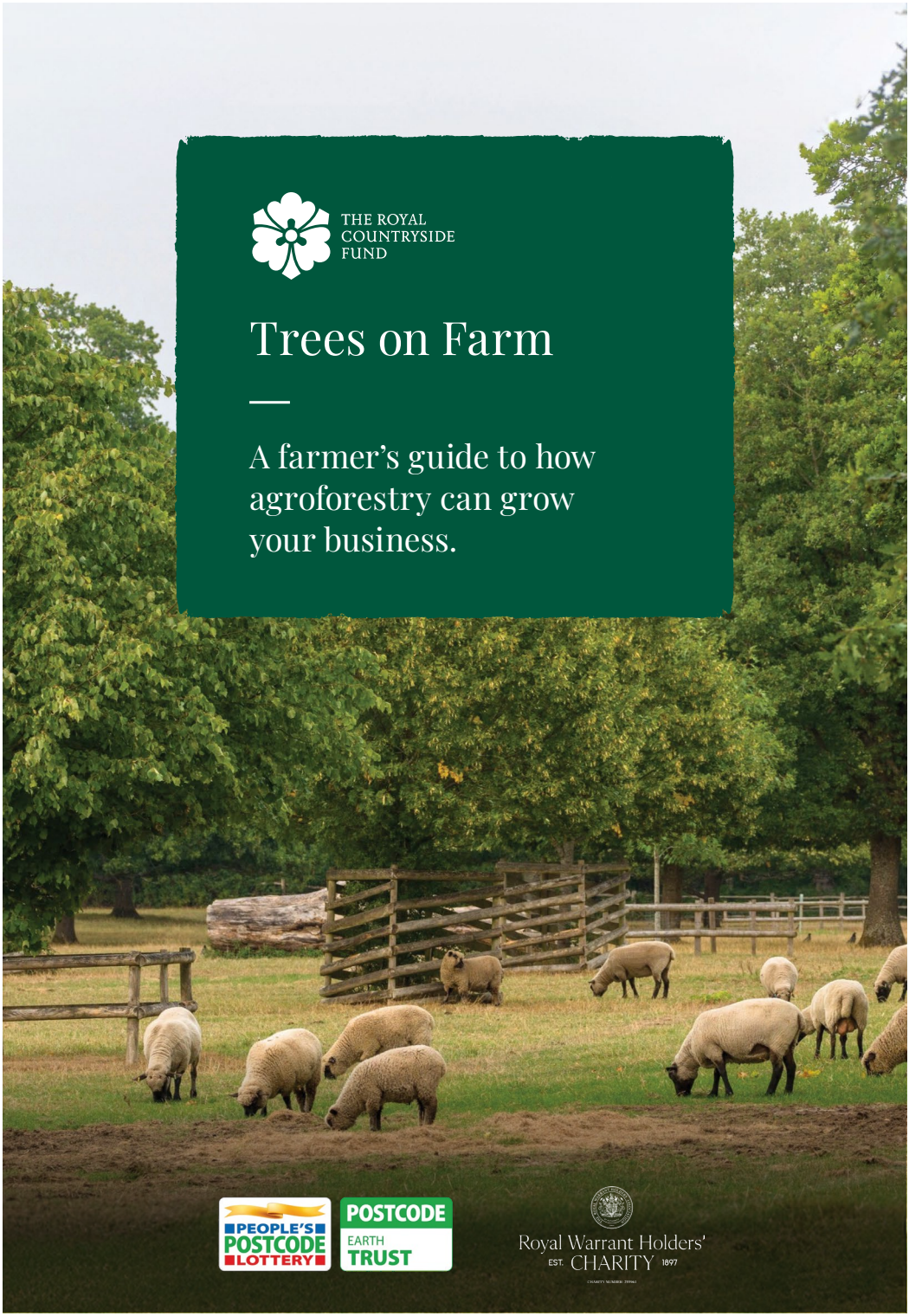
THE ROYAL
COUNTRYSIDE
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Trees on Farm
A farmer's guide to how
agroforestry can grow
your business.
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About The Royal Countryside Fund

We're The Royal Countryside Fund – a UK-wide charity working alongside farming families and rural communities to provide the support and funding they need to thrive.

Right now, hardworking family farms and rural communities face social, environmental and economic pressures that threaten the livelihoods they love. They shouldn't have to face these alone – and with us, they don't have to. That's why HM King Charles III founded The Royal Countryside Fund back in 2010 – to recognise the real challenges that come with rural life and do something about it.

Our locally based programmes help farming families discover achievable ways to make their farms more financially and environmentally resilient. And by combining their ideas with our funding and guidance, we help rural communities run community-led projects that will stand the test of time. So far, we've supported over 5,100 farming families, and invested £12.7 million in more than 556 rural community-led projects.

Whether it's through farming support or rural projects, we're all about bringing people together and making changes that last. Helping countryside communities thrive now and for generations to come.

To find out more, visit The Royal Countryside Fund's website at www.royalcountrysidefund.org.uk

Royal Founding Patron
HM King Charles III
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Heather Hancock LVO DL
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Contents

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Welcome

Most days when I am at home usually involve taking my springer spaniel for a walk, often through mixed woodland on the rural estate where we live. Ash, oak, horse-chestnut, beech, Scots pine, even sycamore, are all prevalent, all different, and each has its own story to tell.

On our walks, I am continuously aware that trees inform us about so much. Apart from the changing seasons and the weather, they are habitats for wildlife and tell us about disease and pests, while playing a crucial role in regulating the climate. And they form part of the local landscape, revealing the history of the land, of people and time.

These are reasons enough to give more thought to trees and their care. But within a farm context, there are other stories to tell too, hence this publication. It is not designed to be a detailed manual on tree planting and aftercare – that information is readily available from farm advisers and online – but instead a pointer to all the things that you need to think about when wanting to increase the tree cover on your farm.

