

AHDB INVITATION TO TENDER

Contract Title:	Early indicators to monitor changes in soil health: evidence to update guidance for UK farmers
Contract Reference:	Early indicators to monitor changes in soil health
Contract period:	October 2025 – March 2026
Date:	5th August 2025

1. Introduction

The Agriculture and Horticulture Development Board (AHDB) is a non-departmental Government body, funded by levy income from farmers, growers and others in the supply chain, and managed as an independent organisation (independent of both commercial industry and of Government). The role of the AHDB is to help improve the efficiency and competitiveness of various agriculture sectors within the UK. Our purpose is to help our farmers, growers and industry to succeed in a rapidly changing world.

As AHDB is funded in this manner, value for money is paramount, and we welcome suppliers who can offer innovative and cost-efficient solutions to meet our needs, whilst also offering superlative service that will enable us to create a world-class food and farming industry. Solutions should look to help us not only reduce costs but increase business flexibility, lift productivity, bring people together to collaborate, innovate and drive change throughout. Further information about AHDB can be found here: <https://ahdb.org.uk/>

This document is an invitation to tender for a project to collate and evaluate UK-relevant data to provide evidence for cost-effective soil health indicators that can detect change when used on a frequent (e.g. annual or seasonal) basis to track soil health improvements. The aim is to provide information to support levy-payers in measuring and monitoring soil health on their own farms, based on an improved understanding of which metrics i) are most practicably suited as sensitive yet robust early indicators of change, backed by validated data, and ii) can be further integrated as an interim measure into a longer-term on-farm soil monitoring regime.

Submissions should be based on the information contained within this document and in the format outlined in section 8. Deadlines and submission instructions are contained in section 10.

2. Background

Good soil health is pivotal for UK agriculture, to maintain sustainable productive systems and deliver a range of environmental functions such as carbon cycling and storage, nutrient cycling, water regulation, and habitat for soil biodiversity. Simple yet robust indicators to measure and monitor soil health, along with an associated interpretation framework, are key to making informed decisions about soil management approaches, and to track and demonstrate improvements using site-specific data. Correlating improvements in soil health with desired outcomes such as improved productivity, economic gains, or delivery of environmental benefits also remains vital to inform decision making on-farm.

On a national scale, there has been substantial work undertaken on soil monitoring, with various initiatives underway (see [Approaches to Soil Monitoring across the Four Nations - LUNZ Hub](#)). Examples include the [Soil Nutrient Health Scheme](#) in Northern Ireland, the England Ecosystem Survey (as part of the [Natural Capital and Ecosystem Assessment Programme](#)), and the [UKCEH Countryside Survey](#), the latter two covering a broad range of habitats. Soil health indicators have recently been [extensively reviewed](#) to inform the development of an indicator for soil health in England ([25 year Environment Plan Outcome Indicator E7](#)).

At farm-level, and with a focus on sustainable productivity, the [soil health scorecard](#) was developed through the [AHDB-BBRO Soil Biology and Soil Health Partnership](#) (2017-2022). The scorecard brings together core physical, chemical, and biological indicators of soil health, and provides farmers and agronomists with a benchmarked traffic-light system to help inform where management interventions might be required to improve soil structure, pH and nutrient balance, soil organic matter, or biological activity. The scorecard was developed to assess soil health on a rotational basis (every 4-5 years), returning to the same geo-located spot in the field to track changes routinely over time. It is integrated into a range of resources available via the AHDB [GREATsoils](#) webpage to support soil management decisions. The soil health scorecard has also been referenced as a tool to help support suppliers in meeting sustainability goals, and was highlighted as a source of guidance for the Sustainable Farming Incentive action CSAM1.

As it does for governments, supply chains, and wider industry, the topic of soil health remains a priority for levy-payers. A key question being asked is how quickly improvements will be seen in soils following a change in management. This is an important consideration for practical decision-making, and to maintain a positive trajectory in sustainable soil management.

The core indicators selected for inclusion in the soil health scorecard were [shortlisted](#) from a longer list of potential metrics and measures. In-field assessments (e.g. visual evaluation of soil structure or earthworm counts) can be carried out as frequently as required, to track progress in between the full suite of soil health indicators being tested routinely once every 4-5 years.

Other soil health indicators that are not included on the scorecard have potential to be used on a more regular (e.g. annual) basis to indicate that progress is being made towards improved soil health and delivery of environmental functions. However, quantifiable evidence from a range of soil types and farming systems may be lacking to provide a robust dataset and interpretation framework relevant for UK agriculture, to improve guidance at farm-level.

