

Trending at Elmia Wood



Gavin Marshall reports on current trends from Elmia Wood, a four-day event held at Jönköping, Sweden, in June

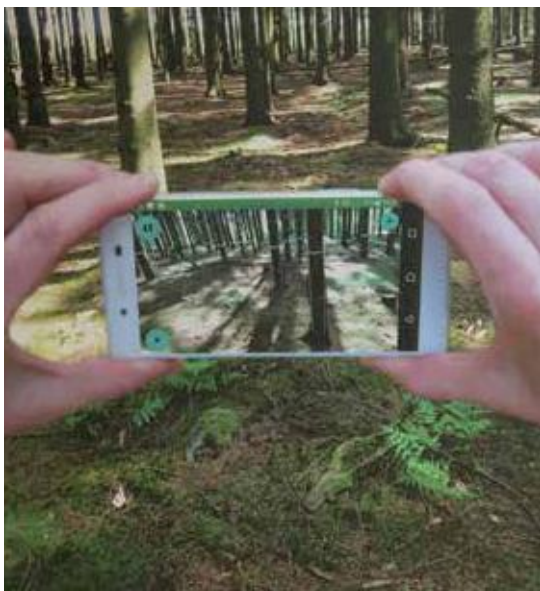
For those who have never had the opportunity to attend Elmia, there is a quite staggering amount to see. It is a truly international show, and it is fascinating because it encompasses working methods from so many different countries. There is always a different way of doing something—whether it is better or not is a matter of opinion, but it will suit someone somewhere, and someone else is providing the equipment or machinery to achieve that aim—and it is all on show at Elmia.

At a time when the forest industry is going through an exciting time in this country, it is my intention with this article to give an overview of trends and working methods, rather than going into detail on any individual item. It is my aim to give pointers as to what is available, indicate new ideas, and perhaps stimulate thought and discussion.

I was particularly interested to share ideas with those involved in forestry in so many different countries, to find that they face the same problems as us, and how they tackle them.

Establishment

The use of wax for protecting plants against *Hylobius* appeared to be a popular display item. I noticed a number of stands showing this product. Treatment is carried out in the nursery, has the benefit of being harmless to both tree and planter, while still offering good protection against *Hylobius*. The wax formulation is in its infancy, but is being trialled in this country by Christie Elite Nurseries, on behalf of Norsk Wax - who are happy to treat either bare root or cell grown plants. It is relatively expensive at about 9p per tree - price is likely to depend on the development of machinery to effect treatment - but it will save on 4 spray applications, so should be cost effective. I like the idea of getting away from the use of unattractive chemicals where possible, and/or avoiding delay in replanting.



Forest management

There were a number of stands exhibiting soft and hardware designed to aid mensuration. There are clearly endless possibilities for such apps with the digital revolution, but many are still in their infancy. Alas difficult to photograph such tools, but the indication is clear—you use your mobile phone or tablet to establish the extent of your 1/100 ha plot, while at the same time measuring the basal area of every tree within the plot to establish stocking density. Or alternatively measuring the volume of timber in a timber stack accurately! For one who grew up with a girthing tape, pencil and notebook, and never quite enough hands to hold every-

thing, I found the concept particularly appealing, but how well it works in practice I cannot say. The most versatile offering was on display on the Treemetrics stand—an Irish company, and I commend you to them. They are digitally recording every tree removed in a harvesting operation, while keeping a running total of volume removed, against target for removal. As every tree removed is mapped, the forester is left with a clear idea of the progress of the operation. Felled timber is also broken down into product categories. Last but not least, it is potentially a good way of keeping a handle on the productivity of both harvesters and forwarders.

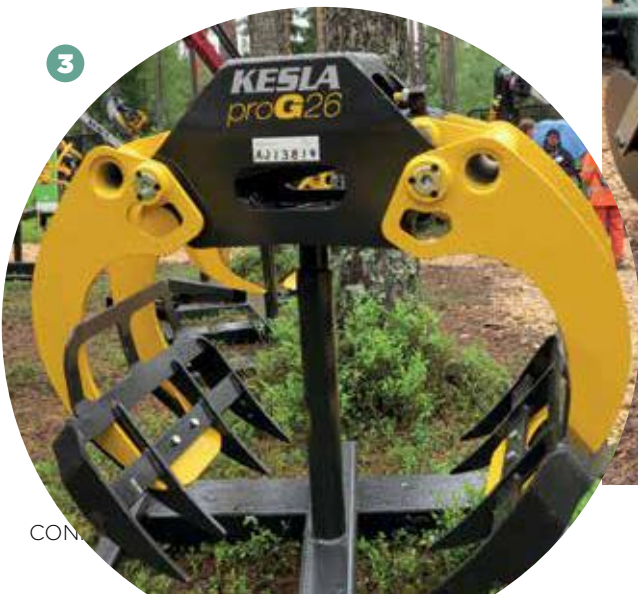
Ground preparation

This is not new, but there is no harm to be reminded of the alternatives available for ground preparation, and especially if we are to significantly increase our planted area. Videos showed this scarifier **[1]** doing a good job of exposing mineral soil through a layer of brush. The discs are powered so help drive the tractor over difficult terrain, but the downside is that you will create a drainage channel on slopes. These machines were being displayed by UOT Forestry, whose UK agent is Paul Vidgen.

