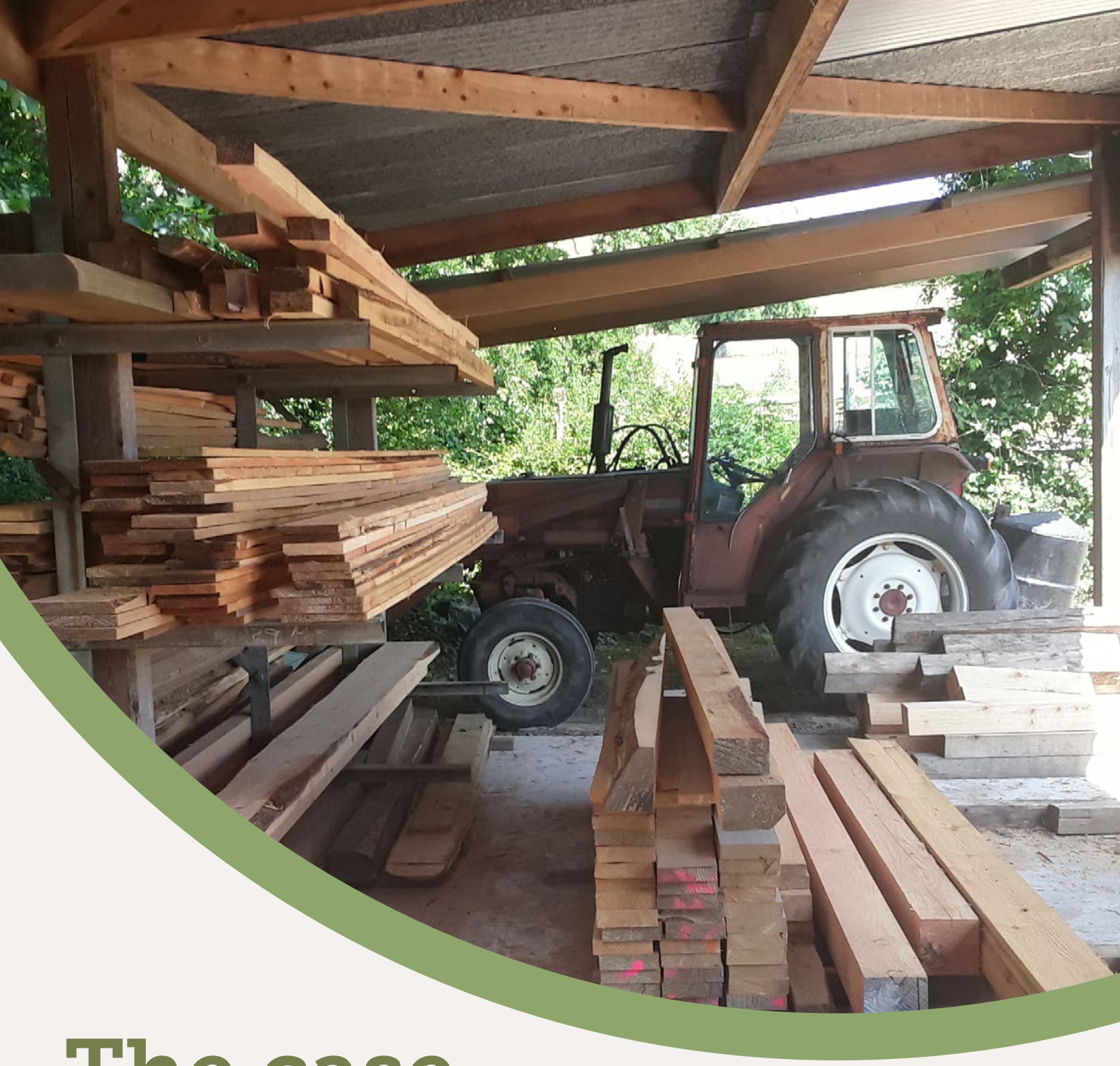


The case for regenerative farm-scale forestry

A farmer led approach to the regenerative management of farm woodlands as a farm-scale forestry enterprise