His Majesty The King created The Royal Countryside Fund in 2010, and there can be no better advocate of the importance of trees. Our aim at the RCF is to encourage productive agriculture in harmony with Nature, as envisioned by His Majesty. As I hope this guide illustrates, trees really can benefit farms, not through significant land-use change, but by considering opportunities for trees in land management and integrating them within the diversity of farming systems. It is specifically written for farmers and is full of practical guidance.

Technical terms are explained in the 'jargon buster' section, and we point you towards some useful resources at the end.

Like most of our work at The Royal Countryside Fund, this publication is the result of collective endeavour, so I would like to acknowledge my appreciation for the contributions of the people and organisations who made this publication possible through their expertise or funding. Geraint Richards, Head Forester to the Duchy of Cornwall and to HM The King, is the author and also offered professional guidance throughout. Mike Glover of Barcham Trees and Stephen Briggs for drawing on their expertise. We would also like to thank our funders at the People's Postcode Lottery, Earth Trust and the Royal Warrant Holders' Charity.

I hope this guide will inspire you to give more thought to trees, what you can do to extend tree cover on your land, and to look forward to the future stories trees on your farm will tell!

Keith Halstead
Executive Director
The Royal Countryside Fund

A note from the author

As a professional forester, trees have been 'my world' for the whole of my career. To my delight, there is now a far wider appreciation of the vital contribution that trees make to 'our world'.

Trees play a key role in mitigating the increasingly evident effects of climate change. Sequestering carbon dioxide, however, is just one of the many and varied benefits that trees deliver, because trees are highly productive organisms! In addition to supplying us with much-needed food and timber, trees perform important ecological roles by creating shelter and shade, reducing flooding and hosting an abundance of biodiversity in one form or another. Trees are also good for us, for our own health and wellbeing, as many people are thankfully now discovering.

For the vast majority of my career, I have had the privilege of working for His Majesty The King and it was His Majesty's idea that I should work with The Royal Countryside Fund to produce this publication that will, hopefully, inspire more farmers to plant and manage trees on their farms.

Whilst we will all benefit from the trees around us, tree planting is a long-term investment and we do it knowing that the greatest beneficiaries will be our children, grandchildren and great grandchildren. It seems particularly fitting, therefore, that as The Royal Countryside Fund celebrates the milestone of its 15th anniversary, we look to a better future by encouraging positive action now. It is my great hope that as you read the personal experiences of other farmers from across the United Kingdom, and note the guidance contained in these pages, you will also become advocates for trees on farms and that 'your world' will be enriched as a result.

Geraint Richards MVO OBE FICFor
Head Forester to the Duchy of Cornwall and to His Majesty The King

Why do farms need trees?

Trees, whether planted individually or forming woodlands and forests, are vital to the health of our planet, both locally and globally. Trees deliver a wide and varied range of environmental, social and economic benefits, making their presence a must for any farm, contributing hugely to its sustainability and resilience.

As we increasingly witness the effects of climate change, trees are a critical part of the part of the solution. During the process of photosynthesis, trees absorb carbon dioxide and release oxygen and, in the process, store carbon to form the basis of their structures. That carbon can be stored even beyond the life of the tree in the form of timber, a product that the world is increasingly going to need to replace other climate unfriendly materials. Many farmers traditionally got their supply of fire-wood and timber from the trees on their farms.

Trees are hubs of biodiversity and so very important as we seek to restore Nature. For instance, a single oak tree can host more than 2,300 other species during its lifetime.

Trees provide shelter, which is much needed in a country as windy as the UK, and also shade, which we as human beings, and the stock we manage, will increasingly appreciate as summers become hotter. The planting of trees is integral to natural flood management schemes, which are becoming increasingly common as we face more extreme weather events.

Trees are good for people, for our physical and mental health and wellbeing. A walk in woodland or sitting under the shade of a tree benefits us, and this is gaining increasing recognition.

Importantly too, trees are beautiful features in the environment, whether displaying spring blossom, summer foliage, autumn colours or winter berries.

Planting trees is one of the greatest legacies we can leave.

Agroforestry explained

Every farm needs trees – for all of the reasons that we've already highlighted – and this is why 'agroforestry' is such an important concept.

In its simplest form, agroforestry is about planting trees and hedges on farmland to bring a range of benefits. This means that agroforestry activities include introducing and managing hedgerow trees, field and parkland trees, copses, shelterbelts, orchards and woodlands. There are also more formal agroforestry plantings, for instance rows of trees with arable crops (known as 'silvo-arable') or grassland ('silvo-pasture') in between.

Trees not only support and enhance existing farm activities, for example, by providing shelter for crops from cold or drying winds and shade for the wellbeing of livestock, but they also add to a healthier ecosystem for the whole farm through enhancing biodiversity and improving soil water management. Trees can provide tangible products such as fruit, nuts, foliage and timber, helping diversify a farm's income. And as farmers increasingly look to generate revenue from other sources, such as through attracting visitors, trees add to the beauty of a farm, and create spaces for learning and recreation.

Too often in the recent past, trees have been viewed as a liability, but in fact they are an asset to be valued and managed.

Farm type: Arable
Soil type: Fen soil
Location: Cambridgeshire
Size: 233 hectares

Stephen Briggs

We took over our farm in 2007 and it became apparent at the time that there were some fairly significant soil degradation issues. This was due to a mixture of intensive arable production and root crop production, and also heavy use of chemicals, fertilisers and some wind erosion as well, and we wanted to address some of those issues.

Why did you choose agroforestry for your farm?

I trained as a soil scientist and when we started farming here there was significant soil degradation. We wanted to farm in a way that was more beneficial to Nature, that was more resilient to climate challenges, and which also looked after the soil.

