

**Follow up written evidence submitted by LEAF from the
visit held in May 2023 (SH0102)**

Andrew Ferguson, Leckford Estate:

1. Clarity of purpose. I was left slightly confused the other day in terms of what we are trying to achieve. There needs to be a headline ambition/vision. There is so much subjectivity that creeps into discussions on soil, that there is a risk that we go round in circles. I felt that this was the case on Wednesday, even if the agreed conclusion from the other day was that 'no one size fits all'. We can't let laudable opinions get in the way of measurable and widespread progress.

2. Objectivity. As above, if we are not clear on what we are measuring, and why, and how, then we risk going round in circles. What is it that we are saying is important enough to be the thing that we measure. Soil health? That's difficult to measure objectively, and different measures are so influenced by weather, time of the season, etc etc, that it's difficult to use these measures meaningfully at a regional or national level. It's challenging enough to use them at the farm level. So, ultimately, soil carbon or soil organic matter becomes the de facto measure for soil health.

3. I still perform an annual soil protection review for our farm. This was a BPS cross compliance requirement, and it was a tool that every farmer could use to demonstrate that they had a plan for protecting their soils from structural damage (compaction, erosions). In essence, it was a farm plan for maintaining and enhancing the physical condition of the soil. What I have not done as yet is to extend this spreadsheet review format to include a review of the biological condition (health) of the soil. This could readily be done, and it could be a tool that the government introduces "all UK farmers have a bespoke plan for protecting and enhancing their soils".

4. That would then lead into the question of where farmers get their technical support from for identifying what they can do to improve their soil health, and who checks that these on-farm plans are generating the required actions. That's where LEAF comes in. Can you develop a bronze/silver and gold standard for soil management? It's really only an evolution of one section in the LSFR. Farmers could be rewarded for this by government... but the requirement is for bronze (lower payment) to be self-assessed, silver (mid payment), to be externally audited, and gold (highest payment) to be audited but also to collect and share specific data to demonstrate measurable progress... to demonstrate 'regenerative' outcomes.

5. In essence, there will be a base requirement for all farms to have a plan, but that the government pot to support this will

As I reflect on my reflections, I don't think the SFI is too far away from this... but too many government schemes are too generic and tell us what to do, rather than reward us for doing the right things for our farm, or our soils. Government needs to decide whether they give payments to farmers as income support (but with conditions which are 'thou shalt follow these generic rules'), or if they give payments based on supporting a resource protection/enhancement plan and supporting the outcomes of that resource protection/enhancement plan. It's the same old argument. The disappointing response from any farmer is that "need more money from government". As farmers, we know what good soil management and bad soil management looks like. We have to make judgement calls

which are based on what we judge to be optimal compromises at a given moment in time. Farming finances are very hard to mouth. Sometimes short term decisions are not optimal in the long term... but without a financial safety net, sub-optimal long term decisions are trumped by bank balance critical short term decisions.

It's why any government intervention needs to be clear in its ambition, clear in its implementation, supportive and committed to the long term, acknowledging that in seasons when farmers can't make progress with enhancing their natural resources (their soils primarily), that they should not be penalised by government as well as the weather etc.

John Hawkins, Bagber Farms:

1. How can the Government measure progress towards its goal of making all soils sustainably managed by 2030? What are the challenges in gathering data to measure soil health and how can these barriers be overcome? **It would be diligent of EFRA that all the BPS data that was digitised over the last 10 years by the RPA be captured for future use as the land use codes clearly indicate the geographical locations of soils suitable for various activities, i.e. from intensive veg to fallow inputs. This in itself will make it easier to see on a map where the best locations are to target and the hardest to target are located on a field by field parcel basis.**
2. Do current regulations ensure that all landowners/land managers maintain and/or improve soil health? If not, how should they be improved? **No.. soil health will only be improved if there is sufficient financial support for each farming enterprise. currently the offerings are way too small to influence this.**
3. Will the standards under Environmental Land Management schemes (ELMs) have sufficient ambition and flexibility to restore soils across different types of agricultural land? What are the threats and opportunities for soil health as ELMs are introduced? **ELM's provides no real incentives to undertake soil health improvements because it only covers "income foregone" is excessively bureaucratic even for the most academic farmer and double funding rules seem to crowd out any possible stacking of incentives in a meaningful way. I have already submitted this evidence last year to the committee on ELM's and even the new standards change nothing for early adopters or intensive farmers alike. In fact it looks like it has been invented just for lowland arable farmers who currently do the least and will continue that approach.**
4. What changes do we need to see in the wider food and agriculture sector to encourage better soil management and how can the Government support this transition? **Stop crowding out private and public funding and finance the Gov side of it properly. Barfoot's were taking land out of production for £650 per Ha wildlife strips but were losing £20,000 of veg crop turnover with high costs for example.**
5. What does the UK Government need to do to tackle other stressors on soil health such as soil contamination? **Compaction is the biggest killer of soil health whether it is by heavy machinery, livestock or rain hitting bare soils mid rotations. There are a multitude of crops that can remove compaction and absorb contamination from soils which is then removed from the food chain for at least 2 months. The science is all out there and the consultants could implement the solutions but without finance and joining up departmental thinking with the Department of Net Zero and OFWAT for example this just isn't going to happen.**

Hazel Smith, Barfoots:

What is soil health?

Traditionally, we have relied heavily on soil chemistry and structure to determine soil health but soil biology is clearly critical to underpinning functional soils. This needs to go beyond simple earthworm counts but it is difficult to navigate the multitude of soil biology metrics. Producers need practical and informative measurements to understand the health of their soils, which take into consideration the context and landscape of the system. Only then will we be able to assess current soil health and develop roadmaps to optimise the health of our farming systems. There is clearly a part for government to play in supporting the development of leading scientific advances in this area and deployment of these commercially to underpin the UK's soil health. A clear, well-funded, monitoring programme is needed if we are to demonstrate that soils are being sustainably managed.

One size does not fit all

SOM is often the 'go-to' measurement to assess soil health but this is not always the best indicator. For example, on soil soils, the farming system has a SOM value of 2%, while ancient woodland on the same site has a SOM of only 3%. Taken alone, this would appear to be 'unhealthy' soil but it is clearly its natural state when at equilibrium.

The pillars of regenerative agriculture are applicable in different ways dependent on situation and not all farmers can implement them all. There needs to be consideration for context and farm profitability. There are many examples of farmers implementing these practices and setting aside significant areas of land to improve soil health where they are still losing money five years later – many/most businesses would not be able to withstand this.

Alignment of roadmaps

There is a conflict between increasing UK production and improving the sustainability of our systems. Where the solution to truly improve soil health is likely to be setting it aside for a number of years, we would be forced to produce more food on less land. This is likely unachievable but would still incentivise intensification which risks further depleting our natural resources.

Carbon and GHGs

Soils are our biggest natural asset in achieving our carbon targets yet there is currently no standard pipeline for farm carbon assessments. As an industry we are paying a number of companies to use their tools to undertake farm calculations with some tools being more geared towards livestock, and few being flexible enough for crops such as ours. The major UK retailers are all requesting data from farmers but these are not standardised and create additional admin burden on an already stretched sector.

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