Response ID ANON-N63Y-Z8W3-C

Submitted to **Health and Harmony: the future for food, farming and the environment in a Green Brexit**
Submitted on **2018-05-08 22:59:08**

Introduction

1 Would you like your response to be confidential?

No

If you answered Yes to this question please give your reason.:
These responses are submitted on behalf of the directors of the Sustainable Soils Alliance (SSA) and will not necessarily reflect the views of all supporters and participants in the SSA. This submission is on behalf of an alliance who have contributed views.

Your details

1 Are you responding as:

Part of any other type of organisation in an official capacity (e.g. NGO, local authority, community group, university)?

Your details (continued)

1 Please tick the box that best describes the organisation:

Other (please specify)

If you have answered 'Other (please specify)' please describe your organisation in the space provided::
Soil focused organisation

2 What is your name?

Please respond in the space provided::
Neville Fay

3 What is the name of your organisation?

Please respond in the space provided::
The Sustainable Soils Alliance

4 Approximately how many people does the organisation represent?

Please select:
<100

5 What is your job title?

Please respond in the space provided::
Director

6 What is the postcode of your workplace? The postcode will enable us to map the geographic spread of responses.

Please respond in the space provided::
BS3 2BX

7 What region is your workplace in?

Please select:
England (South West)

8 Is the organisation in a rural or urban area?

Rural

9 What is your age?

Please select:
65-74 years old

10 What is your gender?

Please select:
Male

Reform within CAP

1 Please rank the following ideas for simplification of the current CAP, indicating the three options which are most appealing to you. Please rank your choices by order of preference (from 1 as your most preferred to 3 as your least preferred):

Please rank the following ideas for simplification of the current CAP, indicating which option is most appealing to you - a. Develop further simplified packages:

Please rank the following ideas for simplification of the current CAP, indicating which option is most appealing to you - b. Simplify the application form:

Please rank the following ideas for simplification of the current CAP, indicating which option is most appealing to you - c. Expand the online offer:

Please rank the following ideas for simplification of the current CAP, indicating which option is most appealing to you - d. Reduce evidence requirements in the rest of the scheme:

Please rank the following ideas for simplification of the current CAP, indicating which option is most appealing to you - e. Other (please specify):

If you have answered 'Other (please specify)' please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

2 Would you like to respond to further questions on reform within CAP?

Yes

Reform within CAP (continued)

1 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?

Please respond in the text box provided::

2 Do you have any further comments?

Please respond in the text box provided::

An 'agricultural transition'

1 What is the best way of applying reductions to Direct Payments? Please select your preferred option from the following:

a. Apply progressive reductions, with higher percentage reductions applied to amounts in higher payment bands

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please provide views on the payment bands and percentage reductions we should apply::

2 What conditions should be attached to Direct Payments during the 'agricultural transition'? Please select your preferred options from the following:

b. Retain and simplify cross compliance rules and their enforcement

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your preferences: :

3 Would you like to respond to further questions on reducing Direct Payments?

Yes

An 'agricultural transition' (continued)

1 What are the factors that should drive the profile for reducing Direct Payments during the 'agricultural transition'?

Please respond in the text box provided::

2 How long should the ‘agricultural transition’ period be?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::

A successful future for farming: 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 (from 1 as your most preferred to 3 as your least preferred):

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - a. Encouraging benchmarking and farmer-to-farmer learning:
1

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - b. Working with industry to improve standards and coordination:

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - c. Better access to skills providers and resources:

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - d. Developing formal incentives to encourage training and career development:
2

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - e. Making Continuing Professional Development (CPD) a condition of any future grants or loans:
3

How can we improve the take-up of knowledge and advice by farmers and land managers? Please rank the following by order of preference - f. Other (please specify):

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

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 (from 1 as your most important to 3 as your least important):

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - a. Insufficient access to support and advice:
1

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - b. Uncertainty about the future and where to target new investment:
2

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - c. Difficulties with securing finance from private lenders:

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - d. Investments in buildings, innovation or new equipment, are prohibitively expensive:

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - e. Underlying profitability of the business:

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - f. ‘Social’ issues (such as lack of succession or security of tenure):
3

What are the main barriers to new capital investment that can boost profitability and improve plant and animal health on-farm? Please rank the below by order of the biggest issues - g. Other (please specify):

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

3 Would you like to respond to further questions on farming excellence and profitability?

Yes

Farming excellence and profitability (continued)

1 What are the most effective ways to support new entrants and encourage more young people into a career in farming and land management?

