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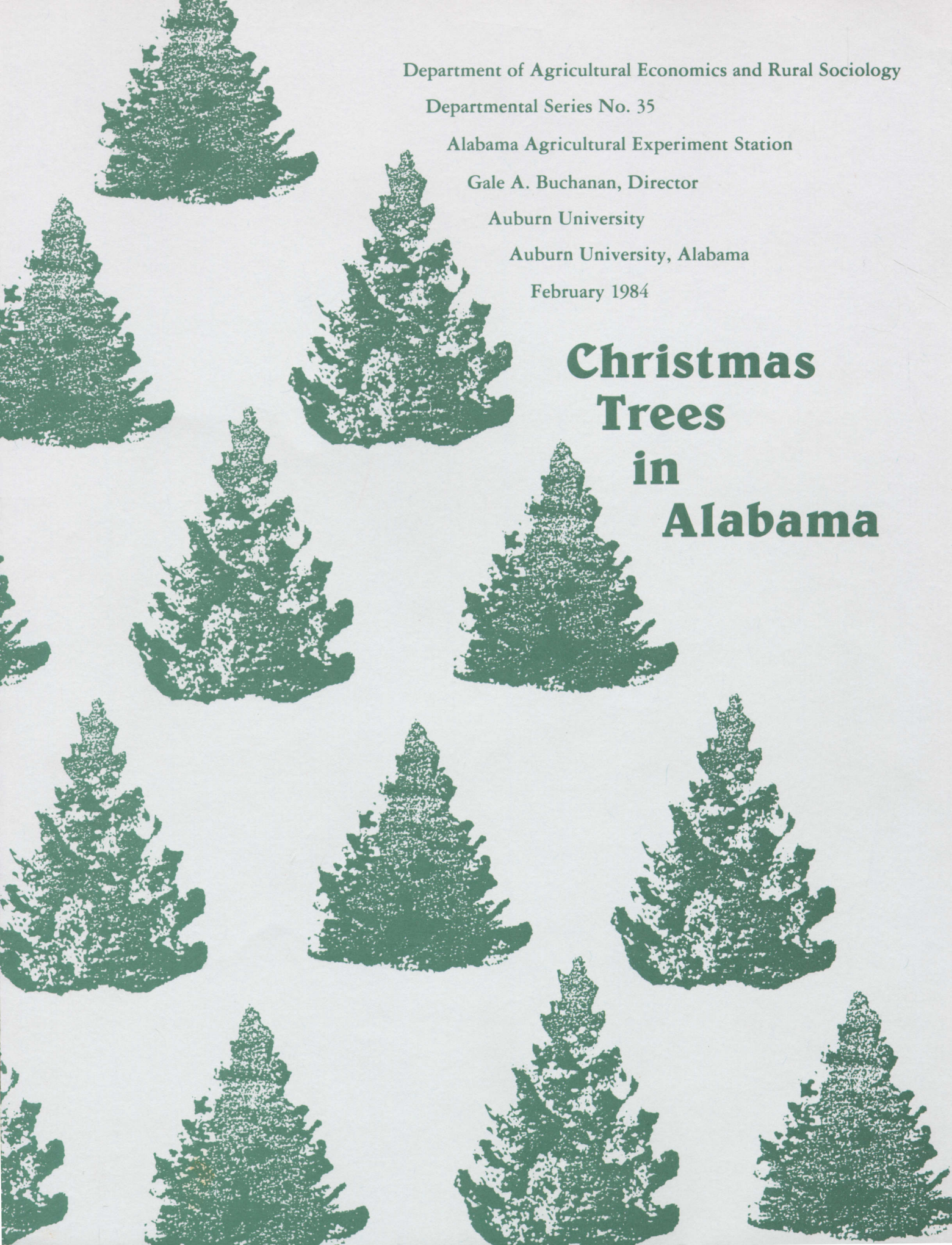
Christmas Trees in Alabama



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PREFACE

In 1979, Dr. Fred Holemo, Extension Forester for the Alabama Cooperative Extension Service, requested the Department of Agricultural Economics and Rural Sociology to initiate production and marketing studies of Alabama's Christmas tree industry. Factual information was needed to provide growers and potential growers a basis for making decisions about growing and marketing trees. A study was undertaken and in 1980 an M.S. thesis was prepared by Ronnie G. Daniel. Title of the thesis was "Household Demand for Christmas Trees and Budgets for Small Christmas Tree Enterprises in Alabama." Subsequently, several articles were published showing production budgets and household demand for Christmas trees in the State. Additional Extension and Experiment Station reports are being prepared that update and expand the production budget information.

In the study reported herein, the purpose was to determine the characteristics and marketing methods being employed by Alabama Christmas tree growers. It is based on a mailed questionnaire sent to growers. Findings reported will be useful to members of the industry, potential growers, and educators.

Appreciation is expressed to Dr. Holemo for stimulating the authors' interest in Christmas trees and for providing guidance in our Christmas tree research. Likewise, the assistance of Dr. William McKee and Doug Back of the Alabama Cooperative Extension Service is acknowledged.

CHRISTMAS TREES IN ALABAMA[1]

Lowell E. Wilson and Jeffrey F. Sims[2]

Interest in Christmas tree production by Alabama farmers and other landowners has expanded greatly in recent years, although the potential demand for quality, locally produced trees has been recognized for many years (1). Stimulating this interest was forestry research and production experience which showed that Christmas trees can be grown in the South in a shorter time and at less cost than in other regions. Southern growers are able to produce marketable trees in 4 and 5 years after planting as compared to 8 to 10 years for trees grown in northern plantations (6).

