

Trees and vegetables

On a crisp, cold January morning I joined the 'Trees and Vegetables' Agroforestry Innovation Networks (AFINET) visit to Duchy Home Farm, Gloucestershire. And what an inspirational day it turned out to be! When 30 plus farmers, growers and interested parties get together it usually turns out that way and this was no exception.

The day began with hearty soup and a welcome from David Wilson, Farm Manager, who introduced Duchy Home Farm and its agroforestry system, which was planted nine years ago.

Close Farm

Then it was off out into the field with Fred Bonestroo, Head Grower. Duchy Home Farm's vegetable production site at Close Farm has a 1 ha (2.5 acre) agroforestry system incorporating 1,000 apple trees, each one a different variety from the Brogdale Collection in Kent. The trees are on M9 and M106 rootstock planted in rows interspersed with annual veg: kale, cabbage, leeks, onions, etc. Green manures include yellow trefoil and clover (undersown with squashes). Between each row of trees there are three veg beds of 1.8m (6') each. The same distance is given for the trees, i.e. 5.5m (18'). This allows adequate space for roots and canopy.

The apple trees have been cropping for five or six years and the 2017 harvest was five tonnes. The majority goes to local drinks producers for juice and gin! Some is sold on market stalls and some wholesale. Each tree is individually labelled so that the variety is traceable. For the first two years the trees were mulched with woodchip.

Much of the discussion outdoors centred around management of the understorey as the trees become established. Fred said that pruning, strimming and cutting the understorey requires significant labour. Many management methods were spoken of such as using chickens and sheep - Shropshire sheep are supposed to be tree friendly, but this was a contentious point! Iain Tolhurst's tip was to establish beetle banks before planting the trees.

We concluded the tour with a look at Fred's woodchip composting area and polytunnels where he uses woodchip compost to warm the propagating area from February onwards. As we left the field a local home school group were arriving to get stuck in and pick their own. The sun also arrived leaving behind a delightful image: trees, happy children, winter veg and mud!

Back indoors and following a quick boost of tea and cake we got stuck into the rest of the afternoon's activities. Sally Westaway and Jo Smith from the Organic Research Centre (ORC) gave an overview of the UK agroforestry innovation (AFINET) groups, of which this was the 'Trees and Vegetables Group'. Working with Abacus Agriculture, and in collaboration with the UK's agroforestry group, the Farm Woodland Forum, ORC are coordinating a series of practical on-farm stakeholder events for these groups, to discuss and learn from each other. The Trees and Vegetables Group will focus on gathering together existing knowledge, identifying gaps, innovative practices and solutions.



The agroforestry system at Close Farm

Photo: Charlotte Steel

Working with AFINET project partners across the EU, ORC and Abacus will design and develop new material for agroforestry practitioners and contribute to the AFINET knowledge cloud. The Knowledge Cloud is a state-of-the-art repository where all available resources will be gathered into one location, a source of knowledge and experience on innovative agroforestry practices at the EU level.

Tolhurst Organics

Iain Tolhurst (Tolly) then presented an overview of his Oxfordshire agroforestry system incorporated into 20 acres of veg cropping with over 100 different crops on site. Trees are planted on a north to south aspect with rows 23m (75') apart to allow for the irrigator. The strips for trees are narrow at two to three metres wide. Tolly has 18 varieties of apple plus field maple, whitebeam, Italian alder, oak, black birch, hornbeam and wild cherry. How to decide what to plant is key and Tolly aims to include a wide mix of indigenous species for various uses: fruit, firewood and timber as well as to provide shelter and biodiversity. Overall 15% of the land has been given to trees. The trees were planted as one year old saplings three years ago and Tolly was helped with the cost by a grant from the Woodland Trust. He applied mulch for the first two years and as yet there is no discernible benefit to the veg cropping but biodiversity has definitely been enhanced. Protection from deer and rabbits has been an issue and is something to consider when planning an agroforestry system as it can be a significant expense.

Different approaches to understorey management have been trialled (by ORC as part of the AGFORWARD project) at Tolly's including daffodils (1,000 bulbs), other cut flowers, rhubarb and globe artichokes. The intention was to make the most of the understorey as productive land to reduce the impact to the business through loss of cropping. The cut flowers have been reasonably successful but both the rhubarb and artichokes succumbed to verticillium wilt.

Shillingford Organics

Martyn Bragg from Shillingford Organics then presented the agroforestry system on his 350 acre farm in Devon. Planted in 2003 on semi-dwarf rootstock with 36 feet between each alley, Martyn began by rolling out a two metre wide strip of Mypex to suppress couch grass before planting. Trees are planted north to south flanked by an east to west hedge for wind protection. In terms of understorey management, Martyn uses chickens and does some clearing before harvesting. The trees are mainly apples with some pears and plums plus a few cobnuts, some willow and the odd kiwi! On another part of the farm there is a much younger system, planted in 2013 with 28 metres between rows to leave at least 24 metres of cropping in between. These trees were provided with help from the Woodland Trust. Martyn emphasised that trees are a long-term investment with five years needed to establish before cropping in some cases. An agroforestry system is therefore something to consider as part of a long-term strategy on the farm.

Agroforestry handbook

Ben Raskin from the Soil Association rounded off the presentations by explaining that an agroforestry handbook is currently in production and should be published by the end of 2018. The aim is to cover some of the major considerations involved in setting up an agroforestry system: choosing your trees, management, understorey, costings, etc.

Discussion

Then came the time for further discussion with participants breaking out into smaller groups to discuss next steps for the Trees and Vegetables Group. The overall feeling was that more visits would be welcome to learn from those who have established agroforestry systems. The potential for specific skills workshops was popular such as pruning, grafting and overall design.

The need for further research and demonstration of the benefits of agroforestry, especially at the soil microbial level was apparent with participants wanting to know exactly what differences incorporating trees into a veg system is making.

Another theme was that of making the business case for agroforestry. There was discussion of a tool that could help inform how an agroforestry system can add value to the farm and how to make decisions on tree varieties, etc with the overall economics in mind.

Charlotte Steel - General Manager, Sutton Community Farm

Join the AFINET Trees and Vegetables network! Sign up to the mailing list here <http://eepurl.com/cYnhN1>

Connect with the Farm Woodland Forum on <https://twitter.com/FarmWoodForum> and <https://www.facebook.com/Farm-Woodland-Forum> and explore the website here. <http://www.agroforestry.ac.uk/>

Explore the AFINET project website <https://euraf.isa.utl.pt/afinet>



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