



Soil Health



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The Group

Diagram was established in 2024 from the transformation of the IBF Servizi Group SpA and the acquisitions of Agronica Srl, Abaco SpA, Agriconsulting SpA and Netsens Srl. It is a leader in Italy and Europe in the digitalisation of services dedicated to the agri-food sector, in the development of farm management software, and in the management of payment, monitoring and control processes for environmental and agricultural support programmes.

It is a partner of major European governments, supporting Public Administration, agricultural enterprises, banking and insurance institutions, and the agri-food industry with the goal of promoting **social, economic and environmental sustainability**.

Today the company is owned 41.6 % by CDP Equity, 41.6 % by Trilantic Europe and 15 % by BF International.



Diagram

Italian and European leader in the provision of precision agriculture services, technological solutions, and professional software applications for the agricultural sector.

The company's mission is to promote sustainability and innovation in agriculture and to build a more digital and sustainable future for agriculture and the environment, sectors most affected by the impacts of climate change.

A trusted partner of leading industrial and governmental stakeholders addressing today's challenges of innovation, sustainable development, traceability, and productivity, the company leverages technology and data-driven decision support to:

- guide the adoption of best agricultural practices
- improve efficiency
- increase productivity through targeted interventions and sustainable practices
- reduce costs
- optimize outcomes
- ensure food security



The challenge

Soil degradation is the main challenge for soil health. This issue manifests in multiple forms and impacts agriculture, biodiversity, water quality, and climate change. The primary degradation factors are:



1. **Soil erosion:** wind and water carry away nutrient-rich topsoil, reducing fertility.
2. **Loss of organic matter:** organic matter is essential for fertility; its depletion reduces the soil's ability to retain water and nutrients.
3. **Contamination:** excessive use of pesticides, chemical fertilisers, or industrial pollution can render soil toxic to plants, animals and humans.
4. **Compaction:** caused by heavy machinery and overgrazing, it decreases porosity and reduces the soil's capacity to absorb air and water.
5. **Salinisation:** in arid or poorly irrigated areas, salt accumulates in the soil, damaging vegetation.
6. **Loss of soil biodiversity:** fungi, bacteria, earthworms and other organisms are critical to nutrient cycling; their disappearance weakens the ecosystem.

The challenge is therefore to identify sustainable agricultural models and management practices that regenerate and protect soil over the long term.



against
heat waves



flooding



and stores
carbon



filters,
and transforms
nutrients,
contaminants,
and water



one quarter
of global
biodiversity

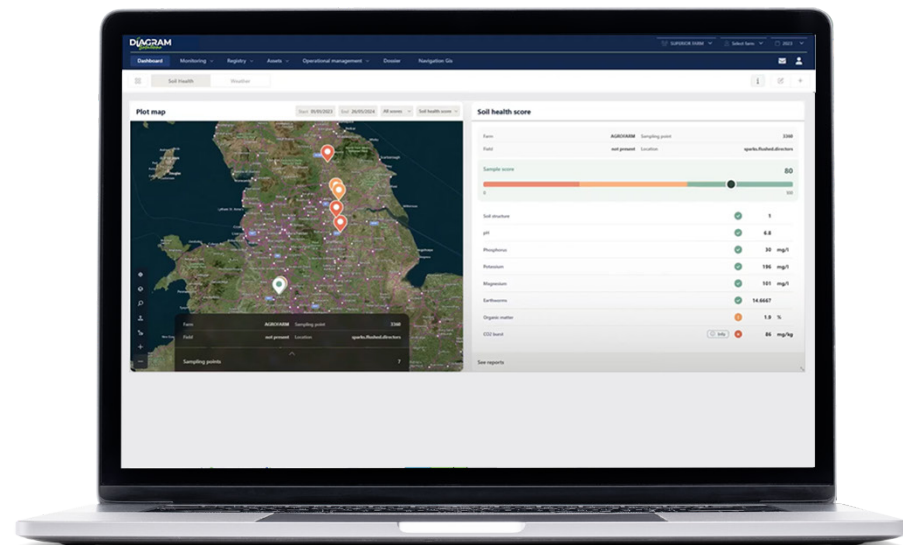


95% of
the world's food

A solution that addresses supply chain needs

Large supply chains, including cooperatives, supermarkets, wholesalers, food processors and multinational food companies, are committed to ensuring supply resilience and improving long-term sustainability. In a context where public perception plays a crucial role, the **Soil Health** solution provides tangible tools to strengthen brand image and positively impact profitability.

Experts across these sectors seek solutions that not only improve soil health and agricultural sustainability, but also reduce risk and optimise operations throughout the supply chain. By implementing this solution, organisations can demonstrate measurable commitment to increasing supply resilience, reducing exposure to external risk factors and enhancing market competitiveness.



Digital Soil Health

Soil Health covers the entire soil health cycle, from mapping and sampling to certification and reporting.