Available data indicate that the demand in Alabama for plantation-grown Christmas trees is substantial (3). Since population growth in the Southeast during the past decade was 24 percent, twice the national rate, the regional market for trees should be increasing at a similar rate (5).

Until recently there were few commercial Christmas tree growers in the State. However, since the late 1970's, plantings of trees have increased over seven-fold and indications are that a high rate of plantings will continue. In 1979, a state-wide Christmas tree association was formed. By early 1983 membership in the association totaled about 225 members.

At present, a relatively small percentage of the plantation-grown trees are

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[1]This report contributes to the Alabama Agricultural Experiment Station Research Project Number 488 and to the Southern Regional Christmas Tree Research Project S-128, Development, Production, and Marketing of Christmas trees.

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of marketable age. Most of the in-state demand is filled with trees imported from other states. However, the supply situation may change dramatically within a short time. Concern has been expressed that an over-supply of locally produced trees may occur within the next 2 years in some areas of Alabama, if the large number of trees being planted are actually harvested as Christmas trees. Alabama tree growers are relatively inexperienced in both production and marketing of Christmas trees. This study was undertaken to assist the developing Christmas tree industry in the State.

OBJECTIVES AND PROCEDURE

The purpose of this study was to provide basic information about the status of Christmas tree production in Alabama. Specific objectives were as follows:

1. to identify selected characteristics of Christmas tree growers,
2. to determine acreages, ages, and locations of Christmas tree plantations,
3. to determine species of trees planted,
4. to estimate anticipated future plantings of trees, and
5. to appraise marketing practices presently being used and methods anticipated by growers.

A questionnaire was developed and mailed to all known Christmas tree producers in Alabama (see appendix). In developing the questionnaire and study objectives, a University of Georgia Christmas tree report by Bachtel, et al. was reviewed (2). The Georgia study had similar objectives and was also based on data obtained through a questionnaire mailed to growers.

Lists of growers and others known to be interested in the enterprise were acquired from the Alabama Christmas Tree Growers Association and the Alabama

Cooperative Extension Service. Extension personnel believed there were about 300 growers in the State in 1982. The questionnaire was mailed in August 1982 to the known growers and others who might have planted trees. A second mailing was made to non-respondents in September 1982. In October, a small number of non-respondents were contacted by telephone in order to secure completed questionnaires from as many growers as possible. A summary of mailings and response is stated as follows:

	Number
Total questionnaires mailed	432
Completed questionnaires	241
No trees (53) and unusable (4)	57
Usable responses	184

Although all growers known to have Christmas tree plantations did not respond to the questionnaire, the respondents include most growers with significant plantings, as well as a wide distribution of small operations. To obtain as wide a coverage as possible, 17 known growers who had not responded to the mailed questionnaire were contacted by telephone. Their completed questionnaires are included in the 184 responses used in the analysis.

In the survey, growers were requested to provide information regarding their occupations, ages, and employment status. Information requested about Christmas tree production included the species, number, and acreage planted by year. Methods used to market trees and market locations were also requested. Information of this type will be useful in projecting the organizational structure of this new agricultural enterprise and in developing extension and research programs to assist the industry.

ANALYSIS

Although most of the following analysis was derived from the 1982 grower survey, a 1983 update on the number and locations of Christmas tree growers has been provided by the Alabama Cooperative Extension Service. In November 1983, there were 440 known plantations of Christmas trees in Alabama, figure 1. These growers were located in 62 counties. Thus, an additional 140 growers have been identified since the 1982 survey.

