

Farm Woodland Forum (FWF) response to the consultation on “the future for food, farming and the environment”

This response is submitted on behalf of the Farm Woodland Forum (www.agroforestry.ac.uk), a registered charity with members in the UK and Ireland which aims to improve information exchange and opportunities for farming with trees.



Until 2003, we were known as the UK Agroforestry Forum. The Farm Woodland Forum is a founder member of the [European Agroforestry Federation](#), and is helping to organize the [World Congress on Agroforestry](#) in Montpellier in May 2019.

Cranfield, 8th May, 2018

The text below includes the consultation questions.

Section 2: Reform within the CAP

- 1. Please rank the following ideas for simplification of the current CAP, indicating the three options which are most appealing to you:*
 - o Develop further simplified packages*
 - o Simplify the application form*
 - o Expand the online offer*
 - o Reduce evidence requirements in the rest of the scheme*
- 2. How can we improve the delivery of the current Countryside Stewardship scheme and increase uptake by farmers and land managers to help achieve valuable environmental outcomes?*

2.1 From an agroforestry perspective, a new English or UK agricultural policy should aim to ensure “as frictionless a border as possible” between agricultural areas and areas of rural tree cover (and the wide range of environmental and societal services that such areas provide). Agroforestry is a useful term to cover this border area and includes practices such as silvopastoral agroforestry, wood pastures, parklands, woodland poultry, alley-cropping, hedgerows, shelter-belts, and riparian buffer strips. There are opportunities for the administration of agricultural, forestry, and rural areas to make use of new remote-sensing technologies regarding land cover. Much rural land use is multi-functional and hence survey schemes such as LUCAS that systematically record multi-functional land use play an important role in understanding what is happening on the ground. The profitable production of domestic high quality food is vital but the sustainability and societal benefit of agricultural production on farms can be enhanced by **supporting increased tree cover and improved tree management**.

CAP simplification should not throw away information held in IACS/LPIS databases but should instead make this more widely available for the independent assessment of the value of farm stewardship schemes which ‘pay by results’. A variety of Indices can be developed which assess the value of different farming practices to landscape, biodiversity or carbon-sequestration goals. Hedgerows, lines of trees, copses and isolated trees make vital contributions to this landscape diversity, and can be readily identified on the 50-cm pixel resolution orthophotos provided to farmers. Information in the LPIS databases is currently almost impossible to obtain from the UK payments agencies, even for researchers, but in many other EU Member States the data (stripped of ownership information) is freely downloadable from public portals and is used for many rural planning purposes. **Open Data is the key to ‘payment by results’**.

2.2 . A recent study by the Forestry Commission for example identified a) that one third of tree cover in GB is on working farms and b) that almost 20% of GB tree cover is on land which is not formally recorded as forestland (i.e. trees are on agricultural land or in settlements) [1]. The FWF emphasises the environmental and landscape advantages of farming with trees. Provided **the main use of a parcel remains agricultural**, it is essential that farmers are not financially or fiscally penalised for the introduction and improved management of scattered trees. Wood pastures and parklands are a traditional part of the UK landscape, and modern agroforestry techniques provide opportunities to design new, diverse and resilient landscapes which combine productive agriculture with additional farm revenues from well-managed timber and fuelwood. A clear and transparent system for preservation of basic payments in these ‘parcels with scattered trees’ is vital to retain farmers’ enthusiasm for farming with trees. Farmers must easily be able to demonstrate that their field-parcels ‘remain primarily in agricultural production’. The FWF therefore requests that the current CAP system of **providing farmers high-resolution digital orthophotos should be retained as a vital source of farm management information**, and should not be one of the ‘simplification’ options. Trees over a certain threshold (probably 4 m canopy diameter) should be automatically identified to save effort on the part of farmers.

Section 3: An ‘agricultural transition’

1. *What is the best way of applying reductions to Direct Payments? Please select your preferred option from the following:*
 - *Apply progressive reductions, with higher percentage reductions applied to amounts in higher payment bands (please provide views on the payment bands and percentage reductions we should apply).*
 - *Apply a cap to the largest payments*
 - *Other (please specify)*
2. *What conditions should be attached to Direct Payments during the ‘agricultural transition’? Please select your preferred options from the following:*
 - *Retain and simplify the current requirements by removing all of the greening rules*
 - *Retain and simplify cross compliance rules and their enforcement*
 - *Make payments to current recipients, who are allowed to leave the land, using the payment to help them do so*
 - *Other (please specify)*
3. *What are the factors that should drive the profile for reducing Direct Payments during the ‘agricultural transition’?*
4. *How long should the ‘agricultural transition’ period be?*

3.1 The FWF cannot advise on differential payments for smaller farmers or young farmers, but we note that existing flexibilities in the CAP were not implemented by UK nations.

