

Agroforestry

Forest Type 8 (FT8)

Ireland's Afforestation Programme

2023-2027



This booklet has been funded under the Forestry Promotion Scheme provided by the Department of Agriculture, Food and the Marine



An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine



farming and forestry working together

Welcome

This booklet is an informative guide to the Agroforestry measure - Forest Type 8 (FT8) under the Afforestation Scheme 2023 - 2027.

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Definition of Agroforestry

Agroforestry is a collective name for land-use practices where trees are combined with crops and/or animals on the same unit of land and where there are significant ecological or economic interactions between the tree and the agricultural components.

Forest Type 8 - Agroforestry

Forest Type 8, or FT8, in the Afforestation Programme 2023-2027, aims to provide support for agroforestry and food forests. This will facilitate landowners' planting land with trees and continuing to produce food through agriculture.

FT8 Agroforestry allows for the creation of

- Silvopasture Systems (trees and pasture)
- Silvoarable Systems (trees and crops) – Pilot Scheme
- Forest Gardening Systems – Pilot Scheme

Contents List

1. Introduction
2. Agroforestry benefits
3. Who can apply?
4. Support rates
5. Suitable site characteristics
6. Application process
7. Planning and design
8. Planning context and objectives
9. Planting singly
10. Planting in rows and silvoarable
11. Planting in groups and forest gardens
12. Planting in groups, design examples
13. Tree protection
14. Planting trees
15. Plantation management early years
16. Plantation management later years
17. Ash dieback conversion
18. Additional information





agroforestry benefits

Agroforestry offers the potential for additional sources of sustainable on-farm revenue. While agricultural production continues to bring in an annual income, the trees mature over the longer term, growing high-quality timber and other valuable silvian products, thereby **enhancing your financial stability**.

Agroforestry, with its two-tier design, increases leaf area and solar capture through photosynthesis. By maximizing solar capture, you not only **improve your farm's overall yield** but also enhance its capacity to cycle and **sequester on-farm carbon**.

Implementing agroforestry on your farm not only enhances financial and production resilience but also builds ecological resilience into your farm's model, creating a more **sustainable and diverse agricultural landscape**.

Shelter and shade create a microclimate beneath the trees and ambient, healthy conditions for livestock. The trees also provide opportunities for animals to “browse” or consume tree forage, enhancing their diet diversity and reducing their greenhouse gas emissions. These benefits **boost health and welfare**, which contribute to **increased productivity**.

Tree roots and their associated biology build soil structure, which increases soil porosity, **water infiltration** and **nutrient capture**. In a silvopasture context, careful grazing management can **dramatically extend the grazing season**.

Forest Type 8 – Agroforestry offers attractive **establishment grants** and **annual premiums** (see page 4 for details). Additionally, eligible landowners can continue to benefit from the **Basic Income Support for Sustainability payment** (BISS). For organic farmers, land planted under FT8 is also entitled to payment under the **Organic Farming Scheme** (OFS).





agroforestry scheme FT8 who can apply?

Who can apply?

The FT8 — Agroforestry scheme accepts two categories of applicants: farmers and non-farmers. The FT8 Support payments for establishment and the premium paid are the same for both groups, and premia are paid for 10 years.

Applicants who qualify as farmers with entitlements will be able to draw BISS on their agroforestry and CRISS support payments subject to certain conditions. Organic Farmers in the Organic Farming Scheme (OFS) can also claim organic payments on areas under agroforestry.

To be eligible for farmer status, you must:

Be an approved participant in the Basic Income Support for Sustainability Scheme (BISS) in the forestry application year 2024, **and** if applying for forestry planting in 2024, then you will need to have

- Submitted a valid BISS application in 2023
- Submitted a valid Basic Payment Scheme (BPS) each year, 2020 - 2022

Young Trained Farmers

Must have claimed BISS or BPS in each of the previous four years, or from the year they were approved members for either the Young Farmer Scheme or the National Reserve for New and Young Farmer Schemes until the year of their afforestation application.

