Selection and Care of Your Christmas Tree

People seldom realize that a Christmas tree is not a timber tree whose aspirations have been frustrated by an untimely demise. It is realizing its appointed destiny as a living room centerpiece symbolic of "man's mystic union with nature."

Moreover, while it grows, it provides cover for a variety of wildlife, enhances rural beauty, contributes to the local economy and helps to purify the atmosphere by absorbing carbon dioxide and releasing oxygen.

A large selection of Christmas trees is available to New York residents. Most of the trees are grown in plantations, but some still come from natural forest areas. Only the few species of trees that are commercially significant will be discussed in this bulletin.

Selecting a Tree

One of the joys of the Yule season can be selecting and cutting a tree. Many Christmas tree growers in New York State are willing to let the purchaser do so himself. Also, Christmas tree growers usually have a good selection of freshly cut trees at roadside stands. Such facilities assure you of fresh trees rather than trees that were cut some time ago and shipped long distances. "Freshness," however, relates to a tree's moisture content. With favorable storage and atmospheric conditions, a tree can still contain adequate moisture many weeks after harvest. Some growers control moisture loss from their products by applying a plastic anti-trans pi rant spray to the growing trees just prior to harvest.

In New York, Christmas trees can be divided into two main groups: the short-needled spruces and firs and the long-needled pines. Both are common. In general, however, the ideal Christmas tree must have good needle holding ability, attractive color, a full or bushy appearance, a conical symmetrical shape, a pleasing fragrance, branches sturdy enough to hold ornaments and gifts and reasonable fire resistance. While spruces drop their needles readily when dry, pines do not. Thus, in the case of pines, needle retention alone cannot serve as an index of good fire resistance.

Of the conifers native to New York, hemlock is notably unsuitable for Christmas use. The needles drop almost as soon as the tree is cut, and the branches are much too limber to hold ornaments or lights.

Christmas Tree Identification

To identify the trees as you make your selection, look at a branch and find the characteristics on the following outline.

A. Needles attached to twig singly

1. Four-sided needles (in cross-section); attached to small, peg-like projections that make the twig rough and rasp-like when the needles are removed: *spruces*

2. Flat needles with rounded tips; twigs slender and smooth:

a. Needles attached directly to twig without any stem (will leave a round or oval leaf scar when shed); 3/4 to 1-1/2" long; dark shiny green above, silvery banded below; buds blunt and waxy: *balsam fir or other true fir*

b. Leaves with a tiny stem; 3/4 to 1-1/2" long; dark yellow-green or blue-green without silvery banding; buds sharp, red-brown: *Douglas fir*

B. Needles attached to twig in clusters of two or five

1. Two in cluster:

a. Needles 4 to 6" long; flexible but will break when bent with round side out: *red pine*

b. Needles 3 to 6" long; stout and sharp with dull luster; buds prominent and wooly: *Austrian pine*

c. Needles 1-1/2 to 3" long; stout and twisted; usually blue-green: *Scotch pine* 2. Five in cluster: *white pine*

Care of the Tree

A few simple practices that help to maintain tree color, reduce needle fall and keep the tree moist and fire resistant follow.

When you bring your tree home, stand it in a bucket of water outdoors or in a cool place inside. Be sure it is protected from sun and drying winds. Snow and rain will not harm the tree, but heat will cause the needles of some conifers to drop quickly.

Your experience with a natural tree will be most successful if you obtain one that is fresh (at least 80 percent moisture content) and set it up for storage or use so that the lost moisture can be replaced. When you bring the tree inside for decoration, make a fresh cut across the trunk at least one inch above the old cut. The smoother and cleaner the cut is, the better the tree can absorb water. Place the tree in a container of water, or in a Christmas tree stand that has a reservoir for water. Lukewarm water is taken up more readily than cold. A tree in a warm room will absorb up to a quart of water a day. Keep the reservoir filled above the base of the tree at all times.

Sterilization of the stand and tree base with boiling hot water when the tree is first set up may also be beneficial in retarding the fouling of the tree's pores that can ultimately reduce water uptake.

Christmas trees can be a fire hazard when they are allowed to dry below certain levels of contained moisture. Matches will ignite foliage with a moisture content of less than 50 percent. When foliage has dried to below the 20 percent level it will burn violently. However, trees standing in water maintain moisture contents of over 100 percent. Such trees can be ignited only by a ring of flames from, for example, burning parcel wrappings at the base.

Stored trees can recover lost water provided that their moisture content does not fall below 80 percent. If it reaches this level, the trees continue to lose moisture even though their butts are immersed in water.