3.2 Other. Options for tree-based ‘Landscape Feature’ Ecological Focus Areas were not fully implemented in the greening schemes of UK nations. These could have included hedges or woody strips, isolated trees, trees in line, and groups of trees or copses. Only England, Northern Ireland and Wales implemented ‘hedges or woody strips’, only Northern Ireland implemented ‘hectares of agroforestry’, and even this was limited to arable land and to land which had benefited from previous agroforestry planting schemes (probably less than 5 ha in total). Implementation of the Greening Regulation by Member States was largely focused on easy options. Thus, while in 2016, 68% of arable land is subject to the EFA measure, the Ecological Focus Areas were almost entirely composed of N-fixing crops (39%), cover-crops (34%) and fallow (24%), and largely ignored the options to use Landscape Features [2,3]. A study commissioned by the EU Joint Research Centre found that agroforestry had potentially the highest impact of all the Greening options, but it was the least used overall [4]. If greening is removed in the new UK Regulations then **some form of “enhanced cross-compliance” will be required, and this should recognise the importance of tree-based landscape features.**

3.3 “Enhanced Cross Compliance” could allow continuation of a form of (Pillar I) Direct Payments whilst maintaining high agricultural stewardship standards. Rural Development payments (Pillar II) should recognise the services provided by agriculture and agroforestry. Alongside afforestation of marginal agricultural land we would like to see **payments continue to establish and maintain high-quality widely-spaced trees on agricultural land**, where levels of agriculture remain broadly unchanged, and the land continues to be managed as agricultural land.

3.4 A transition to 100% of payments being made according to Rural Development Planning (Pillar II) criteria, will benefit agroforestry on farms, but within parcels which are designated as forest land, since these areas are currently not eligible for Basic Payments (Pillar I). Changes will have to be phased over a considerable period however.

Section 4: A successful future for farming

4A Farming excellence and profitability

- 1. How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank your top three options by order of preference:*
 - o Encouraging benchmarking and farmer-to-farmer learning*
 - o Working with industry to improve standards and coordination*
 - o Better access to skills providers and resources*
 - o Developing formal incentives to encourage training and career development*
 - o Making Continuing Professional Development (CPD) a condition of any future grants or loans*
 - o Other (please specify)*
- 2. What are the main barriers to new capital investment that can boost profitability and improve animal and plant health on-farm? Please rank your top three options by order of the biggest issues:*
 - o Insufficient access to support and advice*
 - o Uncertainty about the future and where to target new investment*
 - o Difficulties with securing finance from private lenders*
 - o Investments in buildings, innovation or new equipment are prohibitively expensive*
 - o Underlying profitability of the business*
 - o ‘Social’ issues (such as lack of succession or security of tenure)*
 - o Other (please specify)*
- 3. What are the most effective ways to support new entrants and encourage more young people into a career in farming and land management?*
- 4. Does existing tenancy law present barriers to new entrants, productivity and investment?*

4A-1 Other - The EU AGFORWARD Project (www.agforward.eu), led by Cranfield University has been invaluable in collecting, collating and disseminating results and information related to agroforestry in Europe [5], and practices relevant to the UK have been summarised in a recent article for Royal Forestry Society of England and Wales [6]. Participants in the project produced 50 peer-reviewed scientific papers but also focused on dissemination to farmers. Online access is available for 46 “Agroforestry innovation” leaflets and 10 “Agroforestry best practice” leaflets. The leaflets were produced in cooperation with 40 agroforestry stakeholder groups across 13 countries. **This type of project, summarising the best of EU and world experience in relevant areas of agriculture and forestry, should continue to be funded post-Brexit.**

4A-1 Encouraging benchmarking and farmer-to-farmer learning - Within the H2020 thematic network project AFINET (Agroforestry Innovation Networks <http://www.eurafagroforestry.eu/afinet>), an online survey was carried out during the summer of 2017 to assess the perceived barriers to adoption of agroforestry in the UK. A total of 132 people responded to the survey, with responses categorised into farmers (46%), researchers (22%), advisors (9%), government organisation (6%), conservation organisation/ charity (10%), forestry (7%) and contractors (1%). In terms of additional information that would be useful for those interested in establishing agroforestry, working

examples, case studies, knowledge exchange and training was identified by 34% of respondents, and information on profitability, yield data and costs and benefits of agroforestry systems by 25%. This highlights the importance of farmer-to-farmer learning and benchmarking. In subsequent AFINET workshops with UK agroforestry stakeholders, bottlenecks were identified, again supporting a need for demonstration farms, case studies and pioneers, for experience based learning, and a need to build local networks and partnerships to facilitate this learning. **Access to advice on specific technical and management issues was also seen as a key requirement to support the development of these diverse and knowledge-intensive systems.**

4A-2 Other - In terms of increasing the use of trees on farms, the primary constraint on farmers is the risk of losing direct payments if there are too many trees or too great a tree-crown cover in a parcel. **This needs certainty and transparency for farmers on the rules to be used by the payments agency now, and in the future.**

4A-3 Ensure that land management also includes training in management techniques to produce valuable high quality timber, and other tree products such as fuelwood. Not just trees for amenity.

