



Cawood

agriculture





Your complete solution for agricultural analytical testing, monitoring and insight

Access to accurate, reliable data is essential to help farmers and their advisors enhance performance, improve productivity and evaluate progress.

Cawood is the UK's leading provider of agricultural laboratory testing, offering a comprehensive range of analysis services for arable and livestock farmers, many UKAS accredited, through our business units, NRM (2334), IAS (275T), Sci-Tech (7617), and Sciantec (2511).

- Soil nutrient status and carbon measurement
- Manures, plant tissue and grain nutrient analysis
- Forage, raw materials and animal feeds, including shelf life
- PCR and serology for veterinary diagnosis and animal health monitoring
- Milk and grass mineral analysis for dairy farmers
- Water testing for horticulture, utilities, and homeowners
- Feedstock, process, and end-of-line analysis for anaerobic digestion (AD).



Cawood Agriculture works closely with agronomists, farmers and farm advisors to help improve the sustainability, productivity and profitability of the agricultural supply chain.

For farmers, we provide reliable, accurate analysis of soil to measure its health and its ability to support high-yielding crops. We help growers to plan effective crop nutrition strategies by analysing the nutrient status of soils and manures, and to refine those strategies during the season, identifying deficiencies



before they become yield-limiting. At harvest, growers use our test results to assess crop performance and make plans for the following season.

For livestock farmers, we support animal health and welfare, providing analytical testing for producers and vets to fulfil regulatory and diagnostic requirements.

We deliver specialist services for the animal feed and forage market, supplying manufacturers with data for quality assurance and legislative compliance.

We contribute to safer food production by monitoring flock or herd hygiene, food safety and quality control in the supply chain.





NRM was founded in 1990 and has built a reputation for reliable, accurate results from a wide range of agronomic analyses. Working with agronomists, advisors and farmers, our service is designed to support decision making.

Whether you are aiming to improve soil health, maximise the efficient use of inputs, or increase productivity, we firmly believe that better decisions are made when you are armed with the facts.



Sciantec has over 30 years' experience in the agriculture sector, offering a complete analytical service for animal feed safety and nutrition.

Our ISO 17025 accredited laboratory has modern testing facilities and is UKAS (2511) and GMP+ accredited to satisfy quality management and assurance schemes for full legislative requirements. We carry out UFAS, FEMAS and FEDIAF-based analysis as well as per customer requirements.



Based in County Carlow, Ireland, IAS Laboratories has developed its services over the last 30 years to cover a full range of analytical requirements for agriculture.

INAB (275T) accredited to ISO 17025:2017 standard, IAS has extensive experience in soil testing, water analysis, compost & sludge analysis, crop tissue & silage testing, and mineral analysis. We have a long track record of delivering successful long term environmental & agricultural testing, monitoring and sampling projects around Ireland.



Sci-Tech supports farmers and vets with high quality PCR and serological testing services for porcine, poultry and gamebird production. From routine hatchery and farm monitoring to veterinary diagnostics, our UKAS (7617) accredited services are confidential, accurate and timely.

We work closely with vets and farmers to develop innovative solutions to meet market demand and respond to new client specific requirements.



Crop nutrition

Data provided by laboratory analysis is becoming an essential tool in improving crop productivity. The range of testing available allows farmers and their advisors to assess growing conditions and plan effective strategies for soil health and crop nutrition.

The use of analytics in managing soil health, including measuring and monitoring soil carbon, means that landowners and managers can set a benchmark against which to measure the impact of changes to farming practices.

Combining the data from soil, tissue and grain testing gives a detailed view of crop potential and performance, whilst highlighting areas for adjustment throughout the season. Clear, accurate information leads to better decision making, improved inputs efficiency and higher crop yields.

Soil health: agronomy & specialist soil

Successful crop production relies on healthy, fertile soil. Regular soil analysis provides valuable insight into the quality of the soil, including texture, pH and the nutrients available to crops. Additionally, assessing soil organic matter using the LOI method is a strong indicator of soil health. We offer a full range of tests across broad parameters, but for a full understanding of your soil and its potential for crop production and farm income, our most popular suites are:

Standard soil suite

Regular analysis P, K, Mg & pH is required by farm assurance schemes, food supply chains and many government schemes. It measures soil pH and the levels of available phosphorus, potassium and magnesium in the soil. Results are expressed as mg/l and ADAS indices.

