



Avant Gardening

Dr Sue Holland at the food forest in Awliscombe talks to Seth Dellow about Agroforestry in action.

In a field just outside Honiton, an avant garde approach to growing organic food is under way. A bird's eye view of this once fallow land above the tiny village of Awliscombe reveals how it has been transformed into a flower-shaped food forest, with more than 200 plant species. Food forests are a type of agroforest, a concept where both trees and agricultural crops are grown on the same piece of land. It's estimated to be one of just 60 small-scale projects in the UK and is maturing at the same time as the climate pendulum shifts in its favour.

The project is the brainchild of Dr Sue Holland—a botanist and ecologist—who credits a course ten years ago as the moment when the seed was planted. Sue was inspired by the wisdom imparted by Martin Crawford at the Dartington Estate near Totnes in 2016.

'Martin was talking partly about indigenous people and communities and how they grow food. It was a sensitive way not to damage the ecosystems as you take food from them. He shared impressive cost analysis data compared with traditional farming; and showed how agroforestry is likely to be part of the solution for food security into the future. Particularly as climate change deepens and increases challenges facing food growers', Sue reflects.

Crawford is widely recognised as a pioneer of agroforestry in the UK, having overseen the creation and development of a popular food forest at Dartington since 1994. Scientific research demonstrates that agroforestry can be more productive, profitable and sustainable than monocultures in the long-term.

Sue remarks how Martin made 'a compelling argument' at the time about how one could grow food and regenerate the soil. 'The more I read about how we grow food, it became a no brainer. And it had the added benefit of making a richer, biodiverse environment, a place of beauty.' By 2018, Sue had sourced a suitable parcel of land to turn her vision into reality.

Central to her vision was the creation of a regenerative agroforest: 'We are trying to improve the soil while getting edible crops out of it. We plant tree species such as Italian alder (*Alnus cordata*) and autumn

olive (*Elaeagnus umbellata*) which fix nitrogen through the synergistic relationship of microbes in their roots. That nitrogen then becomes available to other plant species growing nearby.'

'We plant the fruit trees [quince, almond, and crab apples] within three metres of the alder, so that the heavy cropping tree gets its nitrogen through the connectivity of the root system and fungal network. It's already forming a symbiotic relationship under the ground', Sue added. The food forest also includes perennial shrubs, such as allspice, cranberry and loganberry.

'A big part of our job is standing back and not intervening with everything we see'

Since the creation of the food forest eight years ago, there have been some noticeable observations with wildlife and biodiversity. Sue has observed 'a significant visiting bird population in there in the spring and summer; because we have more flowers, we have more invertebrates and hence more birds, mammals & reptiles. All the trophic levels are represented. If you cram a lot of species into an area with not too much shade, and plenty of mulch, you really do experience natural selection in real time.'

Another benefit in the agroforest has been the incorporation of a 'scrape'—a shallow pond that accumulates rainwater. In the first year, Sue observed the arrival of two varieties of newts, snails and diving beetles. 'All the usual mix has arrived over the last few years. I'd heard that if you're trying to build a system without pesticides and herbicides, to keep the slugs at bay, you need amphibians and grass snakes. You need a pond to attract those creatures, and now that we have them, our leafy veg is less decimated by the slugs!'

The development of a natural equilibrium is a further development in the agroforest. Rather than rushing to banish pests with chemicals—as many of us would traditionally do—Sue simply observes the process and waits. It's a sustainable approach rooted in what's known as Integrated Pest Management (IPM).

