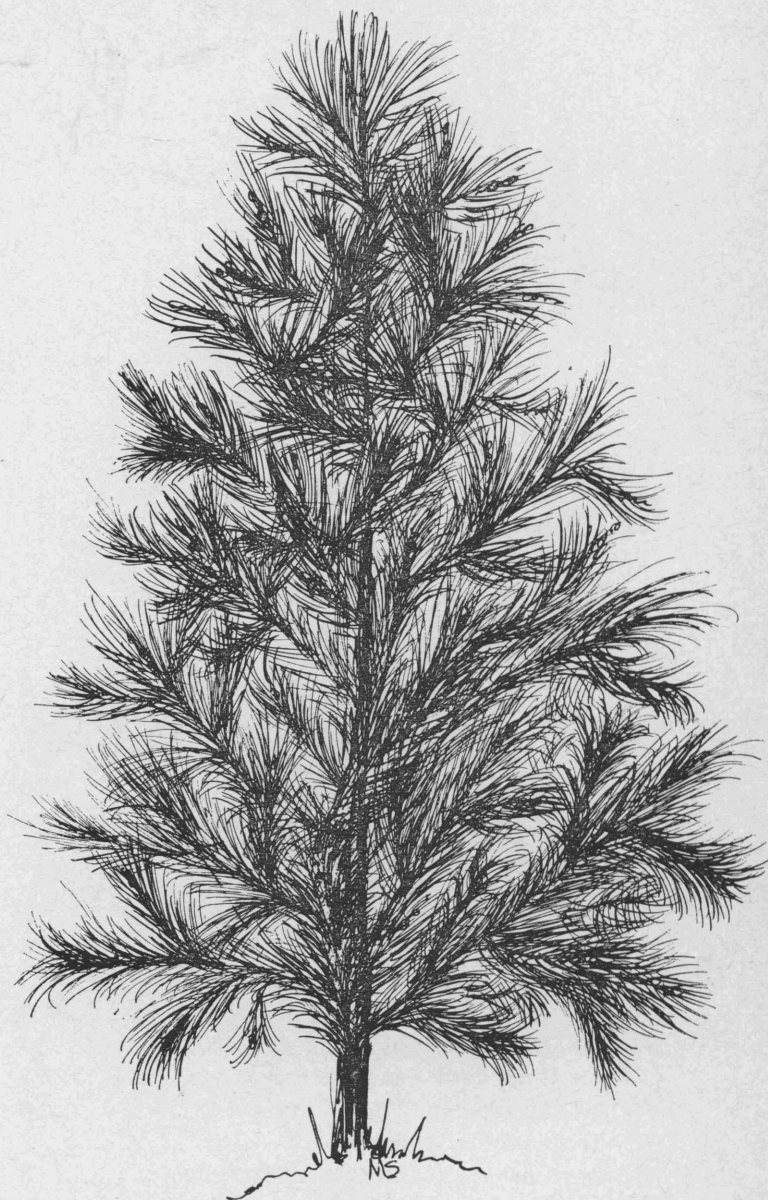
Interestingly enough the demand for artificial trees varied for the three market cities in the study. The Dallas area appeared to have reached its peak for artificial trees, and in some instances buyers had reduced orders. However, in Houston and San Antonio sales of these items were still increasing. Most buyers reported that the introduction of artificial trees had little influence on evergreen tree orders, and most of them had increased their business in recent years.

Potential markets for materials for Christmas decorations were also investigated with wholesale buyers. These items included pine cones, mistletoe, tree boughs or limbs, holly, sweetgum balls and other items. Some interest was expressed for mistletoe, holly, pine cones and evergreen tree limbs. However, buyers emphasized that they needed to have an adequate, dependable supply of these items in packaged form for convenient handling, and the materials had to be fresh.

### *Recommendations*

Because buyers surveyed by this study indicated some interest in buying locally grown Christmas trees, the Texas Forest Service has established test plantings of redcedar and shortleaf pine to develop acceptable cultural techniques. In addition they will explore the possibility of test plantings of an exotic species which may hold promise as a market substitute for Scotch pine. Despite more rapid growing conditions than in more northern climates, results will not be available for several years.

It is recommended that the species tested be developed in a range of sizes, shapes and colors and that these be market tested to determine buyer and customer preference. Also, it is suggested that future information pertaining to locally grown trees contain recommendations on marketing. This will likely require a review of the then prevailing markets. Prospective Christmas tree growers should be urged to consider carefully market requirements before entering the business.