Soil Association

Barriers to the integrated active management of farm woodlands has resulted in an on-farm resource that is neither pulling its weight at the farm-level or more strategically.

image credit: Treeline

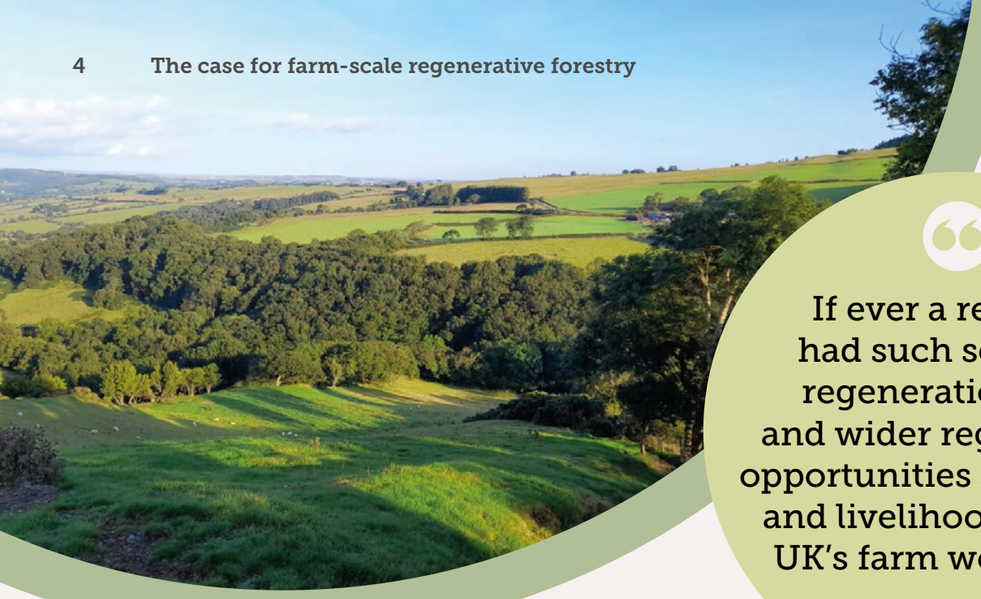
Introduction

The public policy benefits of trees and woodlands in our farmed landscapes are increasingly understood and accepted. Whether for climate, nature, water management or nutrient buffering, the benefits of well-designed and site appropriate woodland have been well researched and documented. Taking their lead from this evidence base, all UK Governments are supportive of new woodland creation, with attractive grants and marketing campaigns focused on tree planting; and despite some of the perceptions, many farmers do plant new woodlands. Perhaps not at the scale yet that government targets require, but an overview of the woodland area in the UK in the last 10 years demonstrates that an additional 300,000 hectares are now reported as farm woodland[1].

Yet the barriers to the integrated active management of farm woodlands, both those of older vintage and new woodlands created in recent decades, remain. These barriers include capability and confidence, scale and access, as well as routes to market and wider supply chain deficiencies; all resulting in either the under-management or complete lack of management of the majority of farm woodland in the UK. This has resulted in an on-farm resource that is neither pulling its weight at the farm-level or more strategically.

In 2022, we published our Regenerative Forestry report[2], which set out our vision for forestry based on restoration, resilience, integration and engagement. In this short follow up report, we make an optimistic case for the regeneration of our farm woodlands based on these principles, driven by the benefits for the individual farm enterprise and farming system. We make the case for regenerative farm-scale forestry, where active farm woodland management supports farming objectives. The farm-level benefits are explored, including the production of timber and fibre, alongside livestock and crop production. We conclude, that although each farm woodland and farm will be different, in most cases regenerative farm-scale forestry is a diversification strategy, underpinned by active farm woodland management, to achieve long-term farming resilience and risk management.