Please respond in the text box provided: :
Farming good practice and land management that delivers healthy soil will in turn lead to farm profitability. Good practice depends on reducing inputs, enhancing efficiency, and preventing soil degradation. To achieve a transition to better soil management, farmers need support in a number of ways, including through learning networks and knowledge transfer.

The challenge is to de-compartmentalise knowledge, skills and understanding and ensure that where transformation through good practice is achieved, this can be shared within networks, catchments, regions and between on-farm practitioners, academics, trade and support organisations. As such it is inappropriate to prioritise different options for knowledge take-up against one another, especially as effective education requires an integrated combination of the options laid out. The siloed prioritisation of one mechanism above the other is indeed part of the problem.

A clear career path is the best way of encouraging young people into farming and land management and given that the average age of farmers is 59 years, the need is urgent.

Since for many farmers and land-owners, soil will be the most important asset they have, a soil health curriculum should lie at the heart of the new career path. This should be appropriate to all learning stages through primary, secondary and tertiary education (including biology, chemistry, structure, field monitoring) and lead to a degree in agriculture based on soil knowledge.

There is also a need to ensure this is supported through an integrated approach to soil science and that the UK has sufficient qualified soil scientists to meet agricultural education, policy and farming practice needs through the 21st century.

2 Does existing tenancy law present barriers to new entrants, productivity and investment?

Please respond in the text box provided: :
Short-term (e.g. five-year) tenancy agreements do not serve to motivate good soil management, which necessarily demands a long-term, generational vision and approach. Short-term agreements drive quick returns within the term agreement with little incentive to invest in long-term productivity.

In future, tenancy agreements should embed the timescales for soil custodianship such that tenants can and must take reasonable interest in delivering the long-term benefits for the land that comes from managing good quality soil. Soil management is becoming more common within the terms of new tenancies, e.g. The Crown Estate has a soil testing regime in all new farm tenancy agreements to ensure that soil quality is maintained and where possible improved. On all its recent farm re-lettings, successful tenants are chosen for both their soil management proposals and their commercial approach.

The example above of tenancy agreements is a case study of the application of economic levers to drive healthy soil management – and contains lessons which could be applied elsewhere. Indeed, there is a need to ensure that all those with a vested interest in short-term, commercial soil productivity also have an awareness of and responsibility for maintaining its long term health. As well as farmers and other land managers, this mind-set should be applicable for retailers and manufacturers - who have an impact on soil health via their crop and livestock demand as well as financial investors and the insurance industry who will use soil health as a metric to judge the value of an asset, a region or even a country.

3 Do you have any further comments?

Please respond in the text box provided::

A successful future for farming: 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 (from 1 as your most important to 3 as your least important):

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - a. Plant and animal breeding and genetics:

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - b. Crop and livestock health and animal welfare:
3

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - c. Data driven smart and precision agriculture:

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - d. Managing resources sustainably, including agro-chemicals:
2

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - e. Improving environmental performance, including soil health:

1

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - f. Safety and trust in the supply chain:

What are the priority research topics that industry and government should focus on to drive improvements in productivity and resource efficiency? Please rank the below in order of importance: - g. Other (please specify):

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

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 (from 1 as your most important to 3 as your least important):

How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? - a. Encouraging a stronger focus on near-market applied agricultural R&D:

How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? - b. Bringing groups of farms together in research syndicates to deliver practical solutions:
1

How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? - c. Accelerating the 'proof of concept' testing of novel approaches to agricultural constraints:
3

How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? - d. Giving the farming industry a greater say in setting the strategic direction for research funding:
2

How can industry and government put farmers in the driving seat to ensure that agricultural R&D delivers what they need? - e. Other (please specify):

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

3 Would you like to respond to further questions on agricultural technology and research?

Yes

Agricultural technology and research (continued)

1 What are the main barriers to adopting new technology and ideas on-farm, and how can we overcome them?

Please respond in the text box provided: :
There is a false distinction here between e and a,b,c and d. Indeed, a productive and efficient farming policy must recognise as a first step that research into the factors listed cannot be pursued in isolation.

