

Trees get the personal touch

This Clare farmer manages and shapes each tree in his forest. The rewards are substantial.

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There's a Chinese proverb – “The best time to plant a tree was 20 years ago. The next best time is now.” Martin Murphy from Cahermurphy in west Clare lives by it. He's a Christmas tree grower, firewood producer and a passionate pioneer of farm forestry.

Martin began planting trees in 1982. Since then he has won or been placed in the RDS forestry awards on numerous occasions. He's taken the science of growing trees to a new level that has not been achieved in Ireland. The local primary school has used Martin's forest in their Green Flag initiative. Martin's forest is mainly Sitka spruce.

The species is from the Pacific northwest of the United States and Canada. In 1831 it arrived in Europe. Today it accounts for 60% of the total forest area in Ireland and thrives on wet mineral soils.

When Martin started out in farming he wanted to utilise all of his land. So he planted the poorer parts first. “This was very poor peaty land,” he says. “Before planting there was a lot of purple moor grass and heather present. Both use up a lot of nitrogen, one of the key nutrients in tree growth.” In order to make use of whatever N was available in the soil Martin removed the heather and continued spreading fertiliser until the trees were able to compete with the natural vegetation.

High pruning

High pruning is the systematic removal of a tree's lower branches. This allows knot-free timber. Conventional advice is for high pruning to commence after first thinning. But Martin began before thinning. He started in year 13 and continued pruning and thinning by chainsaw. He had a practical reason.

“From various trips and workshops I

concluded that the best way for me to thin was ‘complete selection’,” says Martin. “Most people thin forests in lines as it suits machinery. But I wanted to do my own thinning, sell my own product. I felt if I high pruned all the stems at canopy closure I could achieve this.

“Also I knew it would mean I wouldn't have to cut the lower branches when the tree was harvested. So it would mean less work for me with the chainsaw overall.”

Harvesting

First thinning involves the removal of one third of the trees. Conventionally one line in seven is removed with some selection. Martin says his goal is to produce clean, knot free, saw log to 6m. “I never did a first or second or subsequent thinning. I continued thinning each year.”

Because the site was pruned initially to 4m, Martin could pick out the good stems and mark those to remain. The first few years he removed the weak, crooked and wolf stems (big stems with no form). This was done over a 15-year period until he got the spacing down from the 2,500 stems/ha planted to 500 stems/ha.

“It's the way farmers do it in Finland,” says Martin. “Only they do it over 50 years. (Trees grow much slower in Finland than here.) If it works near the Arctic Circle, I figured it would work in west Clare.”

Minimise wind blow by extraction

Since 1990 most harvesting and extraction in Ireland has been done by specialised machines. Martin in contrast has used a chainsaw, tractor and winch. “I had a supply of shale so I made roadways through the stand of trees,” he says. “My idea was to avoid soil compaction. If I prevented this I'd reduce wind blow and be able to use the paths to extract timber.

“Canopy closure is also vital. The force of the wind doesn't cause wind blow (where trees fall over). It's holes in the canopy that funnel the wind that uproots the tree. My forest has no straight lines. It's all on selective and



crown thinning. I regard it as managing the crop so the wind becomes a help rather than a hindrance.” Has it worked? After 34 years Martin's trees were each 1.5 cubic metres. His is probably the only Sitka spruce forest on peat achieving this in Ireland.

Firewood

For many years there was little de-



Michael Sommers and Martin Murphy.

mand for pulp material in west Clare. The big pulp mills are in the south east of the country and getting trees to them was uneconomical. "I wanted to sell the product myself so I went into the firewood business," says Martin. He went about marking, harvesting and marketing his trees.

When the trees were on the ground Martin winched them along his road

network to be stacked and 'season'. Sitka spruce is 55% moisture when cut fresh; not suitable to burn in open fires because it tends to spark. But once the moisture content is between 20% and 25% it's very suitable to burn.

"I cut trees into three-metre lengths and sold the logs," says Martin. "West Clare has a lot of wind, so I just used what we had here for free. And it

worked for me. Those buying the logs could cut them into whatever size firewood they wanted for their own stoves."

Continued thinning

Martin states he had one major goal, to produce 6m knot-free sawlog. As trees got bigger Martin changed to "positive selective thinning" – competing trees, of similar quality to selected crop trees, are removed. Some of these logs were sold as sawlog and pallet. Bigger trees have been sold for telegraph poles and slated units.

Clearfell

By March 2016, trees planted in 1982 were ready for clearfelling. This means removing all trees at the same time. It is tax free of income so it was the main payday. Martin says: "The only day price matters is at clearfell!"

However, the harvesting is not over. Martin is continuing to take firewood from the off cuts left behind. "There's timber still there I'm collecting it and drying it," he says. "People come to the yard for it."

Re-establishment

One of the biggest costs associated with clearfelling is replanting. However, there were few branches on Martin's site because of the pruning he had done earlier on. Hence they don't need to be windrowed and taken off site.

Martin says he is surprised by the amount of natural regeneration. "I've a few years before I have to replant," he says. What I will do is look after the new saplings coming back and hopefully they will grow.

"I'll cut them back to get stocking to 2,500 stems per ha. Breeding with trees is the same as breeding livestock. The parents of these trees grew well in Clare so why not their offspring?"