

- 7 Farmers have long recognised the value of their soils to their farming businesses. The naturally variable characteristics have been one of the most significant factors in shaping local and regional land use.
- 8 Welsh Government's Soils Evidence Programme commissioned ADAS to undertake an assessment of Welsh soil issues in context³ in 2019. This identified that agricultural management is the major controllable factor influencing soil condition as 85% of the land area of Wales is utilised for agriculture. This assessment determined that many soils in Wales remain in good condition and are at a low risk of degradation under current agricultural management, which is dominated by permanent grassland (i.e. grassland not ploughed for >5 years). Welsh Government's Soil Evidence Review⁴ identified that '*the current land use, soil and climate combination in Wales is favourable to minimising widespread risks and threats to soil from degradation processes such as erosion, compaction, and loss of biodiversity*'.
 - 9 At farm level, a combination of knowledge, research and technology drives an increasingly sophisticated and diverse range of management strategies which are making soils more resilient and sustainable such as different grazing regimes, cultivation techniques and companion cropping.
 - 10 There is a need to recognise, however, that soil is an extremely complex system and there is still much to be researched and learned on a practical scale. This makes soil management inherently complex. Variables like weather conditions, cropping, point in the rotation, time of testing, soil type and topography mean that actions which drive a measurable improvement in soil health in one year, do not the next. Improving soil health is fundamentally a long-term process, and progress may be difficult to measure so trends over time are much more important than short-term absolute measures.
 - 11 Whilst progress is being made, farmers are increasingly aware of the link between good soil management and productivity and the need to protect and enhance this precious resource for all the beneficial services it provides, particularly in the context of a changing climate which, could, for example, lead to an increased risk of soil erosion due to extreme weather events.
- **Monitoring of soil health**
 - 12 Monitoring and measuring soil health is key to sustainable soil management. Many farmers already routinely test and assess soil fertility using professional soil testing services and use the data to maintain or improve crop and livestock productivity, as well as environmental benefits.
 - 13 Key indicators of soil health include chemical, physical and biological characteristics such as levels of organic matter / carbon, nutrient balance, pH level, earthworm count, soil structure and biodiversity. Interactions with water are also important so drainage, water retention and compaction are also indicators of healthy soils that farmers consider.
 - 14 There is still much to learn about how soil contributes to productivity, biodiversity and climate change. More work is needed to assess the impact of specific soil management practices on physical, chemical and biological soil health.
 - 15 NFU Cymru supports investment in soil management research and innovation from both the public and private sector. Soil management practices need to be evaluated for their impact on physical, chemical and biological soil health and any research developed should be easily accessible to farmers.

³ [Assessment of Welsh Soil Issues in Context](#)

⁴ [Synthesis of Welsh Soil Evidence](#)

- 16 Research also needs consider the role of soil amendments like the land-spreading of biochar and enhanced mineral weathering which have the potential to capture carbon, their long-term interaction with soil ecology needs to be evaluated before possible inclusion within soil management policy.
- 17 There are opportunities for the uptake of new technologies like drones, satellite imagery and DNA sequencing to aid soil monitoring. The industry is ready to take advantage of these technologies. Soil testing should be affordable and accessible to give a true picture of the high variance of soil types at farm and field parcel level.
- **Classification of soils for land use**
- 18 The Agricultural Land Classification (ALC) is a scientific system used to assess how good land is for growing crops. In Wales, around 10-15% of the land area is classified as BMV (Best and Most Versatile land) for agriculture defined by ALC grade classes 1, 2 and 3a and is '*conserved as a finite resource for the future*' within Planning Policy Wales⁵. The Welsh Soil Evidence Review identifies that 75% of land in Wales has an ALC grade of 3b, 4 and 5 (non-BMV) which is less capable of arable cropping.
- 19 However, there is a need to recognise that agricultural production in Wales is largely characterised by grass-based livestock systems, producing high-quality protein and in the context of predicted challenges to our global food production systems, where food production systems elsewhere are expected to face greater challenges due to climate change impacts, we believe Wales has a social responsibility to contribute to global food security.
- 20 On this basis, and in the context of the multiple and increasing pressures on land use in Wales, NFU Cymru believes greater protection should be afforded to safeguard all agricultural land and our agricultural productive capacity in the future. Land is a finite resource and NFU Cymru restates our ask for a decision-making framework to guide land use change decisions so that the long-term effects to food production and wider economic, environmental, social and cultural impacts can be properly assessed.
- **The policy and legislative mechanisms to protect soils and productive land (including the Sustainable Farming Scheme, National Minimum Standards and planning policy (amongst others))**
- 21 NFU Cymru believes that with the right support and incentives, there are opportunities to further enhance soil management on Welsh farms, but only if we avoid overly prescriptive, simplistic and restrictive approaches. We are clear that 'one size fits all' approach is challenging and could be detrimental to soil health.
- 22 For example, Part 2 of the Control of Agricultural Pollution Regulations 2021, places limits on the application of livestock manures which leads to an increasing reliance on inorganic manufactured fertilisers. The regulation is perverse, works against net zero and circular economy principles and prevents farmers from making the best use of organic fertilisers with impacts for soil organic matter. It is important to recognise that the Survey of Fertiliser Practice⁶ shows a long-term decline in overall application rates of Nitrogen, Phosphorus and Potash since 1983 and, in the context of the historically high costs of manufactured inorganic fertilisers and availability challenges, farmers are looking at alternative ways of providing nutrients to their soils to maintain soil fertility.

