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How can farmers and landowners be motivated to plant more trees to deliver a wide range of benefits, especially mitigating climate change?

Planting trees is one of the most effective ways to combat climate change. *"For each new hectare of forest and woodland created, it is estimated that, on average, seven tonnes of CO2 will be removed from the atmosphere each year".*[1] At a time when the UK government has committed to reducing the UK's net greenhouse gas emissions to 0 by 2050, the number of trees being planted must be increased and farmers and landowners have an important role to play.

The root of the problem

There is a common misconception that if trees are planted on land, then that land can be used for no other purpose. This is not the case. Forestry and woodlands can be successfully integrated with other land uses and promotion of this concept is key when it comes to motivating famers and landowners to plant trees.

Agroforestry is a land management approach which sees trees growing alongside agricultural or horticultural crops or on land where livestock is farmed. Rather than seeing farm and land productivity separately to tree planting, this approach integrates the two. In fact, in some cases agroforestry can increase productivity by up to 20-30%.[2]

There are a wealth of benefits regardless of the farming system. In a report produced by the Woodland Trust last year, which looked into Agroforestry in England, multiple successful case studies were highlighted. One example was Dartington Estate in Devon, where an "*innovative three-tiered agroforestry contract has been made between the landowner, farm tenant and local businesses*".[3] The tenant farmers on Dartington Estate were keen to integrate trees into their arable/silage rotation, however, they needed guidance and finance to make this happen. By collaborating with the landowner and local businesses the farm has gained external investment and is now benefiting from the effects of integrating trees into their arable production. The success of projects such as this shows that there can be multiple uses for one area of land and that landowners and tenant farmers can work together for mutual benefit when it comes to diversifying and planting trees.

[1] Scotland's Forestry Strategy 2019-2029, 21. Available at: https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/

[2] Lampkin, N.H., et al (2015) 'The role of agroecology in sustainable intensification', Report for the Land Use Policy Group. Organic Research Centre, Elm Farm and Game & Wildlife Conservation Trust, 74. Available at: http://publications.naturalengland.org.uk/publication/6746975937495040

[3] The Soil Association, Agroforestry in England – Benefits, Barriers and Opportunities, 3.Available at: https://www.soilassociation.org/media/15756/agroforestry-in-england_soilassociation_june18.pdf

Innovative approaches like this will prove key in achieving tree planting targets. The main aim of Scotland's newly published Forestry Strategy[4], is that that by 2070, Scotland will have more forests and woodlands sustainably managed and better integrated with other land uses. Despite this, agroforestry is not specifically mentioned in the publication.

A recent article in the Scottish Farmer highlighted the work of the Farm Woodland Forum, a group which aims to encourage "Farming with Trees" through education and promotion of success stories.[5] The group organises site visits, so that farmers can see working agroforestry schemes first hand. Projects such as this need to be promoted further to educate landowners and farmers that tree planting can work alongside existing systems and increase productivity.

Alongside agroforestry, there is also opportunity for trees to provide added revenue on otherwise disused land not suitable for agricultural purposes. For example, planting trees can open up sporting opportunities such as game shooting. However, as highlighted by the Committee on Climate Change "*using agricultural land for alternative uses requires land owners and managers to have the knowledge and training on what and how to plant and undertake on-going management*". [6] The report also highlights that around 30-40% of farms are estimated to be tenanted, and the average tenancy is just under 4 years. This emphasises the need for landowners and farmers to work collaboratively.

The benefits of tree planting

The global incentive to reduce climate change may seem far removed from farmers' and landowners' everyday lives, however, the positive impact of planting trees can also be seen on home turf. Farmers and landowners can benefit personally by improving the quality and overall productivity of their land, while at the same time mitigating climate change.

Trees are natural barriers, protecting soil and crops from the impact of wind and rain. They can provide shelter for animals all year round, protecting them from the elements and reducing the loss of livestock as a result of exposure to weather extremes. Shelter also reduces wind speed which can help grass growth and gives an overall increased soil temperature extending the grass growing season. In fact, protected areas have been shown to have a 20% increase in average annual pasture growth.[7]

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[4] Scotland's Forestry Strategy 2019-2029 can be read on the Scottish Government website: https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/

[5] The Scottish Farmer, 27 July 2019, 34.

[6] The Committee on Climate Change, Land use: Reducing emissions and preparing for climate change, November 2014, 97. Available at: https://www.theccc.org.uk/wp-content/uploads/2018/11/Land-use-Reducing-emissions-and-preparing-for-climate-change-CCC-2018.pdf

[7] The Role of Trees in Sheep Farming, a guide produced by the Woodland Trust and the National Sheep Association, 14. Available at: https://www.woodlandtrust.org.uk/publications/2018/07/the-role-of-trees-in-sheep-farming/

Deep rooted trees also improve soil stability and reduce erosion. The organic matter from leaf litter can improve soil structure and reduce water run-off, which in turn can help with water management. Having well established trees on land, means that when there is heavy rain the trees encourage infiltration and prevent water damage. The rate rainwater reaches streams and rivers is therefore slowed meaning that there is a reduced risk of flooding. This, of course, protects the land and livestock. Equally, trees provide protection for watercourses by reducing the amount of nitrate getting into waterways, leading to healthier natural ecosystems.