Both crop and livestock health depend on high levels of environmental performance with fertile healthy soil a core pillar of this. This in turn requires the sustainable use of agro chemicals which can be directed in many cases by the increased uptake of smart and precision agriculture.

• While the understanding of the link between crop and soil health is widespread, new research is shining an increasing light on the connection between soil health and livestock performance. A recent (April 18) study by Rothamsted Research demonstrated animal performance on individual fields was positively associated with the level of soil organic carbon, a common measure of "soil health" for sustainable farming. It also discovered that fields grazed more intensively had healthier soils and were less prone to water and nutrient losses.
• Soil health is arguably the biggest environmental beneficiary of increased uptake of Precision farming. Controlled traffic farming improves water infiltration which in turn reduces surface run-off and nitrous oxide emissions and lowers flood risk while field sensors transmitting data on soil moisture, temperature, or the presence of disease spores can direct help farmers plan when to sow or spray crops. Greater effort and investment must be made to improve the understanding and application of this technology, and where appropriate, promote its take-up.
• The evidence base for good soil management practices, including the impact of agro-chemical versus organic inputs, has been slow to accumulate because soils improve slowly and measuring their response needs long-term, controlled studies. The cost of these resources both financially and environmentally makes this particular research topic a priority for business and government.

When it comes to soil, the main barrier to the uptake of innovation and ideas is the lack of a clear starting point – of the baseline understanding of what is to measured, how and when.

• A robust long-term and continuous soil monitoring programme needs to be introduced and reported routinely as part of national reporting requirements. This will enable the UK to report against commitments such as the restoration of soil carbon by 0.004% per annum from COP21 and the Sustainable Development Goal 15 to reverse land degradation, quantify its natural capital and ensure food security.
• Sampling needs to be sufficiently comprehensive that a representative sample of soils are monitored to provide an accurate national picture. A rolling programme of sampling across a 5-year period will ensure soil condition is continually being reviewed and always appear on budget lines as part of the

Government's set of environmental indicators. Programmes such as these have reported before but none have received funding since 2007.
• A minimum set of high level indicators could be delivered for £200k per year on a 5-year rolling programme (i.e. £1m) to start filling the 10-year data gap. This excludes pollution and biodiversity which could be targeted at high risk sites only, but includes linked assessment of change in land use and vegetation change which are important drivers of soil health e.g. transfer from arable to pasture. The programme should be continuous.
• Specific thresholds for soil quality are available (Environment Agency 2006) and commercial labs provide services to assess soil health where results are provided, benchmarked against samples of the same soil type to assist with interpretation. Advances in mobile technology should be channelled to facilitating self-evaluation and upload of measurements.
• Basic principles need to be established for agreed metrics to ensure against soil degradation and that this is well accepted. The primary organisations involved in tracking soil quality across the UK proposed a UK national framework (Environment Agency 2008), but the suite of indicators continues to be subject to debate and discussion by a broad spectrum of stakeholders. Criteria for demonstrating no loss of soil quality and preventing degradation might include:
o No loss of soil organic carbon
o No increase in nutrients above agreed thresholds
o No increase in acidity
o No increase in contaminant levels
o No loss of good soil structure (indicated by aggregation or bulk density)
o No bare soil during periods of high erosion risk

2 Do you have any further comments?

Please respond in the text box provided::

A successful future for farming: labour - a skilled workforce

1 What are the priority skills gaps across UK agriculture? Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

What are the priority skills gaps across UK agriculture? - a. Business/financial:
2

What are the priority skills gaps across UK agriculture? - b. Risk management:
3

What are the priority skills gaps across UK agriculture? - c. Leadership:

What are the priority skills gaps across UK agriculture? - d. Engineering:

What are the priority skills gaps across UK agriculture? - e. Manufacturing:

What are the priority skills gaps across UK agriculture? - f. Research:

What are the priority skills gaps across UK agriculture? - g. Other (please specify):
1

If you have answered 'Other (please specify)', please explain your preferred alternative::
Sustainable resource management for protecting soil, air, nature and water

Please give a short explanation as to your ranking preferences::
Level of soil degradation, loss and downstream diffuse pollution

2 Would you like to respond to further questions on labour - a skilled workforce?

Yes

Labour - a skilled workforce (continued)

1 What can industry do to help make agriculture and land management a great career choice?

Please respond in the text box provided::
As indicated above, the demonstration of a clear career path is the best way of encouraging young people into farming and land management and a soil health curriculum should be a central thread throughout. The focus on soil as a core asset of a farmer's training and education not only ensures that a pillar of understanding of a vital asset is in place, but also engenders a long-termist perspective on farming as a career with the capacity not only for profit and fulfilment, but considerable environmental enhancement throughout the course of their lives.

