

Lodgepole pine

(*Pinus contorta* Dougl. var. *latifolia*)

Distribution & Provenance

Lodgepole pine is a species of north west America with a large natural range, along the coast from Alaska to California and inland over the Rocky and Cascade mountains as far as Wyoming and Colorado. Lodgepole pine was first introduced into Ireland in 1884 and was first used as a plantation species in 1918. Differentiation between provenances is not always straightforward as there are many intermediate types displaying varying degrees of straightness, vigour, form and branchiness. However, three commonly classified types have been recognised in Irish forestry. These are north coastal, south coastal and inland. North coastal types include Queen Charlotte Island, Vancouver Island and Alaskan provenances and are preferred both pure and in mixture with Sitka spruce on infertile, exposed upland sites. South coastal provenances are preferred for less exposed mineral sites. Research has shown that Lulu Island provenance is unsuitable to Irish conditions.



Natural distribution of lodgepole pine



Free standing lodgepole pine



Lodgepole pine needles and cone

Silviculture & Management in Ireland

Lodgepole pine is established at a stocking of 2,500 stems per hectare. This is equivalent to 2 metre x 2 metre spacing. Mounding is the cultivation technique currently used but most existing lodgepole pine stands were established following double mould board ploughing. The species generally establishes easily although coastal provenances have a tendency to lean which can result in basal sweep with considerable loss of recoverable timber. Young crops generally receive fertiliser in the form of ground rock phosphate (250kg / hectare). On most site types planted with lodgepole pine, thinning has been associated with the onset of varying degrees of windblow. Thinning of the species may therefore be suitable only on the deeper more stable sites. Similarly, pruning should be a practice confined to the better stands showing good form and on stable sites. Most lodgepole pine stands in Ireland are felled prematurely in an attempt to bring forward the second rotation which will probably favour a different species.

Non Timber Benefits

Lodgepole pine is a pioneer species, being one of the first to colonise bare or unused ground. In its native habitat, it is the first species to recolonise burnt ground due to the fact that intense heat, such as that provided by fire or hot sunshine, will open its cones and release seed. In Ireland, it is thought that its pioneering properties will ameliorate poor sites for a successor crop. The less vigorous north coastal pine is planted as a nurse with Sitka spruce on poorer sites. Lodgepole pine is a popular Christmas tree species.

Position in Irish Forestry

In Ireland, lodgepole pine was historically planted largely as a pioneer species on upland peats and western blanket bogs. Initially it seemed very promising in that it was quick to establish on the very poorest of sites. However, it has largely disappointed foresters both in terms of the quality of timber produced and its productivity over a full rotation. Large areas of lodgepole pine are harvested each year and this resource is of great importance to both the Oriented Strand Board (OSB) and Medium Density Fibreboard (MDF) mills in the south east of Ireland. Over 2.5 million lodgepole pine transplants are produced and sold by Irish nurseries each year. Coillte, the Irish Forestry Board, manage an area of over 65,000 hectares of the species, making it the second most common conifer in Ireland after Sitka spruce.

Uses & Markets

Lodgepole pine was traditionally used by native Americans in the construction of lodges, hence its name. The primary market for the species in Ireland is for the manufacture of Oriented Strand Board (OSB) and Medium Density Fibreboard (MDF). For both products, logs are pulped and the wood strands or fibres moulded into boards. Other small dimension lodgepole pine logs are used for the manufacture of fencing stakes as the species readily accepts preservatives. Medium sized logs are used for the manufacture of pallets while large logs of good quality can be used for structural purposes. Lodgepole pine's distinctive grain and yellowish colour has encouraged its use for panelling. The timber is prone to staining and felled logs need to be processed quickly in order to avoid degrade.

Further Information

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



Stand of lodgepole pine

Native North Coastal Americans used pitch from lodgepole pine to dress open wounds and sores and chewed the young buds to relieve sore throats.



Lodgepole pine is used in the manufacture of Oriented Strand Board (OSB) - seen here as hoardings