The alternative is this moulder **[2]** from the same stable. This might be the preferred ground prep on wetter ground. Notable is its capacity to compact the mounds as it makes them, thus avoiding the need to allow time for settlement. I cannot compare rates, but this is dramatically quicker than mounding with an excavator and, again, appears to work well even on restock sites. This particular machine is currently being trialled, to good effect, by Simon Richardson.

I liked the look of this brush rake attachment on a standard Kesla grapple **[3]**. Apparently not such a new idea in Sweden, but it is new to the export market. The attachment, as with all Kesla products, is available from Jim Watt at Caledonian Forestry and will cost you £580-00. It is easily bolted on And it works! (Or so he says)

This double mouldboard plough **[4]**, developed by Kompania Lesna in Romania appeared to be packed with features. Note the discs behind the mouldboard, so designed to break down any brush lying on the upturned turf. And the addition of a subsoiler to break down any pan below the furrow looked useful. Designed for planting in the furrow - their weather pattern must be different to ours - the mouldboards were not wide enough to provide for two metre spacing if planting on the turfs, but being Romanian, they were clearly quite prepared to adapt the design to suit the customer. And another advantage is that you get a lot of steel for your money from Romania - this plough retailing at about £3,500-00.



Harvesting

OK, so this is what any forestry show is really about - big machines and there were any number to look at. However I suspect that those in the market for a large harvester or forwarder know exactly what they are looking for, and it is my aim therefore to concentrate on the range of machines available, with particular emphasis on versatility. One talking point which interested me was the universal difficulty of attracting drivers to all of these machines, a problem we must address. Of interest to me is that the Swedes, despite the extent of their forest cover, appear to favour working on a smaller scale, thus providing their operators with variety.

One trend of interest is the development of the tractor and trailer. Well, perhaps not the tractor—you can have any tractor you like so long as it's a Valtra. But coupled to modern trailer/crane combinations, you get a unit which is not so far removed from a purpose-built forwarder. Take the 'Y' drawbar, for example, (pictured below) which does away without the need for stabiliser legs, and means that you can reverse your trailer with the ease of a purpose-built forwarder. And the trailers are now available with affordable direct drive, and which can more easily match the tractor speed - a significant advantage over cage drive, and technologically no mean feat. Did you know that the trailer wheels must turn 4% slower than the tractor wheels?! Drive systems are constantly progressing. The main advantage of a tractor and trailer, is the high road speed, invaluable for long extraction routes, and obviating the need for low loaders. And of course the tractor unit is versatile, and can be used for many different tasks, with a wide range of attachments. But please note that all harvester heads on tractors are small, with a maximum tree girth of 35cms.





“

The move for greater versatility is perhaps the most interesting point of note, the striving to develop machinery which will reach ever more inaccessible corners of the forest

I hope that these photos convey something of the variety of systems available to the industry. Alas space does not permit more comprehensive coverage – the range of machinery available is truly eye watering from the largest forwarder I spotted boasting a payload of 24 tonnes, to the many quad-based forwarding units at the other end of the spectrum. Yes, there appear to be developments in the larger scale machines, boasting, for example, ever smoother crane operation, but in what I thought was an interesting move, the bigger names – Rottne, Komatsu et al were all exhibiting new thinnings machines – not that they looked particularly compact to me! And there was a considerable range of what I would call true thinnings forwarders, from the Vimek, to the Wood Tiger, Malwa, and the extraordinary little Alstor, which appears to defy gravity.

But the move for greater versatility is perhaps the most interesting point of note, the striving to develop machinery which will reach ever more inaccessible corners of the forest, and as witnessed by the many harvesters and forwarders boasting winches allowing them to be lowered down the sort of slope where even trees are struggling to hang on.

But I think my favourite forwarder has to be this one...

[1] Harvester head on a Valtra N Series

[2] Stroke processor – not very productive but cheap and easy to operate

[3] Nilsula conversion on a Volvo excavator, this one with harvester head. Not only does this make the excavator base much more stable, but it is also more comfortable for the operator – negating one of the main criticisms of tracked harvesters.

[4] Timber trailer with direct drive to trailer wheels

[5] One of the few purpose-built tracked harvesters, this one built by Neuson, and complete with tilting cab. An excellent looking thinnings harvester, but not zero tail swing, and quite expensive when compared to an excavator conversion.

[6] The simple art of suspending a harvester or forwarder from a winch on steep ground – not easy to demonstrate on flat ground!

[7] Remote controlled tracked skidder – with ultra-low footprint, but expensive at about £65,000

