



Tree and Hedging Group

Newsletter 2023



Chairman's notes

Ed Holmes, J&A Growers

2023 AGM

It was great to see so many members of the Tree and Hedging Group at this year's AGM, back in June in Northumberland, thanks again to our hosts Charles and Ed Beaumont from Trees Please. For many, the highlight of the meeting was a presentation from Earth Rover, with James Miller giving an insight into the Concentrated Light Autonomous Weeding and Scouting robot (CLAWS) which uses concentrated light to kill weeds. The prospect of these machines being available to purchase within a year or two was sweet music to the ears of those people in the room. This is evidence that technology is moving forward at an ever-increasing pace. We look forward to having more solutions for some of the labour-intensive processes on nurseries. Another highlight for me was seeing several new faces at the meeting and a few of these were from the next generation of potential managers, I hope you found it useful.

EAMUs

There has been a lot of concern over the future mechanism for the application and authorisation

of Extensions of Authorisation for Minor Use (EAMUs) and Emergency Authorisations (EAs) for plant protection products.

AHDB Horticulture used to carry out this task, which was funded via a compulsory levy, but this funding system was voted out at a ballot and AHDB Horticulture was wound down in the spring. Horticulture Crop Protection Ltd (HCP) has since been established and has now taken over this work for the horticulture sector. They have transferred across the relevant AHDB staff who are knowledgeable and understand these processes and have a strong link with the HSE Chemicals Regulation Division (CRD) who process and approve the applications.

The HTA will provide our route into the HCP for making voluntary funding payments and for any suggestions for new EAMU requests. We look forward to seeing this mechanism continue and develop as we try to retain as many plant protection products as possible.





EAMUs are an important route to access plant protection products for the ornamental industry

Grants

Over the past few years there has been a lot of dialogue between public bodies and the industry to try and prepare the seed suppliers and nursery sector to ramp-up production and meet the predicted increase in planting requirements. To help industry achieve this, there have been some welcome funding streams made available through government grants, in England via the Tree Production Capital Grant (TPCG), Tree Production Innovation Fund (TPIF) and Seed Sourcing Grant (SSG) and in Scotland through the Harvesting and Processing Grant. These capital grants have helped many businesses to invest in new equipment and capital items, and without this assistance many new purchases would not have happened, especially at this scale. It really has helped established nurseries to focus and invest for the long-term and has helped some recent start-ups too. The TPIF grant has enticed research bodies and companies with new technology into horticulture, I am sure this engagement wouldn't have happened as quickly or to the same degree without this funding.

We all know about the UK Government's ambition to plant 30,000 ha of new woodland creation per year by 2025, this is now a maximum of two planting seasons away. For many species, this planting stock needs to be growing on nurseries now! To what level should the nursery trade be ramping up production?

Several of our members, especially those supplying the forestry market, were faced with late cancellations for planting stock this spring. There were various reasons for this, such as some schemes hadn't moved through the grant process

as planned, some forest managers were a bit too enthusiastic ordering stock in case of shortages etc, etc. There is no doubt some level of blame can be allocated all the way along the chain, but what has clearly happened is that new planting levels in the UK have not increased as hoped. In fact, there has been a drop-off in overall UK woodland creation from 13,840 ha of new planting in 2021/22 to 12,960 ha in 2022/23 (Scotland 8,190 ha, England 3,130 ha, Wales 1,190 ha, N. Ireland 450 ha). This puts nurseries in a very vulnerable position should they decide to continue ramping up production, as we are being encouraged to do. None of us need reminding that over-production leaves us burning our profits!

On a brighter note, the Countryside Stewardship's hedgerow planting grant has increased from £11.60 per metre to £22.97 per metre, which is a substantial increase and will no doubt create an increase in demand for hedging plants over the next few years.

We battle on!

Best wishes to everyone for the season ahead.

HTA Tree and Hedging Group AGM, 13-14 June 2023, Trees Please

Ray Jenkins, RJ Trees and Hedging and Vice-Chair of the T&HG

Twenty-five guests from fifteen companies attended the two-day HTA Tree and Hedging Group AGM at the kind invitation of Charles and Ed Beaumont of Trees Please, at their nursery in Corbridge, Northumberland.

On arrival on the first day, Steven Green the departing Chair welcomed the group and handed over to the new Chair, Ed Holmes of J&A Growers. The meeting is always a useful opportunity to exchange opinions on how the previous season has gone, and there was lots of discussion about the various challenges that we growers face producing trees and hedging plants in an unprotected environment. The prevailing weather conditions always feature as one of the most prominent challenges, the previous year being no different, with extremely wet weather when we all should have been lifting crops last autumn, and

then again in spring 2023, an incredibly cold, wet spell, when we all should have been planting our next production out. Seasonal labour is another perennial challenge, and whilst in theory this ought to be improving, in practice many growers are still extremely hard-pressed for labour.