Back in 2008 the Common Agricultural Policy meant that if you planted more than 50 trees per hectare, the land ceased to be classed as agricultural and became forestry. No farmer in their right mind would do that! Also, as a tenant farmer with a 15-year tenancy, I could not wait 30 to 40 years for a return on investment. We needed something quicker, which also delivered on Nature and soil, and which added another income stream to the farming business.

With all those things in mind, we decided to plant 4,500 early-cropping fruit trees.

How have the trees benefitted your farm's productivity and resilience?

Since day one we have monitored biodiversity both above and below the ground, invertebrates, pollinators and species richness. We started to see benefits to Nature after about three or four years and that helps protect the soil too. In terms of yield, we had a return on investment after about seven and a half years.

The trees are nearly 20 years old now and we're seeing some unexpected results. Our fruit trees are planted in rows through an arable field, spaced 24 metres apart. Normally, you would expect the arable yields to be highest in the middle of the arable alleys and to drop off towards the edges of the alleys adjacent to the tree rows. Instead, we're seeing the opposite. The crops closest to the tree rows are consistently better. That's partly due to improved winter drainage associated with the deeper tree roots, and partly from better moisture retention during dry years. Reduced wind speed plays a role too.

However, the biggest factor is what's happening underground: the perennial tree strips are hosting healthier, more abundant soil fungi and mycorrhizae, which are spreading into the arable area. This improves nutrient and water cycling, directly boosting crop performance. So we're seeing productivity benefits as well as resilience.

What have you learnt about risk management through agroforestry?

From a climate change perspective, mixing annuals and perennials is a risk mitigation strategy. In annual arable cropping, you put fresh seed in the ground every year and you don't know what the market will be like. But once a perennial is in the ground and established, it is much more resilient to unusual weather events.

If you want to make the farm bigger without having to borrow more money to buy more land, you can farm vertically. You can go down deeper into the soil, and you can go up into the atmosphere.

What challenges did you face when you started?

I'm no different to many other farmers: I had little knowledge of trees. One of the questions was, how do I manage to grow a tree crop? I had to learn to do that pretty quickly. Secondly, what and where is the market for my product? We also had to deal with various pest issues in the first few years, until we got things established. It's a more complex system than straightforward arable or grass crop management.

Stephen's top tips

There are three simple things farmers can do:

1. Go and see other farms that have already done it.
2. Surround yourself with people that have already made the mistakes and are willing to share their knowledge.
3. Commission appropriate advice from an expert in agroforestry.

The right species in the right space

It is important to think carefully about the reasons that you are planting trees, where you are going to plant them and which species will help you deliver your goals.

Trees are long-lived species; the trees we plant will almost inevitably outlive us, and so it's important to spend some time getting it right at the beginning.

If protection from wind is your goal, then correctly aligning the shelterbelt against the prevailing wind is vital. If you are planting trees in fields, whether as shade for livestock or for the production of fruit, nuts or timber, then you need to consider what spacing will still allow your farm machinery to operate; bear in mind that the tree you initially plant will get bigger every year. If you want to create woodland, then remember that it will be a permanent land-use change, so find those areas of the farm which are generally less productive and harder to work.

There are many different species of trees, growing to different ages, delivering different benefits and requiring different conditions. The UK has a relatively small palette of native species and while we want to keep planting these, given climate change and the increasing threats from pests and diseases, other non-native species should be considered, provided they are not invasive. Given so many unknowns, diversity is critical.

Factors such as soil type, ground conditions, annual rainfall, seasonal temperatures, aspect and exposure, plus your own objectives, need to be taken into account when choosing the right species for a particular part of your farm.

Ecological Site Classification can help to select trees that are ecologically suited to particular sites. It is produced by Forest Research, a scientific organisation for forestry and tree-related research, and it is accessed via a specially designed web page. You can start exploring by entering a grid reference and soil type.

Find more information at forestresearch.gov.uk

Bruce and Jane Mackie

Farm type: Organic mixed dairy
Soil type: Gley soil
Location: Aberdeenshire
Size: 240 hectares

Middleton of Rora is an organic mixed dairy farm where we also produce yoghurt under our Rora Dairy brand. We've been planting trees on the farm for over 25 years, usually in small numbers, to keep it manageable. As well as the aesthetic and environmental benefits, I've come to see tree planting as deeply meaningful. We have woods the same age as our two boys, and oaks planted as part of the Queen's Green Canopy (a tree planting campaign to mark the Platinum Jubilee in 2022). They mark milestones in our lives.

What are the key things to consider when planting a tree?

The first question is always: is the species suitable for this location? Soil type, exposure, water levels and even proximity to the sea all matter. For example, if a site is prone to flooding, tubes and stakes might wash away. On exposed ground, trees need to be hardy and able to withstand salty winds.

You have to think about protecting the young tree. Tubes work for rabbits and deer, and fences for livestock, but sometimes both are required. Planting density needs balancing. A tighter canopy will encourage straight growth and suppress weeds, but can mean more thinning later.

How did you decide where to plant on your farm?

We started planting trees in awkward corners of fields. I also bought a few books on the subject. There are some practical guides published by the Forestry Commission.

Rather than leaving each small wood isolated, we have worked to join them to each other with grass margins or water to create a network which increases biodiversity. This way we hope that we create a bit of environmental leverage so that the result is greater than the sum of the parts.

How did you choose which tree species to plant?

I learnt this the hard way! I got a catalogue from a nursery and, like a child in a sweet shop, ordered all sorts of species that weren't appropriate to our exposed location and many died.

I then took note of which trees were growing locally and based my selection on those. I also began to appreciate the importance of pioneer species in new planting. Ash was a great success for us and subsequently a great loss when Ash Dieback Disease came to the UK. While it's pleasing to report that many have survived, it really shows the importance of planting a diverse range of tree species. Later we 'smuggled' species more suited to established woods, such as oak, into the middle of small plantations and this has worked well.

