Marketing Christmas Trees
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MARKETING CHRISTMAS TREES

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MARKETING CHRISTMAS TREES

by
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REMEMBER THE GOOD OLD DAYS when sunny fall weather brought Christmas tree buyers out to the plantations in droves? This custom has nearly vanished. Each year, however, in October and November, thousands of growers will be busy cutting, bundling, and piling Christmas trees for sale.

The Christmas tree industry has changed in recent years. Today we deal with a different quality tree, largely produced at high cost on a plantation or tree farm. Christmas tree production is no longer a part time way to market some extra labor or work in the swamp. The Christmas tree producer has become a skilled, knowledgeable specialist in growing his product. Customers have changed, market channels have changed, market areas have changed. This publication will attempt to outline and focus these changes, and point out the means for meeting the challenge of this new market.

Michigan is the leading state in the production of plantation grown Christmas trees, particularly the Scotch Pine variety. With competition of other Christmas tree producing states, imported Christmas trees from Canada, and the advent of artificial trees, it has become necessary for Michigan Christmas tree growers to recognize the needs and problems of the retail sales outlet. With this knowledge, Michigan tree growers can develop merchandising techniques to retain their leadership.

Information in this publication was gathered in the following manner:

(1). Questionnaires were mailed to over 700 retail operators in 48 states (excluding only Hawaii and Alaska) and Canada. Of those questionnaires returned, 322 were used in tabulating information. A few questionnaires which were incomplete or not sufficiently representative of the Christmas tree industry were discarded. These questionnaires represented retail dealers from 30 different states and Canada.

(2). A follow-up personal interview of a sampling of retail dealers was made by the author to authenticate the answers made on the questionnaires.

(3). Consumer preference panels were conducted to verify certain consumer preferences and tastes. These panels were supervised by Michigan State University personnel.

(4). Much of Christmas tree literature on marketing was perused and studied, and 18 references are quoted in this bulletin.

Characteristics of Retail Lot Operators

The characteristics of retail lot operators have changed materially in the last few years. Most of us have visions of a retail lot being set up by some enterprising merchant. This has been a fairly accurate scene, as most *natural* trees are sold that way. It is the change in the characteristics of these merchants that is significant to the Christmas tree producer.

Ten years ago the retail lot operator ranged the whole spectrum from housewives, gas station operators, tavern keepers, civic groups, growers, used car sales outlets, etc. Almost anyone who had some extra time and could find a place to set up a few trees was in business. This vast variety of temporary entrepreneurs was gone the day after Christmas. If they made some money, they were back next year. If they didn't, chances were they wouldn't try a second time but someone else would.

This situation is rapidly changing. Today, Christmas trees are being sold by regular merchants who are in the business each year. These businessmen are not pounding up and down the rural paths looking for a "fast buck", or panicky seller. These buyers are looking for reliable sources of quality merchandise.

What is the "New Look" of the Christmas tree dealer that is being developed? First, he is big. Table I illustrates the size of today's retail outlet. About two-thirds of the retail outlets showed sales of over 750 trees in a 1964 national survey of dealers.

Table 1. Number and Size of Christmas Tree Dealers

Number of Trees Sold	*Number of Outlets*
1 - 250	22
251 - 500	39
501 - 750	43
751 - over	214

By contrast, a few years ago 250 to 500 tree sales per lot were common place as the great bulk of retail sales were made by local grocers (11).* Civic groups were a small percentage of the total retail outlets (1). Today the retail outlets are concentrated in the following manner: civic groups (clubs, schools, churches, Scouts, fraternal, etc.), garden centers and produce stands, and chain grocery stores account for the largest percentage of retail outlets. The larger the urban area, the more Christmas trees sold per retail outlet. Retail lots in cities of over 250,000 population sold about 4 times as many trees per lot on the average than cities of under 5,000 population.

These retail lot owners are in business *to stay*. Over 60% of the retail lot operators surveyed by the author in 1964 had been in business for six or more years. Only 10% had only one year's experience (18). The in-and-outer is fast disappearing from the Christmas tree retail scene. This stability of operational tenure offers the producer an opportunity for repeat sales, providing he gives the quality of product and service demanded. The ability to acquire a new set of customers each year is limited for the wholesaler that is not reputable in his business practices.