3. Related information

Some examples of recent AHDB soil health projects include:

Code	Project title	Year ended
91140002	Soil Biology and Soil Health Partnership AHDB In particular, see the soil health scorecard protocol and benchmarking documents, and final reports from Project 2, Project 9, Project 11, and Project 12	2022
91140082	Best grazing options for soil health (AHDB/BBSRC net-zero partnership) AHDB	2022
21140093	Updating cover crop guidance (Part B): long-term soil health impacts	2025

A review of soil health indicators has recently been published by JNCC: [Review and evaluation of existing soil health indicators being used in the UK and internationally. JNCC Report 737: Annex 1](#)

4. Purpose of the tender

The intention of the current AHDB research call is not to develop novel metrics and indicators of soil health. Applicants should consider the large body of work that has already been done on assessing soil health indicators.

This call is for a short-term project to collate and review evidence specifically for existing soil health indicators that are most informative for use as an interim measure of soil health, which can be used to track progress in soil health improvements on a short-term (e.g. annual or seasonal) basis. The focus is on UK-relevant data. Outputs will be used to update AHDB guidance for farmers on practical soil health assessments and are expected to complement the AHDB soil health scorecard.

Findings from this project will also inform future research on measuring and monitoring agricultural soil health and environmental functioning. Relevant indicators (and interpretation framework) may be tested at scale in future years to obtain further data and support knowledge exchange.

The focus of the current project is to examine the existing evidence base for relevant soil health indicators (as described), with reference to UK agro-climatic conditions and soil types. Applicants are expected to specify which indicator(s) their proposal will cover, with justification for inclusion. The option is available to include soil sampling and analysis within the project to add new data for different soil types or systems, where gaps have already been identified, although this is not an essential requirement. Note that the project timeframe does not allow for yield or harvest data to be collected within the duration of this project.

5. Tender Objectives

Proposals should build on existing research (funded by AHDB and others) to deliver the objectives outlined below. The output should aim to improve levy-payer confidence in measuring and monitoring soil health, based on an improved understanding of which metrics i) are most suited as early indicators of change, backed by validated data, and ii) can be further integrated as measures of interim progress into a longer-term on-farm soil monitoring regime, in a cost-effective way.

1. Identify indicators that are most useful and practicable on-farm as early indicators of change for the following outcomes:
 - a. Agricultural productivity (e.g. yield, cost of production)
 - b. Environmental function (e.g. carbon storage, water regulation, nutrient cycling)
2. Critically evaluate the evidence for the chosen indicators, considering the following (non-exhaustive list):
 - a. Availability and robustness of independent data, relevant to UK agriculture
 - b. How clearly the indicator can be linked to an outcome
 - c. How responsive or sensitive the indicator is, to be able to track progress in improving soil health on a short-term basis (e.g. annually or seasonally)
 - d. Sampling strategies required - including temporal and spatial replication, location, frequency and correlation with other environmental factors - to account for high levels of soil variability (i.e. ease of sampling and/or assessment)
 - e. How cost-effective the measure is
 - f. Ease of interpretation of results to provide actionable insights

3. Identify any related evidence to show links between the soil health indicators and quantification of economic value (e.g. increased yield, reduced inputs)
4. Produce an interpretation framework for farmers based on robust and repeatable data, and consider how this can be integrated into the soil health scorecard, highlighting where further development may be required
5. Produce a final report
6. **Optional:** Soil sampling - with adequate replication - and analyses to add to the evidence base and to inform the development and/or validation of the chosen indicator(s).

A final project report will be required along with participation in our annual project monitoring exercise. Further information and example templates for these reports can be found at [AHDB Cereals & Oilseeds research report templates](#).

6. Scope and Approach

The scope covers UK farmland soils (all soil types and systems, for arable and grazed land). Indicators under consideration should be relevant to both agricultural productivity and environmental functions (e.g. carbon cycling and storage, water regulation or nutrient cycling), and evidence and data should be relevant to UK agro-climatic regions.

The project should consider indicators beyond those included as core metrics on the AHDB soil health scorecard. Inclusion of biological indicators would be welcomed, including direct measures and/or proxy measures of soil biological functioning, linking presence or activity of soil biology to outcomes (productivity or environmental function). In-field assessments should be accessible to farmers or have the potential to be developed for wider uptake in the near future.

7. Project Duration, Budget, and Collaboration

AHDB has set aside a maximum total budget of £34,000, inclusive of VAT, over 5 months.