Soil health suite

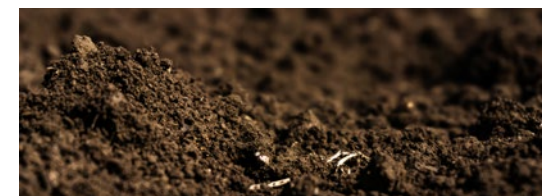
This comprehensive suite of tests provides you with a soil health index based on biological, physical and chemical tests. It measures soil pH and the levels of available phosphorus, potassium and magnesium in the soil. Results are expressed as mg/l and ADAS indices. The addition of organic matter using LOI, textural classification by laser, and the Solvita CO₂ burst test gives a thorough overview of your soil health.

Organic matter

Organic matter analysis is a key metric included in many soil samples. We offer this analysis by Loss on Ignition (LOI) and DUMAS, either as a stand alone test or as part of a broader analysis suite.

Soil trace element suite

The availability of trace elements (micronutrients) can have a significant impact on crop productivity and quality. This suite of tests combines our standard soil tests for pH, phosphorus, potassium and magnesium with a comprehensive range of trace element tests (sodium, calcium, manganese, iron, organic matter, copper, zinc, sulphate and boron) and estimated CEC. These tests identify which fields are at risk of deficiency, either through low trace element availability or the need for pH adjustment.





Soil nitrogen analysis is recommended by RB209 ahead of the spring growing season to refine fertiliser application plans and improve nitrogen use efficiency.

N-Check tests for nitrate ammonium and soil mineral nitrogen at a given depth.

For a deeper understanding of nitrogen availability in the soil, N-Check Plus also includes organic matter, mineralisable nitrogen, soil nitrogen supply (SNS) and SNS index for select crops, and a spring crop nitrogen estimate.



CarbonCheck

Interest in soil carbon storage and sequestration is increasing, following the government's pledge to reach net zero emissions by 2050 and the NFU's aim to achieve it ten years earlier.

CarbonCheck enables farmers and their advisors across the UK to measure, monitor and benchmark the carbon levels in their soils. The package includes organic matter using the DUMAS method, C:N ratio, total nitrogen, total carbon, inorganic carbon, carbonate classification and bulk density. We also have CarbonCheck Plus which includes Active/Labile carbon to give a deeper insight into soil health.



Anaerobic Digestion (AD)

Bioenergy is produced from organic waste (such as biodegradable animal matter, food or drink waste, agricultural residues, or sewage sludge) through the action of micro-organisms in feedstock under anaerobic conditions.

Cawood offers a wide range of testing for feedstock, process, and end-of-line samples. We test to PAS110 digestate quality specification.

- Feedstock suitability: full characterisation including microbial inhibition
- Biomethane Potential (BMP) bench scale analysis with over 20 baths in a dedicated lab
- Residual Biogas Potential (RBP) 28 day test with optional VFA measurement
- Full PAS110 capability (assessing nutrient, PTEs, contaminants, and pathogens), ADQP full assessment, and available without RBP
- Process analysis and process troubleshooting capability: FOS/TAC, Volatile Fatty Acids (VFA) speciation, sulphur, nitrogen, Potentially Toxic Elements (PTEs)
- Detection of Salmonella spp to BS EN 6579.

Organic materials

Manure and slurry analysis

Manures and slurry are a valuable source of nutrients and organic matter, which can improve soil condition and increase crop productivity. Although RB209 gives standard values, the nutrient levels in organic fertilisers can vary considerably. Accurate analysis will enable you to adjust your crop nutrition plans, save on fertiliser management and reduce the environmental impact of nutrient leaching. We recommend the use of these tests alongside soil analysis for a full picture of the nutrients being made available to the crop.

Manure/slurry standard waste suite

This suite of tests includes total solids, total nitrogen, phosphorus, potassium, magnesium, copper, zinc, sulphur, calcium, sodium, ammonium-N and nitrate-N with pH.

If you are using poultry manure, we also provide testing for uric acid nitrogen, which can account for up to 40% of readily available nitrogen..

Additional tests can be added for organic matter or to identify neutralising values as calcium carbonate or calcium oxide equivalents.

We also offer suites for waste-to-land suitability and to Environment Agency (EA) standard.

PAS100 Compliance

PAS100 (for composted waste) is the UK quality standard designed to ensure that compost produced from waste materials are safe, consistent, and reliable for use in agriculture, horticulture, and land management.