Table 2. Christmas Tree Sales by Size of City

City Population	*Number of Reports*	*Average No. Trees Sold*
- 5,000	30	528
5,001 - 10,000	26	863
10,001 - 25,000	49	1,342
25,001 - 50,000	57	1,360
50,001 - 100,000	50	1,601
100,001 - 250,000	50	1,807
250,001 - over	47	2,062

Characteristics of Trees Sold

Canada is the leading source of trees for the U.S. market. Nearly one-half of the retail lot operators had secured a part of their trees from Canadian sources. Two major factors seemed to account for this. First: Canadian sources offer a wide assortment of species. They have volume supplies of Scotch Pine, Spruce, Fir, and Balsam. Second: Canadians are doing a very aggressive job of selling and promotion. Many firms have agents or salesmen calling directly on Christmas tree buyers.

Following Canada, Michigan is the second largest source of Christmas trees, supplying about 13% of the retail supplies. Pennsylvania is third with 7% and Washington is 4th with 5%. Montana ranks 5th with 4% as a source of supply. According to this survey, Michigan is the leading state as a source of plantation grown trees in the nation.

Scotch Pine has become by far the leading species of Christmas tree sold. Its spectacular growth as a Christmas tree species can be seen in Figure 1. In less than 10 years it has come from nowhere to nearly 30% of the total market. Its popularity is further evident in the fact that 80% of the retail lots offered at least some Scotch Pine Christmas trees for sale (17). Its obvious consumer appeal is based on the better quality of the Scotch Pine plantation-produced tree rather than on price. Scotch Pine retailed for 60¢ to $1.00 more per tree on the average compared to other species (2).

It is most important to recognize that consumers cannot generally identify Christmas tree species. A check of urban consumers showed that only about 25% gave the correct name for the species they had purchased (2). This fact should challenge producers of Scotch Pine to promote, and educate dealers and consumers, to the relative merits of the Scotch Pine. Christmas trees fall into three groups: fir, pine, and spruce. According to research done at Cornell University, Scotch Pine is rated high in needle retention, in firmness of branches, and fragrance (20). These attributes of the plantation-grown Scotch Pine Christmas tree should be sold by the Michigan Christmas tree industry.

While Scotch Pine has become the nation's No. 1 Christmas tree, we should not overlook the fact that other species are handled by most Christmas tree dealers. More than 40% of the retail lots surveyed carried Douglas and Balsam Fir while 21% carried Spruce. Only 10% offered only Scotch Pine.

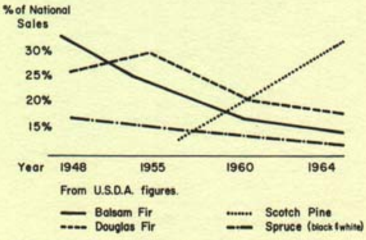

Figure 1. — Trends of leading species sold for Christmas trees.

* Numbers in parentheses refer to bibliography listed on the back cover.

Above and right — Typical Michigan Scotch pine Christmas tree plantation.

One of the goals of Scotch Pine suppliers should be to supply their dealers with a variety of tree species. It is believed that this is one of the prime advantages that Canadian sellers now have. Arrangements to supply other species can be made through cooperative sales efforts, or by becoming a broker for Christmas trees other than Scotch Pine, or by selling through a large broker-handler. This emphasizes the need for growers to have organized sales outlets either through cooperative sales agencies or large reputable sales brokers. These large organizations have the ability to better serve the needs of the dealer through a full line of species. Retail dealers like to deal with one supplier. When a supplier can furnish only one species of tree the retailer's sales position is severely weakened. This is particularly true of the larger dealers.

Table 3. Kind of Trees Sold by Dealers

Species	*Number of Lots*	*Percent of Lots*
Scotch Pine	261	81%
Balsam	136	42%
Fir	141	44%
Spruce	67	21%
Other	46	14%

Here is a Federally graded "U.S. Premium" Scotch pine, tagged and ready to go to market.

Table 4. Relationship Between Species of Trees Sold and Number Handled

Total Trees Sold	One Species No. Lots	One Species % of Lots	Two Species No. Lots	Two Species % of Lots	Three Species No. Lots	Three Species % of Lots
1 - 250	13	59%	8	36%	1	5%
251 - 500	12	31%	26	66%	1	5%
501 - 750	7	16%	27	63%	9	21%
751 - over	34	16%	112	52%	68	32%

The following table illustrates the need of larger dealers for a supplier with more than one species of trees. Over 85% of the retail lots which sold over 750 trees, sold two or more species of Christmas tree on their lots. Only 10% of the tree lots handled only Scotch Pine species.

