

CHRISTMAS TREES - FROM THE NURSERY TO THE MARKET

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Christmas tree growing can be a profitable forest enterprise. It has the advantage of having a relatively short rotation. The species with which I am familiar and which I grow, can be harvested in 8 to 16 years, but keep in mind it is like any other business: To make a success at it, it requires an investment of capital and labor, primarily your labor, consisting of careful supervision, and your sweat. An outsider may unwittingly believe that he need only plant the trees and several years later reap a high profit, such as planting 50,000 seedlings and in 8 to 10 years harvest that many trees for a total of 50,000 to 100,000 dollars. Christmas trees require constant attention to cultural needs and also protection from insects, diseases, animals, and fire.

Let us look at the tree species presently grown in Pennsylvania. Scotch pine plantings predominate. Scotch pine has several characteristics which place it in a favorable position with grower and consumer. It will grow on most well-drained sites. It is relatively fast growing. It retains its needles well, following cutting. It responds well to pruning. From selected seed sources, the winter foliage color is good. Other species popularly grown and used in Pennsylvania are: white pine, Austrian pine, Norway spruce, white spruce, blue spruce, Frazer fir, and Douglas fir. Most or all of these species are grown in many areas of the Piedmont and Mountain sections of the southern states.

Selected seed sources for most of these species is important. The preferred sources of Scotch pine are central France and the Guadarrama and Burgos areas of Spain. For white pine, a source close to the latitude of the planting should be selected, and for Austrian pine, the Austrian mountain source is still considered the best.

Douglas fir sources which are preferred for Pennsylvania planting are the blue variety from Colorado, northern Utah, and Arizona, and the gray variety from interior British Columbia. Each variety has its own attributes. The blue is slower growing but has an attractive bluish-green to green color. The Cooley gall aphid attacks this variety rather severely causing a curling of the needle, but it requires less pruning to shape it into a desirable compact Christmas tree. The gray variety of Douglas fir, on the other hand, being faster growing may take a year or two shorter time to grow to a 7-foot tree than the blue variety. It requires more pruning each season than the blue variety and has a lighter green foliage. In the winter, some individuals will have an undesirable yellowish-green color.

In nursery seeding practices, white pine, white spruce, and most of the firs, plus the gray variety of Douglas-fir, are fall seeded or stratified 24 to 30 days for spring seeding. Spruce, fir, and Douglas-fir are given one-half shade until mid-summer. The pine species are often shaded as insurance against lack of precipitation where little or no irrigation is used.

Nursery management is somewhat similar for all of these species. All of them can be planted as 2-year seedlings however, most private nurseries in Pennsylvania do not use sufficient supplementary nutrients and water, thus these trees usually require an additional year in the seedling or transplant beds to acquire suitable out planting size of 6 to 12 inches. Many 2-year seedlings are transplanted and sold as 2-2 transplants which many growers prefer, especially with spruce and fir.

Chemical weeding using Stoddard solvent for weed control is not a common practice. Only a few private nurseries in Pennsylvania consistently follow good weed control practices using this material. All of the currently grown Christmas tree species are resistant to light applications of Stoddard solvent. Douglas-fir and the spruce species are more resistant to damage by Stoddard solvent than are the pine species. Recommended application rate is 15 - 17 gallons of the 27 percent aromatic spirits content of Stoddard solvent for use on emerging weeds.

Most Pennsylvania plantings are on abandoned agricultural fields which have an existing sod growth. Because of the inhibiting effect of grass sod, some growers on the more gently contoured lands of higher fertility, prepare the soil before planting, by plowing and disking or previously planting a crop such as corn or buckwheat. Some planters use simazine or a mixture of simazine and amino triazole sprayed in a band ahead of the tree planter to kill grass sod and other plant growth and prevent germination of grass and weed seeds. These practices, either before or at the time of planting, have resulted in excellent tree establishment and growth.

A minimum spacing of 5 x 5 feet is used for planting and wider spacing is recommended for production of large intolerant pines, such as Scotch and Austrian.

As is the case of any young forest, a plantation of trees for the production of Christmas trees is susceptible to many pests and in the case of Scotch pine, particularly, there are a number of insects which defoliate or cripple the twigs and leader. Losses due to natural mortality, insects, and rodents, and the presence of genetically inferior characteristics reduce the number of marketable Christmas trees to 50 to 60 percent of the total originally planted. Pine species, particularly Scotch pine, cannot be planted close to adjacent fence rows or woods for the effect of shade causes unsymmetrical growth. Consequently, planting of pine should be kept at a distance from the edge of the woods equal to the height of the trees. This is a rough

Discussion

- Q. (Green) Does shaping take much of your time during their growth?
- A. (DeLong) Douglas-fir takes half as much time as Scotch pine. Once a fairly regular shape is obtained, it's a matter of cutting back some of the longer tips. Occasionally, clipping tips of branches of the upper 3 feet is enough.
- Q. (Bengtson) Does blue spruce have better needle retention than Norway or other spruces?
- A. (DeLong) I've heard it said that blue spruce would hold needles longer than white or Norway spruce, but I doubt if it would for more than a day or two. Most people now use water containers. The trees will hold nicely in these containers if they are cut late in the season.
- Q. What is the price of a tree? Does it go by the foot?
- A. (DeLong) They are sold as individual trees in a height range, such as **3-4** feet, **4-6** feet, or 6-8 feet.
- Q. (Hartmann) What is the outlook for a Douglas-fir market?
- A. (DeLong) Good in Pennsylvania and Northeast. This depends on your location and developing a market, and the fact that you have to plan quite a few years ahead. In my opinion, you might aim for one-third to one-fourth of your stock in Douglas-fir.