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# Texas

## Wholesale Market

### for

# Christmas Trees

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The growing and selling of Christmas trees in the United States is big business. American producers annually dispose of over 33 million evergreen trees in the \$125 million a year U. S. Christmas tree market. Approximately 10 million trees are imported almost entirely from Canada and artificial trees total about 3 million each year. The U. S. evergreen tree production alone increased about 60 percent from 1948 to 1962 (1).

About 2 out of every 3 evergreen trees decorated in American homes during Holiday Seasons were grown on privately-owned lands in the U. S. About one-fourth of these trees were harvested on small Christmas tree farms located principally in the Lake States, Northeast and Pacific Northwest (1). In the past two decades, numerous magazine and newspaper articles have cited examples of both large and small-scale, profitable Christmas tree growing enterprises. These articles have generated interest among Texas landowners anxious to consider growing Christmas trees on a part-time commercial basis.

In 1953, H. F. Morris estimated that Texas was importing about 2 million Christmas trees yearly (2). Despite the portion of the market captured by metal and other artificial trees, this number likely had increased by 25 percent by 1962. This is about normal when considering the 25 percent increase in homes built in Texas between 1950 and 1960, *U. S. Population Census Data*. The main species imported are firs, pines and spruces grown in more northern climates. In attempts to take over part of this market, Texas tree producers would have the obvious advantages of fresher trees and lower transportation costs. However, trends in present Christmas tree producing areas are to increase plantings and production. Reports from some states indicate that plantings nearly doubled the annual sales.

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Past Texas trials at growing the non-native firs, pines and spruces for Christmas trees or other purposes have been very unsuccessful (3, 4). Therefore, it was necessary to determine the extent of the market potential for species which could be grown in at least a part of the State. The Texas Forest Service requested that the Texas Agricultural Experiment Station and the Texas Agricultural Extension Service undertake a study with the following objectives:

- Determine the potential for selling Texas grown Christmas trees.
- Determine what the competitive market requirements would be, i.e., what would local producers need to do to meet established marketing procedures?
- How, when and where does the competition for markets occur — species, area of production, size, grade, quality and that arising from artificial trees?
- Would buyers discriminate against locally produced trees?

### Method and Procedure

The study was designed to use personal interviews of wholesale dealers in three selected Texas cities to develop information about their purchases of Christmas trees. A questionnaire was designed to include only the dealers who had the responsibility of deciding where and from whom the trees were purchased. Wholesalers who purchased from other wholesalers were excluded. The cities were Dallas, Houston and San Antonio. These cities were selected to survey major market areas and provide geographic representation with a limited amount of time and money. In addition to the wholesalers in the selected cities, a mailed questionnaire was used to contact service clubs in Dallas, Fort Worth, San Antonio and Houston.

TABLE 1. QUESTIONNAIRE RESPONSES OF CHRISTMAS TREE WHOLESALERS AND SERVICE CLUBS IN SELECTED TEXAS CITIES, 1962

Cities	Wholesalers		Service clubs			Selling trees Yes No
	Contacted	Usable questionnaires	Mailed questionnaires	Clubs reporting	Percent	
	Number	Number	Number	Number	Percent	
Dallas	13	11	45	27	15	85
Fort Worth			44	32	6	94
Houston	17	14	1	1	100	
San Antonio	9	7	11	7	100	
Total	39	32	101	67	221	179
Percent	100	82	100	66	55	45

This study obtained information on the 1962 marketing season. The number of wholesalers interviewed and the responses to the service club questionnaire are indicated in Table 1. Data were collected in November and December, 1962, and early in January, 1963. The use of 1962 in the tables will refer to that Christmas tree marketing season.

In addition, 65 shipping firms were mailed a request for price list catalogues. Information concerning the selling and shipping of trees from the growing areas was obtained from the 41 responding firms.

This report presents the results of these investigations.

### Market Potential for Texas Trees

The market for locally produced Texas Christmas trees was investigated, as was the potential for marketing certain decorative materials such as pine cones, mistletoe, holly and other items.

### Marketing Locally Produced Trees

The buyers for wholesalers and service clubs were asked if they would buy locally produced trees if they were available. More than three-fourths replied "yes" if the trees were of comparable quality to northern species, such as Douglas fir and Scotch pine. Quality in this case referred mainly to tree form or shape, color and ability to retain needles. There is a market for locally grown trees, provided cultural techniques can be developed to improve tree form.

Wholesalers pointed out that they did not have a minimum number of trees they had to buy, but would purchase as few as 100 trees per order. Some buyers said they would prefer initially to purchase a small quantity of about 100 trees or less to test their saleability. Generally, they said they would buy in quantities the producer had available.