4A-4 Many tenancy agreements prohibit the planting of trees, and revenue from existing trees may belong to the owner and not the tenant. This does not lead to effective management. Tenancy agreements exist elsewhere in Europe where risks and revenues for tree planting are shared between tenants and owners. **UK farming and landowning groups should develop revised model tenancy agreements to encourage tree-planting and management.**

4B Agricultural technology and research

- 1. What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank your top three options by order of importance:*
 - o Plant and animal breeding and genetics*
 - o Crop and livestock health and animal welfare*
 - o Data driven smart and precision agriculture*
 - o Managing resources sustainably, including agro-chemicals*
 - o Improving environmental performance, including soil health*
 - o Safety and trust in the supply chain*
 - o Other (please specify)*
- 2. How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? Please rank your top three options by order of importance:*
 - o Encouraging a stronger focus on near-market applied agricultural R&D*
 - o Bringing groups of farms together in research syndicates to deliver practical solutions*
 - o Accelerating the 'proof of concept' testing of novel approaches to agricultural constraints*
 - o Giving the farming industry a greater say in setting the strategic direction for research funding*
 - o Other (please specify)*
- 3. What are the main barriers to adopting new technology and ideas on-farm, and how can we overcome them?*

4B-1 Other. Research priorities should recognise the importance of agroforestry in all its forms, including silvoarable and silvopastoral systems and hedgerows, shelterbelts and buffer strips. Agroforestry research in the UK should focus on providing tools to help farmers select the best tree species for their climate and soil conditions, on how to thin and prune the trees to maintain agricultural productivity combined with quality timber, and on the impact of tree-planting on carbon-sequestration in soils and tree components, and on the environmental and economic impacts of farming with trees. There is a particular need to quantify how trees in livestock systems can provide both production (e.g. shelter, extension of grazing season) and environmental benefits. **Research is also needed on the role of agroforestry in helping UK agriculture meeting targets for reduced net greenhouse gas emissions, improving soil health, regulating runoff, and providing cultural benefits at plot-, farm- and landscape scale.**

4B-2 Other. Farmers are excellent innovators in both agriculture and forestry, but are often constrained by the rules of grant-giving bodies. A “participative research” dispensation could be provided from some of these rules (for example the species of tree allowed to be planted in agroforestry schemes), provided that the farmer records their findings according to protocols agreed with the funder, perhaps in conjunction with a research organisation or an agricultural college. We support the financial and in-kind support given by the Woodland Trust to farmers planting innovative tree arrangements.

4B-3 Important barriers to the adoption of agroforestry in the UK include a lack of information on species choice, optimum layouts, tree-crop-animal interactions, management practices, and environmental interactions. Readily available market prices for hardwood timber and fuelwood (which could be quoted for example in the weekly farming press) would help create confidence in the market for timber and tree products. All the issues need participative-research with individual farmers or groups of farmers and grants which favour these partnerships.

4C Labour: a skilled workforce

1. *What are the priority skills gaps across UK agriculture? Please rank your top three options by order of importance:*
 - *Business / financial*
 - *Risk management*
 - *Leadership*
 - *Engineering*
 - *Manufacturing*
 - *Research*
 - *Other (please specify)*
2. *What can industry do to help make agriculture and land management a great career choice?*
3. *How can government support industry to build the resilience of the agricultural sector to meet labour demand?*

4C-1 Effective management of trees on farms needs skills which many farmers do not have, but are often keen to learn. Greater awareness is needed on how to high-prune trees in a way that maximises the volume and quality of harvested boles. Also important is the development of market premiums for quality timber. Compared to most European countries a very low premium is available for quality hardwood boles. **Training agricultural advisers in tree management, and foresters in managing trees in farming systems would provide an integrated advisory service for farmers wishing to implement agroforestry.**

4C-2 Inclusion of silvicultural and arboricultural techniques in the syllabuses of agricultural colleges.

4C-3 Agricultural labour requirements are often highly seasonal, but greater integration of agroforestry in UK farming provides opportunities for the labour to be used in off seasons for thinning, pruning and harvesting operations. Many opportunities exist for small-scale industry related to fuelwood extraction and drying, conversion of small roundwood to products used in construction [7] and greater use of grazing on mature forest land.