In addition to offering more than one species, the seller should try to supply his dealers Christmas time accessories such as wreaths, greens, roping, strands, etc. (13). Of the lots surveyed, about 44% carried some other Christmas items. Nearly 40% sold greens, 20% sold wreaths, 12% sold roping. An additional 31% of the retail lot operators indicated a desire to enter or expand their sales of Christmas accessory items.

Retail lot operators also desired a varied assortment of heights (12). By far the largest percentage of buyers preferred trees in the 6-foot range, and 80% preferred trees from 5 to 7 feet in height. It is interesting to note that those consumers purchasing bushy trees were satisfied with shorter trees (16). Retail lots in the heart of the city sold a higher percentage of smaller trees than did suburban dealers (3). The larger the metropolitan area is, the larger proportionately the number of small trees sold. The following table shows the mix sold by the average Christmas tree retailer as a guide to be used in harvesting and selling trees to lot operators.

Table 5. Assortment of Trees by Sizes

Size of Tree	Number Purchased	Percentage
2 - 3 feet	206	7%
3 - 5 feet	607	19%
5 - 7 feet	1,789	57%
Over 7 feet	553	17%

Producers may be able to sell larger percentages of smaller trees by working with retailers on sales methods and promotion. Having measuring devices available to consumers on the lot, and careful sizing by the producer could help. Many consumers purchase a tree too large for their home. A New York study shows that 42% of Christmas trees were cut off by the home owner (4). This is costly as well as an inconvenience. Growing trees to this added height, transporting the added height, then wasting it represents a cost that serves as an economic drag on the industry.

Christmas Tree Procurement

The vast majority of retail lot operators purchased their trees after July 1 but there is a definite trend toward buying earlier (15). This trend is likely due to the dealers settling on a permanent source of supply. The favorite period for ordering supplies is July to September when nearly 65% of the dealers purchase their trees. The October to December period is next with 23%, April to July 10%, and January to March last with only 2% ordering in this period. With earlier ordering and 78% of the trees being contracted for by September, the grower is in a very precarious position if he waits too long to sell his trees, or cuts in anticipation of sales to itinerant buyers.

Christmas tree purchases by dealers are quite evenly divided between purchases direct from growers and purchases from wholesalers, brokers, or salesmen. Purchases direct from tree growers are roughly 43%, while purchases from wholesalers, brokers, and salesmen are 57%. Those purchasing predominately Scotch Pine were more likely to purchase direct from a grower. Ten years ago the percentage of trees purchased from wholesalers, brokers, and salesmen was much higher than today. As Scotch Pine became more important as a Christmas tree species, the percentage of trees purchased direct from growers increased. The trend recently has reversed again; as the type of buyer has changed, more trees are being purchased from sales organizations rather than from growers directly. Today local growers account for only about 10% of the total trees purchased. It is expected that as Scotch Pine gathers increased favor in markets more distant from the production areas, this trend will greatly accelerate.

Table 6. Sources of Wholesale Purchases of Christmas Trees by Retailers

Source	Number	Percentage
Grower (local)	36	10%
Grower (not local)	124	33%
Brokers, wholesalers	141	38%
Salesmen	71	19%

In the future, Michigan growers will find it more necessary to sell through marketing organizations such as cooperatives, brokers, or wholesalers. Increased production, market differentials, and greater distance between production areas and sales outlets will force growers to sell in this manner, as the cost of direct sales will soar for an individual grower. Only extremely large producers will be able to afford this increased sales cost. Local markets are already being glutted and price-depressed by a lack of organized selling.

Buyers are not traveling the country looking at trees. Only 18% of the retail buyers look at the trees they purchased before delivery. This indicates that even when lot operators purchase direct from growers they rarely see the trees. This further emphasizes the need for direct sales organizations, and honesty and integrity being built-in features of the Christmas tree marketing system. About two-thirds of the purchasers of Christmas trees signed a written contract with their supplier. Those who did not sign written contracts with suppliers tended to have bought trees from the same source over a long period of time. The lack of formal relationship apparently stemmed from a mutual trust acquired from the long association. Christmas tree buyers show a definite desire to stick with a good source of supply. Over three-fourths had purchased their trees from the same supplier for more than one year. Nearly 15% had purchased their trees from the same source for five or more years.

