UNIVERSITY of NEW HAMPSHIRE
Cooperative Extension

Establishing the Christmas Tree Plantation

The difference between a successful and unsuccessful Christmas tree farm depends on site, soil type, customer preferences, possible sales methods, and accessability to markets. It requires an annual commitment of time and money to produce a marketable crop. Growing and selling Christmas trees is not a "get rich quick scheme". If you decide to start a plantation, begin in a modest fashion. Insect and disease problems, tree nutrition, weed control, shearing, and shaping are all critical management concerns which must be addressed.

SOIL AND TOPOGRAPHY

Tree species used for Christmas trees have specific site requirements for optimal growth. Soils that are either excessively droughty or wet are unsuitable. Sandy, loam soils that are moderately to well-drained are ideal.

Old pastures and recently abandoned agricultural land are ideal locations for starting a plantation. Costs associated with clearing forested areas such as stumping and stone removal can exceed the possible economic gain of a Christmas tree plantation.

Choose a gently rolling site. Avoid low areas subject to late spring frosts. Air drainage provided by rolling terrain helps prevent frost and certain disease problems.

SPACING AND ACCESS

Provide good access roads into the plantation. The spacing, size, and frequency of these roads are dictated by a number of considerations. Edges where shading will affect tree quality are good road locations. Spraying equipment, harvesting machinery and methods are other considerations.

Spacing is dictated by the species, mowing machinery, and terrain. The most frequent spacing intervals and subsequent numbers of trees per acre are:

5x5	1,740 trees per acre
5x6	1,476 trees per acre
6x6	1,210 trees per acre

PLANTING

Consider soil pH and fertility levels before planting. A soil test will help to determine the quantity of lime and fertilizer needed to bring the site to an adequate level of fertility. Soil test information and packets are available at county offices of the UNH Cooperative Extension.

Seedlings will develop quicker and have a better chance of survival if competing heavy grasses and other vegetation are eliminated. Site preparation is most economically accomplished by the use of herbicides. These can be applied in strips for rows, or spots for each individual tree, before planting.

Spring is the ideal season for planting seedlings in New Hampshire. Best results will be achieved if trees are planted as soon as the frost is out of the ground and before buds open. Planting at this time will ensure that cool temperatures and adequate moisture will help to reduce transplant shock.

Keep unplanted trees cool, moist, and out of direct sunlight. When planting, carry small quantities of seedlings in a container with enough water to cover the root, or wrap them in wet moss or burlap. Make holes deep and large enough to ensure that tree roots are not crowded, upturned, exposed, or all vertical. Place seedlings so that soil covers the root collar by not more than a half-inch. Firm the soil around seedlings to avoid air pockets.

SEEDLINGS

Planting stock can be purchased as either bare-root seedlings, bare-root transplants, or container grown seedlings. Bare-root seedlings are two or three-year old plants. They are often the least expensive choice and usually quite small. These seedlings can be placed in transplant beds for a year or two before field planting.

Bare-root transplants are also available from nurseries. These seedlings are larger and costlier, but require less weed control and become established more readily if properly cared for.

Container grown seedlings are raised in specialized containers under greenhouse conditions. Their roots are never removed from the planting medium. This helps to reduce field planting damage and may ensure higher survival rates.

Seedlings are available from the New Hampshire State Forestry Nursery and from various private nurseries. For additional information, contact the Extension Forester at your county office of the UNH Cooperative Extension.

CHRISTMAS TREE SPECIES SUITABLE FOR NEW HAMPSHIRE

SPECIES	SOIL	HARDINESS	SPACING	REMARKS
Balsam Fir	well-drained sandy loam	sensitive to late spring frost	5x5 5x6 6x6	Avoid planting in south central and southeastern NH. Requires a very good soil and air drainage. Keep off south facing slopes.
Concolor Fir	excessively-drained to well-drained sandy loams	sensitive to late spring frosts and winter burning	5x5 5x6 6x6	Provide good air drainage. Organic mulches on excessively drained sites will improve production.
Fraser Fir	well-drained sandy loam		5x5 5x6 6x6	Requires a good soil. Will grow throughout the state.
Douglas Fir	well-drained sandy loam	sensitive to late spring frosts	5x5 5x6 6x6	Avoid planting in northern NH. Provide good air drainage. Plant guaranteed disease free (needlecast) stock.
Scotch Pine	adaptable to a range of soils	drought resistant; short needled varieties may suffer from winter burning	6x6	Short-needled varieties are more susceptible to winter burning. Will outgrow most other species.
White Pine	adaptable to a range of soils	susceptible to winter burning	6x6	Will outgrow most other species.
Colorado Blue Spruce	adaptable to a range of soils		5x5 5x6 6x6	Color not always “blue”. Sharp pointed needles.
Norway Spruce	adaptable to a range of soils	susceptible to winter burning	5x5 5x6 6x6	
White Spruce	adaptable to a range of soils		5x5 5x6 6x6	