We offer a range of PAS100 suites for agriculture, field horticulture, soft landscaping, and horticulture.



Crop health

Plant tissue testing is key to understanding the nutrient content of your crops before deficiencies become yield limiting. Undertaking in-season plant tissue analysis alongside soil analysis enables farmers and their advisors to identify nutrient and trace element deficiencies in the plant and adjust their crop nutrition plans accordingly. At harvest, grain testing will allow you to calculate actual nutrient offtake from your results, which will help refine plans for the following season.



CropCheck

CropCheck provides nutrient values linked to crop growth stages coinciding with the fertiliser application window. This service is suitable for a broad range of cereal crops, including winter and spring barley, winter and spring wheat, winter and spring oats, and rye. Samples should be taken between growth stages GS 30 to GS 37.

CropCheck drives efficiency by assessing the plant as it develops and providing data that allows growers to adjust crop nutrition decisions at a key time in the season. Farmers using CropCheck will either be reassured that the crop is on track to reach its full yield potential, or they will have the opportunity to correct any issues before it is too late.

CropCheck includes total nitrogen and sulphur with N:S ratio, total phosphorus, potassium, magnesium, calcium, copper, manganese, zinc, iron, sodium and boron. CropCheck Plus includes all this, as well as molybdenum and sodium.

The CropCheck report provides adequacy status for each nutrient as well as interpretation guidance.



GrainCheck

Suitable for all cereal crops, our GrainCheck service measures grain nutrient levels to improve crop nutrition plans for the following season.

Grain testing is recommended by RB209 to assess nutrient capture and offtake. It allows you to identify and investigate any shortfalls and evaluate the success of your crop nutrition programme. GrainCheck can also be used to gauge the suitability and fertility of home-saved seed. Our online calculator enables you to calculate actual nutrient offtake.

GrainCheck includes nitrogen, phosphorus, potassium, magnesium, calcium, sulphur, manganese, zinc, copper, iron, boron and N:S ratio.

To add molybdenum analysis, choose GrainCheck Plus.



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Drinking water analysis

Well water is at greater risk of contamination than mains water. As private supplies are not regulated, it's the homeowner's responsibility to ensure their water is safe to drink.

Analysis of private domestic water supplies should be undertaken annually to check for harmful bacteria and chemicals and to comply with EU regulations.

We provide a comprehensive water testing service, which includes supplying sampling kits, performing the analysis, and providing a full explanation of results with advice on how to rectify any issues.

Water & Horticulture

Irrigation water analysis

Testing water used for irrigation is important, particularly for valuable or sensitive crops, or soils which are repeatedly irrigated or where irrigation water is recycled and used again. We test irrigation water for salinity, hardness, nutrient availability and toxicity.

Standard irrigation suite

This range of tests gives you all the basic information you need to confirm the suitability of water for irrigation, including dissolved sodium, calcium, magnesium, phosphorus, potassium, boron, chloride, sulphate, and nitrate-nitrogen. The suite also covers pH, electrical conductivity, total dissolved solids and alkalinity.

Livestock drinking water analysis

Water quality is an important factor for animal health and welfare. Even clear or borehole water can contain dissolved salts, minerals and metals that affect suitability for consumption. Our livestock drinking water suite assesses key parameters to ensure water sources are appropriate for use on-farm.

Standard livestock water suite

This suite includes total sodium, calcium, magnesium, chloride, sulphate, nitrate-nitrogen, total dissolved solids, pH, iron and copper. Results are supplied with explanatory notes to support suitability assessment.



NFT analysis for horticulture

The nutrient solutions in NFT provide plants with the necessary elements to maximise crop production. The solution concentration needs to remain below the level at which interference with water uptake occurs, whilst maintaining sufficient nutrient levels.

Standard NFT suite

This test suite includes pH, electrical conductivity, chloride, sulphate, nitrate-N, boron, calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, zinc, and ammonium-N.

Animal health and nutrition

Livestock farmers, feed suppliers and vets face increasing legislation designed to protect animal welfare and provide traceability and safety in the food supply chain. At the same time, maximising yield and quality is key to maintaining profitability. Laboratory analysis helps establish compliance and enhance performance.

From ensuring contaminant-free feed to monitoring livestock for disease, the provision of reliable, accurate and accredited data is required by government, the supply chain and organisations certifying industry standards. Analytics are also used to evaluate and manage animal nutrition, which is a key factor in maintaining productivity.