How To Keep Customers

One question asked most often by Christmas tree producers is: how do you attract and hold customers? Personal contact is far and away the most successful way of selling Christmas trees. Over one-third of the Christmas tree retailers report they had purchased because of direct call by a salesman. A good product and a satisfied customer is apparently the best advertisement, as nearly 30% reported they found their source of trees upon recommendation of another retailer.

Table 7 illustrates the effectiveness of various ways of contacting tree buyers. It may well direct the budgeting of sales and promotion for Christmas tree growers in the future. It does not indicate that the promotional efforts are ineffective, only that they should be associated with direct personal contact for maximum success. It might also suggest the value of attractive plantations and good road signs to direct travelers to your plantation and properly identify it upon arrival.

Table 7. Ways in Which Buyers Selected Suppliers

Personal contact	45%
Recommended by another	30%
Visited plantation on trip	18%
Direct mail	5%
Growers catalog	1%
Magazine ads and newspaper ads	1%

Transportation

After a Christmas tree is sold to the retailer, the seller must provide proper service and delivery to keep customers happy. Transportation is becoming an increasingly important problem for the Christmas tree industry. About one-third of the buyers furnished their own truck or arranged for the transportation. The buyers more distant from production areas depended almost entirely on the producer or sales organization for arranging the transportation. As markets for plantation-grown Christmas trees become larger, and distances between production areas and markets increase, Michigan growers will find transportation an increasingly greater problem.

Delivery

Delivery of trees on time and in good condition is becoming a bigger problem each season. Retail lot operators indicated that 20% of the trees were delivered late, and nearly 60% indicated that trees were excessively damaged in transit. It is extremely important that growers schedule transportation equipment well in advance so equipment shortages and bad weather will not delay delivery. It is also important that Christmas trees be bundled or packaged (see M.S.U. Extension Bulletin 480, "Packaging Christmas Trees"), and carefully loaded and unloaded on transportation equipment. Today's retailer is not interested in purchasing trees unbundled, and a negligible number are bought on the stump (15). A good quality tree delivered too late or in poor condition is of little value to the retailer.

Credit

Credit policies are one of the most acute problems in the Christmas tree marketing system. Many growers are inadequately financed. In addition, they have a full year's cost in the tree when it is shipped, plus the cost of years of growing the tree to marketable size. Christmas trees are such a specialty item, dependent entirely upon seasonal sales, that they have a negative value after the Christmas sales season ends. This puts a high risk upon both the buyer and seller. Some larger sales organizations have set the trend in credit policies which are extremely favorable in most cases to the buyer.

Only about 5% of retail lot operators pay cash for their trees before delivery. Another 10% paid a sizable deposit before delivery. About 35% paid the freight or some amount upon delivery of the trees. Most astounding — about 50% were required to pay nothing until December 20, or later. In other words, nearly one-half of the retailers were operating wholly on the seller's capital and risk! Of course, the retailers surveyed were mainly old established operators whose credit history was good. This does not alter the fact that the seller was providing the financing and taking the risk for a great percentage of the retail operators. This risk must be taken into account by those who sell their trees as an added cost of doing business.

Christmas Tree Quality

With the ever increasing trend toward purchase from salesmen, without seeing the trees, it becomes necessary for the buyer and seller to have a common denominator when talking about Christmas trees. This need is greatest and most difficult in terms of defining quality. One of the most pressing needs for the Christmas tree industry is to develop a meaningful definition of quality factors which can be interpreted equally by all segments of the industry.

The U.S. Department of Agriculture developed Christmas tree grades in 1958. These grades and standards have since been modified to meet the needs of the industry. Michigan has been the primary user of Federal Standards for Christmas trees with official inspection by U.S.D.A. inspectors. Over 80% of the nation's Federally graded and certified trees have been shipped from Michigan. Many trees are sold on U.S. Grades or Standards without official certification. In some cases unscrupulous or uninformed sellers have shipped poor quality trees represented as being U.S. #1 graded trees. This has not helped to improve the stature of U.S.D.A. graded trees. While U.S. Standards still offer problems for the industry, an increasing use of them points to a solution to the problem of a known quality factor.

Retailers surveyed purchased trees in the following manner: 65% bought on grower's individual grade or representation, 20% purchased trees designated according to U.S. Standards, and 15% selected their own grade. Each year more trees are sold with official U.S.D.A. Inspection Service certificates attesting to quality.

Retailers have confidence in the accuracy and reliability of Federal grading. About 65% of the retailers indicate a feeling the U.S. Grades are likely to be a more reliable indication of quality than the grower's own grade. An Ohio study of retailers showed that 75% would prefer to purchase Federally graded trees, and only 7% of the retailers were opposed to purchasing on this basis (10).

