


Cawood

agriculture

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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 divisions, NRM, Sci-Tech and Sciantec.

- Soil nutrient status and carbon measurement
- Manures, plant tissue and grain nutrient analysis
- Forage, raw materials and animal feeds, including shelf life
- Microbiology and serology for veterinary diagnosis and animal health monitoring
- Water testing for horticulture and livestock.

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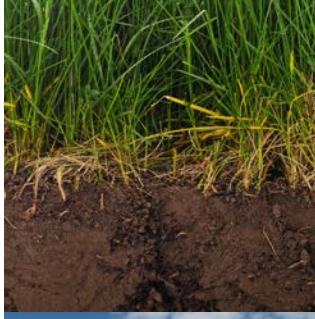
Cawood Agriculture works closely with agronomists, farmers and farm advisors to help improve the sustainability, productivity and profitability of the agricultural supply chain.

For arable 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.



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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. For customers with specific requirements, we also develop tailored suites of tests.

Sciantec part of Cawood

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 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 developing bespoke studies and projects for individual customers.

Sci-Tech part of Cawood

Sci-Tech supports farmers and vets with high quality microbiological and serological testing services for porcine, poultry and gamebird production.

From routine hatchery and hygiene monitoring to veterinary diagnostics, our UKAS accredited services are confidential, accurate and timely.

We work closely with vets and farmers to develop innovative solutions to meet market demand, respond to new diseases and provide data for specific projects.

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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 analysis

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. You can now also assess soil organic carbon, which 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, we recommend the following:

Soil health suite A500

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, textural classification and Solvita CO2 burst test gives a thorough overview of your soil health. Lime and fertiliser recommendations are available for most crops from RB209.

An additional test for sodium and calcium with estimated CEC is useful for growers of crops such as sugar beet and other root crops, which benefit from higher levels of sodium, and horticultural crops which require greater concentrations of calcium.

Soil trace element suite A224

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 full 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.

Standard soil suite A001

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.

N-Check

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, giving a total value for all sampling depths for each.

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, 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, C:N ratio, total nitrogen, total carbon, inorganic carbon, carbonate classification and bulk density. There is also an add-on option for Active Carbon for growers working to improve soil health.

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For more information, contact NRM on 01344 886338.

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 I093

This comprehensive 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, please also ask for uric acid nitrogen testing to be added to the suite.

Additional tests can be added for organic matter and any potentially toxic elements. We can also identify neutralising values as calcium carbonate or calcium oxide equivalents.

Plant tissue analysis

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 for cereals, oilseeds and pulses will allow you to calculate actual nutrient offtake from your results, which will help refine plans for the following season.

Plant foliar suite C013

This suite of tests for fresh plant material measures total nitrogen and sulphur with N:S ratio, as well as total phosphorus, potassium, magnesium, calcium, copper, manganese, zinc, iron and boron.

We also offer additional tests for molybdenum and sodium.

GrainCheck

Suitable for cereals, oilseeds and pulses, 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.

For more information, contact NRM on 01344 886338.

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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. For growers working to Red Tractor standards, water testing by an accredited laboratory is mandatory; this is offered by Sci-Tech.

Standard irrigation suite L003

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.

For a broader analysis including trace elements, choose suite L004 which adds dissolved iron, manganese, copper, zinc and lead to the list. Both packages include interpretation and explanation of the results.

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 N004

This test suite includes pH, conductivity, chloride, sulphate, nitrate-N, boron, calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium and zinc. There is also the opportunity to add ammonium-N if required.

For more information, contact NRM on 01344 886338.

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 and microbiology services for the rapid detection of infection and disease, using blood samples, swabs from carcasses, faecal samples, eggs and organs

Porcine

Identify and treat infection quickly in your pig herds to prevent issues including reproductivity issues and high piglet mortality with our UKAS accredited porcine serology and PCR tests. We test for Porcine Reproductive Respiratory Syndrome (PRRS), swine influenza and porcine salmonella. We also test for Porcine Circovirus 2 (PCV2) and are one of the first laboratories to test for the emerging PCV3 disease.

For more information, contact Sci-Tech on 01588 672600.

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Poultry and gamebirds

Testing for diseases is essential for both the health of the birds and the safety of the eggs they produce. We are one of the few independent, fully accredited laboratories to use CASE agar testing to improve the detection and isolation of Salmonella. Our other serology and PCR services test for infectious bronchitis, egg drop syndrome, avian coronavirus and MG/MS, amongst others, enabling reliable diagnosis. Tests distinguish between different groups and strains of bacteria from a large range of sample matrices, including tissue, swabs, environmental samples, blood and other bodily fluids.

Results from our UKAS accredited testing services for poultry and eggs are uploaded automatically for members of Eggbase, saving time and making data more easily available to demonstrate compliance.

Microbiological water screening

Poor water quality affects all aspects of livestock performance, hampering growth, curtailing egg production, and reducing quality. We provide mineral and potable water testing using a range of techniques and analytical methodologies in line with up-to-date legislation and regulations. Packages include, but are not limited to, full mineral bacteriological screen, potable screen, livestock bacteriology, in-farm water (poultry drinker lines), livestock suitability and full chemistry water suite analysis.

For more information, contact Sci-Tech on 01588 672600.

Animal feeds and premixes

Animal feed is often identified as the highest cost of animal husbandry. Feed analysis ensures that the required nutrients for efficient livestock productivity are balanced and assesses the need for nutrient supplements.

We provide nutritional, microbiological and undesirable substances analysis, helping feed manufacturers to meet FEMAS and UFAS regulations. Analysis for premixes is also available, including vitamins, minerals and feed additives for inclusion in animal diets for quality and compliance. We offer the full scope of feed analysis regardless of species in both agriculture and aquaculture 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 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 feed, food and drink worldwide is one of the biggest marketplaces in the world. Commodities such as cereals, grains, oils, fats, minerals, trace elements, vitamins, animal by-products, and chemical products are all subject to quality checking, either when moving between countries, or when treated or stored. 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, hay and haylage, as well as other forage including crimped silage. 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		

For more information, contact Sciantec on 01757 242400.

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

We provide laboratory analysis to the agriculture, food and environmental sectors, as well as contract research to GLP standards to support the development of agrochemicals, biocides and other chemicals. Our field services team offers measurement and monitoring for water, construction and ecology across the UK.

Our business is focused on operational excellence, innovation and offering comprehensive solutions to customers. With a turnover of £50m, the group employs 600 colleagues across ten sites and completes over ten million analytical tests every year.

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 three of our divisions:

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