Place your tree in the coolest part of the room away from the fireplace, radiators, air ducts and TV sets, all of which can dry the needles.

Judging the freshness of a tree is not a simple matter, but some clues are provided by the needles. The needles of dry trees are a dull, grayish green color, fail to exude pitch when broken apart and squeezed, and feel stiff and brittle rather than rubbery. Unfortunately, the best test is usually of little value to the consumer. To perform it, make a fresh cut at the base of the tree, and place it in a water-filled container in a warm room for 12 hours. If the tree takes up a pint or more of water, it is fresh.

Although the United States Forest Products Laboratory at Madison, Wisconsin, has tested many methods of

treating Christmas trees with fire retardant chemicals, none have been found to be completely effective. Cornell research indicates that the best way to reduce the fire hazard in Christmas trees is to keep the tree standing in water, which also reduces the needle fall. Many sprays actually were found to increase the fire hazard by reducing water intake.

If you feel that a fire retardant must be applied, the U.S. Forest Service, United States Department of Agriculture, recommends using nine parts by volume of sodium silicate (water glass) in one part of water with one teaspoon of wetting agent (any household detergent) per quart. Mix the solution well and apply a heavy coating by dipping or spraying. If the spray method is used, thin the mixture with an additional one or two parts of water and double the applications. A paint, insecticide or vacuum cleaner sprayer may be used. Care must be taken to assure complete coverage. When the solution dries, it produces a shiny transparent, colorless coating.

Some proprietary chemicals that can be added to the water in a Christmas tree stand are now available. These help the tree take up water and so enhance "freshness" and fire resistance.

Guard Against Carpet Stains from the Christmas Tree

Water spilled from your Christmas tree holder and pitch from the tree can cause permanent carpet stains. Some preventive measures follow.

As you set up a tree, pick up fallen needles. Needles allowed to remain on the carpet may exude pitch that will cause stains. If pitch gets on the carpet, apply a commercial spot-removing solvent or turpentine. Do not use carbon tetrachloride, gasoline or lighter fluid. Use a small amount of the solvent on a cloth because an excessive amount can damage the backing of the rug, particularly if it is latex. Then blot with clean white toweling or cloths. Repeat if necessary. Try the cleaner on a small inconspicuous area of the carpet first to be sure that no color change occurs.

As you add water to the tree holder, check carefully for spills and any sweating from the container. Blot spills immediately with paper towels over any wet area and weight it down in order to allow the moisture to wick up into the toweling without stopping at the rug surface where it might deposit staining material soaked up from the backing.

Keep Your Tree Safe

- Keep the tree away from fireplaces, radiators, TV sets and anything else that could dry the needles.
- Keep candles away from the tree and use fireproof decorations and light reflectors. Do not let tinsel touch the light sockets.
- Check all Christmas tree lights for loose connections or bare wires before use. Any set of lights with brittle, cracked insulation should be replaced rather than patched.
- Plug in all sets of lights to detect burned out bulbs and short circuits before putting them on the tree.
- Purchase only sets of Christmas tree lights that are wired in parallel and bear the approved label of Underwriters' Laboratories.
- Do not overload electrical circuits. For a typical home tree with 36 bulbs, you are adding 250 watts to the circuit. A 15-amp fuse is capable of handling a total of 1,500 watts. If a fuse blows, it means that the line is overloaded or attached to defective equipment. Do not replace with a larger fuse.
- Unplug lights when leaving the room, even for ten minutes.

Characteristics of Common Christmas Trees Under Room Conditions

1 = *excellent;* 2 = *very good;* 3 = *good;* 4 = *fair;* 5 = *poor*

	Fir	
	Douglas	Balsam
Needle Holding (without water)	2	2
Needle Holding (with water)	1	1
Firmness of branches	4	3
Fragrance	1	1

	Pine		
	Austrian	Red	Scotch	White
Needle Holding (without water)	1	1	1	1
Needle Holding (with water)	1	1	1	1
Firmness of branches	1	2	1	4
Fragrance	3	3	3	2

	Spruce	
	White	Norway	Blue
Needle Holding (without water)	3	5	2
Needle Holding (with water)	2	4	1
Firmness of branches	2	2	1
Fragrance	5	3	3

Source: Cornell Cooperative Extension of Suffolk County

Resource: Selection and Care of Your Christmas Tree, Alex Dickson and Fred E. Winch, Jr., Information Bulletin #48. A Cornell Cooperative Extension publication, 9/75.