

# Can commercial forestry learn from Christmas tree industry?

**Tony Johnston** looks at where the two sectors cross over – in theory and practice



The production of Christmas trees is probably the ultimate expression of Short Rotation Forestry. Whilst not actually a forestry activity - generally it is classed as 'hardy ornamental plant production' - there are many areas where there is crossover in theory and practice. Christmas trees are a much more scientifically managed crop where recent advances in theory and practices are having real financial benefits. These are worthy of sharing with the wider forestry community.

## Rotation length

Whilst many in the Christmas tree industry quite understandably strive for quality in order to realise the maximum price for their trees, they often forget the influence of compounding on their costs. With high inputs both in terms material and labour costs it makes more sense to reduce the rotation length, even if this is at the expense of final unit cost achieved. Even a one year reduction in the rotation can yield a 10% or more increase in return.

Many factors influence the length of rotation but it is primarily the species choice that will determine when you can start to harvest. Species, as in commercial forestry, must match the soil and site conditions present. Once this is determined the next choice will be provenance. In the major Christmas tree species there is a bewildering choice of provenance, not all of which will be suitable for a given location. Whilst this might sound relatively straightforward there is also the need to grow a product that the customer of the future wants to buy. Growers are now also considering factors such as weight

(how bushy) and form as these influence the ease of harvesting and transportation as these will have an influence on cost and hence margin achieved.

As can be seen in the table, no one species offers everything and species choice will always be based on a degree of compromise. I am still trying to find the perfect tree, this being one with reliable establishment, rapid growth, pest and disease resistance, minimal need for management intervention and good marketability. I continue to experiment with new species in the hope of one day finding this 'Holy Grail'. Commercial forestry seems to have found theirs in the shape of improved Sitka spruce but could look to improving margins by refining some management practices further.

## Nutrition

Nutrition goes hand in hand with rotation length. In order to get this right from the start, soil testing is a must. This is not used enough within plantation forestry. Getting nutrition right gives better early establishment, aids plant health and disease resistance, gives a better quality product and ultimately leads to a reduced rotation length. Whilst fertiliser inputs are expensive, the adoption of foliar sprays in recent years have reduced costs significantly. Even if nutrition is focused on pre-planting and the early establishment phase of a commercial timber crop the advantages could justify the added expenditure.

## Access for management

This is especially important in Christmas trees. Blocks are laid out to allow for mechanical access, initially for spraying and latterly for ease of harvesting. The loss of stocking levels is counteracted by the reduction in management and harvesting costs. Normally blocks are laid out based on the length of spray booms and the need to keep the distance the trees are hauled by hand to a minimum. Having a more open architecture means that trees in the middle of a field are accessible for inspection and management.



Harvesting Christmas trees (picture Simon Penson)

## Herbicides

The use of plant protection products, (herbicides, pesticides and bio stimulants) is significantly higher in Christmas trees than in plantation forestry. In most cases its use is only justified in ensuring the quality of the tree as the cost would not be justified in timber crops. Where there could be a lesson is in the use of over-spraying with glyphosate. Christmas trees species (less Douglas fir) have shown tolerance to non-wetting glyphosate even when sprayed with tractor-mounted booms in the summer. Obviously the application rate is critical with common rates being 0.7l/ha in the summer rising to a maximum of 3l/ha when the trees are fully dormant. Summer spraying offers grass suppression only, the winter applications clean up the crop really well, albeit slowly. Spring glyphosate applications are generally mixed with a residual herbicide; however, this can add significant expense.

