FACT SHEET

L-1033

A LOOK AT TEXAS CHRISTMAS TREE PLANTATIONS

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In a 1962 study of wholesale Christmas trees, Sorensen and Smith estimated that Texas imported about 2½ million trees that year.[1] Current imports are estimated to have risen by 1 million trees or up to 3½ million Christmas trees imported by 1970. These trees have a wholesale value of approximately $15 million. By supplying a good fresh tree at a competitive cost, Texas producers could capture as much as half of this market. Also, such additional land use would greatly supplement the income of thousands of Texans.

Christmas tree production can be divided into two deeply important phases – growing and marketing.

GROWING CHRISTMAS TREES

Texas A&M University personnel receive about 300 requests annually for information on growing Christmas trees. Work by H. F. Morris at the Tyler Substation during 1949-51 provided good basic information on species selection for Christmas trees.[2] His work indicated that traditional Christmas tree species such as Scotch pine and Douglas fir would not grow under Northeast Texas growing conditions. Tests on pine species by Zobel *et al.* confirmed Morris' results.[3]

An Extension Service Adaptive Research Demonstration was established January 1971. This 2-acre Christmas tree plantation was established at Kilgore College Demonstration Farm about 3 miles east of Overton. In this demonstration, nearly 2 acres were planted to Douglas fir *(Pseudotsuga menziessi),* Eastern redcedar *(Juniperus virginiana),* white pine *(Pinus strobus),* Arizona cypress *(Cypressus arizonica),* spruce pine *(Pinus glabra),* Virginia pine *(Pinus virginiana)* and Scotch pine *(Pinus sylvestris).* Initial results agree with previous data indicating that Arizona cypress, Eastern redcedar and Virginia pine are good selections for Texas growers.

Planting stock is available from southern nurseries – state and private. Placing orders late in the summer preceeding planting is recommended. Planting should be done late in December, January or February and can be successfully done by hand or by machine. Generally, early plantings (late December or early January) will be most successful. Seedlings must be planted at a spacing to permit cultivating or mowing between the rows with regular farm equipment. This could mean rows from 6 to 9 feet apart with the trees planted 4 to 6 feet apart in the row. A 5 by 8-foot spacing requires 1,089 trees per acre.

Quality trees are essential for profitable Christmas tree production. High quality trees must have proper density, taper, balance, a straight stem and be free of defects. Shearing begins in May or June during the second growing season and continues periodically until the trees reach salable size.[4]

Weed and grass control is essential in the commercial production of Christmas trees. Control is achieved either chemically or mechanically or by combination methods. If weeds and grasses are allowed to build up around the trees, quality is hampered and growth rate is reduced because of competition.

Mechanical methods include mowing as an effective means of controlling weeds. Usually three or four mowings are necessary during the growing season. These mowings can be done between the

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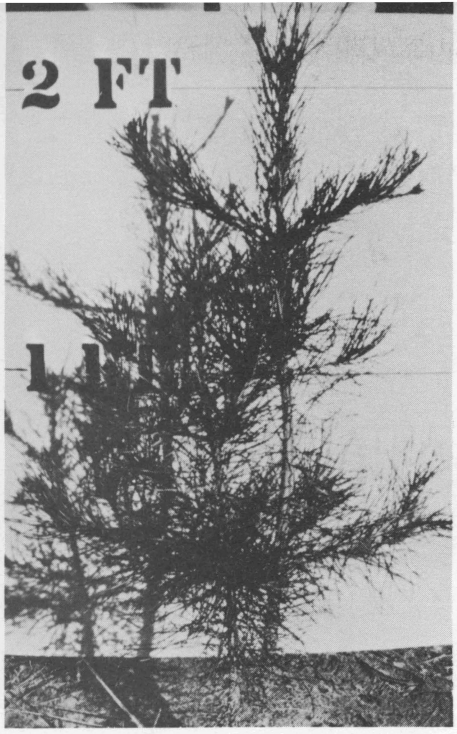
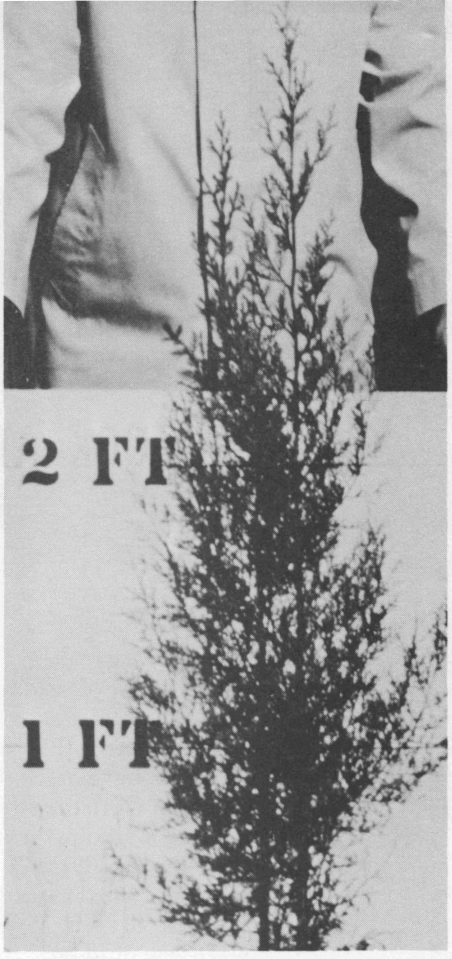


