Sitka spruce (Picea sitchensis (Bong.) Carr.)

Non Timber Benefits

Sitka spruce grows well in Ireland because it is suited to our soils and climate. As proof of its 'ecological fit' the species flowers, produces seed and is able to regenerate naturally. The species has thus adapted to the Irish environment rapidly and many native animals, insects and birds now inhabit Sitka spruce woodlands.

Distribution & Provenance

Sitka spruce is a native species used in Irish forestry. It is relatively easily established and will grow productively under a wide range of conditions but best on moist to wet mineral sites. It is tolerant of exposure which makes it possible to plant Sitka spruce in Ireland at elevations of up to 450 metres. The wide ranging site types suited to growing Sitka spruce vary from very fertile mineral soils to impoverished peaty and podsolic conditions. Fertiliser application may be required for the latter where afforestation or reforestation is taking place. Unmodified peat sites are no longer recommended for afforestation. Sitka spruce is a light demanding species which means that it will not grow well in the shade or as an understorey.

The management of Sitka spruce in Ireland will always depend upon the specific site conditions. In general terms Sitka spruce sites are cultivated by either improving or maintaining the site condition. It is planted at a site density of 2,500 stems per hectare which is equivalent to 2 metre x 2 metre spacing. Plantations are fenced against livestock trespass and competitive weeds are controlled where necessary. The productivity of the crop will influence the age at which thinning and final felling should take place. In general terms thinning commences anywhere between the ages of 18 and 22 and in the latter part of the age range over 200 tonnes of Carbon per hectare can be fixed over a rotation. Sitka spruce is susceptible to late spring frost which burns new growth and can result in poor stem form and lower productivtY. Over 1.4 million cubic metres of Sitka spruce logs are produced annually from Irish forests. Although not considered a joinery timber, recent research has proven itself as one of the most productive coniferous species grown in Ireland and as such has become the industry's mainstay in terms of productivity, value to the timber and foliage. Over 75,000 hectares of Sitka spruce have been planted in Ireland.

Uses & Markets

Sitka spruce produces a pale timber which is generally traded as "white deal". Because of its long fibres and pale colour it is suitable for use in fibreglass, strand board and chipboard. Sitka spruce timber is light in weight while maintaining good strength properties. For this reason it was used as the prime assurance of wood for American Bomber and aeroplanes in World Wars I and II. The timber industry currently uses Sitka spruce for a variety of end uses including building timber, fencing material (stake), pallet manufacture, Medium Density Fibreboard (MDF) and Oriented Strand Board (OSB). Sitka spruce timber is relatively light in weight while maintaining good strength properties. For this reason it was used as the prime assurance of wood for American Bomber and aeroplanes in World Wars I and II. The timber industry currently uses Sitka spruce for a variety of end uses including building timber, fencing material (stake), pallet manufacture, Medium Density Fibreboard (MDF) and Oriented Strand Board (OSB). Although not considered a joinery timber, recent research has proven itself as one of the most productive coniferous species grown in Ireland and as such has become the industry's mainstay in terms of productivity, value to the timber and foliage. Sitka spruce sites are cultivated by either improving or maintaining the site condition. It is planted at a site density of 2,500 stems per hectare which is equivalent to 2 metre x 2 metre spacing. Plantations are fenced against livestock trespass and competitive weeds are controlled where necessary. The productivity of the crop will influence the age at which thinning and final felling should take place. In general terms thinning commences anywhere between the ages of 18 and 22 and in the latter part of the age range over 200 tonnes of Carbon per hectare can be fixed over a rotation. Sitka spruce is susceptible to late spring frost which burns new growth and can result in poor stem form and lower production. It is therefore not suited to sites where such frosts occur regularly. Other risks to Sitka spruce crops include livestock trespass and fire, and windblow on unstable sites.

Further Information

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