GROWING CHRISTMAS TREES IN VIRGINIA

by

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During the past few years a great deal of interest has developed in Virginia in growing Christmas trees as a crop. To date, however, very few plantations have been established. This has its disadvantages because very little experience has been built up as to the species to plant, how they will react to the different climatic conditions throughout the state, what the potential markets are for home grown trees and many other factors.

That a good market can be developed for home grown trees is most likely. Many other states are growing several different species of conifers for the Christmas trade. Experience indicates that well-formed trees of several different species command a better price on the market than shipped-in, wild trees.

Christmas tree growers have also found that there is a great deal of difference between establishing a plantation for a timber crop and growing trees for Christmas decoration. First of all, stock usually costs more. Our state forest nurseries do not grow coniferous seedlings especially for Christmas tree plantings. Their selection of seedlings is of those species adapted to timber production. Neither are commercial nurseries in Virginia specializing in Christmas tree stock at the present time. There are, however, several commercial nurseries in nearby states which have Christmas tree stock.

After stock is in the ground, considerable work must be done each year if the trees are to develop into quality trees which command a good market price.

1. They must be inspected and, if attacked by insects, sprayed against damage.

2. Grass and brush competition must be eliminated.

3. They must be pruned and trimmed.

4. In some instances they should be fertilized the spring before cutting for the development of a better color.

5. They must be protected against fire, grazing and theft.

All of these practices take time, equipment and material. By harvest time the grower has usually made a considerable investment in capital and labor. A good profit can be made, however, if the trees are
of good form and a market is found for them.

At the present time over forty million trees are cut each year for the Christmas trade in the United States. The top five species in sales are: Douglas-fir, balsam fir, eastern redcedar, black spruce and Scotch pine. Most of these trees, with the exception of Scotch pine, come from natural wooded or pasture lands. Many are cut as thinnings or from tops of trees cut in commercial operations. A large percentage of these trees are cut in September and October. They may reach the market dry, sometimes off-color, and with a large percentage of low-grade trees. On the other hand, they do reach the market in any quantity ordered, of the species commonly accepted, at the proper time and at an established price.

A local grower could have the following advantages:

1. Freshly cut trees with a lower fire hazard because they are green.
2. Better control over size, shape and color.
3. Species for which there is a growing demand.
4. Only those trees cut for which there are orders.

There are also problems in addition to the ones mentioned in the growing of the trees. They may be enumerated as follows:

1. Species acceptance. Buyers may not be accustomed to the ones you can grow best.
2. Volume production. Many retailers may want more than you can harvest.
3. Getting your product into trade channels. You will be in competition with wholesalers who have a well established business.

A prospective grower has two choices if he decides that he wants to go into the business. He may want to talk with some of the retailers of Christmas trees in the markets he wishes to supply. From the retailers he can get ideas as to species most likely to sell, the number of trees the market will take, and some idea of the price he may expect to get for the trees.

His other choice is to plant trees which have some chance of success in his locality and then work his trees into the market as the trees become ready for harvest. In either choice there is some risk. One can never be sure of his market until he has an order to deliver.
As we previously mentioned, there is little experience in Virginia in the growing of Christmas trees. The following discussion is based on our best knowledge of the subject from observation and experience in other states.

Where to Plant

Christmas trees should grow neither too fast nor too slowly. If they grow too slowly, it takes them too long to reach marketable size. If they grow too fast, they become spindly and require an abnormal amount of pruning. Consequently, the soil should be neither real rich nor very poor. It should also be well drained. It is not recommended to establish plantations on either good crop land or on worn-out, eroded land. Idle spots between these two extremes would be best suited for a plantation. Trees should be planted on open land or where competition from brush can be controlled. A neutral or slightly acid soil for all except redcedar is required. Plant where trees can be protected from trespass.

Species to Plant

Here is where lack of local experience is a handicap. Observation of ornamental trees and advice from local nurserymen would help. Based on our best knowledge, however, the following species are marketable, or customer acceptance is good. They should do well if properly cared for.

