



Agricultural | **Growth** | Solutions

AGRILAB CAN HELP FARMERS INCREASE YIELDS, IMPROVE CROP QUALITY AND BUILD A SUSTAINABLE REGIONAL AGRICULTURAL SECTOR

AgriLab performs valuable research and testing, providing advisory and consultancy services to ensure the regional agricultural sector has the equipment and scientific expertise to close the gap between optimal yield and realised yield.



FES, Malawi's leading farming mechanisation supplier and agricultural solutions partner, has launched AgriLab to help agribusinesses, farmers, smallholders and outgrowers test, manage and control their soil, leaf and water quality.





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ADDING VALUE

AgriLab can undertake comprehensive and accurate soil, water and leaf analyses. The purpose of analysis for agricultural enterprises on all scales is threefold:

1. Facilitates effective crop diversification decision-making, improving resilience to climatic and market shocks.
2. Advises on the appropriate use of agri-inputs which delivers cost savings and increased yields and crop quality, resulting in improved profit margins and incomes.
3. Reduces agricultural impact on ecosystems by optimising nutrient intake, reducing leaching and methane and nitrous oxide emissions.

Aside from soil testing, AgriLab offers quality analysis of plant material, including pesticide and herbicide residues.

HARNESSING TECHNOLOGY TO DRIVE PROGRESS

AGRONOMY

Healthy, balanced, fertile soil — the most important ingredient for ensuring crop success.

This agronomy division of AgriLab analyses soil and plant material for agricultural use and produces analysis of soil and leaf nutrients, water retention capacity and various other soil characteristics. With this information at hand, the AgriLab team can advise farmers on their fertiliser, watering and planting requirements and schedules.

- **Soil texture analysis:** Fully automated particle size distribution.
- **pH and electrical conductivity (EC) levels:** Measured utilising cutting-edge robotic analysers
- **Organic matter analysis:** A high temperature combustion analyser produces fully automated examination of total nitrogen, total carbon, inorganic carbon, organic carbon on soil, leaf and crop samples to establish soil fertility.
- **Elemental analysis:** Inductively coupled plasma-optical emission spectrometry (ICP-OES) measures individual elements, including metals, to indicate soil micronutrient availability, crop micronutrient uptake and water quality.
- **Nutrient analysis:** A study of the nutrients cannot always be conducted using single element analyses as it requires a combination of elements to be examined in conjunction. The laboratory's dedicated continuous flow analyser (CFA) evaluates ortho-phosphate, total phosphate, nitrate, nitrite, potassium, sodium, sulphates, chloride, ammonia, urea and boron, providing state-of-the-art colorimetric methods for determining key soil and fertiliser ingredients essential for healthy plant growth and maximum crop productivity.

To ensure homogeneity and accuracy, all laboratory analyses are automated in line with global best practice standards. AgriLab's multiple robotic analysers ensure samples are prepared and analysed consistently. The laboratory prides itself on conducting frequent and real-time quality control analyses along with all of its client requests.

SOIL | LEAF | OIL AND WATER TESTING CAPABILITIES



PRODUCT QUALITY

Using a sophisticated blend of liquid- and gas-chromatography mass spectrometry and other scientific techniques, our food quality division assesses the chemical compounds in soil and vegetative samples, testing whether the produce grown in it is healthy, free of toxins and complies with the required safety standards. Testing for the presence of:

- residues from pesticides and herbicides in consumer goods;
- aflatoxins content; and/or
- purity of other molecules of interest in products meant for market consumption.

Our one-stop soil quality testing shop and advisory services ensure farmers — from small-scale to commercial — have access to cutting-edge information and testing.

GROWTH FOR THE FUTURE

Securing Southern Africa's food supply starts with knowledge. At AgriLab, we are making that knowledge happen.

CONTACT US

If you need more information or have questions about how we can help your farming operation, give us a call or come visit us. **Let's talk.**

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AgriLab is part of the FES Group



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