Forestry (including Agroforestry) planted since 2009 and which will be planted in 2024 can be eligible for a BISS payment in 2024, provided it satisfies specific conditions, including:

- That the land to be planted was given a right to payment under the BPS (2015-2022)
- That the afforested lands meet all the requirements of the relevant forestry scheme under which it was established
- That the eligible forestry parcels that are declared on a BISS application to activate entitlements will also be subject to conditionality requirements





FT 8 Agroforestry support rates

Ireland's Afforestation Programme 2023-2027

Establishment-(excluding fencing) €/ha

Silvopastoral system: €8,555

Silvoarable system Pilot: €6,000

Forest gardening (small-scale food forest) Pilot: €6,000

Annual Premium Payments €/ha

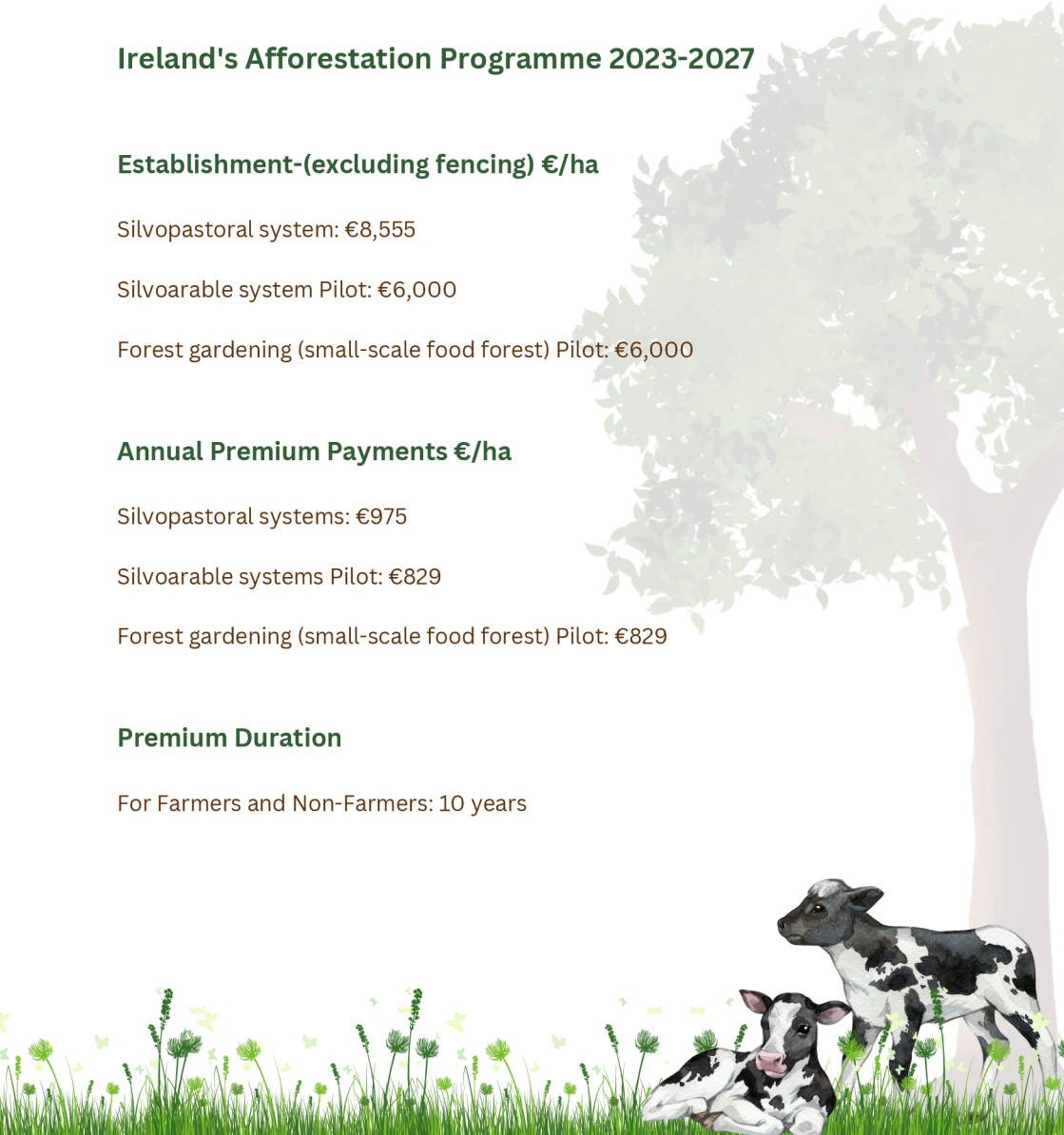
Silvopastoral systems: €975

Silvoarable systems Pilot: €829

Forest gardening (small-scale food forest) Pilot: €829

Premium Duration

For Farmers and Non-Farmers: 10 years





suitable site characteristics

Free-draining mineral soils with no need for additional drainage.

