Cash your chips now or sell your woodchips later?

John Casey
Forestry Development Officer, Teagasc Crops, Environment & Land Use Programme (CELUP)

I am often asked by farmers whether they should sell their timber 'standing' (i.e. where the timber buyer purchases the timber in the field at an agreed value per volume/weight), or whether the farmer should organise the harvesting him/herself and try to increase the value of the crop as a roadside or 'delivered' sale? The answer depends on the level of knowledge, time and effort the forest owner is willing to put into selling his/her timber.

Timber is sold using one of the following options:

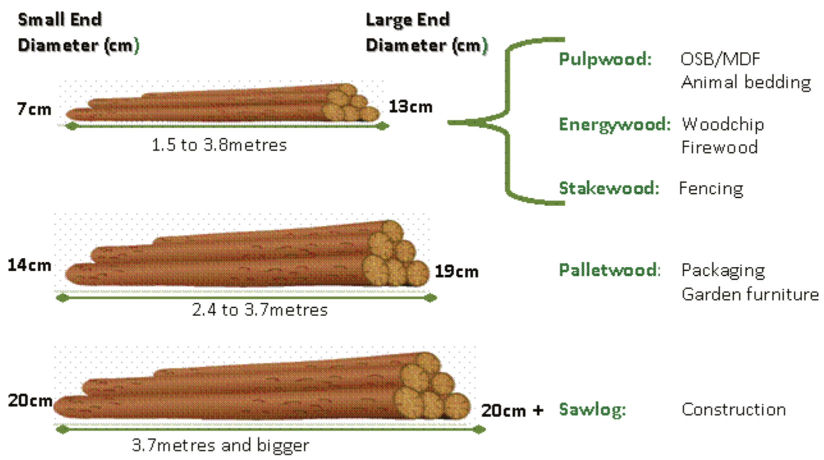
- **Standing sales:** The forest owner sells timber as it stands in the forest at an agreed price in advance of harvesting. The buyer is responsible for thinning and harvesting. Timber is sold by volume (m^3) or weight (tonne). Most first-time forest owners opt for this, the most straightforward method of sale.
- **Roadside sales:** Timber is sold to the buyer when stacked on the forest road. The harvesting contractor is paid by the forest owner. The haulage is covered by the buyer. Timber is sold by volume (m^3) or weight (tonne).
- **Mill gate sales:** The buyer pays for the timber delivered to their yard/mill. The forest owner pays for the harvesting and haulage cost. Timber is sold by weight (tonnes). Obviously, the closer the timber gets to the processing stage, the higher the price offered.

In addition to the method of sale, the price the forest owner receives for the timber depends on the diameter assortment category of the logs produced during harvesting. The quantity (and price) of each category produced depends on the species, quality, size, and age of the timber being harvested (Figure 1).

- **Small diameter timber:** This is generally the top section of the tree and has a diameter between 7cm and 14cm and is generally divided into three further categories: pulpwood, stakewood and energy wood/biomass.
- **Palletwood:** This is cut from the mid-section of the log, which has a large end diameter generally up to 20cm and a small end diameter down to 14cm. It is used as the name suggests in the packaging industry, manufacture of garden furniture and fencing.
- **Sawlog/light sawlog:** This is cut from the lower section of the stem and is cut to a small end diameter of 20cm. It is used to produce timber for the construction industry. In general, first and second thinnings would not contain timber large enough to fall into this category.

Note -the timber lengths and categories mentioned refer to products from conifer trees.

Figure 1



Keen forester
Tom Hickey, Stradbally, Co Waterford, is an example of a farm forester keen to get the most out of his thinnings, while remembering that the crop remaining at clearfell stage is the priority.

Tom planted 7.3ha of mainly Sitka spruce conifers in the winter of 1997 after trying twice unsuccessfully to drain parts of the land. In fact, he remembers turf being cut in one area in his father's time.