Most of the buyers surveyed were shown representative pictures of seven species of trees which could be grown in most or a part of Texas. These included shortleaf, loblolly, slash, and longleaf pines; redcedar; Arizona cypress and arborvitae. Response for the trees varied between cities, but shortleaf pine led the selection in all three because of its superior shape, especially as depicted in the picture shown to buyers. Redcedar was next in order of selection followed by slash pine. It should be noted that redcedar was more acceptable in the San Antonio area than in Dallas or Houston because the con-

sumers are accustomed to having them readily available from the surrounding areas. Buyers indicated they would pay as good a price for locally produced trees as for northern species if they were of equal grade and quality.

Wholesalers were asked to estimate the amount of the market that locally produced trees might capture within their area. They reported that starting with a small percentage of the market, the volume could be increased to 25 or even as high as 50 percent of the total market if the trees were of high quality and available in sufficient quantity.

Container-grown or balled and burlapped evergreen trees are occasionally sold for Christmas trees. They are purchased for planting outdoors after Christmas. About one-fourth of the respondents indicated that they had tried this type of tree for Christmas tree sales, but they had not been too successful in marketing them because of space and extra care needed in handling.

In addition to the trees used as exhibits in this study, some exotic trees might be tested to determine if they would make suitable Christmas trees. However, any species grown for Christmas trees in Texas will need to be pruned or sheared to develop them into the more compact, symmetrical shapes desired by the consumer. Trees 5 to 6 feet in height are the most desirable, but some markets exist for both shorter and taller trees.

### Market for Christmas Decorations

These items were included in this category; boughs, mistletoe, pine cones, holly, magnolia leaves, sweetgum balls, colored leaves, decorative fruit, hardwood limbs and other material that a housewife might use for home decorations. Mistletoe, holly, pine cones and boughs were the more desired items mentioned by wholesalers. Wholesalers in the three surveyed cities indicated that in the past they had had opportunities to sell one or more of these items. However, they had been discouraged from further attempts to market decorative material because it was not readily available in convenient packages and continuous supply. Also, if this material was not fresh, it detracted from sales. Some wholesalers were not interested in buying decorative materials. The reasons reported were that they were produced locally and sold directly to retail stores, thus eliminating the wholesaler, or the materials were too perishable for easy marketing.

Problems in the marketing of Christmas specialties indicate a need for adequate, dependable supplies of packaged materials so that the retailer can conveniently handle it and have fresh material. There is a demand for this material by the housewife for decorating the home, especially during the Holiday Season. However, much of this demand is currently being supplied by artificial materials made of plastic.

### Marketing Practices for Texas Christmas Tree Wholesalers

#### Shipping Point Information

At the shipping point, Christmas trees were cut from planted tree farms, or as natural or wild trees from both private and public lands. Once harvested, they were hauled to the roadside, bundled and then moved to an



TABLE 2. SPECIES OF CHRISTMAS TREES ADVERTISED BY SHIPPING FIRMS, 1962<sup>1</sup>

State or region	Douglas fir	Scotch pine	Balsam fir	Spruce	Norway (red) pine	Austrian pine	White pine
	—	—	—	—	—	—	—
	Indication markers <sup>2</sup>						
Illinois	X	X	X	X	X		
Maine			X	X			
Michigan	X	X	X	X	X	X	
Missouri	X	X					
Pennsylvania		X			X	X	X
Wisconsin		X	X	X	X		
British Columbia		X	X	X			
Nova Scotia			X				

<sup>1</sup>Sixty-five shipping firms were requested to supply a price list; 41 firms responded.

<sup>2</sup>Several firms were associations representing a number of growers.

accessible road where they were loaded. At the cutting site, the trees were graded, sized and bundled by species.

### Species, Size and Source of Christmas Trees

There are a number of species of evergreens that are used for Christmas trees; for example, Douglas fir, Scotch pine, balsam fir, several spruces, Norway or red pine and white pine. Producing areas are in the northern section of the United States and Canada — Maine, Pennsylvania, Michigan, Wisconsin, Illinois, Montana, Washington and certain Canadian provinces, such as British Columbia and Nova Scotia. From some shipping firms, it was possible to purchase several species of evergreens to be used for Christmas trees and from others only one or two species were available for sale. The species of Christmas trees advertised during 1962 by selected shipping point firms located by states or provinces are shown in Table 2. Available grades and sizes of Christmas trees from these shippers are shown in Table 3. Grades, in most instances, were referred to as top quality from their own producing areas and occasionally they referred to the trees as U. S. No. 1. Each shipper has his own ideas as to what constitutes Christmas tree quality, but this idea of quality is not consistent throughout the industry.