Section 5: Public money for public goods

1. *Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? Please rank your top three options by order of importance:*
 - *Improved soil health*
 - *Improved water quality*

- *Better air quality*
- *Increased biodiversity*
- *Climate change mitigation*
- *Enhanced beauty, heritage and engagement with the natural environment*
- 2. *Of the other options listed below, which do you consider to be the most important public goods that government should support? Please rank your top three options by order of importance:*
 - *World-class animal welfare*
 - *High animal health standards*
 - *Protection of crops, tree, plant and bee health*
 - *Improved productivity and competitiveness*
 - *Preserving rural resilience and traditional farming and landscapes in the uplands*
 - *Public access to the countryside*
- 3. *Are there any other public goods which you think the government should support?*

5.1 Ranking these options is largely unproductive as there are economic and environmental valuation techniques that allow us to weight these six important items together. **Agroforestry is particularly attractive as it can address all six issues.** Agroforestry brings many ecosystem services related to habitat enhancement, biodiversity, conservation and enrichment of soils, uptake of nitrates in the tree-root network and in buffer strips, scavenging of ammonia emissions by tree foliage, reduction of ammonia emissions by extending the grazing season (hence reducing the time that animals are housed) in wetter climates, carbon sequestration in roots and long-lived quality timber, moderation of extremes of temperature experienced by crops and animals, better percolation of rainfall into the soil, and reduction of runoff which can help reduce downstream flooding. The scale of these benefits depends on local circumstances, but the message is that farming with trees contributes to all the benefits listed.

5.2 Government has a particular role to ensure the maintenance of high minimum welfare standards and protect UK agriculture, where possible, from new external pests, as it is difficult for anyone else to take on this role. Improved productivity and competitiveness is obviously important, and government analyses should consider externalities. Suggested order is c,e,d

5.3 For assessment of other public goods the UK Government should use the Common International Classification of Ecosystem Services (CICES), developed by the European Environment Agency (EEA), and supported by United Nations Statistical Division (UNSD). Important work in this area is being conducted by the EU [ESMERALDA](#), [OpenNESS](#) and [MAES](#) (Mapping and Assessment of Ecosystems and their Services) Projects.

Section 6: Enhancing our environment

- *From the list below, please select which outcomes would be best achieved by incentivising action across a number of farms or other land parcels in a future environmental land management system:*
 - *Recreation*
 - *Water quality*
 - *Flood mitigation*
 - *Habitat restoration*
 - *Species recovery*
 - *Soil quality*
 - *Cultural heritage*
 - *Carbon sequestration and greenhouse gas reduction*
 - *Air quality*
 - *Woodlands and forestry*
 - *Other (please specify)*
- *What role should outcome based payments have in a new environmental land management system?*
- *How can an approach to a new environmental land management system be developed that balances national and local priorities for environmental outcomes?*
- *How can farmers and land managers work together or with third parties to deliver environmental outcomes?*

6.1 Agroforestry, or ‘farming with trees’, should be incentivised in any future UK environmental land management system, and would contribute to **all the outcomes listed**:

- Recreation - where diverse landscapes with trees encourage multifunctional use of the land [8];
- Water quality - where riparian tree-strips are recognised as one of the main tools to limit the impact of agricultural drainage waters [9];
- Flood mitigation - where trees have great potential to reduce runoff in upland catchments [10], and to engineer flood control in lowland areas [11].
- Habitat restoration - where increases in the diversity and structural complexity of trees on farms is of clear benefit to biodiversity [12].
- Species recovery - where international experience shows that farms with diverse crop and tree cover recovers faster from extreme weather events [13].
- Soil quality - where agroforestry often enhances soil fertility, protects against erosion, and increases crop yield [14].
- Cultural heritage - where trees were a historical part of UK farmed landscapes, and even the holocene wildwood was much fragmented by grazing [15]
- Carbon sequestration and greenhouse gas reduction - The UK Forestry Standard states that ‘*forest management should contribute to climate change mitigation over the long term through the net capture and storage of carbon in the forest ecosystem and in wood products*’ [16], and the Committee on Climate Change has estimated that by 2030 an additional 1 megaton of carbon dioxide a year could be abated through afforestation activities [17]. The potential sequestration of carbon by trees outside the forest in the UK does not appear to have been estimated.
- Air quality - trees are well known to absorb some types of organic particulates in urban situations and to abate airborne ammonia emissions from animals [18]
- Woodlands and forestry - recent from the Forestry Commission show there are 742 thousand hectares of tree cover outside ‘forests’, representing 19.4% of all tree cover and 3.2% of all GB land area [1]. This resource needs to be included within agricultural, climate and periurban policies.

6.3 See Section 2.1. In the context of ‘outcome based payments’ we consider that the future environmental benefits of isolated trees, alley cropping, groups of trees, copses, riparian strips etc on agricultural land can be estimated from detailed orthophotos of individual parcels and both plot and landscape scale impact models.

A key issue in the development of any new programme is the tension between i) not penalising farmers who are already producing environmental services on an ongoing basis and ii) ensuring maximum value for money for tax payers without creating perverse incentives. Trying to resolve this is not easy. Clearly stating the approach of any public-good payment policy with respect to this would improve transparency. The other tension regards the extent to which the payments are restricted to farmers, as it could be argued that other land-owning organisations are also providing many of these services in the UK. Clear thinking on the limits of eligibility is needed.