⁵ [Planning Policy Wales - Edition 12](#)

⁶ [fertiliseruse-annualreport2223-18jul24.odt](#)

- 23 Protection for soils is also provided for through the current Basic Payment Scheme (BPS) which requires farmers to follow a set of requirements set out in Cross Compliance⁷. This includes GAEC (Good Agricultural and Environmental Condition) and SMR (Statutory Management Requirements). There are a number of GAEC and SMR that deliver direct and indirect benefits for soil health, for example, SMR 1: Water Protection, SMR 10: Restrictions on Plant Protection Products, GAEC 4: Minimum Soil Cover, GAEC 5: Managing land to limit soil erosion and GAEC 6: Maintenance of Soil Organic Matter.
- 24 In the Sustainable Farming Scheme (SFS): Proposed Scheme Outline⁸ published in November 2024, Welsh Government indicates that the Transition Period for the phase out of the BPS will be 2026-2029. Cross Compliance will, therefore, continue to be in place for BPS participants throughout this period.
- 25 Welsh Government has also confirmed they expect Cross Compliance to form part of the regulatory baseline for the Sustainable Farming Scheme commencing in 2026.
- 26 Through the Sustainable Farming Scheme farmers will receive a Universal Payment in return for undertaking Universal Actions (UAs). In addition, to the regulatory baseline and the proposed Universal Code, there are a number of Universal Actions that support further progress in the management of soils including UA3: Soil Health Planning, UA5: Integrated Pest Management and UA7: Habitat Maintenance.
- 27 Action will be dependent on widespread uptake of the scheme by farmers and NFU Cymru is clear that more work is needed to ensure the scheme is attractive to all farmers in Wales, irrespective of sector and location. It is also vital that the SFS provides the same level of certainty and stability to farm businesses as the BPS does currently.
- 28 Subject to budget, the Optional Action and Collaborative Action layers of the Scheme will provide additional opportunities for action on soil health, including on peatlands which cover 90,000 hectares (4.3% of the land area) and the largest terrestrial store of carbon in Wales. The scheme must include a focus on capital support to allow farmers to invest in soil management measures and the latest technologies and equipment recognising that practices such as liming and drainage repair deliver productivity and environmental benefits.
- 29 The requirement to share data on soils with Welsh Government through UA3: Soil Health Planning has emerged as a key concern from farmers. This could ultimately act as a barrier to scheme uptake. Farmers have expressed a lack of confidence that there are robust safeguards and governance in place providing protection for any soil data supplied. For example, in the face of Freedom of Information or Environmental Information Regulation provisions.
- 30 Whilst we recognise the potential to aggregate farm level data to gain valuable insights into macro trends in soils health, this potential will only be realised if farmers are provided with appropriate ownership and control over what data is shared and how their data is utilised. This is a key aspect of scheme design yet to be resolved.
- 31 In respect of wider regulation, there is a need for clear and enforceable regulations and assurance schemes to prevent contamination of soil by materials like composts, digestates and sewage sludges. These materials must be kept free of contaminants such as glass, metal, plastics and polyfluoroalkyl substances (PFAS) and other harmful substances. In particular, there must be efforts to prevent such materials from entering waste streams in the first place.

⁷ [Cross compliance 2024 | GOV.WALES](#)

⁸ [Sustainable Farming Scheme: proposed scheme outline \(2024\) | GOV.WALES](#)

- 32 Sensible regulation of voluntary carbon offset markets could also play a role in helping maintaining and improving soil health. The developing market in voluntary carbon offsets presents both opportunities and long-term implications for agriculture. Farmers need to have confidence that the rules and standards of the market are fair and accessible and that the Sustainable Farming Scheme can work alongside private finance to incentivise action to build further carbon stocks as well as reward the maintenance of existing stores. As custodians of organic matter and carbon already in the soil - Welsh soils are estimated to contain 410 million tonnes of carbon⁹ – farmers would like to see the conservation and maintenance of these stores properly rewarded.
- 33 Overall, NFU Cymru does not support further regulation for farming in relation to soils. NFU Cymru's survey¹⁰ of farmers for the four-yearly Statutory Review of the Control of Agricultural Pollution Regulations brought to life the 'on the ground' issues relating to the implementation of the regulations introduced in 2021. NFU Cymru is clear that an Independent Review is now urgently needed to consider the cumulative burden of regulation on farm businesses.
- **The potential for legal frameworks and targets for soils**
- 34 The key challenge for establishing legal frameworks and / or targets for soils lies in their inherent variability. There are 183 different soil series in Wales¹¹. We concur with Welsh Government's Soils Evidence Programme assessment of soil issues¹² that highlighted that there are a number of challenges associated with regulating soil, which mainly relate to: the establishment of baseline and / or target values for soil properties.
- 35 Regional and local variation would have to be accounted for in any metrics used to measure sustainability. This variation can extend down to the field scale, and the results of many of these must be considered in relative terms when used to assess trends in pH, structure, organic matter and mineral content. On this basis, NFU Cymru would seriously question the feasibility of establishing legal frameworks and / or targets for soils.
- 36 To conclude, NFU Cymru would place on record our thanks to the Committee for the opportunity to contribute to its inquiry into soil health. We look forward to giving oral evidence to the Committee in due course.

****End****

⁹ [SoNaRR2020 Aim 1 assessment](#)

¹⁰ [nfu-cymru-evidence-submission-review-of-coap-december-2024.pdf](#)

¹¹ [Synthesis of Welsh Soil Evidence](#)

¹² [Assessment of Welsh Soil Issues in Context](#)