Characteristics of Growers

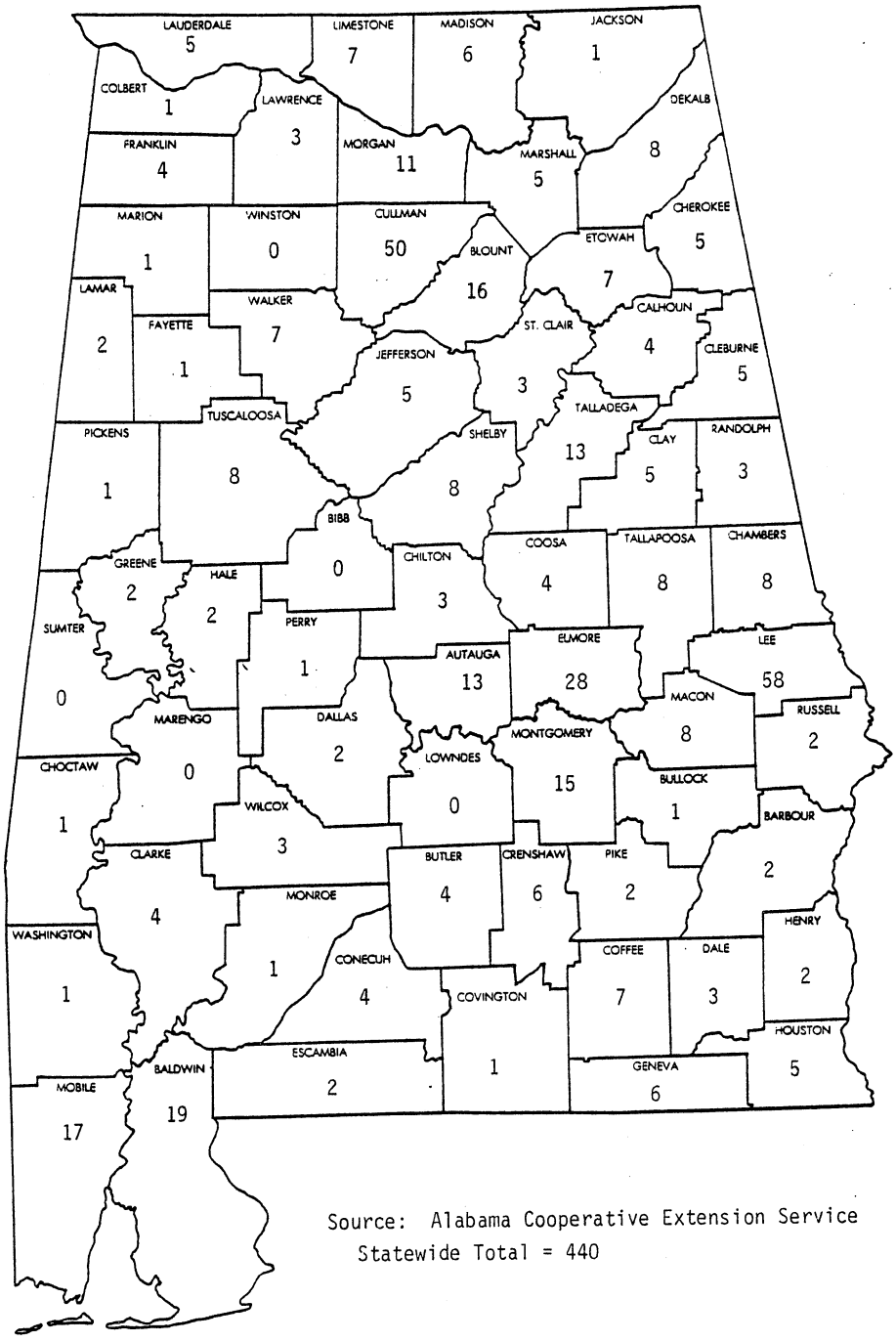
The Christmas tree enterprise apparently appeals to people of all ages, table 1. The greatest concentration of growers was between the ages of 30 and 49. Over one-half of the respondents were in this age range. Only 10 percent of the respondents indicated they had retired from their stated occupation, table 2.

Table 1. Number of Respondents and Christmas Tree Acreage by Respondent Age, 1982

Age (years)	Growers		Tree acreage	
	Number	Percent	Acres	Percent
Under 30	23	12.5	117.5	8.4
30-39	44	23.9	388.7	27.9
40-49	51	27.7	296.2	21.3
50-59	36	19.6	243.6	17.5
60 and over	23	12.5	221.2	15.9
No answer	7	3.8	124.2	9.0
Total	184	100.0	1,391.4	100.0

Table 2. Number of Respondents and Christmas Tree Acreage by Retirement Status, 1982

Status	Growers		Tree acreage	
	Number	Percent	Acres	Percent
Retired	18	9.8	93.0	6.7
Not retired	158	85.8	1,156.9	83.1
No answer	8	4.4	142.5	10.2
Total	184	100.0	1,391.4	100.0



Source: Alabama Cooperative Extension Service
Statewide Total = 440

Figure 1. Number of Christmas Tree Growers in Alabama by County, November 1983.

Growers stated a wide variety of occupations. The responses were categorized into 10 groups, plus a miscellaneous and no answer group, table 3. The enterprise appeals to a broad spectrum of society. Perhaps the limiting factor for entrance into the enterprise is ownership or availability of land for growing trees. Although educational background of growers was not specified in the questionnaire, the requirements of most respondents' occupations would necessitate a high level of education. Over one-half of the respondents stated occupations that would require some college education or a college degree.

Common occupations listed were education, professional fields, business, and government. Surprisingly, only 12 percent of the growers stated their primary occupation was agricultural production or forestry. However, a large proportion of trees were in farmer-owned plantations. Plantations owned by growers in the farmer-forestry group averaged 14 acres, which was about twice the overall average of respondents.

Table 3. Number of Respondents and Christmas Tree Acreage by Occupation, 1982

Status	Growers		Acreage	
	Number	Percent	Acres	Percent
Farmers and foresters	22	12.0	349.9	25.1
Teachers	15	13.6	150.6	10.8
Engineers, technicians, operators, and craftsmen	44	23.9	208.7	15.0
Sales	17	9.2	81.7	5.9
Government-agriculture related	12	6.5	68.9	5.0
Government-non agriculture related	8	4.4	45.2	3.2
Military service	4	2.1	21.5	1.5
Finance and accounting	8	4.4	33.0	2.4
Managerial and business (agr. and non-agr. related)	23	12.5	273.8	19.7
Factory and labor	8	4.4	22.3	1.6
No answer and other	13	7.0	135.8	9.8
Total	184	100.0	1,391.4	100.0

Location of Respondents

Tree plantations were reported by growers located in 54 counties. Although plantings were reported in widespread areas of the State, some concentration of growers was found in a few counties. The counties with the largest number of respondents were Baldwin, 15; Lee, 15; and Elmore, 10. Five or more growers responded in each of 10 counties. Total plantation acreage per county ranged from less than 1 acre in Dale County to over 194 acres in Mobile County.

Respondents were grouped into Crop Reporting Districts as used by the Alabama Crop and Livestock Reporting Service, table 4. The 10 districts are established along county lines with counties included in the districts having common or agricultural production situations. The largest concentration of growers was in District VI, with 38 respondents, while the districts encompassing the western portion of the State had the fewest growers.

