

New Forest Fact File

Timber Production and Uses

Site Preparation



Before trees are planted the ground needs to be prepared. The ground may be “scarified” to break up the ground surface or parts of trees left from felling. Ploughing is also carried out in cases where the ground may not have had trees for a number of years, and drainage may be needed for sites with a lot of water.

Planting

Plants are grown in Forestry Commission nurseries outside the New Forest. They are raised from seed in paper containers and are delivered to the Forest at this stage. Once at the planting site the trees are planted into the prepared ground complete with paper containers which will eventually disintegrate. Planting in this way reduces losses from root disturbance. The trees are planted approximately 2 metres apart which results in some 2300 trees per hectare.



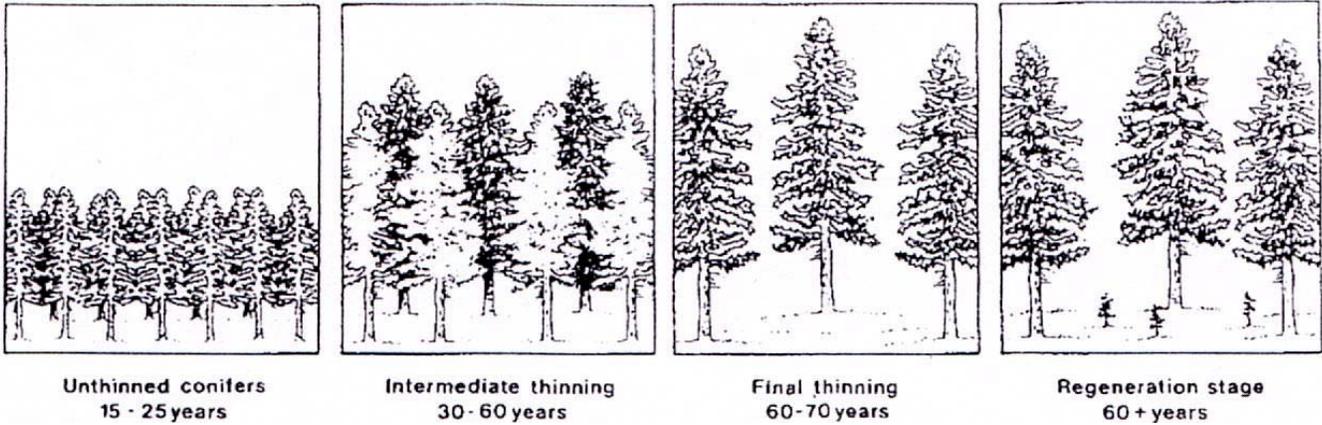
Tree planting is still largely done by hand, but can be done mechanically on flat, lowland areas. To ensure a successful crop, many factors have to be taken into account including soil, climate and species type. Trees are planted close together to give them protection from the wind and to encourage growth. More trees are planted than needed to encourage competition and therefore growth. In their early stages, the trees are vulnerable to various pests and competition from other vegetation. Some trees are protected from attacks by animals by using tree shelters, in other areas sensitive to browsing from deer, deer numbers are managed and/or deer proof fencing is erected.

Thinning

Thinning is the process by which foresters remove selected trees from the plantations when they reach certain ages. Thinning is carried out for the same reasons that a gardener may thin a crop of lettuces, that is to increase the amount of space and light available for the healthier looking specimens, enabling them to grow strongly and quickly.

Thinning is necessary to allow the trees room to grow to their full potential. They are originally planted so close together to provide each other with protection from the wind, and also to encourage them to grow straight and tall as they compete for the light. This is particularly important as straight trunks are essential for good timber.

The thinning of a coniferous plantation will probably first take place at about 15-25 years, when they are at their thicket stage. Intermediate thinning will occur between 30 and 60 years, with the final thinning taking place at about 60-70 years. As the plantation reaches its final stages, more light and space on the forest floor tends to lead to the regeneration of the woodland with new young saplings.



Thinning is a high cost operation, however the wood removed during the thinning operations is part of the forest's annual production of timber, and is used one way or another.

Felling and Removal



Trees can be between 40-150 years old before they are ready to cut down. Most broadleaves need to grow over 100 years before they are felled. Sometimes all the trees in a plantation are cleared at once, known as "clearfelling". The felling of these areas is decided by a plan prepared a long time in advance and which is used for up to 20 years. Some trees are left to continue to grow as homes for wildlife and for people to enjoy. Felling is carried out by a machine called a harvester or by a chainsaw and chainsaw operator. When cut, the trees are carried to the forest roadside by a skidder or a forwarder which are specially designed tractors to pull or carry timber. Trees are usually cut into smaller lengths at the roadside before they are put onto a timber wagon which takes them to a processing site e.g. mill.



