



CRP Alternative: Christmas Tree Production

SUMMARY

- Christmas tree production can be a profitable option for CRP land.
- There are many costs to consider when producing Christmas trees.
- Resources are available to help landowners make decisions.

Christmas tree production is an alternative use for land released from the Conservation Reserve Program (CRP). But first investigate the requirements of this crop. Consider the seven- to nine-year period required between tree establishment and harvest. Landowners must decide if Christmas tree production could be profitable and financially feasible.

Production Costs

As with any agricultural crop, costs will vary depending on the operation. Consider the quantity, cost, and efficiency of labor; it is the most significant production cost. Other factors that might alter production costs include tree species, equipment, and cultural practices.

Scotch pine, white pine, and red pine are well suited for Christmas tree production in Iowa. Fir and spruce species may be selected, but are either harder to grow or considered less desirable by customers. Consider local market preferences. The three pine species account for approximately 90 percent of Christmas tree production in Iowa. Seedlings may be purchased from the Iowa Department of Natural Resources nursery or private nurseries.

Christmas tree production usually can be integrated into an existing farm operation. Farm machinery often can be used to establish and maintain trees. A tree planter may need to be purchased. However, planters may be borrowed or rented from county conservation boards or private vendors.

One to two pesticide applications and two to three fungicide applications may be necessary each year. Two applications of herbicides often are used to prevent competition from native

vegetation. Shearing and staking also are necessary to achieve optimal aesthetic value. Such costs will increase as trees become taller.

Marketing

Consider the strength of the Christmas tree market. Secure a market *before* production. Do not assume that all trees planted will be harvested and sold as Christmas trees. Some death loss will occur, and some trees may be deformed and suitable only for cut greens. A marketability percentage often is used as a production guideline. It is equal to the number of trees that can be sold at the average tree price, divided by the number of surviving mature trees. Experienced Iowa producers achieve near 90 percent marketability for sheared trees. However, new producers should plan for 60 percent marketability or less. As the level of experience increases, the marketability percentage will increase.

Christmas trees usually are marketed as choose-and-cut, retail, or wholesale. The choose-and-cut method allows buyers to travel to the production area, select and cut their own trees, and transport them home. The producer often is responsible for providing harvest equipment, some labor, and parking. Additional costs may be incurred for liability insurance and advertising.

The second method is to retail harvested trees in a well-populated area. Producers must cut the trees, transport them, and rent and tend the retail space. The producer is responsible for all harvesting, transportation, and advertising costs. Because no guarantee exists that all cut trees will be sold, this marketing method has an increased amount of risk.

Consider marketing costs if using the choose-and-cut method or the retailing method. These costs include advertising, cost of baling trees, tree wrap, retail workers, and other items.

Producers also may contract to sell harvested trees to a large wholesaler. The contract often specifies a certain number and grade of trees to be delivered at a predetermined price and time. This method results in a lower price per tree,

but often in more trees sold. Producers should avoid consignment sales to wholesalers; this greatly increases the risk of having harvested trees go unsold.

The sample cost-and-returns budget in this publication represents a typical Christmas tree producer in Iowa; it should be used as a *guideline* for estimating individual farm production costs. Producers should enter their own values whenever possible.

Costs-and>Returns Budget

	Quantity	Unit	\$/Unit	Total	Cumulative Net Cash Flow
Site preparation					
Operating costs, sprayer	1	time over	2.02	\$2.02	
Supplies					
Roundup	1	application	15.00	\$15.00	
Labor costs, spray application	0.69	hours	7.00	\$4.83	
<i>Total production costs</i>				\$21.85	
Machinery				\$2.25	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$90.25	
Interest on cumulative net costs	112.10	dollars	6.00%	\$6.73	
Net costs				\$118.83	(\$118.83)
Year one					
Operating costs, tree planter	1	time over	2.95	\$2.95	
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Tree seedlings	767	seedlings	0.20	\$153.40	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, planting	3.00	hours	7.00	\$21.00	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
<i>Total production costs</i>				\$287.05	
Machinery				\$33.52	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$121.52	
Interest on cumulative net costs	527.40	dollars	6.00%	\$31.64	
Net costs				\$440.21	(\$559.04)
Year two					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Tree seedlings	192	seedling	0.20	\$38.40	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, planting (hand)	4.00	hours	7.00	\$28.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
<i>Total production costs</i>				\$176.10	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Interest on cumulative net costs	838.25	dollars	6.00%	\$50.29	
Net costs				\$329.50	(\$888.54)