In making this case, we aim to inspire all farmers, that the integration of existing and future farm woodlands into the farm enterprise can be a key strategy for future profitability. By making the case, we also aim to challenge policy makers to take more seriously the opportunities for climate, nature and livelihoods from farm-scale forestry and provide support; in the same way that support for large-scale forestry was prioritised during much of the 20th Century.



> If ever a resource had such scope for regeneration itself and wider regenerative opportunities for farming and livelihoods, it's the UK's farm woodlands.

What do we know about farm woodlands in the UK?

As well as being typically undermanaged, our farm woodlands have been neglected by policymakers and data collection has been at best, high-level. There is a reliance on the agricultural censuses run by Defra (Department for Environment, Food and Rural Affairs) and the devolved administrations, which collect annual information on the land use of farms. This data is based on self-reporting and includes no information about woodland condition, nor the scale of any timber resource. However, it is this data that is used to define farm woodland and the area trend is clear, increasing from 0.8 million hectares in 2012 to 1.1 million hectares in 2021. Just over one half (51%) of all farm woodland was in Scotland in 2021, with a further 36% in England, 12% in Wales and the remaining 2% in Northern Ireland[1]. The longer-term trend is similar, with less than 0.3 million hectares reported in 1981 and when compared with the figures for 2021, this represents an almost four-fold increase in farm woodland area over a 40-year period.

Although we should be cautious due to changes in reporting conventions about the overall scale of this trend, what is apparent is that almost one third of the total woodland area for the UK (1.1 million out of 3.25 million hectares in total), is associated with an agricultural holding in some way. Although we do not have a detailed breakdown of what type of agricultural holding has what type of woodland, we know, based on practice, that woodland can be a feature on any agricultural holding, of any size or farm type. Larger holdings will have scale in their favour, and many estates and large farms may already have a dedicated forestry enterprise focused on managing these woodlands. But for many medium size and small farms, these woodlands tend not to be managed as either a separate or integrated enterprise; and as established already, more likely not managed at all.

Based on the reported trend, much of this resource is relatively young – less than 40 years old, and probably planted with a grant, which would have required long-term objectives to be thought about, at least at the time of planting. The remainder of the resource is, by definition, much older and in some cases very old, with farmers being the custodians of some important ancient and semi-natural woodland, in variable ecological condition.

Whether recent or much older, on small or larger farms, it is this resource for which we primarily make the case for regenerative farm-scale forestry.

So much opportunity

There are multiple opportunities for this resource, apparent at both a farm-level and also more strategically for public policy. Although each farm woodland will be different, as will the farm it is associated with, a feature of many of these opportunities is that they have both this micro and macro dimension. For instance, timber products. Timber is a scarce resource in the UK, with 80% of our nation's timber needs imported[1]. Timber has a value, and as anyone who purchases any quantity of timber will know, it can be costly, especially for higher quality material. Significant quantities of timber, both lower grade and higher quality are bought by farmers for on farm use. Often transported onto the farm, usually passing by the farm's own woodlands. Realising more on-farm use of the timber grown on-farm, would be a win-win; by reducing off-farm expenditure and at a national level helping to reduce timber imports.

The tree products don't even have to be high-grade timber to achieve these win-wins. Low grade timber can be chipped or used for firewood; either on-farm or as off-farm sales. As well as farm revenue and support of livelihoods in the supply chain, woodchip can help avoid herbicide use when used as a mulch or as a soil health improvement input. Firewood can help provide an outlet for low grade material and some welcome revenue back to the farmer..

Nature opportunities also apply equally at a farm and landscape level. If farm woodlands are well managed, with a focus on ecological condition, they will regenerate themselves and provide a lasting benefit at a farm-scale. The biodiversity supported by the woodland may also support on-farm enterprises through biological pest control and pollination, with increasing numbers of farmers recognising higher yields through better pollination close to woodland edges and hedgerows. But these benefits are wider, with more nature at a landscape and catchment level if small woodlands are collectively well managed, especially if that management is integrated with other woodlands to achieve good ecological condition at scale.

