

Forestry



- Today forestry accounts for about 10% of land in Ireland.
- 75% of forestry are conifers. Commercial brand is Sitka spruce and native species scots pine.
- Broadleaf e.g. oak, birch, ash makes up the remaining 25% of land

Conifers



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Broadleaf



- Forestry is a long term crop and will grow on poor soils, soils that nothing else will grow on
- Acid brown earths, brown podzolics and grey/brown podzolics are very suitable for broadleaf and conifers
- Podzols, peaty podzols, gleys and peats are suitable to conifers but not really broadleaf's

Planting

- Select saplings (young trees) with a straight stem and a good fibrous root
- Plant the saplings into mounds with the roots well covered
- Broadleaf trees should be planted in November/December
- Conifers should be planted in Spring

Planting into mounds



Fertiliser

- Before planting a soil test should be carried out
- N P and K are required during growing
- Broadleaf forests require a compound fertiliser e.g. 18:6:12
- Broadleaf forests that contain Alder have extra nitrogen as Alder fixes nitrogen in the same way as clover

- Phosphorous is an essential element in a coniferous forest
- It is applied as GRP (Ground Rock Phosphate) at planting
- GRP is released slowly over a number of years
- No other fertiliser is required

Weed Control

- Weed control is very important in forestry
- Weeds and scrub compete with the trees for light, minerals and water and space
- Trees fail to thrive and can die off
- You can physically remove the weeds (small forest) or spray herbicides (large scale)

Harvesting

- There are two stages to harvesting:
Thinning and clear-felling
- Thinning is the removal of the poorest trees from the forest.
- It reduces competition between the trees
- Allows more space, light and water

Planned thinning

- This is when a whole row of trees is removed in a forest.
- Its done to increase space in the forest for other trees

Preparing the forest for thinning

- Before thinning preparation work must take place
- Parallel paths should be created through the forest for inspection
- The branches on the lower part of the trees should be removed to head height (brashing)
- A felling licence should be obtained from the Gardaí



- Conifers grow much faster than broadleaves and therefore should be thinned much quicker
- Wood pulp (paper) and pallet wood (pallets) is produced from the first thinning
- Saw logs (off cuts chipped for mdf, good for furniture production etc) are produced from the subsequent thinnings along with pulp and pallet wood
- The proportion of trees felled for saw logs increases with the age of the plantation

Wood Pulp



Pallet Wood



Saw logs



Sitka Spruce Thinning

- Sitka Spruce have their first thinning after 20 years
- Every seventh line of trees is removed
- This increases space and also provides access to the forest
- Subsequent thinning takes place every 5 years after this

- Thinning in broadleaf plants take place every 10 years
- Conifers can be sown around broadleaf trees.
- They act as a nurse crop to protect the broadleaf during the early stages of growth (shelterbelt)
- They must be removed or they may hinder the development of the broadleaf trees

Clear-felling

- Clear-felling is the final stage of a forest
- All trees are harvested
- In conifers forest this happens after 40 years



Benefits of forests

- Natural habitat
- Food source for animals
- Can reduce nutrient leaching on a farm
- Income from the sale of wood
- Removes CO_2 from the atmosphere – reduces greenhouse gases
- Provides shelterbelts

- Shelterbelts can increase the soil and air temperature
- It can decrease ground wind speed
- Earlier crop germination
- Higher crop yields
- Reduction in heat loss from buildings

Shelterbelts