A majority of retailers indicated satisfaction with quality of Christmas trees purchased in the previous season. Nearly one-fifth felt that their trees were of poor quality, however, and only 30% characterized their tree quality as very good. The dissatisfaction indicates a need to improve quality, and an opportunity for quality producers to secure additional outlets.

Table 8. Major Quality Problems Cited by Christmas Tree Retailers

Quality Factor	*Number of Complaints*	*Percent of Total*
Foliage gaps	126	17%
Thin foliage	117	15%
Crooked trunks	94	12%
Poor color	91	12%
Dry	86	11%
Broken branches	62	8%
Needle drop	57	8%
Poor handles	46	7%
Narrow taper	39	5%
Other factors	25	3%
Wide taper	12	2%

The major fault found by Christmas tree retailers was in the foliage structure. Nearly two-thirds complained of thin foliage or foliage with too many gaps or holes in it. Table 8 illustrates the major areas of complaint voiced by retailers surveyed.

This is a summary of all species of trees sold by retailers. If it were restricted to pines, the author suspects that crooked trunks and poor color would constitute a higher percentage of complaints on quality.

Here is a good negative example. This is the kind of tree that should never reach the retail lot.

And here's another. If this is typical of the lot, this shopper may well end up buying an artificial tree.

Another negative example. Even quality trees will not be shown off to advantage, and may be damaged if piled in a heap.

In a panel study, 75 Detroit consumers preferred the shape of the tree on the right, and 55 liked the one on the left. **(See page 11.)**

Sales Practices of Retail Operators

One of the best ways that Christmas tree sellers can secure buyer satisfaction is by assisting retailers in their sales efforts. This can be accomplished best by knowing retail sales practices and problems.

An opportunity that should be recognized by all tree sellers is in developing a brand loyalty among their customers and if possible, at the consumer level, too. One of the ways to do this is by selling tagged, branded trees and by furnishing promotional helps to the retailer which stress brand identification. Almost all retail lot operators use some form of promotion or advertising effort. Table 9 lists the methods most often used.

Table 9. Promotional Methods Used by Retail Christmas Tree Dealers

Methods Used	*Number of Dealers*	*Percentage*
Newspaper ads	183	24%
Radio spots	172	23%
TV spots	57	8%
Pre-season coupon sale	214	28%
Handbills or bag stuffers	48	6%
Large lot signs	27	4%
Lighted display tree	56	7%

Sellers could furnish prepared radio and television spot material, newspaper mats, handbills or bag stuffers, coupons, or a display tree, or signs featuring their brand of tree. The more successfully a brand loyalty is developed, the more of a captive the customer becomes.

Advice and help to the retailer can also be given on price or markup, and by tagging trees according to height, quality, etc., for his easy identification. Pricing of Christmas trees is now done on a very "hit-and-miss" basis, but nearly one-half of the retailers price each tree on an individual quality basis. This identifies the need for seller help in making the retailer's decision easier by identifying quality and size of trees by tagging in advance.

Retailers price their trees in the following manner: 45% on individual quality basis, 29% on a fixed price per foot, 17% standard percentage of markup, 6% based on what they think the customer will pay, 3% had one price for all trees.

Supermarkets tended toward a pricing system of standard markups or one price for all trees. They lack sufficiently experienced help to price trees according to quality and size. Trees sold to this market should be uniform in quality. An opportunity for pre-pricing trees to this market also exists.

Competitive Market Factors

Christmas tree marketing will become even more competitive in the years ahead. This will result from higher production of, and growing preference for, the plantation grown tree, the increasing inroads of the artificial tree, and increased pressures from Canadian imports.

The total U.S. Christmas tree market in 1964 was estimated at $155 million. Artificial trees accounted for nearly one-third of the total dollar sales volume and has increased 300 to 400% in recent years. Sales of natural trees totaled about 46 million trees in 1964 compared with 43 million in 1960. Artificial trees tend to be purchased more by low-income groups than high, and by families without children (4). Per capita sales of Christmas trees have fallen from 20 trees per 100 persons in 1955, to 18 trees per 100 persons in 1964 (5). Some of the per capita sales of trees can no doubt be accounted for by the purchase of artificial trees which can be used for more than one season.