Less recognised, but with even more potential is the role trees play in improving and maintaining soil health, acting as biological engineering systems to build structure and recycle nutrients for the long-term benefit of grass and other crops. It is no accident that the soil under farmland with bracken is so rich, typically built up under woodland over long time periods.

So in conclusion, regenerative farm-scale forestry can support multiple farm-level objectives and policy priorities. To realise many of these opportunities we need a strategic and farm-level approach, which recognises that although farm woodland management cannot be based on standard prescriptions as each woodland and farm will be different, active management will be a foundation. Although this management will not always deliver a timber resource in the short or even long term, setting out the general current lack of management against the fact that the UK is the second largest importer of timber in the world[1], is one powerful way to make the case for a different approach.

1/3

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80%

of UK timber is imported

Regenerative farm-scale forestry in practice

As well as highlighting the strategic level opportunities, practical examples of those who are bucking the trend, can help paint a real picture of opportunity. The Landworkers' Alliance have showcased 12 case studies in their May 2023 report 'The Cutting Edge'[3]. We add to this by profiling specific features from three examples in the next section, that have helped to inspire our vision for a regenerative approach to the management of farm woodland.

Continuous cover forestry management* is a key regenerative technique benefiting the woodland, nature and the wider ecosystem

CASE STUDY

Growing for value in new farm woodlands

The woodlands that David Brown and Ruth Pybus have planted and grown at **Bron Haul** in North Wales offer a compelling template for what can be achieved through focus and foresight from the start when new woodlands are planted. Their 20 hectares of predominantly broadleaved woodland in the Elwy Valley was established over the last 30 years and from day one, has been managed as a farm asset. Just as livestock farmers (which David and Ruth also are), monitor and tend their livestock and invest in their productivity to create value, Bron Haul offers an example of two farmers who have applied the same approach to their trees.

Although most of the productivity and capital value is in the trees themselves, the small suckler herd managed as part of the farm, benefits as well. The cows have endless opportunities to browse and the micro-climate provided by the shelter and shade from the surrounding woodland contribute to positive animal welfare and production gains, partly achieved through reduced inputs.

But in this case, given the number of trees that are being tended in the woodlands, most of the capital appreciation is in the timber value of those trees selected for intensive management by removing competition from less valuable neighbouring trees during thinning and the high-pruning regime. The ash, chestnut and cherry trees are already yielding planking material at age 30, with plenty of chestnut fencing and firewood as secondary products. The oak and the beech trees are not far behind, with their successors already apparent in the understorey, as the continual thinning and positive ecological condition of the woodlands mean natural regeneration is prolific, with plenty of opportunity to recruit the next cohort of timber trees to add value to. This form of continuous cover forestry management is a key regenerative technique benefiting the woodland itself, as regeneration is encouraged, but also the maintenance of woodland conditions benefits nature and delivers wider ecosystem services.

All of this is underpinned by the close management of David and Ruth, including the necessary grey squirrel control to mean that this non-native species never has the chance to undermine and destroy the capital value of the trees, through destructive bark stripping.

David and Ruth have been able to apply their knowledge and expertise to the management for the woodlands that they own and tend. But less under their control are some of the macro-factors affecting the markets for the quality timber they have grown. Production has largely been offshored by the UK, leading to our status as the second biggest importer of timber globally after China[1]. If David and Ruth are to achieve the real value that their efforts are worth and that the quality of their timber justifies, there are some major issues that require a policy focus to overcome, with stimulation of a local, small-scale farm forestry economy a priority. Meanwhile, through their business Broadleaf Wales[4] they are marketing their products and sharing their skills and experiences through a range of courses, mentoring and other woodland services.

*continuous cover forestry aims to avoid clearfelling and replanting by maintaining a permanent forest canopy, through selective harvesting and encouragement of natural regeneration.

