Leaving a legacy

The many rewards of good forest management

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Peter Reid is a forest owner near Clane, Co Kildare, who has developed a beautiful oak forest for himself and future generations to enjoy.

"A lot of hard but rewarding work has gone into the site to get it to where it is today," says Peter. "I want to leave something of real value to the next generation and beyond."

In Ireland, there are almost 23,500 individual forest owners like Peter. The vast majority have planted trees over the last 25 years or so. At present, the private forest sector comprises over 268,000ha of grant-aided forest. Broadleaves account for 29% of the area (DAFM, 2021).

Land owners plant their land for a variety of reasons. These objectives may include timber production, water quality and biodiversity enhancement, carbon sequestration, improved work-life balance or efficient use of out-farms.

In recent years, there has been increased interest regarding the planting of native and high nature woodlands and the adoption of 'close to nature' management.

High density start

In commercial forestry, trees are planted at high stocking rates, e.g 2,500 young trees per hectare in the case of conifers. With broadleaves, the number varies for different species, but ranges from 3,300 – 6,000 trees per hectare.

The aim, especially with broadleaves, is to induce competition among trees to encourage straight growth, facilitate lighter branching, natural pruning and to allow a better choice of quality trees when thinning.

At maturity in commercial broadleaf forests, the final crop may have just 150 to 200 crop trees per hectare, the other trees having been removed through thinning.

Thinning begins once the trees reach a height of 8-10m. Thinning is done regularly, every few years, once the canopy closes in again. Thinning allows more growing space for the better quality trees to develop. The result is a harvest of large diameter sawlog material suitable for high end uses.

Peter Reid.

The initial thinnings produce a lower-quality wood supply, which is terrific as fuelwood and also facilitates good broadleaf management.

As an advisor, it is heart-warming to come across a site that has been thinned appropriately and to see first hand how the crop has responded so well to the thinning intervention.

Decision to plant

In 1999, Peter and his late mother decided to plant some of their land. Peter said: "We were farming approximately 40ha (100ac), mainly in sheep and some tillage. Some of our ground was heavy and we were disillusioned with the returns from farming. We wanted to try something different on a proportion of our land."

In March 2000, they planted approximately half their farm, converting 19.2ha (48ac) into forestry. They planted 15.2ha of Norway spruce,

along with Ash (1ha) and Oak (3ha).

Peter has taken a strong interest in his forest since it was established. He was an active member of the the Kildare Forest Owner Group and sees his forestry as being very much part of his farm business. There is a planned pathway system through the forest, which facilitates recreational walking. Family, friends and canine colleagues regularly enjoy and appreciate this amenity.

The Norway spruce has grown very well and is now due a first thinning. Peter and his colleagues have the plot well laid out, with numerous inspection paths that assist access, monitoring and measuring of the crop. First thinning will be carried out as soon as the felling licence comes through.

The oak

The oak plot, which consists of 3ha is Peter's pride and joy – it is one of the best and finest broadleaf plots that I have ever come across. The oak was planted with a nurse species (European larch in every alternate line) with a stocking of 3,330 oak plus 1,250 larch per ha.

Nurse trees are fast-growing trees which provide shelter to smaller trees and plants as they grow. The larch helped stimulate the growth of the oak in the initial years and reduced the cost of establishment compared with planting pure oak. However, care has to be taken that the nurse species doesn't smother the oak.

One notable oak tree.

I visited this site for the first time in 2012. At that stage, the larch was beginning to compete with the oak. However, when I visited the site earlier this summer, I could not believe how well the oak had performed. The straightness and vigour of many of the oak stems was a joy to behold.

The oak had really benefited from the two thinning interventions it had received in recent years. In late 2015, the larch lines were completely removed by commercial machinery and sold for pulpwood.

A second thinning was carried out by Peter and his colleagues in 2017, when the oak stocking was reduced to approximately 1,100 stems per ha.

The top height of the oak is now approximately 12-14m. The inferior and competing oak trees were removed in this thinning to provide more growing space for the better-quality stems. Each of the remaining trees was also pruned up to at least a third of their height, which greatly adds to the beauty of the forest.

All the felled trees were cut into 2m lengths and stacked in the woodland. Keeping all of the logs up off the ground is important to facilitate drying. The logs are stacked in the woodland for six to eight months before the complete stack is brought into the farmyard by tractor and buckrake.

The logs are then cut up with a chainsaw and split, and are allowed to season for another few months in an open shed for further drying. The firewood is used to provide heating for Peter and his brother's house.

Peter is currently waiting for a licence to carry out a further thinning next year. The Norway spruce will be mechanically thinned by a mechanical harvester. The oak will be thinned again and will supplement the firewood supply for Peter's own use while also benefitting the crop.

Peter's strong interest in his forest and its active management is clearly yielding rich dividends.