Does money grow on trees?

Looking to the long term, trees can improve economic returns as a whole. Trees can be planted on land that is difficult to farm, adding value to otherwise unproductive land. Their resilience means that trees can provide year round income when paired with other seasonal crops, i.e. if one crop fails, you still have another. However, to reap the rewards, landowners must first find the money to fund planting the trees.

Currently, there are a number of financial incentives in place to encourage tree planting in the UK. However, post Brexit, the funding of certain schemes is uncertain and those that remain need to be flexible to encourage more innovative approaches to tree planting.

The Basic Payment Scheme (BPS) is the biggest of the European Union's rural grants and payments to help the farming industry under the Common Agricultural Policy. There are various criteria that must be met to qualify, but generally trees on agricultural land are included within the scheme. Agroforestry schemes can meet the criteria, providing that agricultural activity takes place underneath the canopy of the trees planted. Interpretation of this can, however, be ambiguous. Furthermore, with Brexit looming, there is no guarantee that the BPS scheme will continue as we know it and farmers may need to look at alternatives.

The UK does have its own grant schemes in place, and in the year 2017-2018, a total of £56.1 million was paid in grants across Scotland, England and Wales giving landowners financial assistance for establishing or improving blocks of woodland.[8]

Despite this, there is a gap in funding for agroforestry schemes. Under the Country Stewardship grant in England, there is no support available for agroforestry and in Scotland a minimum number of 200 trees per hectare is required to qualify under the Forestry Grant Scheme. If less than this number of trees are planted, the farmer or landowner will not qualify, yet the farmer may also no longer qualify for Common Agricultural Policy payments. Farmers cannot receive both types of support at the same time and so they are left with a choice between growing trees or farming, rather than being able to combine the two.

[8] Statistics from Forest Research, Great Britain's principal organisation for forestry. Available at: https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/forestry-statistics-2018/finance-prices/grant-schemes/

Lastly, there are also tax incentives available to farmers and landowners. Owners of commercial woodland can enjoy tax-free income, partial tax free gains and 100% relief from inheritance tax. It is important to note that these tax benefits only apply to commercial woodland and not “agricultural property”. There is, however, Agricultural Property Relief available for Inheritance Tax which may include woodlands if the woodland is ancillary to the agricultural land.

The future

Ultimately, the way to encourage landowners and farmers to plant trees is through educating them on how tree planting can benefit their land and their businesses personally, as well as the environment as a whole. For schemes such as agroforestry to work, it is important to recognise that there are different types of farmers and landowners and in order to encourage tree planting, each farmer and landowner needs to be targeted with the relevant support and advice that relates to them. Alongside this, the government must ensure that there is funding available to support innovative projects and diversification. By planting trees, farmers and landowners can help secure the future of their business, their land and their planet for generations to come.

References:

Committee on Climate Change, Land use: Reducing emissions and preparing for climate change, November 2014. Available at: https://www.theccc.org.uk/wp-content/uploads/2018/11/Land-use-Reducing-emissions-and-preparing-for-climate-change-CCC-2018.pdf

Forest Research, Great Britain's principal organisation for forestry. Available at: https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics/forestry-statistics-2018/finance-prices/grant-schemes/

The Scottish Farmer, 27 July 2019.

Scotland's Forestry Strategy 2019-2029, available at: https://www.gov.scot/publications/scotlands-forestry-strategy-20192029/.

The Soil Association, Agroforestry in England – Benefits, Barriers and Opportunities. Available at: https://www.soilassociation.org/media/15756/agroforestry-in-england_soilassociation_june18.pdf

Lampkin, N.H., Pearce, B.D., Leake, A.R., Creissen, H., Gerrard, C.L., Girling, R., Lloyd, S., Padel, S., Smith, J., Smith, L.G., Vieweger, A., Wolfe, M.S., The role of agroecology in sustainable intensification, Report for the Land Use Policy Group. Organic Research Centre, Elm Farm and Game & Wildlife Conservation Trust. 2015. Available at: http://publications.naturalengland.org.uk/publication/6746975937495040

The Woodland Trust, The Role of Trees in Sheep Farming, a guide produced by the Woodland Trust and the National Sheep Association. Available at: https://www.woodlandtrust.org.uk/publications/2018/07/role-of-trees-in-sheep-farming/