CASE STUDY

Innovative use of farm woodland for on-farm value

Victor Crutchley's management of his farm woodlands in Dorset near Bridport, offer a vision for realising value from what is already present in the farm woodland resource. Two generations of his family have been quietly contributing to the increased farm woodland area in England by establishing new woodland at **North Eggardon farm** over the last 60-70 years.

These woodlands have proved to be an on-farm asset for the development of new farm enterprises, which all required a significant timber input. Instead of outsourcing these inputs, Victor has innovatively utilised the trees in his woodlands to support major restoration projects of farm buildings into workshops and a holiday home. Classic building timbers from the oak, chestnut and larch trees grown on the farm are all apparent in the structural frameworks and flooring for the workshop cluster. Innovatively, some unusual species have provided timber cladding material for the building projects, most notably Lawson and Monterey cypress. Even more impressive, is the sawn poplar timber that is apparent in the room and ceiling panels, and the chestnut doors and window frames throughout. The sheer quantity of timber used means that there would have been a significant outlay to have sourced even sub-standard material off-farm, and even with the harvesting and processing costs, it made sense to utilise the timber resource that was already on-farm.

But Victor is not just benefiting from the trees planted and grown by his family. New woodlands have been planted and the existing woodlands restocked to ensure an ongoing timber resource. Whenever a tree can be improved through investment in pruning, these opportunities are taken.

The operations at North Eggardon also offer clues as to how to add value through on-farm timber processing, as well as timber growing. The woodland enterprise culture has been reinforced through the renting of land for a small-scale sawmill operation, as well as several of the workshops in use by wood related businesses. Of particular note is the Logosol four-sided planing machine, that enables planked timber to be processed into floorboards and tongue & groove for panelling etc. Some advocates of these machines, which are easily installed in farm buildings, are also producing joinery grade material, such as window and door frames. Victor's own next innovation is to install a solar powered kiln, to further enhance the quality of the timber grown on-farm.

Fortunately this innovative model is being shared, as North Eggardon has recently hosted a successful Woodland Demonstration day, profiling to neighbouring farmers and others in the community the opportunities from farm woodlands, on-farm timber processing and use, as well as examples of the wider local woodland economy.

CASE STUDY

Supply chain innovation for farm woodland

Gavin and Nick Marshall are the innovative farmers behind the **Treeline**[5] farm-scale forestry business, that helps support their own farming enterprise but also delivers a solution for other farmers in south Scotland. Convinced of the agroecological benefits of farm-scale forestry for livestock shelter on their own upland farm near Edinburgh , they now have over 90 hectares of mixed woodland on their farm in the Pentland hills, adding about 40 hectares of new woodland in recent decades. As well as new woodland creation, they actively manage their existing woodland; mostly planted as shelterbelts on their extensive sheep enterprise, on low grade land between 1000-2000 feet elevation. As well as benefiting the sheep enterprise, these woodlands provide sporting opportunities as well as an on-farm supply of fencing material for use on-farm and for off-farm sales. Even the non-fencing grade material is used on-farm, processed into a fuel source for the farm's biomass boilers.

Based on their own experience managing farm-scale forestry, Gavin and Nick understand how important it is to offer a bespoke service to their farming clients, rather than just a large-scale forestry approach. This includes use of site appropriate equipment, for instance their 5.5 tonne forwarding tractor, which is ideal for low impact harvesting in small woodlands. They have also found that offering an integrated service to farmers, has helped inspire more interest in farm woodland management, as value is achieved alongside the necessary reinvestment in future planting and management.

Although Treeline now competes with more mainstream forestry businesses, the background and origins of the company in farming, mean that this diversification has helped support other farmers, to have the confidence to actively manage their farm-scale forestry resource.

To develop these woodland based enterprises, they have invested in timber harvesting and processing equipment, which has facilitated their wider supply chain enterprise, providing a service to farmers and other landowners based on their knowledge, experience and expertise. This now extends to four main enterprises:

Firewood - cutting, seasoning, processing and delivering logs, in the best possible burning condition.