6.4 Re the balancing national and local priorities for environmental outcomes, **some good examples are available from Europe**. In the Netherlands, for example, agri-environmental payments are channelled through regional governments and groups of farmers work with consultants to develop proposals which improve the environment and biodiversity at a landscape-scale. The rival bids from farmer-consortia are considered using transparent criteria and assessments are made public [19]. A ‘collaborative’ approach similar to this has also been proposed for England [20], and seems suited to ‘farming with trees’ since the impact of trees is best seen at a landscape scale.

Section 7. Fulfilling our responsibility to animals

1. *Do you think there is a strong case for government funding pilots and other schemes which incentivise and deliver improved welfare?*

2. *Should government set further standards to ensure greater consistency and understanding of welfare information at the point of purchase? Please indicate a single preference of the below options:*
 - Yes
 - Yes, as long as it does not present an unreasonable burden to farmers
 - Perhaps in some areas
 - No, it should be up to retailers and consumers
 - Other (please specify) **if you answered 'perhaps in some areas', please elaborate.*
3. *What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? Please rank your top three choices from the below list, in order of importance:*
 - Use of regulation to ensure action is taken
 - Use of financial incentives to support action
 - Supporting vets to provide targeted animal health advice on farm
 - Making it easier for retailers and other parts of the supply chain to recognise and reward higher standards of animal health
 - An industry body with responsibility for promoting animal health
 - Research and knowledge exchange
 - Transparent and easily accessible data
 - An understanding of animal health standards on comparable farms
 - Other (please specify)
 - N/A – Cannot rank as they are all equally important.
4. *How can the government best support industry to develop an ambitious plan to tackle endemic diseases and drive up animal health standards?*

7.1 The welfare of animals in silvopastoral systems is known to be increased. Many domestic fowl were originally species accustomed to open woodland, and originally birds of open woodland, and recent support from the Woodland Trust to free-range poultry farming has been very successful [21], pigs can be of benefit to woodland management [22], and cattle grazing in forests is a long established practice which brings biodiversity benefits in woodlands, since cattle eat dense vegetation of a low digestibility and break up vegetation mats with their hooves - thus opening the ground layer vegetation and benefiting tree regeneration and a greater variety of vegetation types and wildlife [23]. In the context of greater extremes in temperature, trees can also help moderate the microclimate for livestock. In high temperatures, the shade provided by trees can reduce livestock heat stress and thereby improving both welfare and productivity. In cold and wind-exposed situations, tree shelter can allow animals to minimise heat loss again with benefits for welfare and productivity [24]. **Pilots and participative-research on the welfare, and other, benefits of silvopastoralism will be of great value.**

7.2 Other. Silvoarable systems with moderate tree-density make most sense on mixed farms, where stock can be grazed between heavily pruned trees in the last part of the rotation - when shade precludes the economic use of cereals. Recent agricultural policies have significantly reduced the proportion of mixed farms in UK agriculture, but several studies, e.g. the EU [CANTOGETHER](#) Project, have demonstrated **opportunities for mixed farming systems to be implemented between farmers, not just on individual farms.**

7.3 A UK Government role in maintaining high minimum standards seems essential.

7.4 As suggested elsewhere in this document, the development of fora for UK agriculturalists to come together at district, regional and national levels, perhaps through a “Chambre of Agriculture” or an “Institution of Agriculturalists” would appear helpful.

Section 8: Supporting rural communities and remote farming

1. *How should farming, land management and rural communities continue to be supported to deliver environmental, social and cultural benefits in the uplands?*

2. *There are a number of challenges facing rural communities and businesses. Please rank your top three options by order of importance:*
 - *Broadband coverage*
 - *Mobile phone coverage*
 - *Access to finance*
 - *Affordable housing*
 - *Availability of suitable business accommodation*
 - *Access to skilled labour*
 - *Transport connectivity*
 - *Other, please specify*
3. *With reference to the way you have ranked your answer to the previous question, what should government do to address the challenges faced by rural communities and businesses post-EU Exit?*

8.1 Farmers play an important role in upland rural communities. The integration of trees in livestock systems provides a way for farmers to maintain livestock production whilst at the same time diversifying sources of income and contributing to environmental enhancement and opportunities for tourism.

8.2 Encouraging young people and new entrants to play a role in rural communities seems important.

8.3 One of the benefits of EU membership has been the various counter balances that mean changes in land use and environmental policy have been incremental, well signposted in advance, with budgets agreed in advance for periods of about 7 years. In developing a UK agricultural policy, it will be good to have mechanisms that achieve a sensible balance between long-term planning and the political expediency of electoral cycles. .