2 How can government support industry to build the resilience of the agricultural sector to meet labour demand?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::

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:

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - a. Improved soil health:
1

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - b. Improved water quality:
2

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - c. Better air quality:

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - d. Increased biodiversity:

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - e. Climate change mitigation:
3

Which of the environmental outcomes listed below do you consider to be the most important public goods that government should support? - f. Enhanced beauty, heritage and engagement with the natural environment:

Please give a short explanation as to your ranking preferences::
Soil conservation, recovery and health is the foundation of all the ecosystem services that agriculture can provide including sustainable food production

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:

Of the other options listed below, which do you consider to be the most important public goods that government should support? - a. World-class animal welfare:
2

Of the other options listed below, which do you consider to be the most important public goods that government should support? - b. High animal health standards:

Of the other options listed below, which do you consider to be the most important public goods that government should support? - c. Protection of crops, tree, plant and bee health:
1

Of the other options listed below, which do you consider to be the most important public goods that government should support? - d. Improved productivity and competitiveness:
3

Of the other options listed below, which do you consider to be the most important public goods that government should support? - e. Preserving rural resilience and traditional farming and landscapes in the uplands:

Of the other options listed below, which do you consider to be the most important public goods that government should support? - f. Public access to the countryside:

Please give a short explanation as to your ranking preferences: :

3 Are there any other public goods which you think the government should support?

Please respond in the text box provided::
The framing of the above questions and this question provides a misleading representation of the different ‘options’ at stake. Not only is it illogical to attribute respective ‘importances’ to air, water, biodiversity, soil or climate change and then rank them accordingly, but it overlooks the all-important interconnectivity between them.

• Based on DEFRA’s own figures that 6% of UK’s agricultural land is at risk of erosion and 36% of UK cropland is at risk of erosion (The Future Farming and Environmental Evidence Compendium, 2018) the evidence of unsustainable soil management is overwhelming and must be a priority for government support - including policies for soil recovery and soil health restoration targets.

• To this point we would draw attention to the government’s defined ambition in the 2018 Defra Evidence Compendium to improve the environment through a commitment to ensure that “all soils will be managed sustainably by 2050”. This contradicts the target of 2030 published in the Defra 25 Year Environment Plan and previous environment strategies. We urge the government to clarify which target the government has in mind, and to keep 2030 as an ambitious but realistic focal point.

• 80% of the damage from degraded soils is experienced away from the source (e.g. through siltation of rivers or increasing carbon dioxide in the atmosphere, a fact that is reflected in the eight new rules for water protection that came into force in April. These are essentially rules for soil rather than water husbandry - fertilisers and manure management, preventing diffuse pollution, testing soil at least every 5 years. As such it would seem appropriate and helpful for these laws (many of which derive from CAP requirements) to be reframed under the banner of a specific Soil Act.

• An understanding of soil's role as a store of carbon and therefore in climate change mitigation is now established, and government acknowledgement of this is reflected in the fact that it has signed up to the '4 per 1,000' initiative which set a growth goal of 0.4% in the soil carbon stocks, or 4% per year, in order to halt the increase in the CO2 concentration in the atmosphere related to human activities. Since then there has been little indication from the government how this target is to be met – either in isolation or as part of a broader policy specific to land management and agriculture's role in climate change mitigation. This is a missed opportunity given the clearer regulatory frameworks established for other sectors e.g. transport and manufacture.

• Healthy soil is both dependent on, and the habitat for, an extensive range of life forms, from bacteria and fungi to insects, earthworms and moles. Its role in maintaining biodiversity is extensive, and includes determining the water, nutrients and micronutrients available for plants as well as preventing growth through waterlogging, poor aeration, contamination etc. This in turn influences the distribution of the animals for whom the plants are a source of food and shelter.