Fencing - servicing the Scottish Borders and Edinburgh area with a variety of fencing and timber products for domestic, agricultural and forestry fencing needs.

Machinery - stockists, partners and service agents for a wide variety of quality forestry machinery from well-known brands.

Forestry and woodland management - deploying 30 years of experience to provide services in management planning, grant applications, tree planting, tree felling and harvesting, and timber processing.

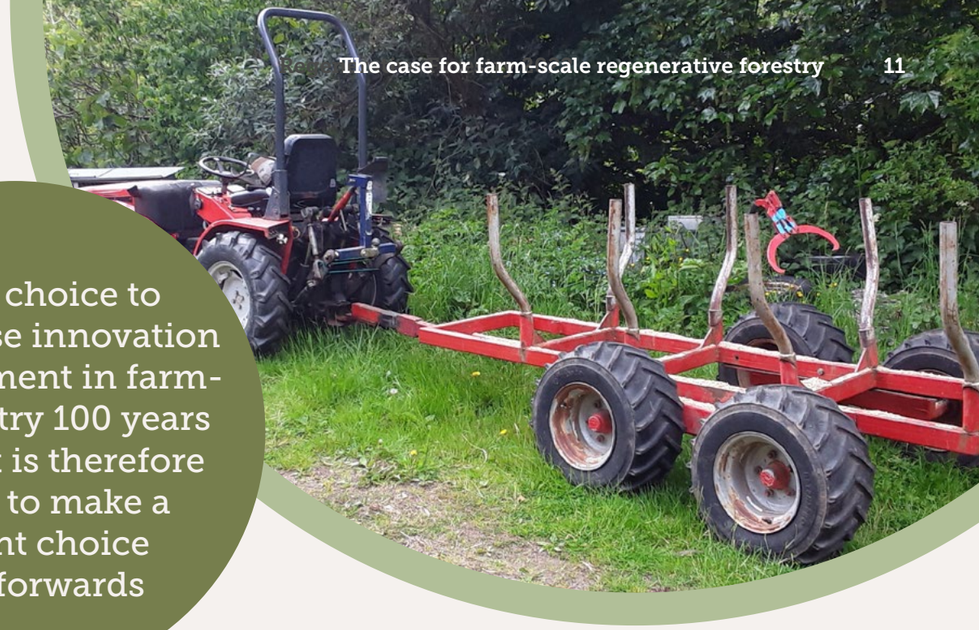
The case for the future to be different

The case for prioritising regenerative farm-scale forestry

When considering future policy direction, a brief reminder of recent forestry history in the UK is worthwhile, as farm-scale forestry has been de-prioritised over the last 100 plus years. The focus throughout much of the 20th century, was on the establishment of a large-scale plantation resource, in response to the war time need for a strategic reserve of timber.

This was then followed by a public policy focus on harvesting and processing the timber grown in this large-scale forestry model and these two priorities dominated government forestry policy for the best part of 70 years. Now in the 21st century, a farm-scale forestry model finds itself compared unfavourably to the large-scale forestry model and written off by some, as either 'not commercial or unviable'. These critiques often ignore that the large-scale model was neither commercial nor viable in the early 20th century and only now has achieved this status, based on the sustained policy focus and huge public investment to achieve such an outcome.

> We need a wide view when considering the viability of farm woodlands and not one limited to whether any available timber can currently find a market.



> It was a choice to de-prioritise innovation and investment in farm-scale forestry 100 years ago, and it is therefore possible to make a different choice going forwards

Another lasting impact of the decision to de-prioritise farm-scale forestry, is that the relative success of the large-scale forestry model now acts as a barrier itself to different approaches, and in many ways has locked in some of the missed opportunities. This is particularly acute in our timber processing sector, with a paucity of support for small and innovative timber processing, meaning that at scale, we have lost the knowledge and perhaps interest, in processing a wider range of tree species, timber sizes and timber grades.