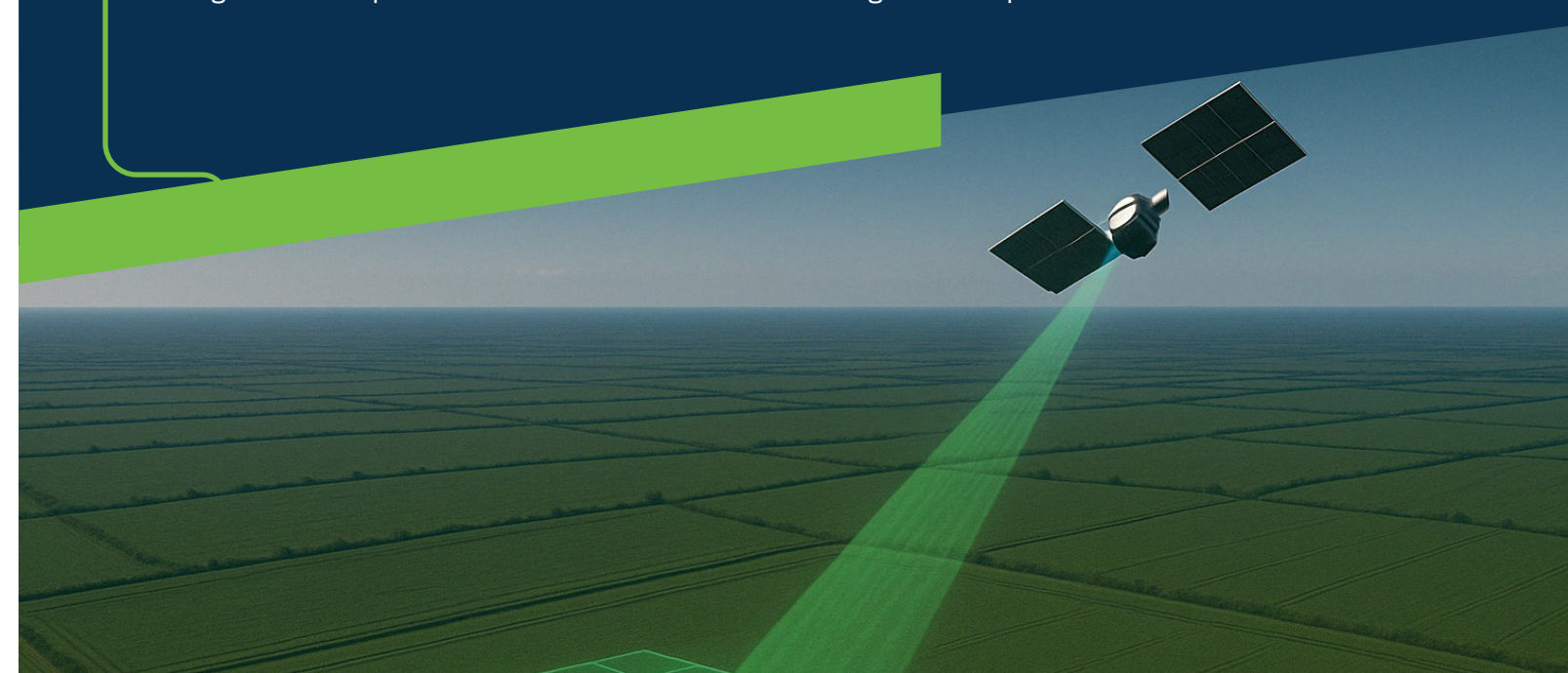
It is not just a measurement or monitoring tool, but a strategic ecosystem designed to build long term agricultural resilience and economic value.

It removes supply constraints, ensures analyses are specifically designed to assess soil health and enables supply chains to demonstrate soil health performance for certification purposes. By consolidating multiple functions into a single system, the solution reduces costs and eliminates the friction of switching between different tools.

Key features include:

- development in collaboration with NIAB (National Institute of Agricultural Botany, UK), integrating chemical, physical, and biological soil properties derived from laboratory analyses
- satellite monitoring combined with proprietary analytical methods that significantly reduce the number of required sampling points, cutting time and costs by up to tenfold compared with conventional approaches
- support for farmers in designing site-specific management plans to achieve healthier soils and more profitable, sustainable farming systems
- a traffic-light classification system that highlights soil properties requiring further investigation or corrective action
- management options that help minimize potential risks to crop productivity

Collaboration among the various stakeholders using performance indicators represents a significant step toward sustainable and innovative agricultural practices.