Minimum plot size is 0.5 hectares.

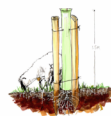
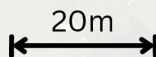
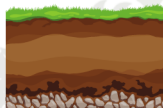
Minimum plot width is 20 metres. (measured tree to tree)

Elevation must be below 200 meters.

A stocking rate of at least 400 trees/ha dispersed across the whole site.

Trees must be protected from livestock by the approved tree guard assembly or be fenced.

There are planting restrictions on sites with protections for breeding waders, including Curlew (1.5km radius); Pearl mussel catchments; High nature value farmland; Peat layer – greater than 30cm; Hen Harrier Catchment.





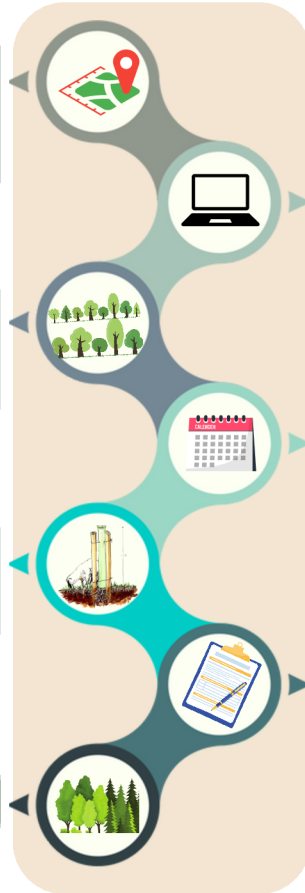
application process

Contact a DAFM registered forester. They will visit your farm and determine if the site is suitable to plant trees, taking account of the soil type, exposure and any relevant environmental regulations.

Talk to your forester and discuss the best planting patterns to suit your landscape and context. Choose a mixture of suitable tree species. Map and plot your plans.

Pay close attention to the FT8 planting and spacing requirements. Adhere as closely as possible to the design you submitted with your application. Plant at least 400 trees/hectare.

Following satisfactory inspections, payments will be made in two stages – 75% in year 1 and 25% in year 4.



Once suitability is confirmed they will draft an application for an agroforestry licence. The forester should work with you to plan your agroforestry so it will fit in with your existing farm enterprise.

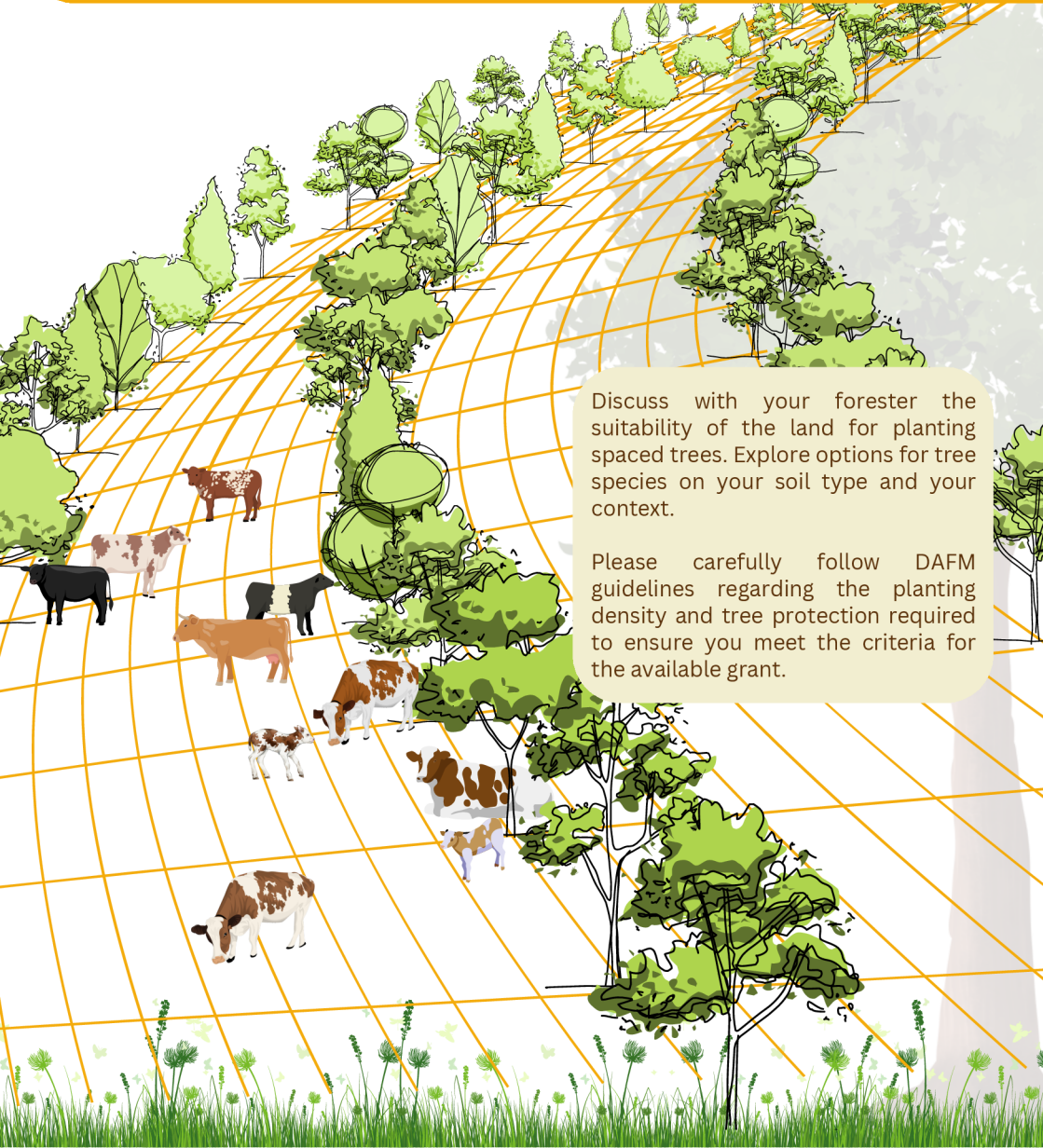
The length of time it takes to process an application is usually 3 to 6 months. Sometimes applications take longer if the site is affected by any of the environmental or other restrictions. Going through an agroforestry pre-application checklist will help avoid delays.

