Enterprise Budget:

Christmas Trees

Gathering around a Christmas tree has been a family tradition since 1500. Purchasing the family tree has become a holiday event. Nationwide, approximately 35 million trees are sold annually and many Iowans have invested in Christmas tree farms to serve the market for this festive tradition. Christmas tree plantations ranging in size from a few to more than a thousand acres can be found in almost every region of Iowa. Growing Christmas trees in Iowa can be profitable, and uses soils that are less conducive to conventional crops. Currently Iowa has around 200 Christmas tree farms on 1,500 acres of land.

Agronomic Characteristics

Several varieties of evergreen trees are suitable for commercial production in Iowa. Among the varieties that grow well in Iowa: Scotch pine, white pine, faser pine, canaan, red pine, blue spruce, Douglas fir, concolor fir, and balsam fir. The most popular tree varieties grown are Scotch pine, red pine, and white pine. These three varieties are well adapted to different soil types and weather. However, Scotch pine is not very resistant to drought conditions or extreme moisture. Most trees take seven to 10 years to grow and harvest, but each variety will grow at its own rate. Some common characteristics of popular varieties are:

- Scotch Pine- dark green foliage, stiff branches for decorating
- White Pine- blue-green needles, intermediate shade tolerance, grows on variety of soils
- Red Pine- dark green needles, bushy, grows best on well-drained, sandy soils
- Blue Spruce- dark green to powdery blue needles, slower growing, stiff branches
- Douglas Fir- blue to dark green, good fragrance, grown in variety of climates
- Fraser Fir- dark green needles, good fragrance, needle retention, grows better in higher elevations

Potential Return

The producers will have substantial investments for five to six years before seeing positive net returns. To reach a state of constant revenues, the farmer will have to practice staggered planting to ensure a constant supply every year. The price of a tree can range from $20-$75 but the average is around $40. Returns per acre will fluctuate depending on tree quality, management, and costs.

Enterprise Assessment

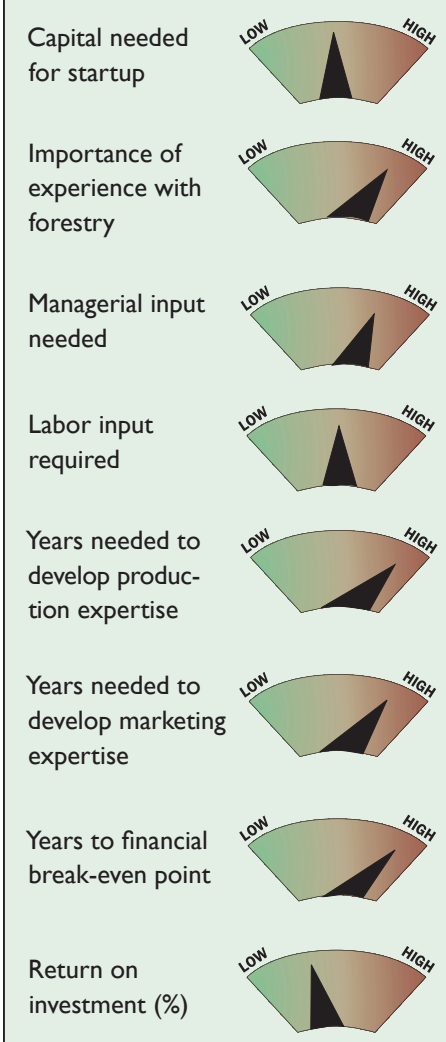
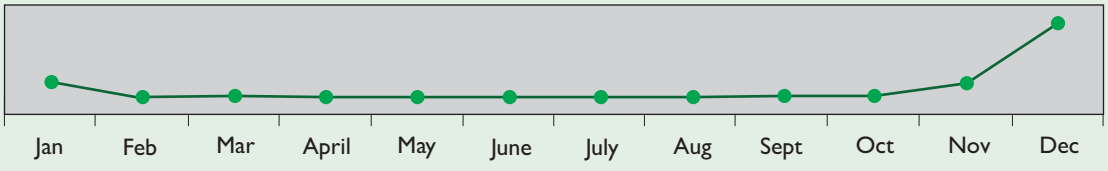