Joint proposals from two or more contractors are acceptable and encouraged where there is added value. AHDB may, if it is deemed desirable, request applicants to form a consortium to work together. There should be one organisation designated as the lead organisation for the Research Partnership which is responsible for project management and delivery. The group size should be manageable. Prospective partnerships can comprise both research institutes and industrial partners, be multi-disciplinary, and draw on a range of research experience for a number of crops. Therefore, the group does not necessarily need to have a history of working together previously. Further, priority will be given to the applicants with in-kind and or cash funding from the industry.

8. Structure/format of submission

Applicants should complete [AHDB Research and KE Application Form - Full Proposal Small](#), referring to the [guidance notes](#) to aid completion. Applicants should also refer to **Section 9** below for criteria used in evaluation of proposals, noting that this replaces the “Full project proposal assessment form” on page 12 of the full proposal document.

Completed application forms should be submitted to research@ahdb.org.uk no later than noon on 15th September.

The earliest date of commencement for work funded as a result of this call will be 13th October 2025.

On submitting a proposal, please ensure you have read and accepted our terms and conditions, these are available on our website [here](#) under the “Standard contracts” heading. Any organisation receiving funding from AHDB shall comply with the terms and conditions specified in the Research Funding Agreement. AHDB will not be held responsible for any expenses or losses incurred by applicants in the preparation of an application(s).

AHDB reserves the right to not proceed with any application or, if appropriate, to request applicants to form a consortium to work together to deliver a programme of activities.

An evaluation panel will assess submissions in line with the scoring criteria and weightings in Section 9 to decide the best outcome for this research project. The selection will be an open and fair competition according to AHDB’s procurement policy, which complies with the UK’s international subsidy control commitments.

9. Evaluation and award of contract

All submitted proposals will be reviewed by cross-sector research representatives within AHDB, and members of the Research and Knowledge Exchange Committee. If required, external peer reviewers may be sought. The selection will be an open and fair competition according to AHDB’s procurement policy, which complies with the UK’s international subsidy control commitments.

Evaluation of proposals will be on the following basis:

Criteria	Weighting (100%)
1. Understanding of requirements: Demonstrates a clear understanding of the project requirements. Addresses all key points outlined in sections 4 and 5. Provides a clear, accurate and concise proposal.	20%
2. Technical approach and workplan: Feasibility and innovation of the proposed solution. Methodology and technical soundness. Conveys a clear ambition to deliver practical outcomes for levy payers. Ensures that levy payers and stakeholders will recognise how AHDB funding and support has contributed to project outcomes. Realistically assesses risks and provides practical mitigation strategies	35%
3. Experience and qualifications: Relevant experience of the team and organisation Qualifications and expertise of key personnel. Past experience on similar projects. Demonstrates or builds in capacity to deliver the work with a focus on clearly visible outcomes and value for money for levy payers. Includes interaction with levy payers and relevant stakeholders for project steering.	20%
4. Cost and budget: Detailed budget breakdown. Cost-effectiveness and value for money in the context of the size of the benefit to levy payers and the project delivery plan.	15%
5. Project management: Quality of the project management plan. Timeline and milestones. Resource allocation and management. Builds in AHDB and relevant industry project steering.	10%

10. Proposal submissions

Quotes must be received by Noon:	15th September 2025
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Submissions to be made electronically:

Email address:	research@ahdb.org.uk
Reference:	Early indicators to monitor soil health - PROPOSAL

Submissions will remain unopened until after the closing date and time has passed

11. Timetable

	Deadline
Invitation to tender circulated	5 th August 2025
Last date for suppliers to ask clarification questions (suppliers are required to register their interest with AHDB in order to receive clarification information)	1 st September 2025
Deadline for receipt of submissions/quotes	Noon 15 th September 2025
Notification of intended award of contract	24 th September 2025
Proposed contract commencement	13 th October 2025
Project completion	20 th March 2026

Please note these timescales are approximate and may change.

A project initiation meeting will be held between the successful bidder and the project funders at the commencement of the contract. Additional meetings will be held as required for progress updates.

12. Terms/conditions of participation

Research and KE funding | AHDB terms and conditions shall apply to any contract awarded as a result of this request for quote.

If you have specific questions relating to this call, please email research@ahdb.org.uk. All Questions & Answers will be published.

As part of the open tender process, AHDB cannot discuss specific programme details prior to proposal submission.

If you have any questions relating to this tender please contact:

Email address:	research@ahdb.org.uk
Reference (entered as the email subject):	Early indicators to monitor soil health - QUESTION