

## Tree fodder: food for thought?

ORC recently hosted a workshop to explore the opportunities and challenges of incorporating tree fodder into today's livestock farming. **Mary Crossland**, agroforestry graduate from Bangor University, ex ORC employee and intern and workshop participant, reports on the outcomes of the day.

An ancient practice now largely confined to drier regions of the world, tree fodder is one of the lesser-known benefits of incorporating trees on farms. Leaves from certain tree species may offer supplementary sources of dietary protein, trace elements and beneficial compounds such as tannins, helping improve animal welfare and boost production. In the rediscovery of such benefits, there is renewed interest from some farmers in exploiting fodder from existing on-farm trees. But can this traditional practice be integrated into today's ruminant systems in the UK? Bringing together farmers, researchers and woodland advisers, the workshop 'Tree fodder: food for thought?' aimed to explore the opportunities and challenges of using tree fodder within modern farming systems.

The day started with presentations covering current knowledge on the nutritional characteristics of fodder species and personal accounts of tree fodder in practice. Sokratis Stergiadis, from the University of Reading, discussed the potential benefits of tannin-containing fodder for animal production. Able to bind with fibre and proteins within the gut, certain tannins can improve the absorption of amino acids, reduce the production of methane, prevent bloat and may even reduce gastrointestinal parasites. While trees are a rich source of tannins, Sokratis cautioned that some tannins are better than others and that the challenge remains to identify which tree species and varieties provide the best types.

Lindsay Whistance, ORC livestock researcher specialising in animal behaviour, spoke of how providing access to trees can allow for more instinctive behaviours and ultimately lead to happier, healthier animals. Trees such as willow store high quantities of trace elements such as zinc and copper in their foliage, while the trees themselves offer opportunities for livestock to play, seek shelter and perform natural behaviours such as body maintenance.

Emphasising the historical importance of tree fodder, Ted Green and Helen Read from the Ancient Tree Forum enthused us with videos demonstrating the surprising palatability of different tree leaves to both cattle and ponies, and photographs of traditional management practices still used in parts of Europe. We then heard from some innovative farmers currently utilising tree fodder on their



farms: Bill Acworth from Little Hidden Farm in Berkshire, Peter Aspin from The Hollies in Shropshire and Vincent Delobel, a goat farmer based in Belgium. It was fascinating to hear how each farmer had made tree fodder work for their specific management objectives, ranging from agroforestry systems designed specifically with tree fodder in mind, to simply allowing livestock access to existing hedgerows and trees.

After lunch, Jo Smith and Sally Westaway (ORC) showcased the various agroforestry options found on Elm Farm, including hedgerow-planting schemes, a silvopastoral trial integrating livestock with willow and alder short rotation coppice, and managing existing hedgerows for wood fuel. While tree fodder was not the sole objective of the plantings, they offer examples of how trees can be incorporated within different niches of a farm and the potential to adapt current systems for tree fodder through appropriate species selection and alternative silvicultural practices.

The day finished with a lively workshop led by Sally and Ian Knight from Abacus Agri Ltd. The aim was to discuss and identify the barriers and opportunities to using tree fodder and how to take this novel practice forward. Key discussions included market opportunities, such as selling tree fodder as a premium product to horse owners, the mechanisation of harvesting, and the potential trade-offs and synergies in managing trees for multiple objectives (i.e., wildlife, fruit, fodder, timber or fuel). Although current research into the benefits of tree fodder is promising, many questions remain. How much tree fodder must a sheep ingest for a meaningful effect on parasites? Which tree species, arrangements and management methods work for different farming systems? What are the nutritional characteristics of different tree species and how does this vary between varieties? And perhaps most importantly, do the potential health benefits translate into an economic advantage?

Under the European project AFINET (Agroforestry Innovation Networks), the next steps following on from this workshop will be to use these discussions to help inform future research and develop a network through which to share practical experiences and existing knowledge on using tree fodder.



Ted Green with 'tree hay' at Elm Farm. Photo: Kevin Waldie