Christmas Tree Notes

Leyland Cypress

Introduction. Leyland cypress is a hybrid of two Pacific Coast species, Monterey cypress (Cupressus macrocarpa) and Alaska-cedar (Chamaecyparis nootkatensis) and has been given the scientific name of x Cupressocyparis leylandii. For all practical purposes, this hybrid species is sterile and must be propagated vegetatively. Leyland cypress is now grown in all southern states, and is becoming desirable for use as a Christmas tree species in that region. It retains moisture well if kept watered after being cut and has an attractive shape. However, unlike several other species grown for Christmas trees, its flexible limbs will not support large ornaments, and the species has very little fragrance. A number of cultivars (cultivated varieties) have been developed by vegetatively propagating offspring of the two parental species. Based on trials in the southern United States, "Leighton Green" is considered most desirable for Christmas Trees. However, other cultivars are certainly acceptable.

Growth. The species is capable of growing to more than 100 feet tall at maturity. Relative to its height, a somewhat narrow crown is maintained. When grown in open, non-shade conditions, the species retains limbs to the base. The species generally has medium green or blue-green foliage. In contrast to some other species, a green color is retained throughout the winter. Branchlets are flattened and are held in two or more planes.

Leyland cypress is rated for Zone 6 in cold hardiness, meaning that the species can withstand temperatures to about -8 degrees F. In the United States, it has been grown on heavy clays, sandy loams, and sands. Best growth appears to be on well drained uplands which have considerable clay in the upper soil horizons. The species appears to grow well where pH ranges from 5.5 to 8.0, with optimum growth at about 6.0 to 6.5. The species appears more responsive to nitrogen fertilization as pH increases. Leyland cypress is a shade intolerant species which grows best in open, sunny conditions. The species is relatively tolerant of salt spray and has often been planted in coastal areas. Growth can be expected to average about 2-3 ft. per year on typical southern sites. Christmas trees are usually harvested at ages 3 to 6.

Employment and program opportunities are offered to all people regardless of race, color, national origin, sex, age, or disability.
North Carolina State University,
North Carolina A&T State University,
U.S. Department of Agriculture, and local governments cooperating.

North Carolina
Cooperative Extension Service
NORTH CAROLINA STATE UNIVERSITY
COLLEGE OF AGRICULTURE & LIFE SCIENCES
Planting. Most Leyland cypress planting is with containerized stock with the best time considered to be late March using fall- or winter-rooted plants. Christmas tree growers generally prefer a field that has been mowed and fertilizers added according to soil test recommendations. Sites with heavy clays or hardpans should be subsoiled. Machine planting is not recommended because of the relatively brittle roots and the tendency for roots to be placed in one plane. Roots should be evenly spread out in all directions, which means that planting rates are less than with some other species. Tree spacing depends on equipment and age to which trees are to be grown. Spacing usually ranges from 4 ft. to 8 ft. between trees. Weed control is important in Christmas tree plantings, but care must be exercised as Leyland cypress is particularly sensitive to glyphosate (e.g. Round-Up®) and other herbicides designed to control broad-leaf plants.

Pests. Cypress canker caused by several species of *Sclerotium* is the most important and most damaging disease of Leyland cypress. The major symptoms include dieback of leading and lateral shoots, resin oozing from cracks in the bark and dark brown or purplish patches on the bark. Following strict sanitation measures such as removing any diseased plants is considered the best method to prevent spread of the disease. Sanitation is also important when taking cuttings for propagation, as the disease is believed to be spread by pruning equipment. Leyland cypress is moderately resistant to *Phytophthora* root rot. However, it is susceptible to *Heterobasidion annosum* root rot, and grinding fresh stumps of susceptible species below the soil surface is recommended. Branch dieback caused by the fungus *Botryosphaeria* has been observed.

Insect pests attacking Leyland cypress are relatively few in number. The common bagworm is probably the most serious, but several others have been reported. Deer damage caused by rubbing of antlers may also result in loss of growth, undesirable form or mortality of planted trees.

Shaping. Shaping is required if quality Christmas trees are to be produced, although less so than with many of the other species of conifers currently used for Christmas trees. Shearing is usually started the second year in the field, but corrective pruning can be done soon after planting to remove double or multiple leaders. Leyland cypress tends to have a rather thin appearance the first two or three years in the field. Crowns will fill out in the third and fourth year with appropriate shearing. Trees that are heavily sheared over a period of years tend to develop large diameter trunks, and are extremely dense, which makes them somewhat heavy. Shearing should be minimized in the early years by doing only enough to ensure the tree has a single leader. At two to three years from harvest, more intensive shearing can be applied. The recommended time to shear is when the new growth has filled out and has become somewhat hardened. Late summer or fall is the preferred time although late winter shearing is sometimes practiced.

Summary. Christmas tree growers usually sell cut trees as opposed to trees in containers or burlap. Research has shown that Leyland cypress dries slower than eastern redcedar, but faster than Fraser fir. For this reason, it might have limited potential for shipping in the wholesale market. However, the advantages of Leyland cypress have led it to become an increasingly popular species for "choose and cut" growers.


*Prepared by Craig R. McKinley, Extension Forestry*  
*February 1, 1995*  

Recommendations for use of agricultural chemical brand names and any mention of commercial products or services does not imply endorsement by the North Carolina Cooperative Extension Service nor discrimination against similar products or services not mentioned in this publication.