A DAFM Forestry Inspector will visit the site in years 1 and 4 to assess tree establishment. The inspector will check to see if the majority of your trees are growing well. Poor establishment may result in your payment being penalised.





planning and design tree protection



Discuss with your forester the suitability of the land for planting spaced trees. Explore options for tree species on your soil type and your context.

Please carefully follow DAFM guidelines regarding the planting density and tree protection required to ensure you meet the criteria for the available grant.



planning context and objectives

Suitable Site Characteristics

- Free-draining mineral soils, no need for additional drainage.
- Elevation: Below 200 meters.
- Plot Size: Minimum of 0.5 hectares.
- Plot Width: Minimum of 20 meters.

Design Considerations

- Aspect - sun direction
- Slope - water flow
- Prevailing wind

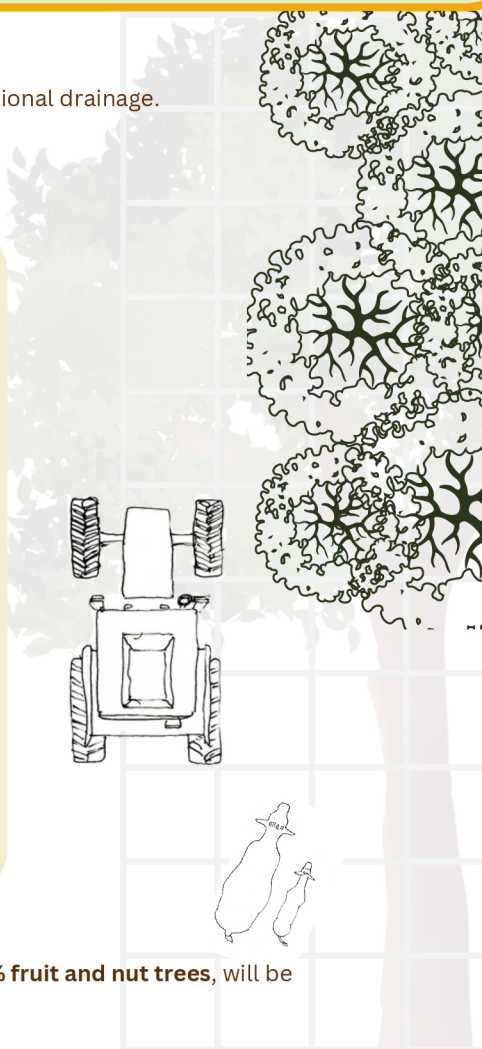
Design Context

- Agricultural practises (current and future)
- Livestock type
- Machinery use and scale
- Wildlife pressure

Desired Objectives

- High-quality sawlog timber
- Firewood
- Coppice wood
- Biomass
- Shelter & shade for livestock or crops
- Access to browse
- Soil health
- Fruit and nuts

All tree species, including conifers and up to **15% fruit and nut trees**, will be considered on a site-by-site basis.