Virginia pine exhibited good survival, growth and Christmas tree form. This tree grew to a height of over 2 feet in only one growing season.

Eastern red cedar survived well and also shows potential as a Christmas tree species.



Arizona cypress not only survived well but some trees grew to a height of over 3 feet in only one growing season. These trees will be shaped into good Christmas tree form starting the second growing season.

rows with an attachment on a tractor, or if the ground is level and smooth, mowing can be accomplished with a regular heavy duty lawn mower. Other mechanical control methods include cultivating or discing around the trees, but this should not be considered after the first two growing seasons because many of the roots will be severed.

Chemical weed control has proved practical in many areas. Its chief advantage is in eliminating weeds close to the tree. Chemicals which show promise are the selective pre-emergent types, applied at approximately 4 pounds active ingredient per treated acre. Pre-emergent chemical can be applied directly around the tree at or soon after planting. Spraying with pre-emergent chemicals should be done during each dormant season. Apply dalapon to effectively control rapidly growing grasses; however, use extreme care to keep this material off the trees. Use caution and apply all chemicals in accordance with instructions printed on the labels.

Each of the three species which shows promise also exhibits certain inherent susceptibility to insect and disease attack. Eastern redcedar and Arizona cypress are sometimes attacked by evergreen bagworm. Hand picking is a simple method of controlling these pests on a small scale basis. Larger infestations might require spraying a contact insecticide or using one of the newer systemics. Both Arizona cypress and Eastern redcedar are susceptible to cedar blight disease. These blights rarely can be controlled completely but an effective weed control program often prevents the spread of these diseases by increasing air circulation around the trees. Cut and burn diseased trees to prevent further contamination. Fungicides containing copper sulfate will keep lightly infected trees in check until harvest time.

Virginia pine is susceptible to attack by the Nantucket pine tip moth. Control of these insects can be achieved by using one of the newer systemic insecticides. Use extreme care and follow label instructions exactly.

MARKETING CHRISTMAS TREES

Producers ready to market trees may consider several possibilities such as marketing directly to the consumer, or by selling through a wholesaler or local retail organization. If a Christmas tree plantation is well located to consumer markets, the producer may develop a good direct local market over a period of years. Developing such a market includes breaking down the old consumer habit of purchasing imported trees. However, the appeal of "come out and select your own tree on the stump" offers great potential.

Christmas trees require a great deal of special care. Here, Christmas trees are being treated with a chemical to possibly reduce the instance of tip moth.

Selling to the Christmas tree wholesaler has the advantage of the producer disposing of his entire harvest for cash. By using this method, the producer will probably receive less than in any other type of marketing.

Retail Christmas tree lots are usually not successful in towns under 10,000 adult population. In managing retail lots, the producer must consider wages paid to sales people, as well as finding a good location, licensing, insurance and the risk factor of vandalism and theft. Sorensen and Smith reported that retail lots often discard as many as 10 percent unsold trees after Christmas.

A marketability study of Arizona cypress Christmas trees in Louisiana was initiated in 1964.[5] In this study, the estimated net return for 1 acre of Arizona cypress on a 4-year rotation was $319.35 or a return of almost $80 per acre yearly.

A projection of the cost-returns from the Texas Agricultural Extension Service Adaptive Christmas Tree Research Project follows.

COSTS FOR THE FIRST YEAR

Shredding and cross discing — 8 hrs.	$ 16
Seedlings — including shipping costs	22
Planting — machine planting @ $10/M	12
Cultivating — 2 times — 16 hrs.	32
	$ 82
Interest on $82 @ 8% for 4 years	30
Total first year costs plus interest	$112

Cultivation costs might be reduced substantially by chemical weed control.