The use of glyphosate in the winter, avoiding the cost of hand spot spraying by using mechanical over-spraying, could offer a cost effective means of releasing a crop from grass and weed competition. This would allow for more rapid

## Species comparison

Species	Establishment	Management (hit rate)	Rotation length input	Disease resistance (growth rate)	Sale value / marketability
Nordman fir	Very good	Low	8-10	Good	Good
Noble fir	Average	Low	7-9	Poor	Excellent
Norway spruce	Good	Medium	6-8	Good	Low
Lodgepole pine	Very good	Medium	6-8	Very good	Low
Fraser fir	Medium	Low	6-8	Average	Good
Douglas fir	Poor	High	5-7 years	Average	Average
Grand fir	Average	High	5-7 years	Good*	Average

\* Grand fir is very prone to Current Season Needle Necrosis (CSNN) that can render significant proportion of a crop unsalable that season.



establishment and ultimately rotation length. Whilst discussing conifers, experience shows that most broadleaved trees are relatively tolerant of these low levels of glyphosate when dormant. In practice I tend to over-spray at a rate of 1.5l/ha and have not lost any trees even after repeated applications over a number of years.

### Marketing

The marketing and sale of Christmas trees differs from both agriculture and forestry in that the grower dictates the price. He does not bring his product to the market and wait to see what the purchaser is willing to offer. Seldom do you find other sectors of industry as open to the influence of the buyers as you do in agriculture and forestry. Whilst this could be understandable with a perishable food product there is no reason, apart from tradition, that forestry should follow this mode. Trees can continue growing if the desired price is not realised. In order for this system to work the seller of a timber crop must keep a close and constant eye on what is happening throughout the markets in order to offer his product at a realistic price. This is also better based on roadside sale, much

akin to Christmas trees being sold 'farm gate'.

Also of note is that the contract growing of a Christmas tree crop is becoming more common. The purchaser stipulates volume, species and grade requirement before the crop is planted and it is subsequently managed to their specification. Whether this is viable for rotations over 10 years is debatable but certainly worthy of consideration in some circumstances.

In conclusion. Instead of planting in the hope of a good yield class should we not look to modify our management practices in order to maximise the financial potential of the improved planting stock now available. Whilst the additional early cost is higher, and compounded over the rotation, the ability to gain an improved yield in a shorter time period could be justified. An owner being more likely to invest more if the return can be realised in the medium to long term compared to some time away in the future.

Whilst obviously the ground conditions will dictate the level of intervention there is certainly merit in considering some of the aforementioned Christmas tree tactics within the wider forestry sector.

## Growers go head to head for Downing Street honour

They travelled from the furthest corners of the UK and have spent a decade nurturing their perfect specimen – and on 20 October, Britain's best Christmas tree growers went head to head in their national competition.

Out of more than 100 entrants, British Christmas Tree Growers' Association member Andrew Ingram was declared the winner of the Champion Tree category and now has the honour of selecting a tree for Downing Street this year.

Andrew Ingram, from Christmas Tree Common in Oxfordshire, presented an impressive *Lasiocarpa* tree (a type of fir) at the peer-judged event, which was held today at Hole Park in Kent. It is the third time he has scooped the top prize.

Also emerging victorious and facing a trip to the Prime Minister's residence this festive season is Hans Alexanderson, from Santa Fir Christmas Tree Farm in Guildford. He claimed a double win and was judged to have the Champion Wreath as well as the runner up position in the Champion Tree category.

Both growers will now visit Downing Street in the first week of December, where Andrew's choice of 20ft tree will be positioned at the steps of Number 10, while the wreath will hang at the door throughout Christmas, and Hans's selection of tree will stand within the Pillared Room.

The contest is now in its 17th year and is entirely managed by the British Christmas Tree Growers Association. It typically sees contenders from 18 to 80 coming together to showcase their trees and be judged by fellow members.

Each farmer, who will have spent around 10 years nurturing the tree to full 'competition' height, is able to enter categories including Best Nordman, Best Other Fir, Best Pine, Best Norway Spruce, Best Other Spruce, Best Container Grown, and Best Festive Wreath.

Finalists were permitted to submit only one tree into each category, and trees entered must be commercially cultivated and be 1.8 metres (+/- 400mm) high from base to tip. Each is judged for foliage, colour, shape and marketability.

Harry Brightwell, secretary of the British Christmas Tree Growers' Association, said: "Our message this year to all festive lovers is to make choosing a tree a special event for the household – and to 'Buy Real, Buy British'."

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