Size and Age of Plantations

Most respondents had relatively small plantations, table 5. Seventy-one percent of the respondents reported plantations smaller than 6 acres. Average plantation size was 7 acres with a total of 7,400 trees. Only 29 respondents, 16 percent, reported plantations of 11 or more acres; however, these producers had two-thirds of all trees reported. The largest number of acres of trees was reported in Crop Reporting Districts V, VI, and VII, while the greatest number of respondents was located in districts II, VI, and VII. An average of 1,060 seedlings were planted per acre for all growers. While the small plantations averaged 870 seedlings per acre, growers with plantations of 21 acres or more averaged planting 1,025 seedlings per acre.

An analysis of ages of seedlings planted to be cut as Christmas trees reveals the infancy of this enterprise in Alabama. Thirty-five percent of the

Table 4. Number of Respondents, Acreage and Trees Planted by Year and Crop Reporting Districts Survey of Alabama Christmas Tree Producers, 1982

District and county	Respon-dents	Total acres planted	Trees planted by year[1]						Total trees planted
			1981	1980	1979	1978	1977	1976	
	No.	Ac.	No.	No.	No.	No.	No.	No.	No.
DISTRICT I									
Colbert	0								
Fayette	2	1.6	200	600	0	200	0	0	1,000
Franklin	3	6.0	3,800	250	0	0	0	0	4,050
Lamar	0								
Marion	1	6.0	4,200	0	3,000	0	0	0	7,200
Total	6	13.6	8,200	850	3,000	200	0	0	12,250
DISTRICT II									
Lauderdale	3	5.8	375	4,000	0	360	0	0	4,735
Lawrence	1	2.8	700	0	480	900	0	0	2,080
Limestone	3	30.0	4,000	5,900	5,500	5,500	5,500	1,500	27,900
Madison	4	8.4	1,000	3,000	2,000	1,000	1,000	1,000	9,000
Marshall	5	15.0	5,485	3,000	3,100	1,000	0	0	12,585
Morgan	7	69.8	12,449	14,700	5,425	14,400	9,600	3,200	59,774
Total	23	131.8	24,009	30,600	16,505	23,160	16,100	5,700	116,074
DISTRICT IIa									
Bibb	0								
Blount	1	1.8	2,160	0	0	0	0	0	2,160
Chilton	3	48.0	6,200	36,500	5,000	0	0	0	47,700
Cullman	8	20.5	1,875	13,150	0	0	2,100	0	17,125
Jefferson	0								
Saint Clair	1	5.1	1,620	650	1,500	375	0	0	4,145
Shelby	4	49.0	17,400	14,000	12,000	4,000	1,000	0	48,400
Walker	4	10.0	5,550	4,400	0	0	0	0	9,950
Winston	0								
Total	21	134.4	34,805	68,700	18,500	4,375	3,100	0	129,480
DISTRICT III									
Calhoun	3	8.0	1,000	2,700	4,000	0	0	0	7,700
Cherokee	3	19.5	7,265	4,250	4,250	0	0	0	15,765
Cleburne	1	5.0	1,500	1,000	0	0	0	0	2,500
DeKalb	4	23.7	5,800	9,455	5,932	3,800	600	800	26,387
Etowah	5	23.0	12,200	7,700	5,280	0	0	0	25,180
Jackson	1	10.0	0	0	0	8,000	2,000	0	10,000
Total	17	89.2	27,765	29,105	19,462	11,800	2,600	800	87,532
DISTRICT IV									
Greene	2	78.5	19,375	16,200	18,000	16,200	0	0	69,775
Hale	0								
Marengo	0								
Pickens	1	1.0	0	500	0	0	0	0	500
Sumter	0								
Tuscaloosa	4	21.9	2,600	6,040	5,000	3,080	1,000	1,000	18,720
Total	7	101.4	21,975	22,740	23,000	19,280	1,000	1,000	88,995

continued

Table 4. (cont'd)