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USES OF TIMBER

There are many ways in which trees can be used. The list includes paper, house building, fencing and gates (estate work), pit props (pitwood), bridges, pallets and packaging. Many species produce general purpose woods, while others, particularly hardwoods from broad-leaved trees, have more specialised uses, such as for high quality furniture and sports equipment, because of their beauty or durability.

Part of tree	Product	Use
Trunk	The main 'crop' is the thicker trunk which provides timber for the sawmill (sawlogs) and produce: Planks or boards - sawn straight from the tree. Plywood - made by gluing layers of wood or "plys" together at right angles. This is extremely strong.	Construction, flooring, furniture, packing cases and pallets.
Tops of trees, thinnings (smaller, younger trees).	Panel boards - made from the tops of trees and residues from sawmills. Panel boards include chipboard, medium density fibreboard (MDF) and oriented strand board (OSB). These are all made from small parts of the tree, flakes or fibres, which are then bonded together under pressure, although the process differs slightly in each case. Paper and Cardboard - made by breaking wood down into fibres to produce a pulp which is mixed with water and spread in a layer before being rolled and dried under pressure.	Boards in construction, flooring, furniture, and worktops. Can be covered in veneers or laminates. Maps, Newspapers, books, stamps, labels, toilet rolls, wallpaper and more.
Bark	Bark Chippings	Playgrounds and garden mulches.



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NAME	TYPE	PROPERTIES	USES
Scots Pine	Soft	Fairly good strength; works, nails and finishes well; easily treated with wood preservatives; preservative treatment required when used in contact with ground.	General purpose softwood. Railway sleepers, telegraph poles, joinery, flooring, carpentry and general construction, box and packing cases, various boards, some pulp, pitwood.
Corsican Pine	Soft	Moderate strength; works, nails, and finishes well; easily treated with wood preservatives; preservatives needed when used in contact with ground; fairly stable in changing atmospheric humidity.	General purpose softwood. Boxes, pitwood, fibreboard and ground wood pulp, woodwool, selected material suitable for joinery.
Douglas Fir	Soft	Excellent strength; works and finishes well; heartwood moderately durable; fairly stable in changing atmospheric humidity, doesn't absorb preservatives well.	Mainly structural timber. Others include pitwood, telegraph poles, joinery, flooring, railway sleepers, boxes, furniture, fibre board manufacture.
Sitka Spruce	Soft	High strength/weight ratio i.e. for its low density is fairly strong, works easily, difficult to get good finish, clean white colour, fairly stable in changing humidity, preservative needed if in contact with ground.	All pitwood, particle board, pulp and fibre board manufacture, box and packing cases, woodwool and general construction.
Norway Spruce	Soft	High strength/weight ratio, seasons rapidly, clean white colour; fairly stable in changing humidity, preservative treatment needed if used in contact with ground.	Boxes, cable drums, food containers, kitchen furniture, pulpwood.

NAME	TYPE	PROPERTIES	USES
European Larch	Soft	Good strength, heartwood moderately durable, resistant to abrasions, fairly stable in humidity changes.	Pitwood, telegraph poles, outdoor structural work, estate work due to durable heartwood, river and marine work, selected material boat-building, wagon construction and vat manufacture.
Japanese Larch	Soft	Good strength, moderately durable heartwood, fairly stable in changing humidity.	Pitwood, telegraph poles, general estate work, selected material for structural work and joinery.
Oak	Hard	Heartwood durable in contact with ground; resistant to abrasion, handsome figure.	Furniture, coffin boards, sea defences, veneers, railway wagon construction and repair, estate work, flooring, cooperage, barge building.
Beech	Hard	Works fairly easily, excellent strength, easy to treat with wood preservatives.	Furniture, wood turning, estate work, charcoal manufacture.
Lime	Hard	Soft wood, works smoothly.	Turnery - prized for decorative carving, hat blocks and fine pattern making.
Sweet chestnut	Hard	Durable in contact with ground, cleaves readily, works and finishes well, fairly stable in changing humidity.	Large - Furniture, flooring, wood turning, estate work. Coppice- Estate work, hop poles, cleft paling fences.
Silver Birch	Hard	Excellent strength, works fairly easily, readily treated with wood preservatives.	Wood turning, furniture, cooperage. General purpose hardwood suitable for estate work if treated with preservatives, charcoal manufacture.
Sycamore	Hard	Clean white colour, easily treated with wood preservatives, works and finishes well.	Furniture, food utensils, turning, textile woodware, estate work, veneers and rollers.