### Methods of Sale

Selling of Christmas trees at the shipping point varies with type of sale methods, i.e., f.o.b. delivered, tree on the stump, tree at the roadside and other means.

Some shippers offered to obtain transportation while others did not. Thus, there exists a vast variety of merchandising methods for Christmas trees.

There was competition in the marketing of these trees within and between areas and species. In some states a large number of small growers have formed a state marketing organization through which trees are sold.<sup>1</sup> This allows for some control over the number of trees to be cut, grades, desirable sizes and other marketing information. In other areas, small individual growers did their own advertising and selling. In a number of instances, Christmas tree farms were owned by persons operating another business. Thus, marketing of Christmas trees was secondary and a part-time function for them.

### Shipping Point Price Range

A review of the price lists received from shippers indicates a wide range of prices according to the specified conditions of sale. Table 4 indicates the 1962 range in Christmas tree prices at shipping points for various sizes of Scotch pine. The conditions listed cause considerable price variation and intensify the price competition for Christmas trees at the wholesale and retail level.

The following list illustrates price variations according to sale conditions.

1. Quantity discounts were available — discounts varied with size of order.
2. Prices f.o.b. destination, in carload lots.
3. Prices f.o.b. shipping point or farm.
4. Prices f.o.b. shipping point with added transportation charges.
5. One price quoted if seller cuts trees and another reported if buyer selects and cuts trees.
6. Prices delivered by area zone number.
7. Prices quoted on baled and unbaled trees.
8. Prices quoted loaded in freight car, 10 cents less when loaded in semitrailer, f.o.b. shipping point.
9. Prices quoted for sizes different from normal accepted size, examples: 3'-4½', 4½'-5½', 5½'-7', 6½'-9', etc.

<sup>1</sup>A list of the State Christmas tree associations and copies of their constitutions are available from the Agricultural Economics and Sociology Department, Texas A&M University, College Station, Texas.

TABLE 3. GRADES AND SIZES OF CHRISTMAS TREES ADVERTISED BY SHIPPING FIRMS, 1962<sup>1</sup>

Tree species	Size of trees									Grades listed			
	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9'-11'	Over 11'	Extra select premium top quality	U. S. No. 1	U. S. No. 2	Utility
	Indication Markers <sup>2</sup>												
Douglas fir		X	X	X	X	X	X				X		X
Austrian pine			X	X	X	X							
Norway (red) pine				X	X	X	X	X					
Scotch pine	X	X	X	X	X	X	X	X		X	X	X	
White spruce		X		X	X	X	X	X	X				

<sup>1</sup>Sixty-five shipping firms were requested to supply price list; 41 firms responded.

<sup>2</sup>Several firms were associations representing a number of growers.



TABLE 4. SAMPLE OF 1962 PRICE RANGE FOR VARIOUS SIZES OF SCOTCH PINE TREES FROM SHIPPING POINT AREAS

Species	Range in Christmas tree prices at shipping point (price per tree) <sup>1</sup>								
	Size of trees								
	2'-3'	3'-4'	4'-5'	5'-6'	6'-7'	7'-8'	8'-9'	9'-10'	10'-11'
	Dollars								
Scotch pine	.85	1.00-2.00	1.15-2.50	1.25-3.00	1.40-4.00	1.75-5.00	2.50-3.00	2.50-	3.00-

<sup>1</sup>Sixty-five shipping firms were requested to supply price list; 41 firms responded.

10. Trees baled singly with automatic baler for a 10 cent additional charge.

11. Quoted tree prices when bundled by machine and placed adjacent to an improved highway for trailer truck pickup. If trees are taken from field not bundled, 10 cents per tree may be deducted from price.

12. Prices range from \$1.25 to \$1.50 on the stump for No. 1 or better grades, 6 to 7 feet tall. Cutting and bundling would add about 35 cents per tree.

#### *Loading and Transporting*

The loading and transportation requirements varied within each producing area. F.O.B. was one method of transportation while in other cases the buyers at the terminal receiving point had to make arrangements for the type of transportation used. Transportation was either by truck or rail, depending upon the distance traveled and the demands or wishes of the buyer. Rail transportation was generally used for shipments from more distant points such as Canada.