What challenges did you face during ground preparation and early establishment?

The biggest surprise was how strongly the weeds grew around the new planting, threatening to smother out the trees in the first couple of years. Knapsack spraying of glyphosate around the base of the tree tube was effective, but now that we are organic it's no longer an option.

Having bare areas reduces vole damage as they are wary about crossing open spaces. We also put up some owl perches. Judging by the number of pellets that we found at the base, they certainly helped.

You're part of Sma Wids, an Aberdeenshire scheme to plant thousands of trees across 40 new woodland areas. How has this influenced your approach to planning and planting?

When I started planting trees, I benefitted by comparing notes and getting advice from neighbours who had more experience. What I find exciting about the Sma Wids initiative is that with neighbouring farmers joining in to plant small areas of up to 0.25ha each, the cumulative effect is much greater. This will bring benefits for wildlife and change the look of the countryside for the better.

Bruce's top tip

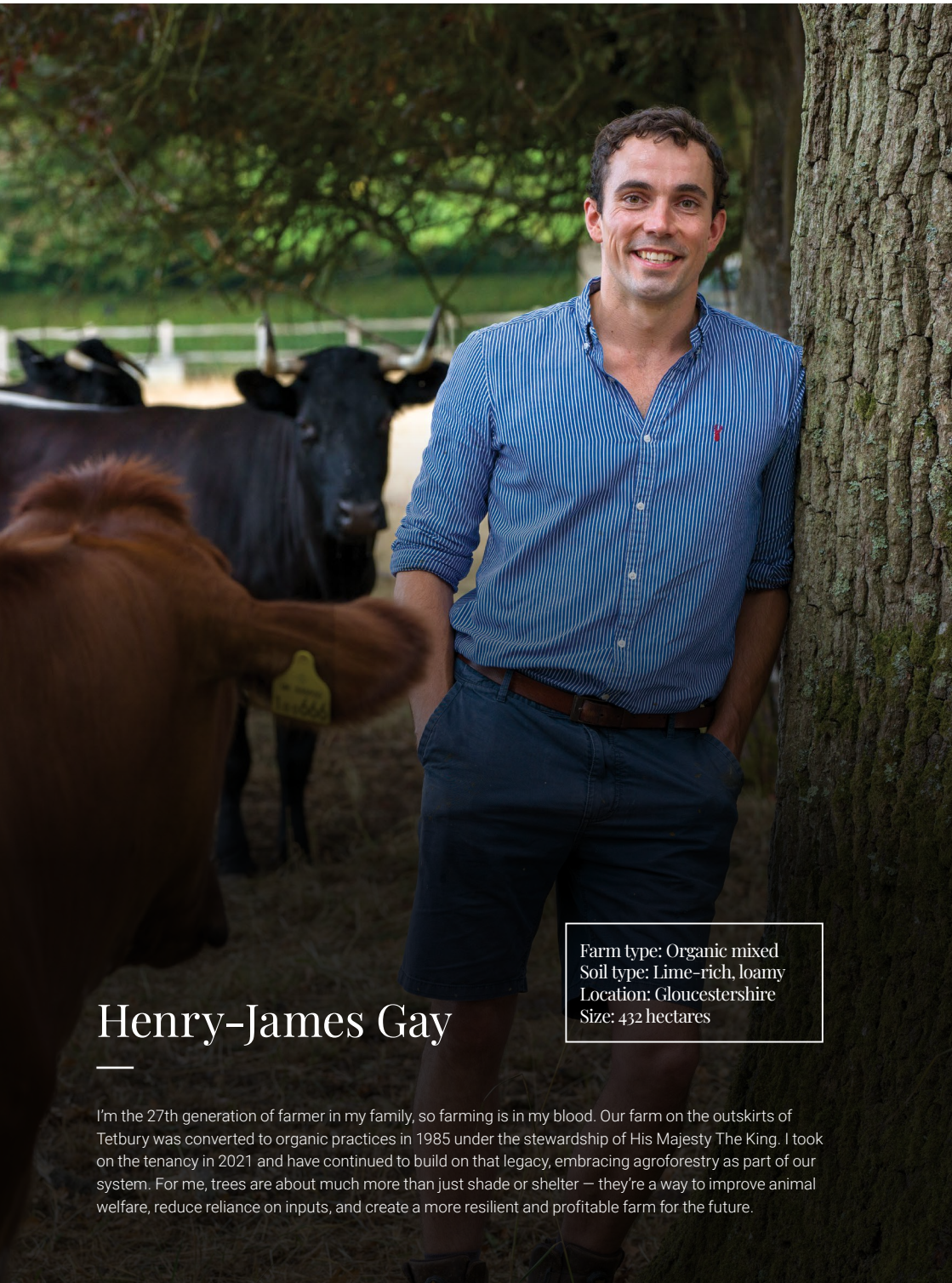
Look around locally to see which trees are already thriving – they'll guide you to what will work best on your farm.

Shelter, shade – and more benefits for livestock

We know, as human beings, that being under stress is not good for our health and wellbeing; the livestock that we manage are no different.

As we experience the effects of climate change in terms of more extreme weather conditions, the benefits that trees deliver can be a vital tool in our toolbox to keep our livestock well.

Whether it be shelter from the colder winter winds or shade from the hot summer sun or, indeed, the medical and nutritional aspects of some foliage, trees can help you keep your livestock in good condition, thereby reducing costs and improving profitability.



Farm type: Organic mixed
Soil type: Lime-rich, loamy
Location: Gloucestershire
Size: 432 hectares

Henry-James Gay

I'm the 27th generation of farmer in my family, so farming is in my blood. Our farm on the outskirts of Tetbury was converted to organic practices in 1985 under the stewardship of His Majesty The King. I took on the tenancy in 2021 and have continued to build on that legacy, embracing agroforestry as part of our system. For me, trees are about much more than just shade or shelter — they're a way to improve animal welfare, reduce reliance on inputs, and create a more resilient and profitable farm for the future.