Section 9. Changing regulatory culture

1. *How can we improve inspections for environmental, animal health and welfare standards? Please indicate any of your preferred options below.*
 - *Greater use of risk-based targeting*
 - *Greater use of earned recognition, for instance for membership of assurance schemes*
 - *Increased remote sensing*
 - *Increased options for self-reporting*
 - *Better data sharing amongst government agencies*
 - *Other (please specify)*
2. *Which parts of the regulatory baseline could be improved, and how?*
3. *How can we deliver a more targeted and proportionate enforcement system?*

9.1 See Section 2.2 for comments on the need to maintain orthophotos as part of the LPIS system - and indeed to automate the marking of trees outside the forest over a diameter threshold. Also the need to make this data available to research organisations and consultants. These images are vital to show that parcels with scattered trees remain in agricultural production.

9.2 No comment

9.3 Within the LPIS, spot checks are made currently on a very low proportion of farms [25]. Given the continuing value of this data, and its use for verification of Greening requirements, there seems no need to change the current system of checks.

Section 10. Risk management and resilience

1. *What factors most affect farm businesses' decisions on whether to buy agricultural insurance? Please rank your top three options by order of importance:*
 - *Desire to protect themselves from general risks (e.g. – revenue protection)*
 - *Desire to protect themselves from specific risks (e.g. – flooding, pests or disease)*
 - *Provision of government compensation for some risks*
 - *Cost of insurance*
 - *Complexity and administrative burden of insurance*
 - *Availability of relevant insurance products*
 - *Other (please specify)*
2. *What additional skills, data and tools would help better manage volatility in agricultural production and revenues for (a) farm businesses and (b) insurance providers?*
3. *How can current arrangements for managing market crises and providing crisis support be improved?*

10.1 Farmers who increase tree cover on their farms and in particular those who manage high value tree species should be aware of the need for insurance against fire and vandalism damage. Unlike arable crops, trees cannot be replaced annually.

10.2 The Pound: Euro exchange rate has been a major determinant of the varying profitability of UK farms (in pound sterling terms). Hence a sudden increase in the value of pound sterling relative to the Euro is likely to be a major risk to the revenue of UK farmers.

10.3 No comment.

Section 11. Protecting crop, tree, plant and bee health

1. *Where there are insufficient commercial drivers, how far do you agree or disagree that government should play a role in supporting:*
 - *Industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority pests and diseases in trees?*
 - *Landscape recovery following pest and disease outbreaks, and the development of more resilient trees?*
 - *The development of a bio-secure supply chain across the forestry, horticulture and beekeeping sectors?*
2. *Where there are insufficient commercial drivers, what role should government play in:*
 - *Supporting industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority pests and diseases in trees?*
 - *Promoting landscape recovery following pest and disease outbreaks, and the development of more resilient trees?*
3. *What support, if any, can the government offer to promote the development of a bio-secure supply chain across the forestry, horticulture and beekeeping sectors?*

11.1 Pests and diseases of trees and other perennial crops is a concern. Maintaining a diversity of tree species is important and in view of future changes in climate, farmers and other landowners should have flexibility to plant novel non-invasive species. In order to minimise the risk of diseases and pests of new planting stock, encouragement should be given to UK- and Irish-based tree nurseries.

11.2 The Government should maintain the scientific, technical and governance capability to allow evidence-based responses to priority disease and pest outbreaks, working closely with partners in neighbouring European countries.

11.3 The International Union for Conservation of Nature have stressed the importance to bee conservation of well-managed field margins and silvoarable systems where trees are planted into herbaceous strips containing flower-species important for bee and other wild pollinators [26]. Support to this type of agroforestry equates to support for the beekeeping sector.

Section 12. Ensuring fairness in the supply chain

1. *How can we improve transparency and relationships across the food supply chain? Please rank your top three options by order of importance:*
 - *Promoting Producer Organisations and other formal structures?*
 - *Introducing statutory codes of conduct?*
 - *Improving the provision of data on volumes, stocks and prices etc.?*
 - *Other (please specify)?*
2. *What are the biggest barriers to collaboration amongst farmers?*
3. *What are the most important benefits that collaboration between farmers and other parts of the supply chain can bring? How could government help to enable this?*

12.1 Other. Strong and clear food and tree-product labelling is desirable. Research and wider promotion on the use of “Sankey” diagrams to explain the allocation of the final consumer price to actors in the food chain (and changes over time) would be informative.

12.2 The greatest barrier to farmer’s collaborating is probably time and money to cover the costs.

12.3 As the UK leaves the EU, it becomes more critical that all the actors in UK agriculture work more effectively together. The creation of district, regional and national fora for actors to come together, similar perhaps to the Chambres of Agriculture system in France, seems an attractive approach.

Section 13. Devolution: maintaining cohesion and flexibility

1. *With reference to the principles set out by JMC(EN)¹ above, what are the agriculture and land management policy areas where a common approach across the UK is necessary?*
2. *What are the likely impacts on cross-border farms if each administration can tailor its own agriculture and land management policy?*

13.1 The Farm Woodland Forum is a charitable organisation with members from Ireland, Northern Ireland, Scotland, Wales and England, and our annual meetings rotate between these countries. Fostering best practice in technical, scientific and governance spheres between these countries is important. For example, England can learn much from Northern Ireland in terms of supporting agroforestry on livestock farms, and from Scotland in supporting agroforestry on upland farms.