Tom estimates that there was a three-year lead time between first considering forestry and finally planting. Tom's spruce plantation is quite representative of farm forestry, as the average private forest area is 7ha to 9ha.

"I felt I knew almost nothing about timber as the crop approached thinning stage," says Tom. "And I had concerns about selling timber standing."

Tom was one of the founding members of the Waterford Forest Owners

Members of WFOG on a field trip to Tom Hickey's farm (ninth from left) with Tegasc's John Casey (fourth from left).

Group (WFOG), initiated by John Casey, Teagasc, in 2010, and is currently the secretary of the group.

Training events and info days offered the group the opportunity to learn as they went along. The Waterford members are very active; organising site visits with Teagasc to demonstrate harvesting and chipping and running clinics at Dungarvan Mart to engage new members, as well as promoting the group and active forest management.

WFOG joined groups in Wexford, Kilkenny and Laois in 2015 to form a new producer group collaboration called Irish Wood Producers. This grouping focuses on:

- Active forest management.
- Professional advice.
- Compliance and infrastructure.
- Training and co-operation.
- Economy of scale.
- Added-value timber products.

From 55 members initially, the Irish Wood Producers now delivers events, training and forestry services to approximately 700 members in five counties. The group is a registered not-for-profit forestry company with a contract forester, a general manager and a part-time office manager with the capacity to deliver forestry services ranging from afforestation to clear fell, working with 34 subcontractors.

An initial site visit to a new member starts with an inventory and site assessment. When the group has a number of sites ready in an area, a harvesting cluster is organised.

The group provides a cost estimate based on the plantation and sales contracts.

Safety assessments are completed before the harvester and forwarder/chainsaw team arrive on site. When the timber is stacked, any commercial timber is sold to sawmills and offset against the cost of harvesting. So far, 2,314t of sawlog and 5,674t of palletwood have been sold to sawmills.

The group encourages retaining pulpwood to increase timber value for biomass, in this case in the form of woodchip. A network of small depots has been established and, depending on site access, biomass is processed either on site or at a depot.

This sales system requires the forest owners to part-fund the timber harvesting instead of a standing timber sale and may involve a possible year-long wait until the pulp is dry enough to chip.

However, it increases the return from the timber sales. To date, 10,045t of woodchip have been delivered, with Danone's infant milk formula plant in Co Wexford one of its major customers.

In Tom Hickey's case, selling his timber using the system outlined above has proved very beneficial. In October and November 2015, Tom organised the first thinning of his 7.3ha Sitka spruce plantation under the auspices of Irish Wood Producers, at an overall cost of €11,735. This was paid for by the sale of 131m^3 of palletwood valued at €5,862 and by Tom paying the harvesting contractor the remainder.

The thinning harvest of 131m^3 of palletwood and 255m^3 of pulpwood came to 386m^3 in total, or approximately 60m^3 per productive hectare, when open spaces, ridelines, etc., are taken into account. If Tom had sold the crop standing at a flat price of €10/t or per m^3, he would have earned €3,500 to €4,000 minus the Universal Social Charge (USC), without any time commitments or other inputs from himself.

The 255m^3 of pulpwood was stacked on the farm before being chipped in June to August 2016 at a moisture content (MC) range of 23% to 37%.

The lower the MC, to a certain point, the more valuable the woodchip is. After chipping and transport costs of €6,586 and the 10% IWP commission were subtracted, Tom earned €17,615 from the sale of woodchip due in part to its high calorific value.

Timber prices will vary according to a range of factors such as season, demand, location, quality, access, etc. Even when the €6,600 top-up payment to the harvesting contractor is taken into account, Tom still earned an impressive €11,000 profit (minus USC) from the overall sale of his first thinnings, while keeping a degree of control by selling through a forest owner-owned grouping.

Tom says that he has learned two very important lessons from his experience:

- "Keeping pulpwood for woodchip can work if you have the market, the patience and resources to wait for the delayed pay day."
- "The real money is in the clearfell. Everything you do is leading to that."