State of UK Soil Science – Key Facts

Strategic Importance

Many of the UK's most important challenges depend on how land is managed. Food security, housing, infrastructure, clean energy, climate resilience and environmental recovery all place growing demands on a finite land resource. Recent policy has increasingly recognised the need to balance these competing pressures. Healthy soils underpin many of these objectives, making soils a strategic national asset.

Value of Soil

By one estimate, the degradation of soil costs England and Wales £1.2 billion annually[1]. Globally, restoring land could generate around $1.8 trillion in annual benefits, with every dollar invested estimated to return between $7 and $30[2].

Demand for Soil Scientists

Industry has experienced large growth, especially in engineering and environmental consultancies. Over 70 soil scientist work at Jacobs alone. Two separate searches of job sites in 2026 found over 100 vacancies each time, primarily in industry.

Training of Soil Scientists

Dedicated MSc Soil Science programmes at Aberdeen, Cranfield and Edinburgh Universities were recently closed or paused due to the university funding crisis. At undergraduate level only the BSc Plant & Soil Science at Aberdeen remains, compared to the widespread availability of soil-related degrees in previous decades. Recent suspension of agriculture degree recruitment at the University of Nottingham further highlights the vulnerability of land-based education provision, reducing a key pathway through which graduates enter soil-related careers.

Although elements of soil science are now taught across many environmental and land-based degree programmes, this broader multidisciplinary provision does not replace specialist training, leaving a gap between the expertise required by the wider soil sector and the number of graduates receiving comprehensive soil science education.

Demand for Soil Science

Demand for soil science is growing rapidly. Recent droughts, extreme weather and global supply chain disruptions have exposed the vulnerability of food, water and environmental security, while soil degradation continues to reduce the resilience of the UK's land resources. Delivering government priorities on food security, climate adaptation, environmental recovery and sustainable growth will require a strong pipeline of soil science and specialists.

Evidence from UK farmers and growers identifies soil science as a major unmet research need. Comparisons with PhD projects funded across UK agricultural universities reveal a significant gap between the priorities of land managers and the current focus of agricultural research.[3]

Soil Science Funding

The recently released report 'The State of Agricultural Research' found a 50% drop in total UK funding in 2025 compared to the previous 3 years[4]. Of UKRI funded agricultural research, only 6% explores Soils and Water, compared to 42% for Crops and 18% for Livestock. Defra's funding is also dominated by Crops and Livestock research (73%) compared to Soils and Water (9%). This contrasts sharply with evidence from farmers and growers that identifies soil science as a major unmet research need.[3]

Soil Science Research Quality

The UK is #1 globally on the proportion of its soil science papers that become most highly cited – i.e. have the greatest impact (2020-2025). Back in 2000, the UK was only second to the USA in the total number soil science papers. Now publication numbers are comparable to leading European equivalents like Germany, but at risk of further decline.

UK soil science has a world-leading legacy of discovery, from helping establish modern crop fertilisation to revealing the role of soils in carbon storage and water supply to plants. Today, it continues to deliver the science needed to address some of society's greatest challenges, including food security, climate change, environmental recovery and sustainable land use.

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[1] Graves, A.R., Morris, J., Deeks, L.K., Rickson, R.J., Kibblewhite, M.G., Harris, J.A., Farewell, T.S. and Truckle, I. (2015) *The total costs of soil degradation in England and Wales*. *Ecological Economics*, 119, pp. 399-413.

[2] UN News (2026) *UNCCD COP17: Land restoration can return up to 30 times every dollar invested, delegates hear on Finance Day*. 26 August. Available at: https://news.un.org/en/story/2026/08/1168198 (Accessed: 26 October 2026).

[3] Crouch, C. (2024) *Evidence: UK farmer & grower research priorities*. Agri-Food for Net Zero Network+, 13 November. Available at: https://www.ag-impact.org/post/evidence-uk-farmer-grower-research-priorities

[4] Agri-Food for Net Zero Network+ (2026) *The State of Agricultural Research and Innovation in the UK*. Available at: https://www.ag-impact.org/sari