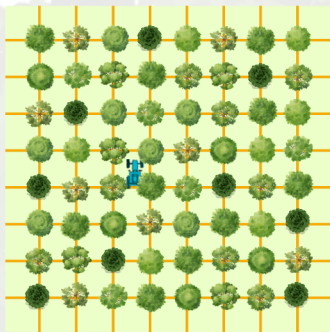




planting singly

Designs should be carefully plotted on a scaled map before planting to ensure the minimum density of 400 trees per hectare can be achieved within the parameters.

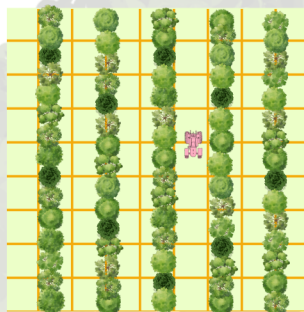
For **singly planted trees**, grid planting at $5 \times 5\text{m}$ is recommended to achieve a minimum density of 400 trees per hectare. Trees must be protected singly (see page 13). This format is designed to be managed with sheep, young calves, poultry and machinery until the trees are well-established. In irregular fields, spacing may be modified—reducing it to a minimum of 3m or increasing it to a maximum of 8m between trees.





planting in rows and silvoarable

When **planting silvopasture in rows**, there should be a maximum of 8m between rows and a minimum of 3m between trees within a row. Rows are best suited to guarding singly where sheep or young calves are the primary livestock during the establishment phase. The rows allow extra working width for silage-making and other machinery use. Planting in rows also allows for designs following contours or curves to follow field shapes.

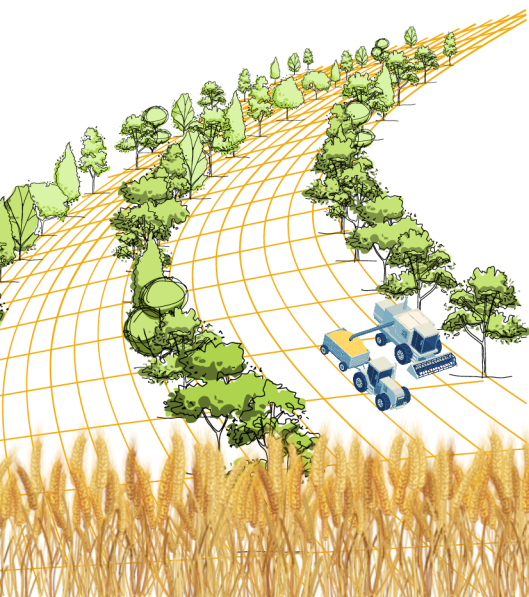


Silvoarable

The silvoarable measure under FT8 Agroforestry is a pilot scheme. It allows for planting rows of trees through arable fields with up to 20% fruit and nut trees while maintaining a minimum stocking of 400 trees per hectare. The key benefits of including trees in an arable context are adding diversity, mitigating wind and water erosion, providing habitats for pollinating and predatory insects as part of an integrated pest management plan, and a potential additional harvest of fruit, nuts, and timber.

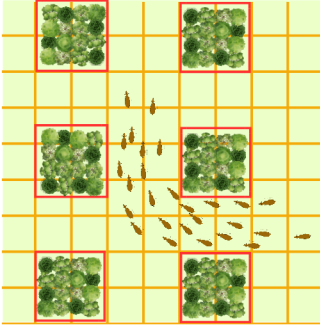
As this is a pilot scheme, the design will be driven by the farmers pioneering this idea in Ireland. It is important to lay out designs on paper but also to ground test machinery with marker posts before planting. Allow plenty of turning room at the headlands.