• Healthy soil provides the literal foundation from which the country's broader beauty, heritage and natural environment can be appreciated. Its role is apparent for ensuring biodiverse landscapes, but is also critical for providing safe and secure public pathways and the foundations for ancient buildings and trees. Depletion of our soil through erosion creates unsightly scars on the landscape and makes public appreciation of the countryside potentially hazardous.

Enhancing our environment

1 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:

b. Water quality, d. Habitat restoration, f. Soil quality

If you have answered 'Other (please specify)' please explain your preferred alternative::

Please give a short explanation as to your preferences::

2 Would you like to respond to further questions on enhancing our environment?

Yes

Enhancing our environment (continued)

1 What role should outcome based payments have in a new environmental land management system?

Please respond in the text box provided::
Outcome based payments have an important place in the new environmental land management system, however those outputs must be clearly defined and explained to ensure a coherent and comprehensible strategy – and the avoidance of perverse incentives. In the case of soil quality, particular attention needs to be given to the following:

• Payments for services delivered: in principle we support payments for soil ecosystem services delivered.
• Monitoring: Soil is the most interconnected of the Public Goods identified, and yet is arguably the least understood, at either local or national level. Addressing this lack of understanding should be considered a priority outcome in itself and is relatively straight-forward to achieve. By making regular soil monitoring at farm level a fundamental pre-requisite for any public funds, a picture of nationwide and farm-level soil health can be formed, and a clear message sent about the fundamental importance of soil health. Technology in the form of testing kits and data collection applications have the potential to ensure this process is not too technical or burdensome for either collector or central resource and should be promoted.
• On-farm monitoring: On-farm monitoring is a vital component of local soil health indicators and national agricultural soil audit processes that policy should seriously consider that farmers should be paid for monitoring.
• Soil health metrics: It is imperative that there is a wide cross-sector-based agreement on the metrics on soil health. In the interim and until cross sector agreement is achieved, metrics should include organic matter, visual assessment of soil structure of topsoil and subsoil, PH and worm counts (which may also be incorporated in the broader-based subsequent metrics agreement).
• Inputs vs outcomes: Soil quality - and specifically improvement/degradation can only be established over an extensive period of time meaning that 'monitorable' (e.g. chemical/structural) outcomes only provide part of the picture. Distribution of public payments needs to reflect the underlying practises that influence soil health - the 'inputs' alongside the 'outcomes' – i.e. the employment of processes that are known to improve soil health (such as increased soil organic matter and improved soil biology) and avoidance of those that cause damage.
• Ecosystem payments: Ecosystem payments beyond good practice should enable farmers to benefit from reversion of land to low risk enterprises, and adoption of soil recovery crops to improve soil structure.
• Indicators: Unlike air and water, there is no such thing as 'bad soil' (apart from in the case of heavy contamination), so a one-size fits definition of soil health and the underlying indicators would not be applicable. Instead, indicators used to determine public goods should reflect the soil type in question, and where appropriate other geographic factors – regional biodiversity/flood risk. In some instances, where inappropriate crop selection is made (e.g. maize production with high erosion risk), public monies should be withheld.

2 How can an approach to a new environmental land management system be developed that balances national and local priorities for environmental outcomes?

Please respond in the text box provided:

3 How can farmers and land managers work together or with third parties to deliver environmental outcomes?

Please respond in the text box provided::
Understanding the complex inter-relationship of all public goods is vital for the formation of government policy, but also in the manner with which these public goods are promoted, regulated and incentivised. For example, a land manager might employ practises with one public good in mind that inadvertently undermines the pursuit of another. As such, no public funding to support farming and forestry should be available unless evidence can be made that none of the public goods identified is significantly undermined.

As a rule of thumb, collaboration and cooperation at every level should be encouraged where environmental outcomes are at stake. For some challenges (climate change, greenhouse gas emissions), policy is best directed and rolled out at central government level, while for other issues (habitat restoration, water quality and soil) localised collaboration on a landscape basis will reap the best – and quickest rewards, especially where the outcomes are so closely interrelated.

