Douglas fir (Pseudotsuga menziesii (Mirb.) Franco)

Distribution & Provenance

Douglas fir is the most common forest tree of north west America where it grows in association with Sitka spruce and western red cedar. Its natural range is along the Pacific coast from British Columbia to California and inland as far west as Colorado and New Mexico. Pockets of Douglas fir are also found in Mexico. The species was first introduced to Europe by David Douglas in 1827. Research and experience have shown that Coastal Washington and Oregon provenances of Douglas fir are best suited for growth in Ireland while mountain and inland provenances do not do well here. Despite its name, Douglas fir is not a true fir.

Silviculture & Management in Ireland

Douglas fir grows best on deep, well drained, non-calcareous and moderately fertile soils. It does not grow well on exposed sites, where drainage is poor or at elevations over 230 metres. Douglas fir is planted at an initial stocking of 2,500 stems per hectare at a spacing of 2.0 metres x 2.0 metres. Special care should be taken at establishment to ensure that plants are straight and well heeled which will help to avoid incidence of 'basal sweep', to which Douglas fir can be susceptible. Douglas fir is normally a quick growing species in early years. It is tolerant of some shade and it is suitable for replanting sites where some overstorey remains during the early growth of the new crop. First thinning should be carried out early in order to enhance the stability of the remaining crop. There is a tendency for Douglas fir crops to produce a number of very coarsely branched and vigorous dominant trees known as ‘wolves’ and these should be removed at first thinning. Douglas fir crops and timber benefit greatly from high pruning and again, this should be carried out selectively at an early stage in conjunction with first thinning. Subsequent thinnings are purely selective and normal rotation lengths for Douglas fir are between 50 and 40 years, depending on productivity. As Douglas fir matures, its bark changes from a ‘fir like’ grey colour with horizontal fissured, corky texture. Douglas fir is a frost tender species and can often suffer from late spring frost damage. However, the biggest threat to Douglas fir crops is browsing and stripping damage from deer who find the shoots and leaders particularly tender and palatable. Deer fencing around Douglas fir plantations is almost always necessary in areas such as Wicklow where there are large deer populations.

Uses & Markets

Douglas fir produces a distinctive timber with a reddish brown heartwood and well defined growth rings. Douglas fir is popular for use in log houses and as a campaigning forest timber. It is a highly durable timber that is popular for outdoor furniture and is used for garden furniture, boat building and in log cabins. As a result, it has a high demand for structural qualities and is used as a structural timber in both domestic and public buildings. In Ireland, it is a preferred species for transmission poles, due to its high tension electricity lines durability. Further Information

Further information on growing Douglas fir can be obtained from your local Forest Service Inspector or any Professional Forester.