There are a number of initiatives aiming to address these challenges but we need a more fundamental reset by accepting that it was a choice to de-prioritise innovation and investment in farm-scale forestry 100 years ago, and it is therefore possible to make a different choice going forwards. As the brief examples in this report, as well as work led by others demonstrate, some farmers and innovators are quietly getting on with delivering results from a farm-scale forestry model, with very little practical or financial support. Although what is actually being delivered varies woodland by woodland, determined by the resource available and the farming objectives, active management (including decisions for non-intervention), underpins all benefits.

The key question is therefore 'can active farm woodland management be scaled up to become more mainstream?'

To help answer this question, we should consider the risks of not scaling up farm-scale forestry. At a farm-level, is it a risky strategy not to grow trees and manage woodlands as part of a diversified production portfolio, even if just for the agroecological (shelter, shade, soil improvement water management) or on-farm use of timber and fibre? At a strategic level, can we continue to ignore the potential climate, nature, livelihood and import substitution opportunities that active farm woodland management offers?

In summary, we should judge whether regenerative farm-scale forestry is viable based on more than just whether any timber can be marketed into the current limited UK timber processing sector. Considerations such as whether the agroecological benefits from the woodland, combined with some on-farm use opportunities and potential off-farm opportunities, would mean the farm woodland makes a meaningful contribution to the overall profitability and therefore resilience of the farming operations, will all be relevant.

Of course, support will be required to help achieve this holistic consideration of viability, just in the same way that the large-scale forestry model was supported to make it viable in the past and tree planting today is heavily incentivised. In the next section we consider the major areas for systemic investment, to scale up regenerative farm-scale forestry.

Investing in solutions

To help develop the interventions that will have most impact, we need an understanding of the potential benefits of farm-scale forestry and how its viability should be considered, combined with insights from those farmers and practitioners who are making it work despite the barriers and with only limited support. Based on this wider view, the following areas should be targeted for investment, innovation and practical support:

1. Developing a culture and practice of active farm woodland management

As the farm woodland area trends demonstrate, there has been some success in increasing the area of farm woodland in the UK and there is a current focus on more tree planting, primarily driven by climate targets. However, as discussed in this report, active farm woodland management is a fundamental requirement, which will underpin all benefits from tree planting. Policymakers and other agencies should shift to promoting a culture of active management based on understanding woodland condition and silviculture, combined with integration into the farming system and whole farm planning.

2. Growing for value

Although active management should not be wholly defined by whether timber is being grown and harvested, increased timber production from farm woodlands should be a strategic objective. When this applies at a farm-level, we do need to match our passion for tree planting with an equal focus on growing and managing high quality woodlands, so that these newly planted trees fulfil their real potential and don't just become the unmanaged failed timber resource of the next century. This means support and investment in activities that deliver value, such as knowledge transfer, farm woodland operational access, high pruning and grey squirrel control.

3. Supply chain infrastructure, market innovation and market investment

We need investment in a timber supply chain and market innovation that is geared around a more mixed range of species and timber sizes. Firewood and woodchip give us a base market but only when we are able to utilise the fantastic range of timbers, both broadleaves and minority conifer species that can be grown in UK conditions, will we be able to regenerate and manage our farm woodlands at scale.