ANNUAL MAINTENANCE COSTS
(after first year) for 6 years

Cultivation and firebreaks	$ 32
Fertilizer, insect control and application costs	25
Total annual maintenance	$ 57
Interest on $57 @ 9% per year	5
Total annual maintenance cost plus interest	62
Annual cost for 6-year period ($62 × 6) =	$372

INFREQUENT COSTS

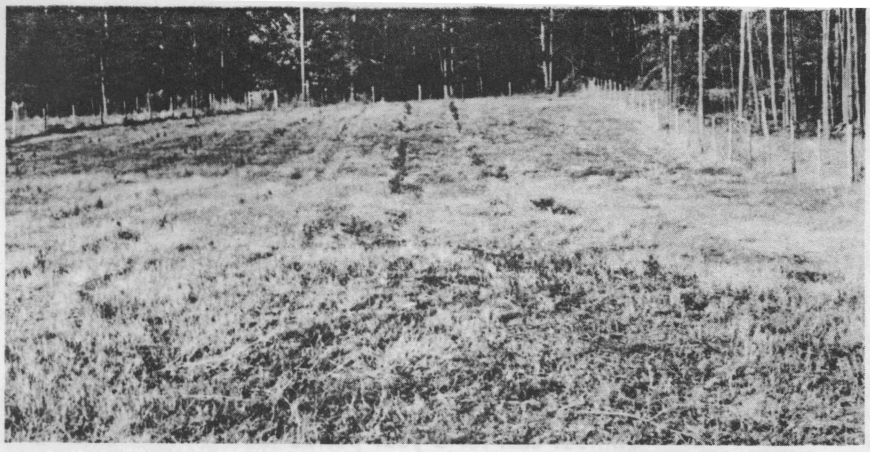
1. Shearing (annual cost for 4 years)	$ 20
Total shearing	20
2. Marketing (annual cost for 3 years):	
a. Marking, advertising and sales	40
b. Cutting, loading and hauling trees	60
	$100
c. Total marketing (annual cost of $100 for 3 years) and total shearing (annual cost of $20 for 4 years)	380
Interest on $100 @ 9% = $9 per year for 3 years	27
Interest on $20 @ 9% = $2 per year for 4 years	8
3. Total infrequent costs for 6 years, plus interest	$415

RETURNS TO INVESTMENT

1. Fourth year, (300 trees @ $1/tree average) — $300 @ 9% = $27 per year for 2 years = $54.
2. Fifth year, (300 trees @ $1.50/tree average) — $450 @ 9 % = $40.50 per year.
3. Sixth year, (300 trees @ $1.75/tree average) — $525.
4. Total revenue $1,275 plus $94.50 interest equals $1,369.50.

SUMMARY OF COSTS AND RETURNS FOR A 6-YEAR PERIOD

1. First year	$112
2. Annual maintenance	372
3. Infrequent costs (shearing and marketing)	415
	$899
Estimated returns per acre	$1,275
$1369.50	
899.00	
$ 470.50 estimated net return for 6-year period.	



Forest landowners in East Texas have a great many acres of idle lands which could possibly return a substantial income if planted with Christmas trees.

An additional possibility for even greater income exists by selling balled and burlapped trees. Selling balled and burlapped Christmas trees, dwarf plants and shrubs is an entirely different area but does offer a potential of additional income.[6]

FOOTNOTES

[3]Sorensen, H. B. and W. A. Smith, "Texas Wholesale Market for Christmas Trees," B-1021.

[2]Morris, H. F., "Growing Christmas Trees in Northeast Texas," **Texas Agricultural Progress,** Vol. 9, No. 2, March-April 1963, PP. 15-16.

[3]Zobel, B. J., Campbell, T. E., Ceeb, 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, October 1956, Texas Forest Service, College Station, Texas.

[4]Box, Benton H. and Foil, Rodney R., "Producing Christmas Trees in Louisiana," Louisiana Cooperative Extension Service, Publication 1590.

[5]Limmartz, Norwin E. and Box, Benton H., LSU Forestry Notes, Note 56, "Arizona Cypress for Christmas Tree Production in Louisiana" and Note 69, "Analysis of Consumer Reaction to Arizona Cypress as a Christmas Tree," School of Forestry and Wildlife Management, Baton Rouge, Louisiana.

[6]Touliatos, Plato D., Unpublished information, Christmas Consultant, P. O. Box 69, Oxford, Mississippi.

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