Plantings above 3000 feet elevation

<table>
<thead>
<tr>
<th>Dry Soil</th>
<th>Moist Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>red pine</td>
<td>balsam fir</td>
</tr>
<tr>
<td></td>
<td>Fraser fir</td>
</tr>
<tr>
<td></td>
<td>red spruce</td>
</tr>
<tr>
<td></td>
<td>Norway spruce</td>
</tr>
<tr>
<td></td>
<td>white spruce</td>
</tr>
<tr>
<td></td>
<td>red pine</td>
</tr>
<tr>
<td></td>
<td>eastern white pine</td>
</tr>
</tbody>
</table>

Plantings from 1500 to 3000 feet elevation

<table>
<thead>
<tr>
<th>Dry Soil</th>
<th>Moist Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotch pine</td>
<td>balsam fir</td>
</tr>
<tr>
<td>eastern white pine</td>
<td>Douglas-fir</td>
</tr>
<tr>
<td></td>
<td>eastern redcedar</td>
</tr>
<tr>
<td></td>
<td>eastern white pine</td>
</tr>
<tr>
<td></td>
<td>Scotch pine</td>
</tr>
<tr>
<td></td>
<td>blue spruce</td>
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<tr>
<td></td>
<td>red spruce</td>
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<tr>
<td></td>
<td>white spruce</td>
</tr>
</tbody>
</table>
Plantings below 1500 feet elevation

<table>
<thead>
<tr>
<th>Dry Soil</th>
<th>Moist Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austrian pine</td>
<td>eastern redcedar</td>
</tr>
<tr>
<td>eastern white pine</td>
<td>Douglas-fir</td>
</tr>
<tr>
<td>Scotch pine</td>
<td>Austrian pine</td>
</tr>
<tr>
<td></td>
<td>Scotch pine</td>
</tr>
<tr>
<td></td>
<td>blue spruce</td>
</tr>
<tr>
<td></td>
<td>Norway spruce</td>
</tr>
</tbody>
</table>

NOTE: None of the above species except eastern redcedar is recommended for the Coastal Plain area except on an experimental basis.

**Characteristics of the Species**

Each of the species suggested for planting, except eastern redcedar, eastern white pine and red spruce, is either not native to Virginia or occurs rarely. While each of the species listed will grow in Virginia under favorable conditions, plantations must be located with care.

The following characteristics should help in deciding what and where to plant.

**Eastern redcedar.** The one popular Christmas tree which is native throughout Virginia. However, its popularity is waning in many sections of the state, particularly Richmond and the District of Columbia. For Christmas trees, planting should be made only on fairly moist loamy soils. Growth is too slow for Christmas tree plantings on dry, very light or heavy soils. Wild trees in great numbers are available in many sections of the state. The wild trees depress the price of plantation grown trees. Planting not recommended unless grower is certain of market.

**Balsam fir.** The number two tree in point of national sales. Sturdy branches, good color, needle retention good, pleasant odor. Requires moist site, some organic matter in soil, north or east slope.

**Fraser fir.** This is the southern counterpart of balsam fir and occurs in a few localities in southwest Virginia. Stock is becoming available.

**Douglas-fir.** The number one Christmas tree in the nation in point of sales. Good form, color and needle retention. Grow on north and east slopes on any but badly eroded land.

**Austrian pine.** Not recommended very highly as a Christmas tree, but will grow on dry, sandy sites at a low elevation. May be grown for local sale.
**Eastern white pine.** A native pine that will grow on almost any type of soil within its range. **Stock available from state nurseries.** This species is becoming very popular, particularly in the District of Columbia. Recommended for planting in Virginia.

**Red pine.** A popular tree for those who like a long needle Christmas tree. Seventh in popularity in the nation. Will grow on almost any soil including dry, sandy locations. Plant only in mountain section. **Stock available from state nurseries.**

**Scotch pine.** This short-needle pine is fifth in popularity in the nation. Since it is of European origin all trees marketed each year are plantation grown. It can be grown on a dry, sandy soil. Most nurseries growing Christmas tree stock specialize in strains for such plantings. Request these special strains when ordering.

**Virginia pine.** Although this native tree is not considered a very desirable Christmas tree, many are sold each year in local markets. If found acceptable, locally forest plantings might be made on a closer spacing and thinnings made for Christmas tree sales. Grows well on dry, sandy soils which are eroded. This species is also available from the state nurseries.

**Blue spruce.** None of the spruces are as desirable as the firs although many are grown for Christmas trees. Needles are sharp and needle retention poor. Plant on moist sites on north or east slope. Not too demanding.

**Norway spruce.** Plant only on fairly moist loamy soils. Needle retention poor.

**Red spruce.** Native to the high mountain sections of Virginia. Plant on moist, sandy soils with some organic matter present. Needle retention poor.