The solution

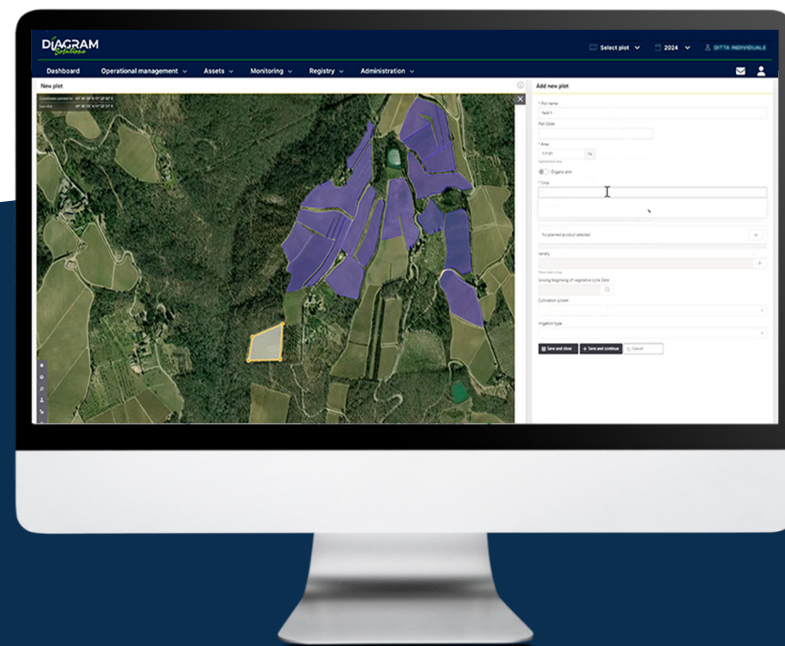


Soil Health is a comprehensive, end-to-end solution that governs the entire soil health cycle, from high-precision mapping and GPS-guided sampling to advanced analytics and final reporting.

The solution processes all types of samples, offering complete interoperability with a wide range of laboratory systems and sample formats. Our solution ensures seamless integration with both conventional and specialized laboratory workflows, facilitating the accurate processing and analysis of samples regardless of their format, origin, or the specific protocols used by different laboratories.

It manages the complete soil lifecycle to ensure transparency and profitability:

- **Mapping & Stratification:** leveraging satellite data and biophysical models to identify Homogeneous Management Zones (HMZs), moving beyond traditional uniform sampling approaches.
- **Smart Sampling:** digital tracking of geolocated soil samples via GPS through to laboratory analysis of pH, extractable nutrients (P, K, Mg), organic matter and microbial activity (CO₂ respiration bursts).
- **Analytics & Intelligence:** automated integration of laboratory results with field-based biological indicators, such as Visual Evaluation of Soil Structure (VESS) scores and biodiversity metrics, including earthworm counts.
- **Certification & Reporting:** generation of analytical and descriptive reports that function as a Decision Support System (DSS), enhancing productivity while meeting ESG certification requirements related to carbon credits and supply chain transparency.



The solution enables continuous digital monitoring, real-time data access and the delivery of tailored recommendations based on site-specific conditions. By integrating remote sensing and historical datasets, it provides a robust, science-based assessment of soil health, supporting supply chains in optimizing agronomic practices and driving measurable gains in productivity and sustainability.

A customizable Soil Health Index, built on priority parameters defined for each supply chain, offers a clear and immediate overview of soil conditions, enabling objective, data-driven decisions to enhance fertility and long-term resilience.

Key soil health parameters include:

- **Chemical:** pH, phosphorus, potassium, magnesium
- **Physical:** soil structure
- **Biological:** earthworm abundance, organic matter content, CO₂ emissions

Managing the end-to-end soil health cycle enables businesses to significantly reduce the number of physical samples required compared to traditional methodologies, while increasing data precision. By establishing a standardized scientific baseline for every plot, the solution allows companies to implement targeted interventions across thousands of suppliers, improving land health and credibly communicating measurable sustainability progress to consumers.

Moreover, soil health data can be directly integrated into financial credit scoring models and environmental risk assessments, transforming soil quality from a biophysical metric into a tangible financial asset.

Benefits

The front-end solution and the companion app, which serves as the primary operational tool, enable farmers to efficiently identify locations where soil sampling is required. The app provides an intuitive interface for field data collection, including soil sample packaging and submission to the laboratory with full traceability. Samples are analyzed according to standard parameters, while operators may also perform additional subjective assessments.

The system provides:

-  Personalized guidance and tailored support consulting based on platform data, offering expert insights and strategic advice for optimizing decisions;
-  A simplified and structured process for soil sampling;
-  Full traceability from field to laboratory;
-  Automation of laboratory results into the system;
-  A scoring system for evaluating each individual soil sample;
-  The ability for an agronomist to intervene and add further values or insights, if required;
-  Leveraging data - including historical datasets - to improve sustainability and communicate commitment to end consumers, who are increasingly aware of the importance of sustainable practices.



**Accurate
and comprehensive
soil analysis**



**Personalized
consulting**



**Commitment to
the end consumer**



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