In the case of soil, there are a number of models of farmers and third parties working together that would benefit from

• Catchment-based initiatives: These need to be expanded more widely. However, there needs to be a much greater level of demonstration and training, preferably with some sort of accreditation available. It has been suggested that to receive payments then some basic CPD - such as on good soil management - should be a requirement.

• Farmers and Land Managers: Improved training and continuing professional development for the sustainable management of our soils needs to be put in place in our colleges and out on the farm. Where best practice exists e.g. Innovative Farmers, we need to encourage its wider communication to and distribution in the community. In many areas e.g. cover crops, farmers are already investigating practices and sharing their knowledge.

• Research community: Initiatives such as the Soil Health Partnership and Soil Security Programme are vital for the continued understanding of the complex world that is our soil, while new technologies and sensors to develop early warning indicators of soil degradation and test the effectiveness of different approaches to restore soil qualities need to be invested in and developed.

The research community also needs to link more directly with farmer facing organisations e.g. Agriculture and Horticulture Development Board and both need to support land mangers undertaking trials. In parallel, work needs to continue to identify the best soil biological measures for soil function and identify best practices for restoration of soil quality and functions.

We advocate developing a support network of model and experimental farms and an information environment where examples of soil recovery that demonstrate profitability can be shared within farming communities. To be effective, a system of financial support is needed of grants or cheap loans to introduce investment in infrastructural changes that will specifically improve soil health, e.g. to improve field drainage or for new, more appropriate equipment and machinery.

4 Do you have any further comments?

Please respond in the text box provided::

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?

Not Answered

Please give a short explanation as to your preference::

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 from the below options:

Not Answered

If you have answered 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your preference. 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 3 choices from the below list, in order of importance (from 1 as your most important to 3 as your least important):

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - a. Use of regulation to ensure action is taken:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - b. Use of financial incentives to support action:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - c. Supporting vets to provide targeted animal health advice on farm:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - d. Making it easier for retailers and other parts of the supply chain to recognise and reward higher standards of animal health:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - e. An industry body with responsibility for promoting animal health:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - f. Research and knowledge exchange:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - g. Transparent and easily accessible data:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - h. An understanding of animal health standards on comparable farms:

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - i. Other (please specify):

What type of action do you feel is most likely to have the biggest impact on improving animal health on farms? - j. N/A – Cannot rank as they are all equally important.:

If you have selected 'Other (please specify)' please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

4 Would you like to respond to further questions on fulfilling our responsibility to animals?

Yes

Fulfilling our responsiblity to animals (continued)

1 How can the government best support industry to develop an ambitious plan to tackle endemic diseases and drive up animal health standards?

Please respond in the text box provided::

2 Do you have any further comments?

Please respond in the text box provided::

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?

Please respond in the text box provided::

2 There are a number of challenges facing rural communities and businesses. Please rank your top three options by order of importance (from 1 as your most important to 3 as your least important):

There are a number of challenges facing rural communities and businesses. - a. Broadband coverage:

There are a number of challenges facing rural communities and businesses. - b. Mobile phone coverage:

There are a number of challenges facing rural communities and businesses. - c. Access to finance:
2

There are a number of challenges facing rural communities and businesses. - d. Affordable housing:
1

There are a number of challenges facing rural communities and businesses. - e. Availability of suitable business accommodation:

There are a number of challenges facing rural communities and businesses. - f. Access to skilled labour:
3

There are a number of challenges facing rural communities and businesses. - g. Transport connectivity:

There are a number of challenges facing rural communities and businesses. - h. Other (please specify):

If you have selected 'Other (please specify)', please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

3 Would you like to respond to further questions on supporting rural communities and remote farming?

Yes

Supporting rural communities and remote farming (continued)

1 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?

Please respond in the text box provided::

2 Do you have any further comments?

Please respond in the text box provided::

Changing regulatory culture

1 How can we improve inspections for environmental, animal health and welfare standards? Please indicate any of your preferred options below (Select as many options as you wish).