The number of trees in each railroad car ranged from about 2,600 to 4,050. The trees were tied in bales or bundles by various height classes and each railroad car ranged from 600 to over 1,050 bales. The number of trees per bale varied — the smaller trees (2 to 3 feet) had 8 trees per bale, those 3 to 4 feet had 6 trees per bales, 5 to 6 feet had 4 trees per bale and larger trees (11 feet and over) had a single tree per bale. Therefore, the smaller number of bales per car may have indicated

that it contained more of the larger size trees. For this reason, transportation can become an important cost factor, i.e. a lower number of trees per car causes an increase in the transportation charge per tree.

#### *Terminal Market Receiver*

The term wholesaler includes a number of business operations such as receivers, service wholesalers, distributors, jobbers and others. Therefore, it was important to determine the type of business operation associated with the wholesaling of Christmas trees. For all three cities, the largest number were service wholesalers. The next largest group were national chain stores. Table 5 shows the distribution and types of wholesalers located in the three cities.

In order to have a better understanding of the methods and experience of the persons ordering trees from the shipping point, it was desirable to know how long the firms had been associated with the purchasing and handling of Christmas trees. The 11 firms responding to the questionnaire in Dallas averaged 4 years' experience; 14 firms in Houston had a 13 year average and San Antonio's 7 averaged 18 years. Of the 14 reporting service clubs in the four selected areas the average was 9 years' experience, ranging from 1 to 16 years. One service club in Houston was the central purchasing group that handled trees for the entire club membership in that city. This information indicates that the buyers surveyed had considerable experience in purchasing Christmas trees.

#### *Changes in Quantity of Trees Sold*

Increases in the volume of trees handled is a good indication of business growth. Reports from buyers indicated that the number of wholesalers who purchased Christmas trees from the shipping point had decreased. However, the increase in business reported by surveyed wholesalers and service clubs was significantly greater than the reported decrease. One-half of the wholesalers in the three selected cities during the 3 years before the 1962 survey stated an increase of business, nearly one-fourth reported a decrease, and 28 percent stated their business had remained the same. In the case of the service clubs, for the previous 3 years, the four areas reported that over one-half had increased, over 30 percent decreased, and nearly one-seventh had remained the same. No check was made of the number of firms no longer selling trees, or of the service clubs that did not reply to the questionnaire to determine an overall Texas Christmas tree market change.

San Antonio had the largest increase in business in both the service club and wholesale trades. Some of these wholesalers reported shipping large quantities of trees to Mexico. The overall increases indicated that

TABLE 5. BUSINESS CLASSIFICATION OF CHRISTMAS TREE WHOLESALERS INTERVIEWED IN SELECTED TEXAS CITIES, 1962

Type of wholesaler	Dallas		Houston		San Antonio		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Service wholesalers	2	18	8	58	1	14	11	35
Distributors	0	0	1	7	2	30	3	10
Jobbers	0	0	1	7	1	14	2	6
Purveyors	1	9	0	0	0	0	1	3
Others	1	9	1	7	0	0	2	6
National chains	5	46	1	7	0	0	6	19
Regional chains	0	0	1	7	1	14	2	6
Local chains	1	9	0	0	1	14	2	6
Voluntary cooperatives	0	0	1	7	0	0	1	3
Cooperatives	1	9	0	0	1	14	2	6
Total	11		14		7		32	
Percent		100		100		100		100

the surveyed wholesale and service club Christmas tree business had improved during the previous few years.

#### *Number of Dealers from Whom Trees were Purchased*

Sixty-four percent of the wholesalers and service clubs reported that they had purchased trees from more than one Christmas tree shipping point dealer. The number of dealers from whom trees were purchased ranged from two to three for the wholesalers with an average of three different shippers. For the service clubs, it averaged two shippers. This indicates that the buyers do shop for the type of trees they want in various areas. This might be due to the fact that certain trees come from certain areas, and buyers are interested in purchasing the better quality trees.

#### *Duties of the Wholesaler*

The wholesaler or receiver at the terminal market had various duties to perform, such as, ordering the trees in advance long before the cutting season to insure delivery; determining the number, size, grade and species of trees; and selecting delivery date and type of transportation. The wholesaler or terminal market receiver needed to receive these trees and move them to the various retail outlets on a specified date. These wholesalers may sell directly to retail outlets or supply other wholesalers who in turn furnish some of their retail outlets with trees.

The terminal market receiver may be an established produce wholesaler, or a service club that is selling Christmas trees as a club fund-raising project. Pooling of a carload may be used by service clubs in adjacent areas, thus splitting the transportation costs and satisfying the requirements of ordering one carload.