Why did you choose to integrate trees into your livestock system?

We've embraced agroforestry wherever possible. Organic farming depends on livestock to provide natural fertiliser; there's a deeply symbiotic relationship at play, one that goes far beyond my own expertise. But what I do know is that when you put all these elements together, wonderful things can happen. Trees, for example, draw up nutrients and minerals from deep underground. Livestock benefit by nibbling on the lower branches, absorbing those nutrients, while at the same time encouraging the trees to grow taller.

How do trees affect your animals during extreme weather events?

The last few years have shown just how important trees are for livestock resilience. In the extremely hot summer of 2022, our cattle spent long periods under tree cover, keeping cool. That made a huge difference: instead of suffering from heat stress, they maintained their growth rates. Trees act as natural air conditioning, lowering the temperature beneath their canopy as well as offering shelter from driving rain, snow and wind. In practice, this means healthier animals, reduced vet bills, and fewer losses during harsh conditions.

Which tree species have you found most useful for your livestock?

We've planted a variety of tree species. Among them are willow, walnut and oak. Willow contains salicylic acid, a natural pain-relieving compound, which can help reduce inflammation in livestock when browsed. Black walnut trees produce juglone, a compound with insect-repelling properties. We've strategically planted these along cow tracks and in the centres of fields to help reduce fly burdens and, in turn, lessen the need for chemical repellents. Oak trees have been planted primarily for shade, but they also support a wide range of wildlife, making them valuable for promoting biodiversity.

How do trees contribute to your wider farm management?

Trees play an essential part in creating habitats for other wildlife species. Whilst I love farming, I also love wildlife, and it is important they both work as harmoniously as possible in a symbiotic way. As trees generally increase an animal's wellbeing and thus health, it's one of the best ways they can help, not only an organic farm, but any farm.

Henry-James's top tip

Plant a diverse range of species. Each one brings unique benefits, whether for animal welfare, ecosystem support or climate resilience. The true value of trees on a farm often goes far beyond what can be measured.

Do the groundwork

To maximise the benefits from the trees you plant, in other words for those trees to flourish and live to their expected ages, it is important to invest some time and energy right at the start – even before planting.

While each planting site will be different and will need its own assessment, consider matters such as whether the ground has been compacted by decades of farm traffic movement. Compacted ground is not good for the development of tree roots and so some remedial work may be necessary prior to planting.

If the ground lies very wet, then some work may be required as tree roots do not generally appreciate being in waterlogged conditions. Weeding is referred to later, but prior to planting there will often be an opportunity to remove competitive vegetation from the site and make a clean planting site for your trees.

Time spent in preparation will always be time well spent; your trees will thank you for it.

It's not just a case of digging a hole

Many people think that planting a tree is simply a case of digging a hole and dropping the tree into it but there's much more to it than that! Sadly, so many trees either don't survive or thrive because of poor planting.

To begin with, source trees from a reputable tree nursery; buy on quality not on cost. A very important consideration, given the ever-increasing threat posed by a wide range of pests and diseases to our country's trees, is that the tree nursery has a strong plant health and biosecurity regime.

When you collect or receive your trees, handle them carefully: avoid dropping, tossing or dragging them to prevent damage. Store them out of drying winds and under shade to protect against freezing or overheating.

Planting season in the UK is generally regarded as being from October to March, but there will be some regional variation.

Remember the importance of good ground preparation, as well-prepared soils will generally provide a better medium for root development and tree growth.

There are various methods of planting trees, depending upon whether the tree is bare-root, cell-grown, root-balled or container grown but a frequent mistake is to plant a tree too deeply; it is the roots that should be underground, not the stem of the tree.

The Plant Healthy certification scheme helps to easily identify businesses and organisations that grow, trade and manage plants to high standards of plant health and biosecurity.

See planthealthy.org.uk

Farm type: Livestock
Soil type: Mixed soil profile
Location: County Londonderry
Size: 120 hectares

Jonny Blair

Our family has been farming in this area for five generations. My grandfather bought this farm, which is next door to the farm where he grew up. The farm is situated on the side of a slope leading down to the base of a loch at an elevation of around 600 feet. We are suckler beef farmers, we have been mixed arable in the past, but we stopped four years ago as it wasn't really a viable enterprise. I studied agricultural engineering but decided I really wanted to farm, and I have been farming since 2013.

What convinced you to get into agroforestry?

I prefer the term silvo-pasture, which is about combining grazing livestock and trees. Mexican farmer Jim Elizondo and Dr Jim McAdam, who is the godfather of agroforestry over here, have been the two major influences on me. I went to Dr Jim McAdam's ash plantation in County Armagh, the longest running silvo-pasture trial in Europe, as well as attending a couple of talks, and he convinced me to take the next steps.

What should you consider when planting a tree?

It needs to fit into your own system and there must be logic to it. We devised two different designs for our farm: row-based and cluster-based, depending on the field. It's also important to think about how to protect the trees, especially if you have cattle. I have used electric fencing and cactus guards.

Did you get advice or training on planting techniques?

I spent a couple of years thinking about what I wanted, then I approached the Woodland Trust and took part in one of their schemes for farmers. It has been great to have professional advice. We've produced something that suits the trees, the cows and most importantly the soil.

How did you choose which species to plant and where?

Willow and alder are the majority of our trees. Willow is a fantastic browse feed for livestock. It is full of healthy tannins and it's very good at reducing methane in animals. It grows on wet ground and grows really fast, so it is fantastic. Alder is high in protein, and it is a nitrogen fixer, so it's beneficial for the soil. We have also planted a lot of oak, cherry, rowan and birch and then some hawthorn, gilder rose and hazel. We looked at succession planting and put oaks between birches as they're lower succession plants, so the birches should grow more quickly and nurse the oak to grow. The oak then should grow straighter and truer.