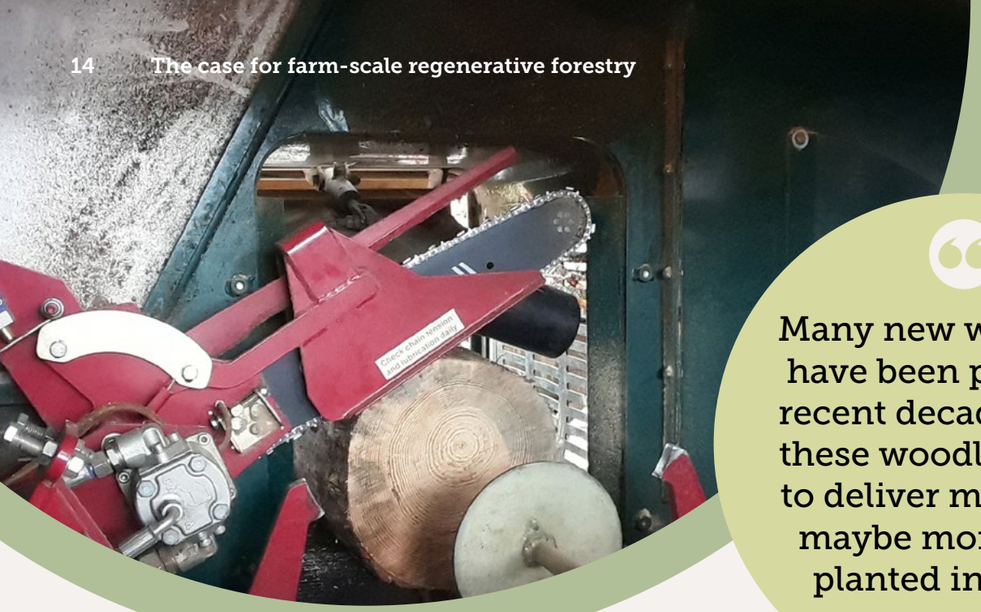
4. Collaboration, cooperation and trusted service providers

Many of the challenges of active farm woodland management relate to the small-scale nature of the resource. By definition, it is usually only a small area of any individual farm. Models that help to tackle these issues of scale will be crucial in helping to mainstream farm-scale forestry. These may take a number of different forms including farmer groups and cooperatives, where individual farm woodlands are managed by a common entity or central capacity. Other models might be based on shared machinery or non-farming actors being encouraged to develop business models for farm woodland management. There may already be existing clusters or models that can be built on, but whether building on something that exists, or starting something new, investment will be required.

5. Building integration and confidence

Farming and forestry have endured a long separation which has resulted in institutional, regulatory, professional and practical silos; and yet at a farm-level, growing trees is just another form of farming alongside the growing of annual crops and livestock production. Whilst we wait for those other silos to either break themselves down or get broken down, at a farm-level as our pioneers demonstrate, it is possible to integrate the management of farm woodlands into the farming system. Most farmers are skilled growers, and through knowledge-sharing there is no reason why these skills cannot be applied to the growing of trees and woodlands for production and profit. Although we do need the institutional and regulatory integration to help support farm-level integration, much is possible already; as long as we operate within the current regulatory frameworks, then with some confidence and inspiration from others, there is so much we can get on with now.

We need investment in a timber supply chain and market innovation that is geared around a more mixed range of species and timber sizes.



> Many new woodlands have been planted in recent decades; and if these woodlands start to deliver more value, maybe more will be planted in future?

In conclusion

There are a number of key conclusions from this brief report into the case for regenerative farm-scale forestry. Most importantly, there is a significant opportunity both to support long-term farming resilience by re-establishing the lost links between trees and farming and to deliver against key strategic climate, nature and livelihood outcomes. However, it is clear that to achieve the mainstream opportunity currently being pioneered by those profiled in this report and in complementary reports, there needs to be a reset and refocus in UK forestry priorities. The example of the change that was achieved in the 20th Century, through sustained policy focus and investment, offers a blueprint for what can be achieved by regenerating and managing our farm woodlands.

In this report we have set out to be optimistic, not only about what can be achieved already but also about how the future can be different to the past. **The question for policymakers in the 21st century is clear - can we afford another 100 years of not getting the farm-scale forestry cog moving? For farmers and practitioners - what can be achieved now, and in the future, from your farm woodlands?**

Soil Association,
September 2023

The Soil Association would like to thank David Brown, Ruth Pybus, Victor Crutchley and Gavin and Nick Marshall, for allowing their work to actively manage and regenerate their farm woodlands, to be profiled in this report.

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There is an opportunity to support long-term farming resilience by re-establishing the lost links between trees and farming and to deliver against key strategic climate, nature and livelihood outcomes.

To find out more visit:

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