#### *Purchasing of Christmas Trees by Wholesalers*

The wholesalers interviewed had placed their orders by at least November 1, and some reported placing orders with sales representatives as early as January or February. Some of the salesmen are located in the Southwest Christmas tree market areas. They, and sales representatives stationed in other regions carry out a very aggressive sales program by making frequent contacts with prospective buyers.

Sixty percent of the wholesalers reported that they also bought trees locally from wholesalers. This was done when they needed a certain size or species of tree and they were unable to have these shipped in soon enough to market. Also, a few individuals offered ungraded, locally produced trees and they were purchased for public relation purposes.

#### *Source of Purchases*

The wholesalers reported that buying directly from the grower was their most important method of purchase. Next in importance was purchase through brokers, followed by purchase through distributors and service wholesalers. This distribution is shown in Table 6. The usual terms of trade among wholesalers were direct purchases, f.o.b. delivered and other methods. Service clubs reported that direct purchases, delivered, consignment and charge accounts were the most important terms of trade for the Christmas trees purchased. Most of the wholesalers reported that when they worked with a reliable

TABLE 6. SOURCE OF PURCHASE OF CHRISTMAS TREES FOR WHOLESALERS IN SELECTED TEXAS CITIES, 1962

Source of trees	Dallas		Houston		San Antonio		Total	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
Growers	5	41	6	42	3	44	14	43
Service wholesalers	3	25	0	0	1	14	4	12
Sale agents for shippers	0	0	1	7	1	14	2	6
Brokers	2	18	3	22	1	14	6	18
Distributors	1	8	3	22	1	14	5	15
Other	1	8	1	7	0	0	2	6
Total	12		14		7		33	
Percent		100		100		100		100

grower, they could establish their own method of trade terms agreeable to both parties. When the wholesalers bought directly from the shipping point, they dealt primarily with the grower-shipper and shipping point broker, or with salaried buyers.

#### *Preferred Dates to Receive Trees*

The wholesalers needed to have their first trees about 25 days before Christmas and averaged about 20 days before that holiday for their last delivery. They preferred to receive all trees in a short time; such as 5 days. The wholesalers said they needed to sell all of their trees about 7 to 13 days before Christmas, averaging around 9 days. Service clubs needed to have their first trees about 25 days before Christmas and their last trees about 18-20 days prior to that holiday. The clubs would like to sell all their trees a day or 2 before Christmas.

#### *Tree Quality*

One-fourth of the wholesalers reported that 85 percent of their purchases were for pruned or sheared trees and that their markets had been decreasing for the non-pruned trees during the past few years. They indicated a definite preference for the better formed trees which could be obtained from relatively intensively managed Christmas tree farms. When asked about the length of time the different species would remain fresh, three out of four wholesalers said they had found a difference. They indicated certain species remained fresh longer than others. From the buyers viewpoint, it was difficult to isolate a single species as superior to all others. However, all of the spruces were rated low on the characteristics of remaining green and fresh. They qualified their preferences based upon the condition of the trees, loading method and how they had been shipped and the amount of hot weather encountered in shipping.

#### *Pricing of Trees*

The wholesalers reported various methods of figuring wholesale markup. It varied from 25 to 50 cents per bundle or more and the individual tree markup ranged from 20 to 25 percent. The markup varied through the season for the wholesalers and decreased as Christmas Day approached, especially if they had only poorer quality trees left. The wholesale markup was the same for all species of trees.



TABLE 7. DISTRIBUTION OF CHRISTMAS TREES BY WHOLESALERS IN SELECTED TEXAS CITIES, 1962

Businesses	Dallas		Houston		San Antonio		Total	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
Retail								
grocery	3	10	8	19	1	9	12	14
Supermarkets	4	13	7	17	1	9	12	14
Chain food stores	8	25	6	15	3	28	17	21
Gas stations	1	3	2	5	0	0	3	4
Individuals using empty lots	2	6	7	17	2	18	11	13
Service clubs	3	9	7	17	2	18	12	14
Youth groups	3	9	2	5	0	0	5	6
Other	8	25	2	5	2	18	12	14
Total	32		41		11		84	
Percent		100		100		100		100

According to the wholesalers and service clubs, the number of trees discarded in 1961 depended on a number of factors. These included how accurately they had estimated the quantity of trees needed and the condition of trees upon arrival or how long they remained green. The average wholesaler reported about 6.5 percent of the trees discarded, ranging from 4 to 10 percent. The service clubs had an average of 6 percent, ranging from 3 to 10 percent.