13.2 Agricultural and forestry policies are currently very different in the four UK countries. This is a strength.

Section 14. International trade

1. *How far do you agree or disagree with the broad priorities set out in the trade chapter?*
2. *How can government and industry work together to open up new markets?*

¹ * *The JMC (EN) agreed the following principles: Common frameworks will be established where they are necessary in order to:*

- *enable the functioning of the UK internal market, while acknowledging policy divergence*
- *ensure compliance with international obligations*
- *ensure the UK can negotiate, enter into and implement new trade agreements and international treaties*
- *enable the management of common resources*
- *administer and provide access to justice in cases with a cross-border element*
- *safeguard the security of the UK*

3. *How can we best protect and promote our brand, remaining global leaders in environmental protection, food safety, and in standards of production and animal welfare?*

14.1 It would be good to establish clear high level goals of the new UK international trade policy in relation to agriculture. The current section talks about “our farmers growing more, selling more, and exporting more great British food”. It does not mention UK consumers until the last line, the UK environment, or how to mitigate the downside risks of imports of products produced with lower environmental, labour or welfare standards. There is no mention of the role of “buffer stocks” to ensure continuation of food supply in a crisis. A focus on “Fair Trade Agreements” (that account for environmental costs) rather than just “Free Trade Agreements” may be useful. Establishing the “goal posts” and “minimum rules” for our trade policy in agriculture, and affirming them with the British Public, will be important ahead of negotiations where agriculture trade policies are likely to be discussed alongside, for example, trade policies for the financial and service sectors.

14.2 The PEFC sustainable management meta standard has just been revised to include an interpretations applicable to trees outside the forest [27]. The FC should revise the UK Forest Standard accordingly.

14.3 Maintaining leadership in environmental protection, food safety and in standards of production and animal welfare will be made easier by maintaining and enhancing UK scientific research in these areas and in the UK government increasing its role in discussions and decisions on such issues in international bodies, including where possible the European Union.

Section 15. Legislation: The Agriculture Bill

1. *How far do you agree with the proposed powers of the Agriculture Bill?*
2. *What other measures might we need in the Agriculture Bill to achieve our objectives?*

15.1 It will be vital to clearly highlight the unambiguous goals that the Government has for UK agriculture post-Brexit. The EU CAP was created with five sometimes antagonistic goals and this has led to problems. The Sustainable Development Goals seems to be a useful basis for informing the goals. Establishing the goals is necessary before highlighting the powers.

15.2 Finally, the Farm Woodland Forum would like to fully support the six priorities put forward by the Soil Association in their paper “The future of British farming outside the EU”[28] . These are a) a national agroforestry strategy with a target of agroforestry on 50% of farms by 2030, b) investing in soil, c) a tipping point for organic, d) a good life for farm animals, e) support for farmer innovation, f) making the most of public procurement