Chart 1: Normal Yearly Labor Requirements

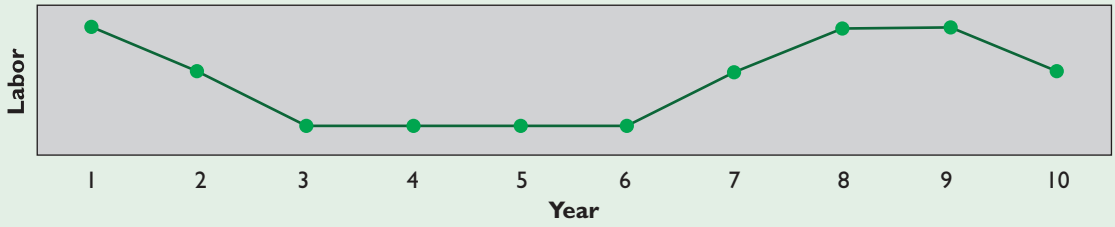


Christmas Trees

Risks

There are many risks to consider in commercial Christmas tree production. It requires a relatively long-term commitment, around 10 years (or more if planting is staggered). Most start-up enterprises will not have any revenue until the end of the seventh year. Tree losses can result from diseases, pests, and adverse weather conditions. Before beginning an enterprise, a market for the trees should be established. This will help protect the producer from price and market risk.

Chart 2: Yearly Labor Requirements



Marketing

Trees can be marketed in several ways: choose-and-cut, wholesale, and internet sales. Choose-and-cut farms provide much more than just a Christmas tree. In addition to harvesting their own tree, consumers also are treated to an outdoor recreational experience. Christmas trees are grown on farms, which always provide an opportunity to enjoy fresh air and the outdoors. Most farms have areas or rows of trees marked for harvest, and consumers are free to wander about, look at all the trees, and select one for cutting. Farmers will provide hand saws or will cut down the tree and haul it out of the field. At many farms, it is possible to pre-tag a tree earlier in the season, and then go out at Christmas time and harvest it. Choose-and-cut farmers often will have many cut trees of differing species available for sale, as well as other products such as wreaths and garland. It is not unusual for choose-and-cut farms to offer other amenities such as wagon or sleigh rides, seasonal foods and drinks, and tree baling and loading. Trees purchased at choose-and-cut farms are freshly cut and usually are cheaper than at retail lots.

The wholesale industry is another option for producers. The price for trees is normally not as high, but the producer can sell a greater quantity. Contracts are typically negotiated during the summer.

A number of Christmas tree growers now are offering mail-order services, whereby a consumer can order a tree, generally of a certain species and size. The tree is then packed fresh in a special box and shipped directly to the consumer. Recently, major mail-order catalog companies have begun to sell Christmas trees.

Some trees might require application of tint and anti-desiccant in the fall. These treatments help the trees maintain their green color and can be applied with a mist blow or hand spray. Even though Christmas is in December, you should begin marketing Christmas trees in October. On the farm this includes tagging, grading, and pricing the trees to get them ready for sale. You also might want to start advertising. If you have a choose/harvest operation, you might want to provide shakers to remove needles and Christmas tree bags for your customers. Most farmers in Iowa use the choose/harvest method, but there is a small demand for wholesale trees.

Economic Considerations: Capital Investment Budget

Item	Purchase price	Life	Deprc/year	Interest/yr
Storage Buildings	on hand	10		
60 hp tractor	on hand	8		
Bush mower	on hand	15		
Mower	on hand	15		
Tools	200	10	20	20
Power sprayer	800	10	80	80
Total	**1000**		**100**	

Note: assumes rented land

Christmas Trees

Management

Plant Bed Preparation – Christmas trees can grow on a variety of soils but well-drained soils work best. Fall plowing and spring disking are the best methods for preparing the land. If planting on slopes with heavy sod, strip till or spray Roundup™ in strips where the trees will be planted.

Planting – This occurs in the spring when the soil temperatures are above 50º Fahrenheit. A planting machine can be used if planting on level ground. In sloped areas trees will have to be planted by hand. It is important to keep the roots moist while planting to prevent injury from dry winds. The first couple of years trees need plenty of moisture, so watering might be necessary if there isn't enough rainfall.

Fertility – Most soils are adequate for Christmas tree production. Yearly fertilizer application usually is not required. Soil testing and professional consulting should be utilized during establishment and operation of the tree enterprise.

Weed Control – Effective weed control is an integral part of profitable production. Mowing between rows will help eliminate weeds and other plants growing between the trees. Mulching and chemicals can be used effectively to keep weeds down around the plant.