#### Retailing

The wholesale establishments contacted in the three selected cities supplied trees to various types of retail outlets such as grocery stores, supermarkets, chain stores, gas stations, service clubs, youth groups and others, as shown in Table 7. Wholesalers reported that the retail outlets to which they sold trees varied in number from 40 to 135 per firm with an average of 79 outlets. The 24 wholesale firms reported they furnished 1,907 retail outlets with Christmas trees.

#### Displaying Christmas Trees

The retail grocer and the service clubs competed with each other for Christmas tree sales. They performed similar functions for the purchaser. The trees are dis-

played outside and arranged so that they will spread out to their normal shape for visual inspection by the customers. This requires a considerable amount of display area and most retail grocery stores were at a disadvantage because they did not have adequate space. Service clubs usually used a vacant lot for display purposes. Both groups reported that when purchasers made selections, the trees were moved or shaken, resulting in some damage to them.

#### Retail Pricing

The retail markup varied with almost every outlet and ranged from double the wholesale price to increasing it four times for an exceptionally well-shaped tree. The service clubs indicated this was near normal. At the time of the study, the uniform grades or standards for trees were often used. The various shapes and sizes were generally sold as one grade, but some differentiation was made in price. Trees with better shape sold for higher prices and poorer ones sold for less. This suggests that there was not any set pattern for markup of trees at the retail level.

Wholesalers generally pointed out that the tree should be symmetrical and well balanced with uniform spacing of the branches. Most of the retail grocery stores handled Christmas trees for the convenience of their customers. However, they reported that it was necessary for them to perform this service to maintain grocery sales before the Holiday Season because shoppers would frequent those stores with trees for sale.

#### Species Purchased

The wholesalers and service clubs sampled in four Texas cities purchased over 527,000 Christmas trees during 1962. Douglas fir ranked first in choice with more than 445,000 trees, followed by Scotch pine and balsam fir. The trees ranged in sizes from 2 to 3 feet to trees over 11 feet in height. The most predominant size was 5 to 6 feet, followed by trees 7 to 8 feet. Table 8 shows the distribution of Christmas trees purchased by size.

#### Competition

Competition for Christmas trees came from a number of different sources. It occurred between the evergreen

TABLE 8. RELATIVE DISTRIBUTION OF CHRISTMAS TREES PURCHASED BY WHOLESALERS AND SERVICE CLUBS BY SPECIES AND SIZE, IN SELECTED TEXAS CITIES, 1962

Species of Christmas trees	Christmas trees		Size of trees					
			2'-3'	3'-4'	5'-6'	7'-8'	8'-11'	11' and over
	Number	Percent	Percent					
Douglas fir	445,174	84.4	7	17	45	26	4	1
Scotch pine	60,336	11.4	1	4	63	28	3	1
Balsam fir	18,100	3.4	9	9	54	18	10	0
Spruce	3,058	0.5	14	15	37	23	11	0
Norfolk Island pine	250	0.1	0	0	100	0	0	0
Redcedar	150	0.1	10	45	45	0	0	0
Austrian pine	100	0.1	0	0	100	0	0	0
White fir	75	*	0	0	0	100	0	0
Norway pine	25	*	0	0	0	100	0	0
Total	527,268	100.0						
Percent distribution			7	15	47	26	4	1

\*Less than .05 percent



and artificial trees, between species of evergreen trees, from various firms and areas shipping Christmas trees and between sizes of trees. Artificial trees or those whose natural condition had been altered may appear in a number of different forms. They are made from aluminum, plastic or fiberglass, or sometimes evergreen trees are flocked, dyed, or painted. The metal, plastic, or fiberglass trees may be used for more than 1 year, giving them a competitive advantage. The flocking of trees — spraying a plastic substance on evergreen trees — is limited only to firms equipped for performing this operation. These trees were marketed in all three cities in the survey with larger ones selling for \$40 or more.

#### *Demand for Certain Artificial Trees*

The demand for the aluminum, plastic, or fiberglass trees varied for the three market cities in the study. The Dallas area seemed to have reached its sales peak as the supply was not increased for the current season. In some instances tree orders were decreased. In San Antonio and Houston, sales of these artificial trees were still increasing in volume.

Stores liked to handle the artificial trees because of their uniformity. For this reason, they only had to display one tree which was a good sample of the others packaged in small cartons. One of their basic advantages is uniformity of size and shape. Generally the packaged trees only came in two sizes, 4 and 6 feet.