References

1. Forestry Commission. Tree cover outside woodland in Great Britain - Statistical Report [Internet]. HMSO; 2017. Report No.: National Forest Inventory. Available: www.forestry.gov.uk/%2Fpdf%2FFR_Tree_cover_outside_woodland_in_GB_statistical_report_2017.pdf%2F%24FILE%2FFR_Tree_cover_outside_woodland_in_GB_statistical_report_2017.pdf
2. European Commission. Commission Staff Working Document - Review of greening after one year. 2016 Jun. Report No.: SWD(2016) 218 final.
3. Hart K, Mottershead D, Tucker G UE, Marechal, Menet L, Martin I, et al. Evaluation study of the payment for agricultural practices beneficial for the climate and the environment. Alliance Environnement- European Economic Interest Grouping; 2017.
4. Warner DJ, Tzilivakis J, Green A, Lewis KA. A guidance tool to support farmers with ecological focus areas--the benefits of agroforestry for ecosystem services and biodiversity. In: Gosme M. et al., editor. 3rd European Agroforestry Conference – Montpellier, 23-25 May 2016. EURAF; 2016. pp. 373–375.
5. Burgess PJ. AGFORWARD: Agroforestry to Advance Rural Development. In: AGFORWARD [Internet]. 2015. Available: <http://www.agforward.eu/index.php/en/>
6. Burgess PJ. Agroforestry in the UK. Quarterly Journal of the Royal Forestry Society. 2017;112: 111–116.
7. Burton R, Dickson M, Harris R. The use of roundwood thinnings in buildings – a case study. Build Res Inf. Routledge; 1998;26: 76–93.
8. Barbieri C, Valdivia C. Recreation and agroforestry: Examining new dimensions of multifunctionality in family farms. J Rural Stud. 2010;26: 465–473.
9. Holden J, Haygarth PM, Dunn N, Harris J, Harris RC, Humble A, et al. Water quality and UK agriculture: challenges and opportunities: Water quality and UK agriculture. WIREs Water. 2017;4: e1201.
10. Ford H, Smith A. Trees, water storage and flooding in upland agricultural landscapes: why do we need to know more? Forestry. 2016;27. Available: https://research.bangor.ac.uk/portal/files/15988845/Ford_H_et_al_Trees_water_storage_and_flooding.pdf
11. Gurnell A, Petts G. Trees as riparian engineers: the Tagliamento River, Italy. Earth Surf Processes Landforms. Wiley Online Library; 2006; Available: <http://onlinelibrary.wiley.com/doi/10.1002/esp.1342/full>
12. Burgess PJ. Effects of agroforestry on farm biodiversity in the UK. The Royal Scottish Forestry Society; 1999; Available: <https://dspace.lib.cranfield.ac.uk/handle/1826/1468>
13. Finlayson R. Farms with trees and crops recover quicker from natural disasters. In: Agroforestry World [Internet]. 13 Aug 2015 [cited 5 May 2018]. Available: <http://blog.worldagroforestry.org/index.php/2015/08/13/farms-with-trees-and-crops-recover-quicker-from-natural-disasters/>
14. Smith J. Agroforestry: Reconciling Production with Protection of the Environment A Synopsis of Research Literature [Internet]. Organic Research Centre, Elm Farm. 2010. Available: <http://orgprints.org/id/eprint/18172>
15. Whitehouse NJ, Smith D. How fragmented was the British Holocene wildwood? Perspectives on the “Vera” grazing debate from the fossil beetle record. Quat Sci Rev. 2010;29: 539–553.
16. Forestry Commission. The UK Forestry Standard: The governments’ approach to sustainable forest management. Edinburgh: Forestry Commission. Forestry Commission; 2017. Report No.: 4th Edition.
17. Ledsome A. Carbon Capture and Storage: Trees:Written question - 4922 [Internet]. 2015. Available: <https://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Commons/2015-06-30/4922>
18. Bealey WJ, Famulari D, Braban C, Sutton MA. Agroforestry Systems for Ammonia Abatement (SAMBA) [Internet]. Farm Woodland Forum Annual General Meeting ; 2011; Wakelyns Agroforestry, Metfield, Suffolk, England, 1 July 2011. Available: www.agroforestry.ac.uk/files/downloads/2011_meeting/bealey_pp.pdf
19. Terwan P, Deelen JG, Mulders A, Peeters E. The cooperative approach under the new Dutch agri-environment-climate scheme - Background, procedures and legal and institutional implications [Internet]. Ministry of Economic Affairs, PO Box 20401, The Hague; 2016. Available: https://enrd.ec.europa.eu/sites/enrd/files/w12_collective-approach_nl.pdf
20. Emery SB, Franks JR. The potential for collaborative agri-environment schemes in England: Can a well-designed collaborative approach address farmers’ concerns with current schemes? J Rural Stud. Elsevier; 2012;28: 218–231.
21. The Woodland Trust. The role of trees in free range poultry farming. 2014.
22. CALU. Pigs in woodland management [Internet]. Centre for Alternative Land Use, Bangor; 2006. Report No.:

Technical Notes 050203. Available:
www.calu.bangor.ac.uk/Technical%20leaflets/050203Pigsinwoodlandmanagement.pdf

23. Armstrong HM, Poulson L. A survey of cattle-grazed woodlands in Britain. report (available on
www.forestry.gov.uk; 2003; Available: [https://www.forestry.gov.uk/pdf/cattle_report.pdf/\\$FILE/cattle_report.pdf](https://www.forestry.gov.uk/pdf/cattle_report.pdf/$FILE/cattle_report.pdf)
24. Broom DM. Livestock sustainability and animal welfare. International Meeting of Advances in Animal Science. 2016.
Available:
https://www.researchgate.net/profile/Donald_Broom/publication/309155408_Livestock_sustainability_and_animal_welfare/links/58014e7908ae310e0d98af28.pdf
25. Devos W. LPIS quality inspection: EU requirements and methodology. EU Joint Research Centre; 2011. Report No.: JRC 65646.
26. Nieto A, Roberts S, Kemp J, Rasmont P, Kuhlmann M, García-Criado M, et al. European red list of bees. IUCN; 2014.
27. PEFC. PEFC INTERNATIONAL STANDARD Requirements for certification systems. World Trade Center 1, 10 Route de l'Aéroport CH-1215 Geneva, Switzerland: PEFC: Geneva; 2018 May. Report No.: PEFC ST 1003:201x.
28. Soil Association. The future of British farming outside the EU - a discussion paper [Internet]. The Soil Association; 2018. Available: <https://www.soilassociation.org/media/10560/soil-association-report.pdf>