How did you prepare the ground, and have you had issues with pests or weeds?

If possible, I would suggest subsoiling the field a year before. We found that by doing this, there were fewer problems with water at the top of the ground. We also placed sheep wool at the base of some of the trees in the cactus guards. The wool acts like a weed suppressor and will eventually break down to become a really good mulch.

What tools, materials or equipment did you find essential for planting?

The most basic thing you need is a tree planting spade: it is a nice short spade with a sharp blade and it is so useful. Once you start using that, you cannot imagine using a normal spade – it is perfectly designed for planting trees. My other tip is to use an electric fencing reel to mark out your planting, because you can hold them like a plumb line, nice and straight, and then you just walk along and measure with your steps where the tree will go and hammer in a stake. Then you just plant the tree where the stake is.

Jonny's top tip

Think about the livestock flow throughout the field, and their entry and exit points, so that you don't make it awkward when moving or rotating livestock. You don't want to end up finishing grazing at the opposite end of the field from the gate.

A stake in the future

Not all trees require staking, but if you have bought larger root-balled or container-grown specimen trees then staking will often be necessary.

There is plenty of guidance available about how to stake a tree, but there are two common mistakes that can lead to either damage to or the death of a tree.

Firstly, the stem of the tree shouldn't rub against the stake or any other hard supporting item, for instance, a wooden crosspiece between two stakes. The UK is a windy country and within days of a tree persistently being blown back and forth against the stake, a wound can be created that could, at worst, lead to the top of the tree snapping off. Even if this does not happen, then the tree will have been weakened. Ideally, position your tree so that the stem cannot come into contact with the stake.

Secondly, tree ties come in a range of shapes and sizes, but too often they are poorly fitted at the start. This could result in the tree rubbing against the stake. What's more, if they are left on too long, they can effectively strangle the tree.

Newly planted specimen trees will generally only need support for a few years, while the roots establish.

It's sad to see trees with their stakes and ties never removed, even years after planting. These are no longer benefitting the tree, and sometimes they're actively harming it.

Guarding against the enemy

As much as you will appreciate the trees on your farm, there are plenty of animals that will also appreciate them – as a source of food or even as a scratching post. Your trees will need protecting from this.

Voles, rabbits, hares and deer will be attracted to your trees, and usually fencing or individual shelters (wraps, spirals, tree shelters) will offer the protection that you need. Remember that tree shelters are provided in a range of sizes, depending upon which species (usually of deer) you are trying to protect your trees from.

Your own livestock are also a threat to your trees if the trees have been planted in fields where the animals graze. A staked tree shelter will not be sufficient to resist the weight of sheep or cattle and so a more substantial tree guard will need to be made using wood and/or wire, unless an electric fencing regime is in place.

Closely monitor whatever forms of tree protection you use because any break in a fence or guard can damage your trees.

Perhaps surprisingly, one of the greatest threats to, in particular, established broadleaved trees, is the grey squirrel, an invasive alien species in the UK. Grey squirrels strip the bark from trees which can lead to severe damage and often death.

Another threat to your trees comes from farm machinery, particularly hedge cutters. If you have planted trees in hedgerows, make sure that the trees are very clearly marked and that everyone undertaking the hedge cutting knows what to look out for.

Malcolm and Catherine Barrett

Farm type: Mixed
Soil type: Freely draining, loamy
Location: Cornwall
Size: 121 hectares

Since becoming one of the Duchy of Cornwall's 'focus farms', we have a greater understanding about Nature and the benefits of having more of it on the farm. Our tree planting is bringing more birds and insects to the farm, which in turn help getting rid of the bad bugs and disease.

What convinced you to bring trees into your farm system?

When we took on the tenancy for Tregooden, we agreed to be one of the Duchy of Cornwall's 'focus farms'. These all play a role in pioneering new technologies and sharing their learnings as a blueprint for sustainable agriculture in the UK. Four years on, we have a greater understanding about Nature and the benefits of having more of it on the farm. We believe that with the tree planting and scrapes being established, it's bringing more birds and insects to the farm, which in turn help with getting rid of the bad bugs and disease from the wrong pests. It's also the enjoyment it brings to us seeing and hearing all the new wildlife on the farm.

How have you used trees on the farm?

We have mainly used trees on the farm to create corridors for wildlife to travel from one end of the farm to the other. We have planted some in-field trees in the flower meadows, and we are discussing planting some trees in the grazing fields too because I can see a lot of benefits for the cattle as well. The tree corridors will also act as shelter belts in rough weather for the cattle.

What has your experience been like so far?

I struggled at first when we started planting trees on the arable land because this is deemed our best land, but once we started working the ground in those fields and you realise it's not as big as it looks, I soon didn't take any notice of the trees. The trees will also attract new insects to help control the pests around my crops, and I will enjoy that.

What's the best way to protect new trees?

All the trees planted in the corridors have been fenced to keep the cattle out, but they will be able to graze through the trees in years to come once they are established enough. All the trees have had plastic tree guards put around them which doesn't look very pleasing to the eye, but we need to protect them with something. In-field trees have had big fencing guards around them to help protect from livestock, which seems to have worked.

What challenges should other farmers be aware of when planting trees?

The main pitfall that most people see is the loss of productive land. I think the benefits it can bring to livestock and soil health need to be more openly discussed, rather than just talking about helping to reduce carbon on farms. I don't see any downfalls now in planting trees, but I did have reservations in the early days.

Malcolm and Catherine's top tip

Talk to the right people who can explain all the benefits of trees, and who can help get the correct trees in the right positions to suit your farm's needs.