District and county	Respon-dents	Total acres planted	Trees planted by year[1]						Total trees planted
			1981	1980	1979	1978	1977	1976	
	No.	Ac.	No.	No.	No.	No.	No.	No.	No.
DISTRICT V									
Autauga	3	12.0	1,800	4,000	2,000	0	0	0	7,800
Dallas	1	44.4	8,700	11,745	11,745	11,745	11,745	2,400	58,080
Elmore	10	33.5	12,120	12,980	4,200	1,000	4,000	500	34,800
Lowndes	1	12.0	9,600	0	0	0	0	0	9,600
Montgomery	3	52.2	11,500	10,000	17,000	15,000	7,500	2,500	63,500
Perry	1	2.5	2,250	0	0	0	0	0	2,250
Wilcox	1	24.0	8,000	10,000	5,000	1,000	0	0	24,000
Total	20	180.6	53,970	48,725	39,945	28,745	23,245	5,400	200,030
DISTRICT VI									
Chambers	5	14.5	2,350	4,300	2,050	1,000	1,000	1,000	11,700
Clay	1	8.0	4,000	4,000	0	0	0	0	8,000
Coosa	2	17.0	15,000	400	0	0	0	0	15,400
Lee	15	93.1	49,396	17,910	12,100	2,800	0	0	82,206
Macon	4	37.0	27,650	24,150	0	0	0	0	51,800
Randolph	1	2.0	1,500	500	0	0	0	0	2,000
Russell	1	2.2	0	563	0	1,350	0	0	1,913
Talladega	5	33.8	7,000	2,820	4,300	4,650	7,700	7,200	33,670
Tallapoosa	4	38.3	0	19,511	18,000	1,000	0	0	38,511
Total	38	245.9	106,896	74,154	36,450	10,800	8,700	8,200	245,200
DISTRICT VII									
Baldwin	15	91.1	62,198	12,070	8,040	1,800	0	2,000	86,108
Choctaw	0								
Clarke	3	9.0	3,400	4,000	1,000	0	0	1,000	9,400
Mobile	8	194.2	99,180	84,035	10,750	3,500	0	0	197,465
Washington	0								
Total	26	294.3	164,778	100,105	19,790	5,300	0	3,000	292,973
DISTRICT VIII									
Butler	3	12.5	8,400	2,960	3,210	2,210	0	0	16,780
Conecuh	0								
Covington	0								
Crenshaw	3	6.8	1,525	0	5,000	0	0	0	6,525
Escambia	2	9.5	0	1,125	800	0	4,760	0	6,685
Monroe	1	11.0	0	0	4,750	4,750	950	0	10,450
Total	9	39.8	9,925	4,085	13,760	6,960	5,710	0	40,440
DISTRICT IX									
Barbour	0								
Bullock	1	77.0	0	0	20,000	12,000	20,000	25,000	77,000
Coffee	4	27.0	6,620	3,420	6,000	6,400	3,600	0	26,040
Dale	1	.2	300	0	0	0	0	0	300
Geneva	2	10.5	1,020	3,610	1,428	1,632	0	0	7,690
Henry	2	5.5	2,000	600	400	1,200	0	0	4,200
Houston	2	23.5	13,000	6,000	3,000	7,500	0	0	29,500
Pike	2	13.7	4,800	960	2,800	0	0	0	8,560
Total	14	157.4	27,740	14,590	33,628	28,732	23,600	25,000	153,290
NO COUNTY STATED	3	3	0	2,500	0	0	0	0	2,500
STATE	184	1,391.4	480,063	392,154	224,040	139,352	84,055	49,100	1,368,764

[1] Respondents reported the number of trees planted. Some of the trees died and some of the tree planted in earlier years had been harvested before the 1982 survey.

Table 5. Number of Growers and Seedlings Planted by Size of Plantation, Survey of Alabama Christmas Tree Growers, 1982

Size of plantation (acres)	Growers		Seedlings planted	
	Number	Percent	Number	Percent
Under 6	132	71.8	292,358	21.4
6 to 10	23	12.5	155,728	11.4
11 to 20	10	5.4	130,112	9.5
21 to 50	17	9.2	645,745	47.1
over 50	2	1.1	145,400	10.6
Total	184	100.0	1,369,343	100.0

trees were planted during the 1981-82 planting season and 64 percent had been planted during the 2 years prior to the survey. Only 4 percent of the trees were planted in the 1976-77 season and some of these should have been cut during the 1981 holiday season. Thus, most of existing plantings in Alabama should be reaching the market in 1985 and 1986.

Species Planted

Choice of species planted has an important influence on the ultimate harvest and sale of the Christmas trees. Murray of the University of Georgia has identified several considerations influencing the choice of species to be planted. These considerations include consumer preference, characteristics of the different Christmas tree species and growing requirements, characteristics of the lands to be planted, and presence or absence of damaging insect and animal pests and diseases (4). Influence of these factors was not measured in this study.

Survey information in table 6 and figure 2 shows that the great majority of plantings are Virginia pine (Pinus virginiana). Of all the seedlings planted since the 1976-77 season, 95 percent were this specie. In the 1981-82

Table 6. Seedlings Planted and Expected Plantings by Species and Year, Survey of Alabama Christmas Tree Growers 1976-1984.

Planting season	Virginia Pine	White Pine	Other	Total
	- - - - - - - - - - Thousands - - - - - - - - - -			
1976-77	41.7	0	7.4	49.1
1977-78	75.2	2.5	6.4	84.1
1978-79	127.9	2.0	9.5	139.3
1979-80	214.5	1.3	8.2	224.0
1980-81	378.7	4.1	9.4	392.2
1981-82	464.8	1.6	14.7	481.1
Expected plantings				
1982-83	501.4	4.4	14.3	520.1
1983-84	428.6	3.6	9.6	441.8