Controlling shade and root pruning are important management considerations. Crown lifting of timber trees and coppicing are possible options to explore and plan at the design stage. (see page 15 for more on shade management)





planting in groups and forest gardens



Group plantings

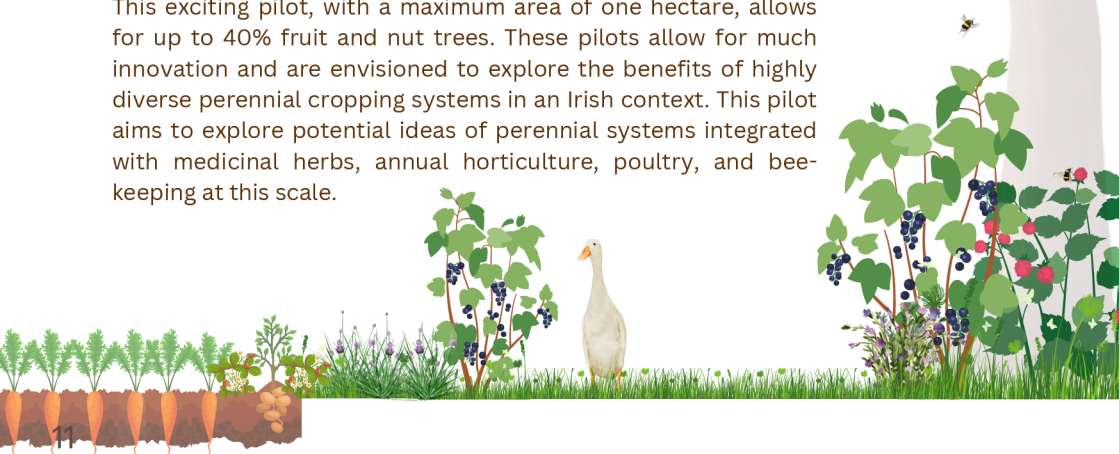
For larger livestock, such as cattle, individual tree protection is not funded under the FT8 Agroforestry scheme. Instead, trees may be planted in groups and protected with permanent stock-proof fencing (see diagram). Group fencing allows trees to be planted without individual plastic guards, which can facilitate better root development, bark hardening and tree growth.

When trees are strong enough, animals can be introduced to manage the understory, and eventually the fences can be removed.



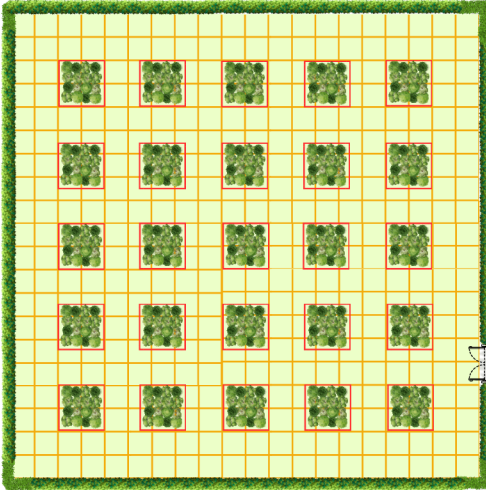
Forest Garden (small-scale food forests)

This exciting pilot, with a maximum area of one hectare, allows for up to 40% fruit and nut trees. These pilots allow for much innovation and are envisioned to explore the benefits of highly diverse perennial cropping systems in an Irish context. This pilot aims to explore potential ideas of perennial systems integrated with medicinal herbs, annual horticulture, poultry, and bee-keeping at this scale.



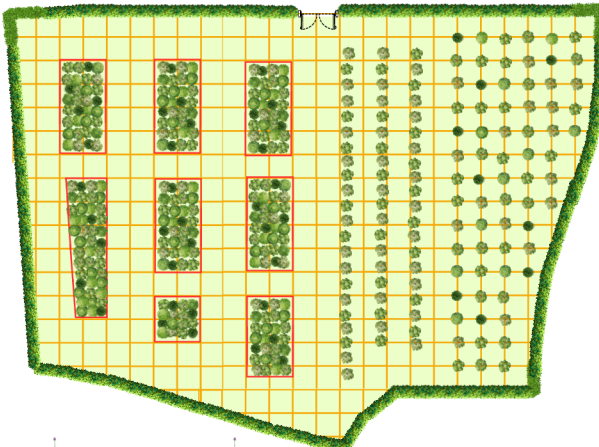


planting in groups design examples



A suggested format is twenty five groups of sixteen trees, meeting the required density of 400 trees per hectare. Allowing headlands of 10m and 7-8m between the groups. In this example the groups are fenced in 10m squares. The trees must be planted 1m back from the fence with a minimum of 2m between the trees. It is vital to have clear objectives when designing groups of trees and to carefully plot the trees on a scaled map to ensure the plan is suitable and achievable.