Disease prevention and monitoring

Following good farming practices and regularly monitoring herd or flock health are the best ways of reducing risk of disease among livestock. To remain compliant, farmers must work with vets and legislative bodies to test their animals and animal products for disease. We provide serology services for the rapid detection of infection and disease using blood samples.

Porcine

Identify and treat infection quickly in your pig herds to prevent issues including reproductivity issues and high piglet mortality with our porcine PCR and UKAS accredited (7617) serology tests.

We test for Porcine Reproductive Respiratory Syndrome (PRRS), swine influenza, and Porcine Circovirus 2 (PCV2).



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Poultry and gamebirds

Testing for diseases is essential for both the health of the birds within the poultry and gamebird sectors. Our other serology and PCR services test for infectious bronchitis, avian coronavirus and MG/MS, amongst others, enabling reliable diagnosis.



Dairy mineral scanning

Minerals play an integral role in the successful breeding cycle of the mid-lactation cow. Trace minerals, such as copper, iodine, zinc and selenium, along with Vitamin E boost fertility and enhance the animal's immunity. Grass-fed animals still require these trace minerals, as there are deficiencies on many farms.

The IAS Mineral Scan (Milk & Grass), gives a full picture of the current mineral status of the farm and herd, ensuring that the nutrient management plan is sufficient to maintain and maximize grass growth throughout the coming season. The scan will not only pinpoint deficiencies but will highlight imbalances.

Farmers can use the information provided by the Mineral Scan to make informed decisions on the necessary minerals/feeds required to bring back balance to the herd. This has been proven to alleviate problems with fertility, thrive and low milk quality/production.





Animal feeds and premixes

Animal feed is routinely identified as the highest cost of animal husbandry. Feed analysis ensures that the required nutrients for health, welfare, and productivity are present and that the product and supply chain are free from undesirables.

We provide nutritional, microbiological and undesirable substances analysis, helping feed manufacturers to meet FEMAS and UFAS regulations. Analysis of premixes is also available, including vitamins, minerals, and speciality ingredients for inclusion in animal diets for quality and compliance purposes. We offer a wide scope of feed analysis across multiple species in agriculture, aquaculture, and companion animal sectors.

Feed manufacturers can now use our service to establish shelf life for finished goods. With an in-depth consultation and a bespoke design to suit your required analysis parameters, our shelf life service gives you visibility throughout and a comprehensive final report.

Raw materials and ingredients

The movement and storage of raw materials and ingredients bound for livestock and companion animal feed worldwide is one of the biggest marketplaces in the world. Commodities such as cereals, grains, oils, fats, minerals, trace elements, vitamins, by-products, and chemical products are all subject to quality checking, either when moving between countries, or when treated, stored, or formulated into diets. We offer a comprehensive quality checking testing service for undesirable substances in accordance with GMP+, UFAS and FEMAS quality assurance schemes, offering microbiology, nutritional, and contaminants analysis.

Forage analysis

Forage analysis helps farmers and manufacturers understand the nutritional value and mineral content of forages to enable rationing for optimal performance. By testing forage with either NIR ('wet') or wet chemistry on a regular basis, livestock nutrition plans can be managed efficiently and reliably to improve animal welfare and productivity.

We test forages including fresh grass, grass silage, maize silage, whole crop, Alkalage, Lucerne silage, hay and haylage, as well as other forage such as crimped cereal. With a wide range of tests, we can provide data on nutritional composition, vitamins and minerals, mycotoxins and microbiological analysis.

Dietary minerals		
Macro minerals	Micro minerals	Antagonists
Phosphorus	Manganese	Iron
Magnesium	Copper	Aluminium
Calcium	Zinc	Molybdenum
Sodium	Selenium	Sulphur
Potassium	Cobalt	Lead
Chloride	Iodine	
Cation-Anion balance		

Cawood is the UK's leading independent scientific group, recognised for its technical capability and value-added service to customers.

We provide independent laboratory analysis for the agriculture and environmental sectors in the land-based industries. Our business is focused on operational excellence, innovation and offering comprehensive solutions to customers. Cawood is owned by Ensign-Bickford Industries Inc, a US corporation with diversified businesses in aerospace and defence, molecular diagnostics, and pet food palatability markets.

Our Agriculture business unit provides a full range of analysis for soil health, crop nutrition and performance, animal health and nutrition, and water suitability. Our tests are delivered by four of our business units:



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