Includes Sand Pine, Arizona Cypress, and Red Cedar

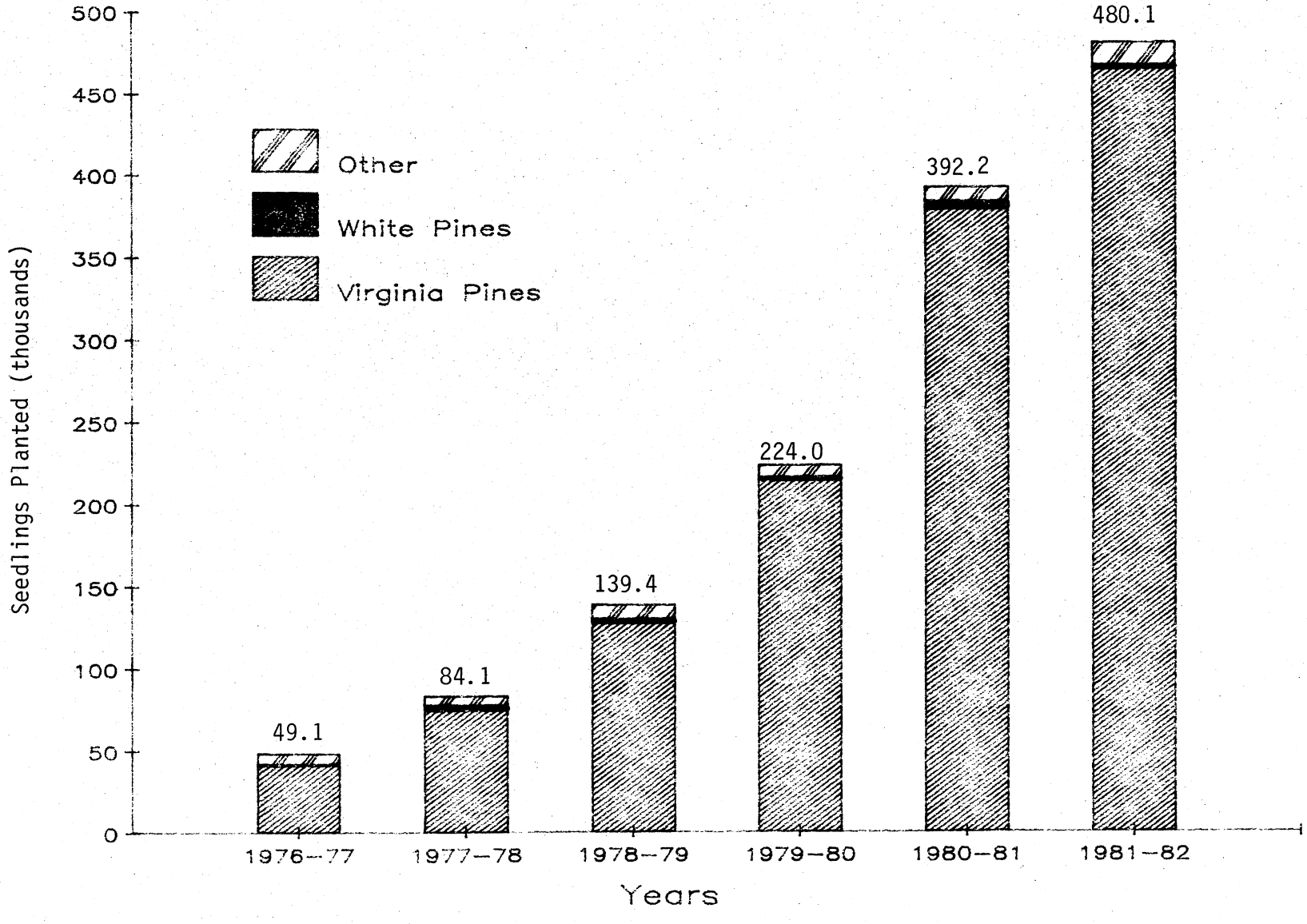


Figure 2. Number and Species of Seedlings Planted by Year, Alabama Christmas Tree Grower Survey, 1976-82

planting season 97 percent of the trees planted were Virginia pine.

Small plantings of white pine (Pinus strobus), red cedar (Juniperus virginiana), sand pine (Pinus clausa) and Arizona cypress (Cupressus arizonica) were reported. Usually these species were planted along with Virginia pine. Some plantings of all species were reported throughout the State.

Respondents stated that they expected to increase plantings to 520,000 seedlings in 1982-83. This was an 8 percent increase in plantings and the smallest expansion of the study period. Then in 1983-84, plantings are expected to be reduced. Comments made by some respondents indicated a "wait and see" attitude about planting after 1982-83. Some growers expressed concerns about future over-supply in their local markets.

Forestry specialists of the Alabama Cooperative Extension Service have estimated that total seedlings purchased for planting in the 1981-82 season amounted to 1,020,000 seedlings and 960,000 seedlings in 1982-83. Although these totals were substantially larger than reported in the survey, the reduction in plantings is similar to the anticipated reduction by the responding growers.

Marketing Methods

In the questionnaire, growers were asked to provide information about the methods used to market trees during the 1981 holiday season and their satisfaction with the alternative marketing methods. Also, growers were questioned as to the marketing methods they anticipated using in the upcoming 1982 season.

Sales in 1981

Forty three growers, 23 percent of the total respondents, sold 18,544 Christmas trees during the 1981 holiday season, table 7. Average sales per grower amounted to 431 trees. The choose and cut method was employed by 31 growers; however, many of these producers used a combination of marketing

Table 7. Sales Methods used by Alabama Christmas Tree Growers in 1981

Method	Number of growers	Total trees sold	Average sales per grower
		Number	
Choose and cut	31	8,912	287
Self-operated retail lot	11	3,604	328
Sales to retailers	8	1,117	140
Sales to wholesalers	6	4,480	747
Other	3	431	144
Total		18,544	431

methods. About one-half of the trees marketed were sold by choose and cut, where the customer comes to the grower's production site and selects the tree before it is harvested. Sales to wholesalers were made by six growers and accounted for about 25 percent of the trees marketed. Growers with a larger

number of trees for sale depended more heavily on the wholesale market. Sales through self-operated retail lots and to retailers accounted for 19 and 6 percent, respectively, of the trees marketed.

Market locations of sales were provided by the growers, table 8. Most growers depended on local customers, with 19 of them selling to customers located in the same county. Thirteen stated that their customers came from the same county, plus adjoining counties. Only four persons stated that they had made sales in out-of-state markets.