Conversation about the impact of the weather on germination levels at Trees Please

This year, a new topic discussed at length was the delay of planting scheme grant approvals, which resulted in some members of the group having to dispose of large quantities of perfectly good stock right at the end of the season.

One of highlights of the day was a presentation by Earth Rover of their CLAWS (Concentrated, Light, Autonomous, Weeding and Scouting) robotic weeding machine (see the following feature for more detail) which all in the group thought had tremendous potential, and are keen to learn more about when the robot can be demonstrated. Dinner in Hexham was a most enjoyable get together and many a good chat was had during dinner and in the bar afterwards.



The grading machine demonstration at Trees Please

On the second day, Charles and Ed gave the group a tour of their nursery, starting in the yard and then the cold store, machinery shed (where we saw their automatic grading machine) and then a tour of the fields, in fantastic weather.

The nursery is situated on the bank of the River Tyne, and in 2015, when Storm Desmond wreaked havoc, the river embankment was breached flooding part of the nursery up to 2m deep. It was amazing to see the recovery since then, and Charles was complementary about how other growers had stepped in to help the business get back up on its feet again. To complete the day a lovely BBQ, courtesy of the Trees Please team, was enjoyed by all attendees.

Next year's AGM will be hosted by RJ Trees and Hedging Ltd at Ross-on-Wye, Herefordshire on Tuesday 11 and Wednesday 12 June 2024, so please pop the dates your diary.

Exploring the potential of the CLAWS robot in tree seedling production

James Miller, Earth Rover

Earth Rover is a pioneering agri-tech company on a mission to revolutionise agriculture and horticulture through its innovative and sustainable autonomous robotic solutions. Cutting-edge technology harnesses the power of artificial intelligence (AI) and robotics to drive advancements in sustainable and organic crop management, particularly by offering cost-effective solutions for weed control and scouting in transplanted field-grown crops.

With its lightweight technology and use of batteries and photovoltaic energy, CLAWS operates solely on clean and renewable sources. This approach not only reduces carbon emissions but also minimises the environmental impact of conventional fuel-powered machinery used in the industry. Nevertheless, the heart of CLAWS lies in its concentrated light technology and autonomy. By using start-stop and concentrated light beams, the robot targets the meristems of weeds and eliminates them at their growing points, effectively avoiding the need for chemical herbicides but also soil disturbance, preserving soil health and structure.



The CLAWS robot in action

Equipped with state-of-the-art technology, including 3D cameras, sensors, and AI, CLAWS's comprehensive scouting capabilities also provide real-time data on crop growth and health, empowering growers with crucial insights into crop development.

Earth Rover is now taking another step towards horticultural innovation with its latest project 'Herbicide Free Weed Control for Tree Production', funded by the Tree Production Innovation Fund (TPIF). The aim of this project is to confirm the feasibility of herbicide-free weed control, and CLAWS' AI driven, concentrated light technology for tree seedling production. Earth Rover plans to build a prototype autonomous agri-robot based on CLAWS and conduct field trials at J&A Growers to acquire data and verify effectiveness.

There are several challenges to address, not least the diverse variety of tree crops, as well as the different types of soils and cover substrates used. Building on the experience gained in brassica and vegetable crops, the team are confident that CLAWS' AI system can be adapted and re-trained to revolutionise weed control in tree seedling production by September 2024 and contribute to a greener and more sustainable future.

Nursery perspective on transitioning to peat-free media use

John Marsden, Bernhards Nurseries

Bernhards moved to 100% peat-free in all plant production in 2013. Working with Melcourt, we selected the right blend, the appropriate controlled release fertiliser (CRF) type and amount, and any additives to suit, and got to work. The first few years we had some minor issues, but it was simply a learning curve. The overall technical back up was a great help, and over the past decade the professional Sylvamix media has also improved.

When we first made the switch, we knew we were ahead of the curve, but we were beginning to feel the need for change in growing media coming from our customer base. Bernhards were conscious that the environmental impact of peat extraction was not sustainable and decided to switch to Melcourt Sylvamix that year. We had prior experience of this growing media and felt that it would be the most suitable for the wide range of plants and trees that we grow.



A range of crops recently potted into peat-free growing media

As a result of the changeover, we now water more frequently, but for shorter periods of time, and this has had the positive effect of reducing our water usage by around 5% per annum (averaged over the last five years). The media feels more open due to it having a higher air-filled porosity than peat, we have also noticed that we get fewer losses from waterlogging, reducing wastage due to this issue. There is very little liverwort or moss growth that we used to experience with peat use, but we also mulch the pot tops, using Melcourt

Potting Bark, to help retain moisture and keep weed growth to a minimum.