Canadian tree imports have varied between 8 and 12 million annually over the past 10 years but appear to be leveling off at about 10 million per year (5). At one time, a major factor in purchase of Canadian trees was a lower price (6). Today this can no longer be considered the major reason for purchase of Canadian trees of Scotch Pine variety. Table 10 below shows range of prices and the average price paid for 5- to 7-foot Scotch Pine Christmas trees from leading sources. It also indicates the range of sales price and the average sales price, and gross margin of trees from these sources.

Table 10. Wholesale and Retail Price Ranges and Average Prices of Scotch Pine Christmas Trees by Major Source Areas

Origin	*Wholesale Price Range*	*Retail Price Range*	*Average Wholesale Cost*	*Average Retail Selling Price*	*Margin*
Canada	$ .55 to $6.00	$2.00 to $10.00	$2.59	$5.47	$2.88
Michigan	$1.00 to $5.25	$2.00 to $ 8:00	$2.56	$5.21	$2.65
Pennsylvania	$ .50 to $6.00	$1.00 to $ 7.00	$2.30	$4.72	$2.42
Wisconsin	$1.75 to $3.00	$3.00 to $ 7.00	$2.27	$5.23	$2.96

It should be noted that Canadian Scotch Pine trees had the highest average wholesale cost and the highest average retail sales price. The gross margin was highest on Wisconsin Christmas trees but Canadian trees were a close second. When the large volume of Canadian trees is considered, their gross margin is very attractive and retailers, as evidenced by their purchases, indicate that Canadian tree quality is substantially as good as average U. S. Scotch Pine quality. Considering 5- to 7-foot Scotch Pine Christmas trees from all sources, the average wholesale delivered price paid was $2.55 per tree. The average retail sales price was $5.18 per tree. The average retail markup was about 100% of the purchase price.

It has been shown that the Scotch Pine is the leading species of Christmas tree sold and its share of the market is increasing very rapidly. The greatest area to be prospected and developed for sales of this species is the far West and the Southeastern United States. Table 11 shows the percent of each species of Christmas tree sold in the various regions of the country. It also indicates the wholesale prices paid in these areas.

It is interesting to note that those regions furthest from the production areas for Scotch Pine are using the fewest of this species of Christmas tree. This is a natural development in the marketing of any commodity. The real challenge is, however, shown by the average price paid for Scotch Pine trees in these more distant areas. Table 11 shows that nearly a dollar more per tree is paid in the areas farthest from the production centers of Scotch Pine.

The big untapped markets for Scotch Pine Christmas trees in the far West and Southeast promise better returns on price for those able to develop these markets.

With modern bundling and loading procedures, Scotch Pine trees can be transported from Michigan to any place in the United States for less than $1.00 in freight per tree. Table 12 shows the average, wholesale delivered price paid for 5- to 7-foot Scotch Pine Christmas trees for various states. It is quite apparent that even allowing for differences in freight, the margin of returns to producers of Christmas trees is much higher in the more distant

Table 11. Percentage of Total Sales of Five Tree Species and Average Wholesale Prices by U.S. Regions

Species of Trees Sold — Percentage of Total				
Region:	*1*	*2*	*3*	*4*
Scotch Pine	44%	37%	39%	33%
Spruce	10%	15%	8%	12%
Fir	16%	33%	43%	14%
Balsam	20%	9%	8%	31%
Other	10%	6%	2%	10%
Average Price — by Region				
Region:	*1*	*2*	*3*	*4*
Price Paid	$2.03	$2.93	$2.60	$2.65
Selling Price	$4.34	$5.83	$5.27	$5.29

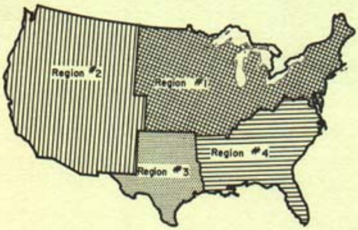

Table 12. Wholesale and Retail Christmas Tree Prices of 5- to 7-Foot Scotch Pine in 30 States