Thirty-three of the 43 persons stating they had sold trees in 1981 answered a question regarding their satisfaction with the marketing arrangements used. Eighty-five percent were satisfied with their markets, while 15 percent were not. The five growers expressing concern over their marketing arrangements had almost one-fourth of all trees planted by the respondents and, in total, had annual plantings of 30,000 to 50,000 seedlings over the past 5 years. Further, these five producers expected to plant over 50,000 trees each year in the 1982-83 and 1983-84 seasons. Except for one grower who had marketed all of his production in out-of-state markets, the other four had depended primarily on choose and cut and self-operated retail lots. Because of the age of their plantings, a substantial number of trees should be marketable in the next 2 years. It is likely these growers recognize the limitations of the methods being employed and realize that these methods may not be adequate to fully market their future supply.

Marketing Plans for 1982

Fifty-one of the 184 respondents stated that they expected to market trees during the 1982 season. This group included 33 of the growers selling trees in 1981 plus 18 growers who did not sell trees the previous year. Total sales by

Table 8. Christmas Trees Marketed, by Location and Method, 1981

Market	Number of growers	Total trees	Percent of total marketings	Marketing method by location[1]					
				C&C	Self Op. lot	Sale to ret.	Sale to w/s	Other	Total
	Number	Number		Percent					
Same county	19	2,958	15.9	60.0	34.5	3.8	0.7	1.0	100.0
Same county, plus adjoining counties	13	9,207	49.6	69.3	16.8	6.0	7.3	.5	100.0
More distant Alabama counties	2	3,000	16.2	15.0	10.0	.0	75.0	.0	100.0
Scattered sales in Alabama	1	919	5.0	0.0	41.8	.0	58.2	.0	100.0
Alabama and out-of-state	2	1,410	7.6	4.3	.0	.0	70.9	24.8	100.0
All out-of-state	2	650	3.5	.0	53.8	46.2	.0	.0	100.0
Not specified	4	400	2.2	62.5	0.0	37.5	0.0	0.0	100.0
Total	43	18,544	100.0	48.1	19.4	6.0	24.2	2.3	100.0

[1] C&C represents choose and cut; self op. lot, self operated retail lot; sale to ret., sale to retailers; sale to w/s, sale to wholesalers.

the six respondents who did not expect to market trees in 1982 amounted to 845 trees. Four of these sold small quantities of trees in 1981 by choose and cut.

Marketing methods are shown for growers with plantations of up to 10 acres and for growers with 11 acres and more, table 9. Choose and cut was the most often stated expected marketing method. Of all growers, 41 expected to use this method to sell all or part of their 1982 harvest. Most of the 33 small plantation growers anticipated using the choose and cut method to market trees; 28 expected to use this method only or in combination with other marketing outlets.

Growers with 11 acres or more apparently recognize the limitations of marketing a large volume of trees by choose and cut. These growers more frequently stated other methods, such as sales to wholesalers, retailers and self-operated retail lots, although over one-half of the growers with larger operations stated that some of their sales would be through choose and cut.

Table 9. Expected Methods of Marketing Christmas Trees During the 1982 Harvest Season

Method of marketing	Christmas tree acreage		Total respondents marketing trees in 1982
	10 acres and less	11 acres and more	
	Number		
Choose and cut only	15	4	19
Self-operated retail lot	2	0	2
Sell to retailers	1	1	2
Sell to wholesalers	1	2	3
Choose and cut plus self operated retail lot	4	2	6
Choose and cut, plus sell to retailers	5	1	6
Choose and cut, plus sell to wholesalers	2	2	4
Choose and cut, self operated retail lot, and sell to retailers	0	1	1
Choose and cut, self operated retail lot, and sell to wholesalers	0	2	2
Other combinations of methods	3	3	6
Total	33	18	51

Projected Supply

Total plantings between 1976 and 1981 amounted to 1,369,000 seedlings. The number of these trees to be harvested as Christmas trees will be substantially smaller. Respondents replies to the question of percentages of seedlings they expect to harvest as mature Christmas trees ranged from 100 percent of all seedlings planted to a 1 percent of plantings. Average expected harvest percentage by all respondents was 76 percent. The most common response was an 80 percent harvest rate. Since a large majority of the respondents were not yet experienced in a completed production period and the subsequent harvest of trees, their estimates lacked the validity of experience. Forty-three growers reported they had sold trees in 1981. The average harvest rate reported by these experienced growers was 67 percent of seedlings planted.

In projecting the supply available from respondents in the next few years, a 67 percent harvest rate was used. It was assumed that one-half the marketable trees will be ready for harvest at the end of the fourth growing season with the remaining trees being available for harvest in the fifth year. In south Alabama, growers are able to harvest trees after the third and fourth growing seasons, while in the northern part of the State over 5 years of growth are needed. The assumption used of harvesting in years 4 and 5 is most suitable for central Alabama.

Based on the plantings shown in table 6, the estimated marketings by the respondents for 1982 through 1986 are projected as follows:

Year	Projected harvest thou. trees
1982	75
1983	122
1984	206
1985	292
1986	395

In this estimate, no consideration was given to the number of growers who will not market any of their plantings as Christmas trees. A few respondents remarked that their plantations will likely not be harvested as Christmas trees. Thus, the estimate above probably overstates marketings by the respondents during the next few years.

