

Christmas Trees

Introduction

Christmas trees can be grown on relatively small parcels of land and on marginal soils. This enterprise can fit in well with an existing farm operation. While Christmas tree production does have a high profitability potential, it is also a long-term, risky investment requiring occasional periods of intensive labor.

Marketing

Christmas trees can be marketed in a choose-and-cut operation, where the consumer selects the tree and then assumes the cost of harvest and transportation. This type of operation is most successful when it is accessible to consumers and located near a populated area. Growers can also sell trees in a retail market which means transporting the trees to a rental space and providing labor for tending the lot. Selling trees wholesale generally involves contracting with a buyer for a specific type and number of trees. Direct wholesaling to local grocery stores, department stores and organizations is another possibility. If wholesaling, producers should seek to inform consumers about why local fresh trees are higher quality than “imported” trees.

Market Outlook

Kentucky growers do have a competitive edge since locally grown trees are fresher than trees from out-of-state sources. In addition, local producers do not have the transportation costs associated with imported trees. Recent increases in transportation costs due to rapidly rising fuel costs will likely make “buying local”



even more attractive. However, local producers should think through their marketing plan before planting Christmas trees for commercial production because markets remain competitive. The greatest barrier for Christmas tree marketing is the increasing popularity of artificial Christmas trees among consumers. This may prove a significant barrier to entry for many potential Christmas tree growers.

Production Considerations

Site selection and planting

Christmas trees can be produced on a wide variety of soils. While good agricultural land is ideal, some species can even be grown on marginal soils, such as reclaimed mine land. A moist but well-drained site that is level or slightly rolling is best. It is important to match the tree species carefully with the existing soil conditions.

Growers who plan to convert forested land should clear the land and establish a beneficial cover crop the year before planting. If pasture land is used, it may need heavily mowed, plowed or herbicide-treated strips for planting seedlings. Because Christmas trees are a long-term crop, it is strongly advised



to interplant them with a compatible annual cash crop so that the land gives a return on the investment while the trees are growing.

Planting material may be bareroot seedlings grown in a nursery bed or greenhouse-grown containerized plants. Stock should be planted in March or April in Kentucky. This can be accomplished with a planting bar, a spade or by machine. The trees will need adequate water for at least two years after establishment. When rainfall is insufficient, trees can be watered with a water wagon, tank or truck, or by trickle or drip irrigation. Applying woody mulch at the time of planting conserves moisture and reduces weed competition.

Maintenance

Christmas trees require regular maintenance from the year of planting until harvest. Monitoring the plantation for pest or cultural problems on a weekly, bi-weekly, or monthly basis is recommended. Corrective pruning should be done the first year after establishment until harvest. Starting the third year and continuing every year until sold, pine trees must be sheared to the Christmas tree's classical conical shape. Shearing of pines is always done in the summer after the new growth spurt is complete. The specific date varies with weather. Douglas-firs and some true firs require less shearing.

Pest management

Plantations should be monitored for pests and diseases beginning in April and continuing through September. Potentially destructive insects include sawfly, aphids, bagworms, pine-tip moth and pales weevil. Diseases, such as needlecasts and needle blights, can decrease the value of the trees or kill them outright. Deer, voles and rabbits can also cause feeding or rubbing damage. Livestock should not be allowed to roam in unprotected plantings due to the resulting mechanical injury and soil compaction. Vegetation control can be achieved by mowing, herbicides, mulching or a combination.

Harvest

Due to variations in growth rate, not all trees planted the same age will be harvestable the same year. A single year's planting could be harvested over a period of 3 years. It can take 5 to 7 years for a tree to reach the optimum market size of 5½ to 7 feet tall. Tree species which turn yellowish in late fall may be sprayed with a commercial coloring dye in late September or early October for increased marketability that season. Small chain saws or bow saws are commonly used to cut Christmas trees.

Labor requirements

Christmas tree production has periods of intensive labor, requiring time to monitor and manage plantings. Presuming 1,000 trees are planted in a solid one acre block (with some space left for access routes) and harvested over 3 years, per acre labor needs are approximately 5 hours for site preparation, 40 to 48 hours for planting, 24 to 48 hours during establishment years, and 55 to 70 hours for harvest years. As trees grow larger, it can take up to 20 hours or more per acre just for shearing. The total labor commitment can total 124 to 171 hours per acre over the seven-year Christmas tree cycle.