Disease and Insect Control – Application of pesticides will vary from year to year

Economic Considerations: Christmas Tree Enterprise Budget (per acre)

YEAR	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Revenue										
Trees	0	0	0	0	0	0	80	200	280	240
@ $25/ tree	**0**	**0**	**0**	**0**	**0**	**0**	**2000**	**5000**	**7000**	**6000**
Variable Costs										
Seedlings	700	105	0	0	0	0	0	0	0	0
Fertilizer	50	0	0	0	0	0	0	0	0	0
Insecticide/ herbicide	60	60	80	70	80	90	90	90	90	90
Shearing	0	0	106	97	175	175	175	175	175	175
Fuel, oil, and grease	13	12	11	11	11	11	11	11	11	11
Machinery repairs	6	5	5	5	5	5	5	5	5	5
Trellis	0	0	300	0	0	0	0	0	0	0
Miscellaneous	15	15	15	15	15	15	15	15	15	15
Operating interest @6.5%	55	13	34	13	19	19	19	19	19	19
Total Variable Costs	**899**	**210**	**551**	**211**	**305**	**315**	**315**	**315**	**315**	**315**
Operating margin	-899	-210	-551	-211	-305	-315	1685	4685	6685	5685
Fixed Costs										
Labor @ $11	462	297	99	99	99	99	99	99	99	99
Cash rent	150	150	150	150	150	150	150	150	150	150
Depreciation exp	490	490	490	490	490	490	490	490	490	490
Interest on capital investment	240	240	240	240	240	240	240	240	240	240
Total Fixed Costs	**1342**	**1177**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**
Total Cost	**2124**	**1303**	**1486**	**1165**	**1261**	**1272**	**1283**	**1299**	**1310**	**1305**
Profit/return to mgmt/ net income	**-2124**	**-1303**	**-1486**	**-1165**	**-1261**	**-1272**	**1517**	**5701**	**8490**	**7095**
Additional labor hour at 2.5 acres	840	540	180	180	180	180	180	180	180	180
Additional net income at 2.5 acres	-5310	-3258	-3715	-2913	-3153	-3180	3793	14253	21225	17738

Sample Budget: http://aede.osu.edu/programs/FarmManagement/Budgets/xmas/conifer-retail.pdf

depending on the environmental conditions. Producers also may need to install fences to protect trees from deer. Common diseases in trees include needlecast, brown spot, and lophoderium. Needlecast is caused by a fungus that results in spots on the needles and black fruiting bodies. The needles turn brown and the foliage falls off. The best way to prevent this is with fungicide. In addition, deer, other animals such as gophers, ground squirrels, mice, and voles can damage the trees. Fencing, hunting, and repellents can be used to control animal pests.

Harvest – Harvesting procedures will be determined by the market niche chosen. Producers should make it a priority to ensure that only fresh trees reach the consumer. This will have a direct impact on the quality and life of the tree. Most trees take five to seven years to reach the marketing height of 5 to 7 feet tall.

Shearing – Shaping and shearing are the most important practices needed to produce quality trees because consumers want uniform, symmetrical trees with dense foliage. Shearing can occur within two to four years after planting. Pines should be sheared in June and July while other species can be done in August and September. Prune off the multiple leaders during the first couple of years after planting. For shearing, use shearing knives, clippers, hedging shears, or power trimmers. Shearing is all about your personal preference. Tapers vary from 1/2 to 2/3 as wide as the tree is tall. It can be beneficial to consider your customer's preferences when shearing.

Market Outlook

With careful planning and attention to detail, Christmas trees can be a high-income producing specialty crop per acre. In recent years, the national Christmas tree market has experienced some instances of overproduction leading to low profitability. Growing Christmas trees must be treated as a business rather than a hobby. Costs and returns must be monitored constantly to serve as a sound basis for management decisions. It is worth noting that the growing popularity of artificial trees will decrease the demand for real trees and prevent some growers from entering the market.

Sources

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www.uky.edu/Ag/NewCrops/introsheets/christmastrees.pdf

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www.agmrc.org/commodities__products/forestry/christmas_trees.cfm

University of Minnesota

http://ipmworld.umn.edu/chapters/mccull.htm

North Carolina State

www.ces.ncsu.edu/fletcher/programs/xmas/budget/index.html

National Christmas Tree Association

www.christmastree.org/home.cfm

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