Within the parameters of the scheme, there is flexibility. If your plans stray from the standard formats outlined, detailed designs with a written rationale should be included in the “one-page plan”. When designing, it is essential to have a spread of trees integrated across the whole agroforestry site.



In this example, we see larger groups on the left, designed for cattle and ease of machinery use. The right-hand side is rougher land that will be managed with sheep, the first section is planted in rows and is suitable for topping and occasional hay making.



tree protection

Silvopasture Planting Specifications

- For singly planted trees, plants should be 60-90cm in height.
- A 1.5m rigid plastic tree guard is required to protect each tree.
- All trees must have two 1.5m stakes at least 7cm in diameter - one round or half-round and the second, half-round or square with a flat face toward the tree guard. This arrangement best prevents the livestock from rolling or crushing the guard.
- Tree guards should be secured by tying wire wrapped around the posts and threaded through the guard. Use tying wire rather than plastic zip ties, as livestock tend to chew through the zip ties.
- It is crucial to follow these specifications carefully, or you risk losing some or all of your agroforestry premium.
- With prior approval, other forms of plant protection, such as rigid fox wire mesh, may be considered as an alternative for plants, such as conifers, birch, alder and other species that might not be suited to tubes.



Trees Planted in Groups

Groups of trees do not require tree guards but must be fenced with a permanent physical barrier of three rows of barbed wire, bull wire or sheep wire fence, appropriate to exclude the livestock and wildlife pressures on the farm.



Silvoarable

In silvoarable plots, no guards or fencing are required; however, the trees may need protection from wildlife, such as rabbits, hares, or deer. Shorter tree guards with a single stake may be adequate for rabbits and hares.

Forest Gardens

Forest gardens are not intended for livestock with the exception of poultry. The perimeter should be protected with a permanent fence, creating a physical barrier to exclude all livestock. Trees should be protected appropriately depending on wildlife pressure.





planting trees

Ground Preparation

Clear the ground manually, cutting long grass and removing weeds. Under the DAFM FT8 Agroforestry scheme, herbicide use is not permitted for weed management.

Pit planting, T-cut planting, auger, shallow inverted mounding, deep ripping or surface tillage are all options. A mulch mat, sheep wool, or woodchip may be used to help suppress vegetation at the base of the tree. Mulch will also help conserve moisture around the roots of new trees.

Care of plants prior to and during planting

Care should be taken with bare-rooted trees. Avoid leaving bags of trees in direct sunlight and ensure the roots do not dry out.

If the plants are not going to be used in a couple of days or weeks, they should be temporarily planted in their bundles or "heeled in" to prevent them from drying out and protect them from frost. Heeling-in is done by digging a shallow trench, placing the groups of plants into it, usually at an angle, covering the roots with soil, compost or sand and watering well.

When planting, do not leave the tree's roots exposed to the open air. Keep the plants in the bag until the planting hole is prepared. Exposing the root hairs to the sun or allowing them to dry out will inhibit establishment.

Fertilising Trees

Artificial fertilisers are not permitted on your agroforestry plantation. However, several organic products, including seaweed and mycorrhizal inoculum, can assist in plant establishment. Ensure that any inputs are suitable for trees and avoid amendments high in nitrogen. For example, if using farm yard manure in the planting holes, ensure it is well composted.

A surface mulch of sheep wool or wood chip will act as a slow-release fertiliser for trees as it breaks down and feeds the soil. Mulching mimics natural nutrient cycling in forest soil.





plantation management early years

Managing an agroforestry plantation

Managing an agroforestry plantation requires balancing the growth and health of trees and the agricultural practices beneath. It is essential that this management begins in the early years of establishment to ensure the trees grow well without compromising agricultural production. The primary tasks include checking that the tree protection is in good order, regular pruning and shaping, potential thinning, and monitoring shading.

Guard Maintenance

Regularly check tree guards for damage. Replace or repair guards if they are damaged or if trees begin to touch and cause ring barking.

Silvopasture Management

Pasture management practices are similar to those for open pastures but with additional considerations for the trees. As the trees grow, pasture health should be monitored, and the trees should be pruned and thinned to limit excessive shading. The grazing rotation should be carefully timed to ensure trees are not damaged by bored animals kept for too long in a paddock.