In some cases where we know we will be potting more nutrient demanding plants, that may be in the container longer (such as some evergreen shrubs), we may ask for a slightly higher amount of CRF to be added to the blend. However, Bernhards do not see this as a real issue, rather a consequence of plants growing away so well, but nevertheless, adding more CRF adds cost to the media, and can result in nutrients being leached from the media if irrigation schedules are not adjusted.

From a professional grower's point of view, the product we have adopted is a very consistent blend, the main issue for us is now sourcing the range of peat-free young plant material to pot on.

UK seed crop roundup for 2023

Helen Richardson, Forestart Ltd

The 2023 seed crop year has had its usual highs and lows to report. The year started well, with good seed crops of aspen and willow. We avoided the late spring frosts, but the damp weather this spring reduced the number of pollinators, resulting in a very poor cherry seed crop. Rowan crops are average, but the later harvested berries, such as hawthorn, are looking excellent.

We had a bumper crop of acorns last year and stored many tonnes in anticipation of a poor crop this year. We have, however, found some crops in certain areas of the UK this year, and at the point of writing, the sessile oak crop in Scotland is looking good.

Sycamore is looking good throughout the UK, so we are hoping that there are no wild storms before the seed is ripe enough to collect.

The birch crops in England and Wales are good but crops in Scotland are more variable with the east coast looking better than the west; we have good stocks to cover any shortfalls in this year's production. Seed from our own orchard is also suitable for most of the UK and shows good form and growth; we have built up good stocks of this. We also have a good stock of beech and are

planning to collect more if the English crop develops. There isn't a collectable crop in Scotland this year.



Collecting sycamore seeds with nets

Many conifer crops are looking poor this year, but Scots pine is looking good, and we are currently organising climbers for noble fir. We're planning to collect a wide range of alternative conifers as some, such as *Cryptomeria*, are cropping well. Orchard conifers are yielding well, although some trees are still too young to yield to their full potential.

A passion for the nursery life

Sam Taylor, Thorpe Trees



Sam and company weeding a crop of hawthorn

When I first came down to work on the family tree nursery, I had no real expectations as my plan wasn't to stay for a prolonged period. I had just finished my degree at Leeds Beckett University with the thought of staying on to do a master's degree. However, as the covid pandemic began

I knew this wasn't going to happen. After a few months working as a landscape gardener over the summer, I decided to join Thorpe Trees in October of 2020, with the aim of staying for a year or two and helping where I can. This soon turned into a passion of all things involved with nursery life and I have no intention of leaving it now.

I had been around the nursery all my life, but seeing it as an employee was very different to visiting on a Sunday with my dad to check on the crops. The buzz about the place as our Romanian workers and office staff arrived back was something quite special. Then the season kicked off and there wasn't a second to think about anything apart from the next order going out or the next delivery coming in. I have always enjoyed being outside and staying active, so this job couldn't have been more fitting. Our dispatch and grading teams have such a good relationship that we share our workload over the season, and occasionally a beer. Without this good relationship the winter would seem a lot longer than it should.

Over the three years I have worked on the nursery my responsibilities have increased greatly, none of which would have been possible without the support of my fellow workers on the nursery. Everyone has helped to show me the various aspects of how a nursery operates, from how to work the land and prepare it for drilling, to providing the cultural requirements of the tree and shrub species produced. I have learnt an immense amount in the few years I have been here, all with the hope of continuing the development of the nursery; both through the health and growth of our plants and keeping our customer base happy. This means making time for each customer that comes onto the nursery, so they get the personal service and information they look for when buying.

News and event round-up Innovative technology exhibition

Following on from a proposal from the Tree and Hedging Group, HTA has begun a programme of work on mechanisation and automation for growers. A briefing paper is being written by the HTA to help raise the profile of UK ornamentals production among mechanisation providers, drawing on research being conducted by the HTA. An event for growers that aims to connect

mechanisation providers with growers and to showcase automation is in the planning stages, and a steering group representing the Tree and Hedging Group as well as the HTA's other grower committees has now been formed. The HTA also recognises the opportunity offered by the event to provide good networking opportunities for grower members. The HTA is continuing to make the case to Defra for government grants to support investments in mechanisation and automation, and for ensuring that the Farm Investment Fund considers the needs of ornamentals producers.

Nutrient management of field-grown ornamentals workshop

This [HTA workshop](#), being staged at James Coles Nurseries and Sons on 18 October 2023, outlines soil types and their properties, examines the impact of crop rotations within soil management planning, and provides an understanding of soil sampling and monitoring requirements. The workshop will also feature results and findings from the AHDB funded project 'HNS 200 - Developing nutrient management guidance for hardy nursery stock' and includes a tour of the field-grown crops in the afternoon.

HTA Nursery Advice Line

HTA members have free access to the Nursery Advice Line managed by Zest-Sustainable ICM.

To access the service with technical queries:



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