Economic Considerations

Returns from Christmas tree production may appear high; however, a grower must make substantial investments for both labor and capital for 5 or 6 years before realizing any positive net returns. Initial investments include land preparation, purchase of plants, plant establishment and possibly the installation of an irrigation system.

The following 2005 economic data is based on one acre of manually planted Christmas trees (1,000 trees), 85 percent of which will be harvested in equal amounts during years five, six and seven on the farm. Total production costs for establishing and growing these trees over a seven-year period will generally range from \$6,250 to \$7,000. Since labor costs account for nearly one-third of this total cost, the availability of family labor versus

hired labor can greatly affect total cash outlay. Total costs can also vary depending on the size of the operation, types of trees grown, and cultural practices. Greens obtained from pruning the bases of trees can be sold for wreaths, garlands, and other Christmas decorations, thus providing some income in the early production years and supplemental income during harvest years.

Assuming 330 trees are sold annually in years five, six and seven at an average price of \$15 to \$20 per tree, an acre of Christmas trees will generate between \$5,200 and \$7,000 in annual *gross* revenues. The producer will not recover the cost of establishing the Christmas tree stand until the sixth year of production. Returns above all costs for the seven-year period should fall in the \$8,000 range; however, most of this return will not be realized until the last year of production. Thus, the producer must be comfortable reimbursing the establishment costs 7 years after the enterprise has begun.

More Information

- Kentucky Christmas Tree Production Workbook (University of Kentucky)
 - Planning and Site Selection, FOR-16 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for16/for16.htm>
 - Plantation Layout, FOR-17 (2004)
<http://www.ca.uky.edu/agc/pubs/for/for17/for17.pdf>
 - Site Preparation, FOR-18 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for18/for18.htm>
 - Ground Covers, FOR-19 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for19/for19.htm>
 - Species Selection, FOR-20 (1986) *
 - Seedlings and Transplants, FOR-21 (1986) *
 - Vegetation Control, FOR-23 (1993)
<http://www.ca.uky.edu/agc/pubs/for/for23/for23.htm>
 - Fertilization, FOR-24 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for24/for24.htm>

- Irrigation, FOR-25 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for25/for25.htm>
- Pruning and Shearing, FOR-26 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for26/for26.htm>
- Pest Control – Animals, FOR-27 (1990)
<http://www.ca.uky.edu/agc/pubs/for/for27/for27.htm>
- Pest Control – Insects, FOR-27A (1996)
<http://www.ca.uky.edu/agc/pubs/for/for27a/for27a.pdf>
- Harvesting, FOR-28 (1986)
<http://www.ca.uky.edu/agc/pubs/for/for28/for28.htm>
- Marketing and Merchandising of Christmas Trees, FOR-29 (1986) *
- Use of “Cull” Trees, FOR-30 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for30/for30.htm>
- Record Keeping and Taxes, FOR-31 (1986) *
- Developing a Demonstration Plot, FOR-32
<http://www.ca.uky.edu/agc/pubs/for/for32/for32.htm>
- Production Calendar, FOR-33 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for33/for33.htm>
- References, FOR-34 (1991)
<http://www.ca.uky.edu/agc/pubs/for/for34/for34.htm>
- Economics and Budgeting, FOR-36 (1986)
<http://www.ca.uky.edu/agc/pubs/for/for36/for36.htm>
- Needle Cast Diseases of Conifers (University of Kentucky, 1996)
<http://www.ca.uky.edu/agc/pubs/id/id85/id85.htm>
- Christmas Tree Budgets: Pine and Single Leaf Conifer (Ohio State University, 2000)
<http://aede.osu.edu/Programs/FarmManagement/Budgets/xmas/index.htm>
- CRP Alternative: Christmas Tree Production (Iowa State University, 1997)
<http://www.extension.iastate.edu/Publications/CRP19.pdf>

- Growing Christmas Trees on Reclaimed Surface-Mined Land (Virginia Cooperative Extension, 1997)
<http://www.ext.vt.edu/pubs/mines/460-116/460-116.html>

- Tree Crops for Marginal Farmland: Christmas Trees, PB-1463 (University of Tennessee, 2002)
<http://www.utextension.utk.edu/publications/pbfiles/PB1463.pdf>

** These publications are available through:
University of Kentucky Forestry Department, 223 Thomas Poe Cooper Building, Lexington, 40546*