More information

Christmas Tree Production in Iowa: Economics and Marketing (Pm-1499) and Christmas Tree Production in Iowa: Establishment and Care (Pm-1500) are available from Extension Distribution Center, Printing and Publications, Iowa State University Ames, IA 50011 (515) 294-5247 pubdist@exnet.iastate.edu

	Quantity	Unit	\$/Unit	Total	Cumulative Net Cash Flow
Year three					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Tree seedlings	10	seedlings	0.20	\$2.00	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, planting (hand)	1.00	hours	7.00	\$7.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing/staking	12.78	hours	7.00	\$89.46	
<i>Total production costs</i>				\$208.16	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Interest on cumulative net costs	1199.81	dollars	6.00%	\$71.99	
Net costs				\$383.26	(\$1,271.80)
Year four					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing/basal pruning	25.56	hours	7.00	\$178.92	
<i>Total production costs</i>				\$288.62	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Interest on cumulative net costs	1663.53	dollars	6.00%	\$99.81	
Net costs				\$491.54	(\$1,763.35)
Year five					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing	31.96	hours	7.00	\$223.72	
<i>Total production costs</i>				\$333.42	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Interest on cumulative net costs	2199.88	dollars	6.00%	\$131.99	
Net costs				\$568.52	(\$2,331.87)
Year six					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing	38.35	hours	7.00	\$268.45	
<i>Total production costs</i>				\$378.15	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Interest on cumulative net costs	2813.13	dollars	6.00%	\$168.79	
Net costs				\$650.05	(\$2,981.92)

Other sources of information include:

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Iowa State
University
Ames, IA
50011
(515) 294-1168

- District Foresters
Forestry Division
Iowa Department of
Natural Resources
Wallace State Office
Building
Des Moines, IA
50319
(515) 281-8657

- Iowa Christmas
Tree Growers
Association
956 East Main
New Hampton, IA
50659

- Iowa Department of
Natural Resources
Nursery
2404 S. Duff
Ames, IA
50010
(515) 233-1161

This bulletin is part of a series to help CRP contract holders assess the land-use options available to them when the contracts expire. Other bulletins in the series and additional information are available at county ISU Extension offices.

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

	Quantity	Unit	\$/Unit	Total	Cumulative Net Cash Flow
Year seven					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing	38.35	hours	7.00	\$268.45	
Labor costs, harvesting	15.00	hours	7.00	\$105.00	
Retailing costs	107	trees	1.00	\$107.00	
<i>Total production costs</i>				\$590.15	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Receipts-Christmas trees	107	trees	18.00	\$1,926.00	
Interest on cumulative net costs	1749.18	dollars	6.00%	\$104.95	
Net returns				\$1,127.79	(\$1,854.13)
Year eight					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing	33.00	hours	7.00	\$231.00	
Labor costs, harvesting	56.60	hours	7.00	\$396.20	
Retailing costs	400	trees	1.00	\$400.00	
<i>Total production costs</i>				\$1,136.90	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Receipts-Christmas trees	400	trees	18.00	\$7,200.00	
Interest on cumulative net returns	4105.86	dollars	6.00%	\$246.35	
Net returns				\$6,206.34	\$4352.22
Year nine					
Operating costs, sprayer	2	times over	2.02	\$4.04	
Operating costs, mower	3	times over	6.34	\$19.02	
Supplies					
Pesticides	1	application	15.00	\$15.00	
Preemergent herbicide	1	application	18.00	\$18.00	
Fall rescue (Roundup)	1	application	15.00	\$15.00	
Labor costs, mowing	4.14	hours	7.00	\$28.98	
Labor costs, spray application	1.38	hours	7.00	\$9.66	
Labor costs, shearing	15.17	hours	7.00	\$106.19	
Labor costs, harvesting	24.00	hours	7.00	\$168.00	
Retailing costs	170	trees	1.00	\$170.00	
<i>Total production costs</i>				\$553.89	
Machinery				\$15.11	
Land rental equiv. for low-grade land				\$88.00	
<i>Total ownership costs</i>				\$103.11	
Receipts-Christmas trees	170	trees	18.00	\$3,060.00	
Interest on cumulative net returns	6755.22	dollars	6.00%	\$405.31	
Net returns				\$2808.31	\$7160.53
Postproduction costs					
Clean-up of stand	8.00	hours	7.00	\$56.00	
Total returns					\$7104.53