#### *Handling of Evergreen or Natural Trees*

By comparison, the natural Christmas trees needed an area for display, usually outside. Generally, the stores did not have adequate space for this purpose. In some instances, stores had to have an employee take care of the tree sales alone. Wholesalers reported natural trees had a wide variation in quality and many trees were not symmetrical in shape or did not have uniform spacing of branches. However, they pointed out that the variation was much less for pruned, plantation-grown trees, and they indicated a decided preference for them. When the Christmas trees were received they were removed from bundles and then priced according to species and size.

Also, competition appeared between species such as Douglas fir and Scotch pine and between tree sizes. In addition, competition arose for the Christmas tree markets from various producing areas such as Michigan,

Montana and Canada, and between pruned or sheared trees and nonpruned ones. Price was also important in the marketing of Christmas trees. This would include price by size, source, services performed at the shipping point and wholesale and retail services. These factors of competition must be considered in determining the feasibility of producing and marketing locally produced trees.

#### *Advertising*

The amount and type of advertisement varied between natural and artificial trees but much more was being done for artificial ones. Very little advertising of evergreen trees was noted for the period from November 1 to the middle of December. Their advertising appeared only in newspapers as a small ad by a local firm. Retail grocery stores sometimes had one-line ads or inserts on the availability and price of evergreen trees in their regular large advertisements. At the same time, large ads for artificial trees appeared in newspapers, brochures, national magazines, advertising catalogues for mail order companies and in local advertisements of retail stores. Many of these ads described the advantage of many years of use for the fabricated artificial trees. For this reason, consumers received much more exposure to artificial trees through advertising media than they did for natural or evergreen Christmas trees.

#### **Acknowledgments**

Grateful acknowledgment is made to the Texas Forest Service for sharing a major portion of the travel expenses involved and for the assistance of District Forester D. W. Fate in performing this study.

#### **References**

1. Sowder, A. M., "Christmas Tree Data for 1962," *Journal of Forestry*, November, 1963, pp. 869-871.
2. Morris, H. F., "Christmas Trees in Northeast Texas," Progress Report 1625, 1953, Texas Agricultural Experiment Station.
3. Morris, H. F., "Growing Christmas Trees in Northeast Texas," *Texas Agricultural Progress*, March-April 1963, Vol. 9, No. 2, pp. 15-16.
4. Zobel, B. J., Campbell, T. E., Cech, F. C. and Goddard, R. E., "Progress Report — Survival and Growth of Native and Exotic Pines, Including Hybrid Pines, in Western Louisiana and East Texas," Research Note No. 17, 1956, Texas Forest Service.

# State-wide Research



The Texas Agricultural Experiment Station is the public agricultural research agency of the State of Texas, and is one of the parts of Texas A&M University.

Location of field research units of the Texas Agricultural Experiment Station and cooperating agencies

## OPERATION

IN THE MAIN STATION, with headquarters at College Station, are 13 subject-matter departments, 3 service departments, 3 regulatory services and the administrative staff. Located out in the major agricultural areas of Texas are 20 substations and 10 field laboratories. In addition, there are 13 cooperating stations owned by other agencies. Cooperating agencies include the Texas Forest Service, Game and Fish Commission of Texas, Texas Prison System, U. S. Department of Agriculture, University of Texas, Texas Technological College, Texas College of Arts and Industries and the King Ranch. Some experiments are conducted on farms and ranches and in rural homes.

## ORGANIZATION

THE TEXAS STATION is conducting about 450 active research projects, grouped in 25 programs, which include all phases of agriculture in Texas. Among these are:

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| Conservation and improvement of soil | Beef cattle                     |
| Conservation and use of water        | Dairy cattle                    |
| Grasses and legumes                  | Sheep and goats                 |
| Grain crops                          | Swine                           |
| Cotton and other fiber crops         | Chickens and turkeys            |
| Vegetable crops                      | Animal diseases and parasites   |
| Citrus and other subtropical fruits  | Fish and game                   |
| Fruits and nuts                      | Farm and ranch engineering      |
| Oil seed crops                       | Farm and ranch business         |
| Ornamental plants                    | Marketing agricultural products |
| Brush and weeds                      | Rural home economics            |
| Insects                              | Rural agricultural economics    |
|                                      | Plant diseases                  |

Two additional programs are maintenance and upkeep, and central services.

*Research results are carried to Texas farmers, ranchmen and homemakers by county agents and specialists of the Texas Agricultural Extension Service*

AGRICULTURAL RESEARCH seeks the WHATS, the WHYS, the WHENS, the WHEREs and the HOWS of hundreds of problems which confront operators of farms and ranches, and the many industries depending on or serving agriculture. Workers of the Main Station and the field units of the Texas Agricultural Experiment Station seek diligently to find solutions to these problems.

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