Weeding out the competition

Weeds compete with your trees for water, nutrients and light. So for your trees to thrive, particularly during the early years when they're getting established, a weed-free environment is essential.

As we saw earlier, creating a weed-free environment can begin even before planting, when the ground is being prepared. Then for the first few years in particular, it is important to actively keep weeds away from your trees – remember grass is one of the most competitive weeds.

There are different ways to do this, ranging from hand and mechanical weeding to the use of mulches or herbicides. Mulching may not be practical on large-scale planting sites but where practicable, it is highly recommended as not only does the mulch suppress the weeds, but it also helps retain the moisture in the soil around the tree. This is especially important as we experience longer, drier periods.

During these more frequent dry periods, watering will often be needed to sustain tree growth, particularly where larger specimen trees have been planted. Direct watering from a bowser, a sprinkler system or the use of tree hydration bags are all options, but the aim must be to mimic the rainfall that trees would prefer to receive. In other words 'slow release' water, delivered at a rate that gives vital time for the soil to grip the water as gravity takes it down through its profile.

Charles Sainsbury-Plaice

Farm type: Ex-arable, beef
Soil type: Lime-rich
Location: Hampshire
Size: 81 hectares

I grew up at Tidgrove, so farming has always been part of my life. After studying agriculture and working in the seed trade, I eventually came back to manage the farm with a greater focus on trees, scrub regeneration and creating diverse habitats. Our family has farmed here for three generations, and now the land is evolving into something richer and more resilient.

Why is weeding and mulching so important for young trees?

Effective weed suppression is crucial during the early establishment phase. It significantly reduces competition for water and nutrients. Once roots establish and reach water, additional weeding becomes unnecessary, unless you are dealing with invasive species.

How do you manage weeds around newly planted trees?

In areas where I've planted larger trees, I use a heavy bark mulch to suppress weed growth. This gives the trees a strong start, reducing competition for water and nutrients while the roots establish. After that, I monitor the area regularly, only stepping in if invasive species like docks or ragwort appear, which I remove manually before the trees leaf out. Letting the surrounding vegetation act as a protective nursery, like with volunteer oaks, also works really well. Nature does a lot of the work if you give the trees a strong foundation.

How do you approach pruning to improve tree health and form?

I'm a strong advocate for pruning specimen trees in autumn, particularly removing the lower lateral branches to encourage upright growth. At Tidgrove, I take a visual, intuitive approach, seeking out good, single-stemmed examples of blackthorn, hazel and hawthorn with the aim of guiding them from bushy forms into true specimen trees. This not only helps with form but also adds height diversity to the woodland, which benefits a range of birds and mammals.

What are the most common mistakes people make when pruning?

Doing it too hastily without stepping back to assess the tree as they go. It's important to visualise how the tree will look in the future and how it will fit within the surrounding trees and landscape. Pruning should be thoughtful and deliberate, not rushed. You don't need to prune every tree. Leaving some unpruned can help encourage height diversity.

What benefits have you seen from consistent maintenance?

Regular pruning has increased structural diversity in the woodland. Jays now favour taller trees for perching and acorn burying, and we've seen volunteer oaks establish more successfully near these areas. Protective measures like cactus guards have improved survival rates of young trees by deterring browsing animals without hindering growth. Even our Belted Galloway cattle contribute by naturally pruning and fertilising the ground, supporting biodiversity like ant hills. Overall, consistent care has led to a healthier, more balanced woodland with better-established trees and richer wildlife activity.

Charles's top tip

Integrate tree care into your daily routine. Checking trees regularly while moving around the farm means problems are spotted early. Small actions now prevent bigger issues later.

Pruning for perfection

Once your trees have made it through those early years getting well established, there is likely to be further work necessary if you are to maximise their benefits, particularly if the trees have been planted to produce fruit or timber.

Pruning involves cutting back or removing branches from trees, either to improve their form or productivity. Form is important when the tree is being grown for timber because the aim is to achieve a straight and branch-free (and hence knot-free) trunk, which will be ideal for putting through a sawmill one day in the future.

Fruit trees require pruning to improve their productivity and to ensure the fruit is accessible for picking.

Different trees require different pruning regimes and expert guidance should be sought.

Farm type: Mixed
Soil type: Wet, acid soil
Location: Gwynedd
Size: 486 hectares

Geraint Davies

I'm a third-generation farmer and I've always felt strongly about restoring the trees and hedgerows my family was paid to remove in the 1980s. Even as a child, I saw how their loss affected wildlife and shelter on the farm. As soon as I was able to take over, I started a plan of action: replanting hedgerows, adding new ones and dividing fields into smaller paddocks for rotational grazing. That grew into woodland creation and more recently, a small block of silvo-pasture, which is still in its early stages.

What are some simple first steps small family farms can take to get started with agroforestry?

Be open-minded with your approach. Consider how you can integrate trees within a productive food system rather than why you cannot. Think about how you can stack enterprises on the same parcel of land, such as silvo-pasture and silvo-arable. There's always room on farm to do things slightly differently that could benefit both your business and the natural environment at the same time. Have a willingness to push yourself out of your comfort zone and talk to others who have done these things before.

When you first started, what was important for successful tree establishment?

The most important thing for me was to make sure the trees were stock-proof andvermin-proof, otherwise their early establishment could be hindered by rabbits or young livestock.

What has been your experience of tree maintenance and aftercare?

I balance my approach to maintenance and aftercare by on the one hand remembering that trees are part of Nature and have grown in the wild forever, and on the other, that I want them to be as successful as possible as part of a managed landscape.

I try to understand the natural environment they are in, but have a particular focus on their needs, particularly around establishment. Weed and pest control have had a particular focus in the establishment period.

In terms of harvesting wood, I carefully harvest wood for farm use, and also ensure that I allow a certain proportion of fallen branches, fallen branches to decay to decay naturally and form 'bug hotels'.