SUMMARY AND IMPLICATIONS

Purpose of this study was to determine the status of Christmas tree production in Alabama. Information was acquired by means of a mailed questionnaire sent to growers in 1982. A total of 184 growers, an estimated 61 percent of all growers, located in 54 counties responded to the questionnaire.

This enterprise appeals to people of many occupational backgrounds. Only one-eighth of the growers stated that their primary occupation was agricultural production or forestry, although this group reported about one-fourth of all trees planted. The largest concentration of respondents was located in Baldwin, Lee,and Elmore counties; however, the largest concentration of trees was in Mobile County with 194 acres. Since 1976, the respondents had planted a total of 1.4 million seedlings with the intention of harvesting them as Christmas trees. About 95 percent of the seedlings planted was Virginia pine.

In most cases, the enterprise was a small-scale, part-time activity. Average size of plantation was 7,400 trees planted on 7.0 acres. Less than 30

percent of the respondents reported plantations of 11 acres or more; however, they had two-thirds of the acreage planted.

Infancy of the industry in Alabama is revealed by the fact that two-thirds of all plantings since 1976 were made during the past 2 years before the survey. Respondents expected to increase plantings about 8 percent in the 1982-83 planting season, but to decrease plantings in 1983-84. According to Extension Service information, the number of growers in the State increased about 100 since 1982 to 407 growers in late 1983.

Few growers were experienced in harvesting and marketing trees. Many expected to harvest an unrealistic percentage of seedlings planted. Most of those with marketing experience had sold small quantities of trees, usually by choose and cut or other direct marketing methods in local areas. Larger growers were using alternative marketing methods, however, choose and cut was also a popular sales method.

With the rapid expansion of this new agricultural enterprise in the State attracting growers with a diversity of backgrounds, educational information about cultural practices and costs are of immediate need. Information is needed about cultural practices and costs of producing trees in different areas of the State and on plantations of various size. Auburn University Extension and Experiment Station staff have responded to these needs with research and preparation of published information and meetings with growers and potential growers.

It is not likely that the availability of mature plantation-grown trees in Alabama will exceed demand at satisfactory grower prices by 1986. However, the concentration of plantations in some areas may result in over-supply if the marketing choices are local sales by the various marketing methods. If producers in these areas are to avoid excessive competition and low prices, plans

should be made in advance to develop alternative marketing methods. The Christmas Tree Association and Auburn University can provide leadership in identifying marketing methods and developing new markets.

In Lee County, where one of the greatest concentration of plantations and trees exists in the State, local growers with the assistance of Auburn University Extension personnel have formed a marketing association. Through marketing associations, growers can combine individual supplies to attract wholesale buyers and other markets. These associations should be particularly appealing to growers with relatively small volumes of marketable trees.

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APPENDIX

ALABAMA CHRISTMAS TREE SURVEY
Alabama Agricultural Experiment Station
Auburn University, Alabama 36849

Please complete the following form and return in the enclosed envelope.

1. Name _____ Date _____

   Address _____ Telephone _____

2. Are you currently growing Christmas trees or intend to plant seedlings for Christmas trees in 1982-83? Yes ____ No ____. If yes, complete this questionnaire. If no, stop here and return the incompleted questionnaire.

3. Age: Under 30 ____; 30-39 ____; 40-49 ____; 50-59 ____; 60 and over ____

4. Major occupation (if retired, what was your major occupation?)
   _____

5. Are you now retired from your major occupation? Yes ____ No ____

6. In what counties are your Christmas tree plantations located?
   _____

7. Total acreage in Christmas trees _____ acres.

8. Plantings by species and expected dates of harvest for the following:

Planting season	Species planted	Seedlings planted per years	Acres planted	Expected harvest date (or did harvest)
Winter 1981-82	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)
Winter 1980-81	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)
Winter 1979-80	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)
Winter 1978-79	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)
Winter 1977-78	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)
Winter 1976-77	_____	No. _____	_____acres	_____year(s)
	_____	No. _____	_____acres	_____year(s)

9. What percentage of the seedlings planted do you expect to harvest as Christmas trees? _____ percent.

10. The total number of trees you intend to plant:

Planting season	Tree species	Number of seedlings per acre	Acres to be planted
Winter 1982-83	_____	No. _____	_____acres
	_____	No. _____	_____acres
Winter 1983-84	_____	No. _____	_____acres
	_____	No. _____	_____acres

11. Methods you used to market your trees during the 1981 Christmas season were:

Marketing method	Number of trees sold
Choose and cut	No. _____
Self-operated retail lot	No. _____
Sales to retailers	No. _____
Sales to wholesalers and brokers	No. _____
Other (explain) _____	No. _____
Total trees sold	No. _____

12. For the 1981 Christmas season, briefly identify the location(s) of the market areas for your trees _____

_____

_____

_____

13. Were any of your trees shipped to customers located in other states? Yes ____ No ____. If yes, what percent of your total sales in 1981 were shipped out-of-state _____%.

14. Were you satisfied with your sales (marketing methods and prices received) for the 1981 season? Yes ____ No ____. If no, explain

_____

_____

15. How do you expect to sell your trees (method of marketing) during the 1982 season?

_____

_____

16. If you know of any individuals who should be included or may wish to be included in this Christmas tree grower survey, please give names and address in the space below. They will receive a questionnaire.

_____

_____

_____

_____

_____

All information is confidential. Results of the survey will be reported only as grouped information and will not reveal individual data. Thank you for assisting in this study.

If you desire a copy of the finished report, please indicate by a check in the following box. ☐