Fertilisation

Pasture can be fertilised similarly to low-input conventional systems. Consider adding clovers to pastures to promote natural nitrogen fixation or multispecies swards to enhance diversity and pasture resilience.

Pruning

Timber trees should be shaped to have a single leader and be “crown lifted”, which involves pruning the lower branches to promote the growth of valuable knot-free timber. This pruning also reduces shade to the understory therefore maintaining good pasture production. Coppicing or pollarding may be appropriate for certain trees in some systems for managing understory shade while producing tree fodder and shelter for livestock, and habitat for wildlife.

Thinning

When the canopy begins to close, selective thinning – removing trees with poor growth forms – is the next step. This small dimension timber could be chipped or processed for firewood.



plantation management later years

Further Thinning and Harvesting

As the trees mature, the best and most valuable trees should be marked so they are not felled prematurely during thinning operations. Strike a balance between growing good quality timber and managing shade. In an agroforestry system, trees should be under continuous cover management – at any one time, only harvesting a percentage of trees when they attain marketable dimensions.

Successional Planting

The key to maintaining forest cover in accordance with the Forestry Act 2014 is to replant trees little and often as thinning and harvesting progress. Protect the new trees as before. This process of continuous harvesting and replanting will create a diverse and dynamic landscape with many niches and habitats for wildlife and livestock.

Protecting Maturing Trees

As the trees outgrow the initial tree guards, the guards must be removed and gathered. Extra attention should be paid to grazing management at this stage. If the trees are especially palatable species, they may need further protection in the form of a plastic mesh to prevent the bark from being eaten.

A Note on Grazing Management

As a silvopasture or woodland pasture is a transitional ecological habitat, the disturbance created by the livestock is the principal tool for halting succession from advancing to a full woodland. The action of livestock trampling and grazing stimulates pasture plants and inhibits woody understory plants from establishing. In the early years, when the trees are vulnerable to damage, using livestock at a high density for a short time (small paddocks and frequent moves) is the best method to get an adequate animal impact without damaging the trees. Most damage occurs to trees when the ground becomes fouled and the animals are bored. As the pastures and trees are established and have found their balance, the management can be relaxed. However, silvopastures should never be subjected to continual grazing for extended periods; the animals should constantly be rotated, allowing the pastures to recover between grazing events.





ash dieback conversion

Reconstitution Ash Dieback Scheme 2023–2027

Purpose

Ash Plantations that have been affected by Ash Dieback are eligible to apply to convert to agroforestry under FT8. Agroforestry is a suitable remediation solution for these sites.

Key Practices

Site clearance: This involves removing ash trees and associated operations to prepare the site for reconstitution.

Reconstitution: This involves the replacement of ash trees with alternative species following ash clearance.

Conversion to Agroforestry

Landowners with plantations affected by Ash dieback may apply for the Agroforestry measure FT8. Once cleared and planted at a density of 400 trees/ha (with appropriate protection) and the plantation has passed DAFM inspection, landowners will be eligible to receive 75% of the €8,555/ha establishment grant. 25% of the grant will be held until the year 4 DAFM inspection.

Ash sites planted under this measure will not be eligible for annual premiums.



additional information

Sourcing Trees

Trees for your agroforestry plantation must be sourced from a registered nursery to ensure that they are of the required standard and quality and for plant health traceability. All trees will need to be accompanied by a Provenance Declaration Form when submitting documentation for the 1st instalment of the agroforestry grant. Healthy trees are crucial for the successful establishment of your agroforestry plantation, which is why it is important to obtain trees from a verified source.

Please note: If you are considering the use of seed or other forest reproductive material from your own farm it is advised that you first discuss this option with your registered forester or registered nursery. There are certain legal responsibilities associated with the marketing of Forest Reproductive Material and Plant Health which must be adhered to. These are described in the Forestry Schemes Manual on the Department's website.

Important Consideration

Land planted under the Afforestation Programme or land at 400 trees per hectare converts to forestry designation under the Forestry Act 2014 with an obligation to maintain 20% tree cover through perpetual replanting obligations and requires a licence for felling.

Further Resources

www.gov.ie/en/campaigns/a9d3c-forestry-in-ireland

www.irishagroforestry.ie/https://ft8helpfultips






www.irishagroforestry.ie

Social media: @AgroforestryForum Contact: info@irishagroforestry.ie

www.irishagroforestry.ie

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