Greater use of risk-based targeting, Increased options for self-reporting, Better data sharing amongst government agencies, Other (please specify)

If you have selected 'Other (please specify)', please explain your preferred alternative::
Creating a structure for self monitoring sufficiently underpinned by well-resourced advisory service

Please give a short explanation as to your preferences::

2 Would you like to respond to further questions on changing regulatory culture?

Yes

Changing regulatory culture (continued)

1 Which parts of the regulatory baseline could be improved, and how?

Please respond in the text box provided::
t is noteworthy that under decades of the EU Common Agricultural Policy, no regulatory framework for soil health was ever established – despite ambitious frameworks being put into place for air and water. It is also worth bearing in mind that despite the existence of these respective air and water Directives, the UK has failed to maintain the required standards (Refs: air quality Directive 2004/107/EC and the Air Quality Framework Directive 2008/50/EC, article 23, supreme court 2015 and high court 2016 judgments, NAO report 2017. According to the WWF, only 14% of England's rivers are at acceptable Good Ecological Status.

The implementation of a robust environmental regulatory framework for protecting and enhancing soil is one of the great opportunities from the UK's departure from the EU. It is vital that lessons be learnt from both the successes and failures of EU policy-making in this area.

Defra's 25 Year Environment Plan and the Defra Future for Food, Farming and the Environment in a Green Brexit recognise the fundamental importance of UK soils and that they should be managed sustainably by 2030. To facilitate the creation and implementation of a coherent and effective policy framework and demonstrate the scale of the government intent for soil health, a dedicated soils department should be established within government.

A soil framework should recognise different soil landscapes and the fact that they will have differing objectives, problems and solutions. For example, soil issues in the East Anglian fens, will be different from the soil issues in South Devon. A framework based on the Natural Character Areas would be a good basis for identifying local priorities where solutions are tailored to landscapes.

2 How can we deliver a more targeted and proportionate enforcement system?

Please respond in the text box provided::
The following are some of the core components of an effective, targeted and proportionate enforcement system.

• Land Capability Classification review and revision: Land capability should be reviewed and land considered unsuitable for certain agricultural practices should be designated as such.

• A consistent regulatory baseline is needed for soil standards: Such a regulatory framework needs adequate resourcing to ensure adequate skilled regulatory workforce that can influence behaviour and impart knowledge for farmers.

• Bad practice: Soil erosion causing water pollution is now an offence. This rule should be kept. Bad practice should not be rewarded, and compliance failure should result in penalty.

• Core monitoring information: It should be a requirement to measure and monitor organic matter levels and keep five-year records of performance.

• Farm inspections: This needs the development of a positive culture with specialist inspectors who work with and support farmers to help develop good soil management practices that also benefits the farm.

• Penalties and perceptions: A transition is needed from a culture where farmers are worried about being fined, and instead should be based on the principle that fines are seen as a last resort. Fines are a measure of the overall failure. Farmers should be able to engage with regulators to create a positive environment of knowledge transfer, training and understanding of the benefits of sustainably managed soil. Diagnosing the soil management problem should be central and the basis of an agreed recovery action plan.

• Quality Assurance: Systems: Quality Assurance Systems should not depend on methods that generate over reliance on paperwork as occurs at present. The trend to Quality Assurance advocated as a preferred route, generates bureaucracy, tends to be inspected by generalists without proven knowledge of soil health, and is based on tick box culture. The system should be outcome-based and measured on performance (e.g. of soil structure and health improvement).

3 Do you have any further comments?

Please respond in the text box provided::

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 (from 1 as your most important to 3 as your least important):

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - a. Desire to protect themselves from general risks (e.g. revenue protection):

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - b. Desire to protect themselves from specific risks (e.g. flooding, pests or disease):

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - c. Provision of government compensation for some risks:

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - d. Cost of insurance:

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - e. Complexity and administrative burden of insurance:

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - f. Availability of relevant insurance products:

What factors most affect farm businesses' decisions whether to buy agricultural insurance? - g. Other (please specify):

If you have selected 'Other (please specify)' please explain your preferred alternative:

Please give a short explanation as to your given ranking of preferences:

2 Would you like to respond to further questions on risk management and resilience?

Yes

Risk management and resilience (continued)

1 What additional skills, data and tools would help better manage volatility in agricultural production and revenues for:

a. Farm businesses? Please respond in the text box provided::

b. Insurance providers? Please respond in the text box provided::

2 How can current arrangements for managing market crises and providing crisis support be improved?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::

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 (from 1 as your most important to 3 as your least important):