State of Sale	*Average Wholesale Price Paid to Producer*	*Average Retail Selling Price*	*Difference*
California	$4.63	$8.13	$3.50
Mississippi	3.75	7.50	3.75
Oklahoma	3.75	5.00	1.25
New Mexico	3.28	5.80	2.52
Colorado	3.24	5.25	2.01
Arkansas	3.23	6.17	2.94
Florida	2.90	5.72	2.82
South Carolina	2.75	5.50	2.75
Virginia	2.75	4.80	2.05
Texas	2.69	5.58	2.89
Georgia	2.66	5.52	2.86
Kansas	2.64	5.54	2.90
Missouri	2.63	5.88	3.25
Iowa	2.62	5.25	2.63
Louisiana	2.58	5.25	2.67
Alabama	2.53	5.65	3.12
North Carolina	2.49	4.98	2.49
Delaware	2.40	5.00	2.60
Illinois	2.38	4.82	2.44
Kentucky	2.22	4.86	2.64
Tennessee	2.06	3.62	1.56
Ohio	2.00	4.36	2.36
Oregon	2.00	5.00	3.00
Wisconsin	1.96	4.19	2.23
Michigan	1.82	3.58	1.76
New York	1.81	3.94	2.13
Indiana	1.67	3.95	2.28
Maryland	1.67	3.60	1.93
Pennsylvania	1.62	3.58	1.96
Minnesota	1.57	3.66	2.09

Mechanized tying saves time and also facilitates transporting of trees to market.

markets. For example, a Michigan grower ships to Illinois; the average wholesale delivered price there is $2.38 for a 5- to 7-foot Scotch Pine. Freight to Illinois will be around 25¢ per tree. This subtracted from the gross wholesale price leaves $2.13 gross for the producer. If the same tree were shipped to California, average freight would be 90¢; this subtracted from the wholesale price of $4.63 gives the grower a gross of $3.73 — a plus of $1.60 per tree gross return.

Table 12 also shows that even now the average wholesale delivered price for a 5- to 7-foot Scotch Pine in the major producing states is less than $2.00 per tree. When costs of production, harvest, bundling, loading, transportation, sales, and risk are computed, most Christmas tree producers are losing money by selling trees in these areas (9).

Not a space capsule on Mars — a new handy method of packaging Christmas trees in net plastic film.

Consumer Preferences

Each year as competition increases, both retail operators and consumers are demanding a higher quality Christmas tree. The grower must produce the kind of tree the consumer wants. Failure to meet this basic requirement will result in trees being unsaleable or severely discounted in the market place, or a swing to substitutes.

What influences a Christmas tree shopper to buy a certain tree? Several consumer preference tests have been conducted by Michigan State University specialists to help determine this. These tests were conducted under the direction of the Marketing & Utilization Center of MSU in the Detroit area. A carefully selected panel of consumers representing various levels of purchasing power in the city were selected to insure the accuracy of the test results. Tests were run to determine the preference for taper of tree, density of foliage, and color.

One of the questions argued by Christmas tree producers is "what shape of Scotch Pine is best"? There appear to be as many opinions among producers as to the most desirable shape as there are shapes of the producers themselves. Consumers however, exhibited a remarkable preference for a certain shape of tree. Two trees of similar foliage, thickness, color, height were selected. One tree had a taper of 80% while the other had a taper of 55%. (Taper is the width of base divided by the height.)

Table 13 illustrates the significant preference by consumers for the narrower tapered tree. Government housing figures show that the average living room is 12 feet in width. A tree more than 3½ to 4 feet in diameter at the base after allowing for some clearance from the wall can completely disrupt use of the room. Too large a tree can dominate the small room to the point of losing much of its value as a decorative symbol of Christmas.

Table 13. Consumer Preference for Shape of Christmas Tree

Taper	*Number of Panel Members*
Candlestick (55% taper)	75
Flared (80% taper)	55

Growers will find the greatest demand for Christmas trees with a taper of 50 to 60%. Pictures on page 7 illustrate both desirable and undesirable shapes of Christmas trees.

Another important consumer preference is in the looseness or tightness of the foliage. Consumers definitely prefer a Christmas tree with dense foliage. Nearly 70% of consumers prefer a tree with dense foliage regardless of species (3). They also prefer a tree that is compact rather than loose or wild in appearance.

Table 14 shows the consumer preference for a more compact tree. It is of greatest importance that producers shear for density and compactness of their trees. In the year a tree is to be sold, however, some branches should be allowed to grow so ornaments and decorations can be placed on the tree without too much difficulty (6).

An unusually high quality planting of Scotch pine Christmas trees ready to be sheared. See pictures on page 7 and table and text on this page for Michigan consumer panel preference in Christmas trees.