What benefits have you seen from your tree planting so far?

The benefits of increasing tree and hedgerow cover on farm have been numerous. There have been direct financial benefits in terms of woodland creation and management payments, which are easy to put a figure on. In addition, having more trees on farm has reduced soil erosion, helped with water regulation, improved biosecurity for my livestock, and increased connectivity for wildlife across the farm. It is critical that any form of agroforestry is viewed for the multiple co-benefits it offers rather than just one outcome.

Has your approach to tree aftercare changed over time?

We farm in an area that's got fairly high rainfall, so we've not had to go to the extremes of watering trees for them to survive. Over time, I've found that it's more about observing, stepping back, and letting the trees get on with it. They're resilient, and if you give them the right start with protection, they will thrive without needing constant intervention.

Geraint's top tip

Design a system that is as low maintenance and as low cost as possible, which means you'll reap the financial and environmental rewards. It needs to work for you and your farm, rather than replicating something that has worked elsewhere.

An enduring legacy for future generations

As we hope that this publication has illustrated, the investment in time and resources in the early years of tree planting will pay huge dividends in the long term.

If you regard the care and maintenance of the trees on your farm as part of your daily farming activity alongside that of your livestock and crops, the challenge will seem much less daunting.

The benefits – and joy – that you will reap from the trees on your farm will be ample reward for the effort, and there is no more enduring legacy than the gift of trees for future generations. To quote the well-known proverb:

> The best time to plant a tree was 20 years ago. The second best time is now.

Explore more

From The Royal Countryside Fund

A-Zero: A farmer's guide to breaking free from environmental jargon

The Great Grazing Guide: Money-saving tips for livestock farmers

Savings in Soil: A practical guide for farmers to boost soil health and improve your businesses

AFINET: Agroforestry Innovation Networks: a thematic network aimed to foster the exchange and the knowledge transfer between scientists and practitioners in agroforestry.

The Agroforestry Handbook, The Soil Association.

Climate Farm Demo: a European-wide network of pilot farmers implementing and demonstrating climate-smart solutions.

Ecological Site Classification: to help to select trees that are ecologically suited to particular sites.

The European Agroforestry Federation: represents agroforestry associations from across Europe.

The **Plant Healthy** certification scheme helps to easily identify businesses and organisations that grow, trade and manage plants to high standards of plant health and biosecurity.

Temperate Agroforestry Systems, CABI Books.

Tree Species Guide for UK Agroforestry Systems, Forestry Research and the University of Reading.

Find all further reading and resources here:

www.royalcountrysidefund.org.uk/tree-resources

Jargon buster

De-mystify common terms relating to trees and farming with this handy glossary.

Agroforestry
A land use system that combines trees, crops and/or livestock.

Annuals
Plants that complete their entire life cycle within a single growing season.

Biodiversity
The variety of living things within a given area or habitat, including the diversity of species and ecosystems.

Biosecurity
Practices and measures designed to prevent the introduction and spread of pests, diseases and invasive organisms that could harm plants, animals or ecosystems.

Carbon sequestration
The natural or managed process of capturing and storing carbon dioxide from the atmosphere in vegetation, soils and other carbon reservoirs.

Compaction
The compression of soil particles, often caused by heavy machinery or livestock, which limits root growth and impairs water infiltration.

Coppicing
A woodland management technique where trees are cut down to near ground level to encourage the growth of new shoots from the stump or roots.

Ecosystem
Living organisms and the physical environment they interact with, functioning together as a self-sustaining system.

Invasive species
Non-native plants, animals or microorganisms that establish and spread rapidly, often outcompeting native species and disrupting ecosystems.

Legumes
A family of plants, including peas, beans and clovers, that often work with nitrogen-fixing bacteria to enrich soil fertility.

Mycorrhiza
Fungi that grow with the roots of a plant, enhancing water and nutrient uptake in exchange for carbohydrates from the host plant.

Natural flood management
The use of natural processes, such as restoring wetlands, planting trees or reconnecting rivers with floodplains, to reduce flood risk and improve water retention.

Perennials
Plants that live for more than two years, regrowing each season from their roots.

Pioneer species
Plants or other organisms that are the first to colonise bare or disturbed land, creating conditions that allow other species to establish later.

Pollarding
A tree management method where the top and upper branches are cut back to promote new shoot growth.

Rotational grazing
A livestock management system where livestock are moved between pastures on a planned schedule to allow vegetation recovery and maintain soil health.

Shelterbelt
A line or group of trees or shrubs planted to protect crops, soil or livestock from wind, reduce erosion and improve microclimates.

Silvo-arable
An agroforestry system where trees are grown alongside arable crops, combining timber or fruit production with annual or perennial cropping.

Silvo-pasture
The integration of trees and pasture for livestock grazing, providing shade, fodder and additional income sources while improving land health.

Specimen tree
A tree grown as a focal point in a landscape or field, chosen for its aesthetic, ecological or cultural value.

Succession planting
The practice of sowing or planting crops in stages to ensure continuous harvests and efficient land use through the growing season.

Acknowledgements

About the author

Geraint Richards is the Head Forester to the Duchy of Cornwall and to His Majesty The King. Graduating in 1992 with a degree in forestry from Bangor University, he worked for four years for the Forestry Commission before taking up his current role. Geraint is involved with a wide range of tree, woodland and forestry organisations and initiatives in the UK and internationally. He is a Fellow and past President of the Institute of Chartered Foresters and is also Chair of Action Oak. Geraint was made a Member of the Royal Victorian Order (MVO) in 2017, was awarded the Royal Forestry Society's Gold Medal for distinguished services to forestry in 2019, and in 2025 was awarded an OBE for services to the forestry sector.

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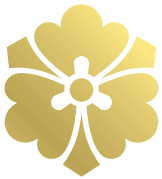

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