How can we improve transparency and relationships across the food supply chain? - a. Promoting Producer Organisations and other formal structures?:
1

How can we improve transparency and relationships across the food supply chain? - b. Introducing statutory codes of conduct?:
3

How can we improve transparency and relationships across the food supply chain? - c. Improving the provision of data on volumes, stocks and prices etc.?:
2

How can we improve transparency and relationships across the food supply chain? - d. Other (please specify):

If you have selected 'Other (please specify)' please explain your preferred alternative::

Please give a short explanation as to your ranking preferences::

2 Would you like to respond to further questions on ensuring fairness in the supply chain?

Yes

Ensuring fairness in the supply chain (continued)

1 What are the biggest barriers to collaboration amongst farmers?

Please respond in the text box provided::
Without a dedicated focus on soil health and its sustainable management, retailers, manufacturers and the rest of the supply chain through vested interests and short-termism, will drive the commercial productivity of their suppliers' soil without oversight of and connection to any necessity to nurture the long-term requirements for soil health. Their influence is apparent through the demands made in relation to individual crops, consequences for crop spoilage from order cancellations, the timing (seasonality) of their purchasing decisions and the pressure this can put on chemical inputs and harvesting/sowing in the context of uncertain weathers.

The above can have long-term implications for soil health and the actors engaged in delivering the products to the consumer. Closer collaboration between farmers and the supply chain will be a key factor in reducing the pressures that may adversely impact soil husbandry.

2 What are the most important benefits that collaboration between farmers and other parts of the supply chain can bring?

Please respond in the text box provided::
Education is important so that supply chain buyers learn about the environmental impact of their purchasing decisions on all environmental factors, the impacts upon farmers and on soil health. As orders may be made through intermediaries rather than direct farmer-retailer relations, the need for direct engagement is especially important.

The supply chain also has a crucial role as the connection between farmers and consumers, and both retailers and manufacturers who are in a position to inform and educate their customers through their food assurance standards. These may follow third party accredited standards such as Freedom Food, Soil Association Organic or supermarkets with their own scheme that producers adhere to requiring products to be supplied using specific husbandry and growing systems

How could government help to enable this? Please respond in the text box provided::
Incorporating soil health into government standards is a significant opportunity to both improve consumer awareness about its importance, and also to influence their purchasing decisions in favour of products and suppliers with the most beneficial 'soil footprint'.

3 Do you have any further comments?

Please respond in the text box provided::

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:

a. Industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority prests and diseases in trees?:
Strongly agree

b. Landscape recovery following pest and disease outbreaks, and the development of more resilient trees?:
Strongly agree

c. The development of a bio-secure supply chain across the forestry, horticulture and beekeeping sectors?:
Strongly agree

Please give a short explanation as to your preferences::

2 Would you like to respond to further questions on protecting crop, tree, plant and bee health?

Yes

Protecting crop, tree, plant and bee health (continued)

1 Where there are insufficient commercial drivers, what role should government play in:

a. Supporting industry, woodland owners and others to respond collaboratively and swiftly to outbreaks of priority pests and diseases in trees? Please respond in the text box provided::

b. Promoting landscape recovery following pest and disease outbreaks, and the development of more resilient trees? Please respond in the text box provided::

2 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?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::

Devolution: maintaining cohesion and flexibility

1 With reference to the principles set out by JMC(EN) and listed in the devolution chapter, what are the agriculture and land management policy areas where a common approach across the UK is necessary?

Please respond in the text box provided::

2 What are the likely impacts on cross-border farms if each administration can tailor its own agriculture and land management policy?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::

International Trade

1 How far do you agree or disagree with the broad priorities set out in the trade chapter?

Please choose one of the options from the dropdown list::

2 How can government and industry work together to open up new markets?

Please respond in the text box provided::

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?

Please respond in the text box provided::

4 Do you have any further comments?

Please respond in the text box provided::

Legislation: the Agriculture Bill

1 How far do you agree with the proposed powers of the Agriculture Bill?

Please choose one of the options from the dropdown list::
Neither agree nor disagree

2 What other measures might we need in the Agriculture Bill to achieve our objectives?

Please respond in the text box provided::

3 Do you have any further comments?

Please respond in the text box provided::