In the last few years an increasingly higher number of Scotch Pine Christmas trees are being sprayed with a green colorant. Due to its great variation, color has been one of the greatest problems in selling the Scotch Pine. Over 40% of the Scotch Pine trees had a color rating of no higher than 5GY (Green-Yellow) on the Munsell Scale (4). Consumers prefer green color treated trees over even good natural green color Scotch Pine trees. Two Scotch Pine trees of similar foliage, density, size, and color were selected for testing. One tree was treated with green colorant and the other was not. The untreated tree however, was of a good acceptable green color, somewhat better than average color for Scotch Pine.

Table 15 shows that a high percentage of consumers prefer a green color-treated tree. Retail lot operators also report consumers' preference for sprayed trees. Proper spraying or treating with green colorant enhances the natual beauty and attractiveness of a Christmas tree. Spray-

Table 14. Consumer Preference Panels for Compactness and Density of Foliage

	Detroit, Michigan		*Holland, Mich.*	
	No. of Consumers (showing preference)	*% of Consumers (showing preference)*	*No. of Consumers (showing preference)*	*% of Consumers (showing preference)*
Sheared tightly	96	73%	91	75%
Sheared losely	36	27%	30	25%

Table 15. Consumer Preference for Colored vs. Natural Christmas Trees

	Muskegon, Mich.		*Detroit, Michigan*	
	No. of Consumers (showing preference)	*% of Consumers (showing preference)*	*No. of Consumers (showing preference)*	*% of Consumers (showing preference)*
Colored trees	86	75%	106	68%
Natural tree	28	25%	49	32%

ing or breeding better color into Scotch Pine Christmas trees will become even more necessary in the future as consumer demand for this kind of tree is felt in the market place.

It would also appear from limited railroad car freight weight comparisons between sprayed and unsprayed trees, that treated trees retain more moisture and freshness (17).

Tests conducted during the 1965 harvest season by the author also corroborated this premise. Christmas trees from various plantations were secured, and ten were sprayed (with a well known commercial colorant), and ten were unsprayed. The trees selected were of as nearly the same height, shape, and foliar characteristics as possible. These painted trees were sprayed within a 10-day period prior to cutting and all trees were cut within a 3-day period. All of the trees were weighed on November 4, within three days after cutting. The similarity in size and density can be shown by the fact that there was only a 16-pound difference in the combined weight of the two lots of trees in the test.

These trees were stored outside in a common stockpile until December 2 when they were weighed again. At this time the sprayed trees had lost 7% of their original weight, while unsprayed trees had lost 12½% of their original weight. This indicated the unsprayed trees were losing weight nearly 40% faster than sprayed trees.

On December 4, the trees were moved inside and stored at a humidity of 50 to 60% and a temperature of 68° to 70°F. Ten days later they were again weighed. The sprayed trees had lost an additional 27% of their weight while unsprayed trees had an additional 35% weight loss.

From the time of cutting until final weighing, the sprayed trees had lost 34% of their original weight while unsprayed trees had lost about 47½% of their original weight. Unsprayed trees lost weight nearly 40% faster than sprayed trees. At the end of the test period unsprayed trees were so brittle and dry that they were nearly unsaleable, while sprayed trees were in good condition.

From the results of this limited study it is possible to say that in addition to improving the appearance of a Christmas tree, painting also enhances its freshness and condition. When trees are shipped to dry, hot areas such as the Southern and Southwestern U. S., spraying with a colorant is particularly desirable to retain condition and freshness of the trees.

Christmas tree buyers most often mentioned needle holding ability, custom or family tradition, and certain appearance factors as reasons for buying a particular tree or species. When asked which was the most important consideration, the consumers' answers were distributed as follows:

Reason for Selection	*Percentage of Respondents*
Needle-holding ability	27%
Traditional species	17%
Good density	16%
Foliage color & length	12%
Shape & balance	11%
Miscellaneous — (easy to decorate, availability, price, fresh appearance, etc.)	17%
	100%

Summary

Consumers prefer a premium grade Christmas tree (as graded by U.S. Standards), and are willing to pay for this high quality. About two-thirds of Christmas tree users preferred a premium grade tree and only one-fifth of this number would switch if the premium tree was $2.00 higher priced than a lower grade tree (6). More than half (57%) of the consumers want a tree with at least three good faces, while 36% wanted a tree with four good faces.

Christmas tree producers face a real challenge in meeting the demands of the consumer. In producing the higher quality tree, they should price it to return a fair profit for their efforts as producers. Consumers want a Christmas tree that is of good quality, shape and appearance. Michigan Christmas tree growers are the leaders in the industry today and must study the demands and preferences of retail operators and consumers to retain their leadership in the future.

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