**White spruce.** Similar to red spruce in site requirements. Needle retention poor.

**Spacing**

The spacing of Christmas tree plantings should be determined by the intensity of management and the investment the landowner wishes to make in stock. With a 4’ x 4’ spacing, trees could be thinned and the thinnings sold for table trees. A wider spacing would give a crop that could be harvested all at once. Number of trees per acre for the most popular spacings are:

- 4’ x 4’ - 2722 trees per acre
- 5’ x 5’ - 1742 trees per acre
- 6’ x 6’ - 1210 trees per acre

-Over-
Size of Planting Stock

Any size sold by a nursery is suitable for Christmas tree plantings. The larger and older the trees are, the quicker the trees will be merchantable, all things considered. However, larger and older trees are more expensive and more difficult to plant.

Commercial nurseries usually list trees by size and age. The number of years the trees are in the seedling bed and in the transplant bed are usually presented in the following manner: 1-0, 2-0, 2-1, 2-2. The first figure represents the number of years the trees were in the seedling bed, the second figure the number of years the trees in the transplant bed. Thus, a 2-0 seedling would be two years old and a 2-2 transplant four years old. Transplant trees may be too expensive for the beginner who has had no previous experience in raising trees.

Where to Get Stock

Eastern white pine, red pine and Virginia pine are grown in the state nurseries. Order blanks may be obtained from your county agent or from Virginia Division of Forestry. Other species available from the state nursery are loblolly pine and shortleaf pine. It is questionable whether loblolly and shortleaf pine would ever become acceptable on a large scale for Christmas trees.

Commercial nurseries in Virginia do not grow stock for Christmas tree plantings at the present time. Several, however, are interested and may go into the business.

The following commercial nurseries have advertised in the American Christmas Tree Growers Journal. Their listing here is not a recommendation.

Canale's Forest Nursery, Shelocta, Pa.
Eccles Nurseries, Dept. N, P. O. Box 65, Rimersburg, Pa.
Forest Farms, Parker, Pa.
Musser Nurseries, Box 97-K, Indiana, Pa.
Paint Creek Nurseries, Route #1, Shippenville, Pa.
Western Maine Forest Nursery Co., Dept. XJ-27, Fryeburg, Maine

Recommendations for Initial Planting

Marketing observations indicate that eastern white pine and Scotch pine are gaining in popularity. Fraser and balsam fir will have market acceptance in any city in the state. Douglas-fir, while it is not marketed in Virginia at the present time, would receive immediate acceptance because of its shape and color. Spruce has good shape but poor needle retention.
For those who wish to make plantings of an acre or over of one species we would recommend eastern white pine or Scotch pine in the areas and on the sites recommended for them. The firs should be tried out on an experimental basis.

**How and When to Plant**

Planting may be done in the same manner as with forest seedling stock. For further information on how and when to plant, see your county agent.

**Income to be Derived From Christmas Trees**

In a new enterprise especially, it is difficult to predict what the income will be. In the Christmas tree business there is little experience in Virginia in the various costs which may be expected. Wholesale prices will also vary. However, a wholesale price of one dollar per tree is not at all unreasonable. With half of that price going into the cost of trees, labor and materials the dollar net would be approximately fifty cents per tree. This should be a conservative estimate of income if the grower takes care of his trees. Under favorable circumstances and good marketing methods, it could be three or four times more. One writer estimates that a grower can make 8% net on his investment if trees are wholesaled fifty cents each.

**Marketing Methods**

There are many ways to market Christmas trees, each one of which would fit certain market conditions. The following methods are suggested as possibilities:

1. Grower to cut and sell on the market place. This has the advantage of the retail price, from $.50 to $1.00 per foot of tree for good trees. The grower is in competition with all other sellers and may not sell all his trees.

2. Grower can sell to retailer. Here the price will be from $.50 per tree to as much as $.25 to $.50 per foot of tree for select trees. All trees contracted for would be sold and the owner would have no loss from unsold trees.

3. Sale of trees to individuals where plantation is accessible to public but protected from trespass. Some individuals will pay a premium price if they can select their trees from a large number of uncut ones.

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Summary

Christmas tree plantations are becoming more popular each year. Over 13% of all Christmas trees sold last year came from plantation stock. The advantage of plantation grown trees is their better form and color if properly managed and fresher trees with better needle retention.

Virginia has lagged behind other eastern states in growing trees for the Christmas trade. Thus local experience in the best species to grow on the different site conditions is lacking. However, if one starts on a modest scale, he should be able to develop a good business as he gains experience. Local nurseries do not handle Christmas tree stock. It is expected that several will as interest increases.