

# HEALTHY SOIL

THE LIFEBLOOD OF PRODUCTIVE  
AND SUSTAINABLE FARMS.



## SOIL HEALTH TEST PACKAGE

Measure and monitor the soil's key biological,  
chemical and physical characteristics.

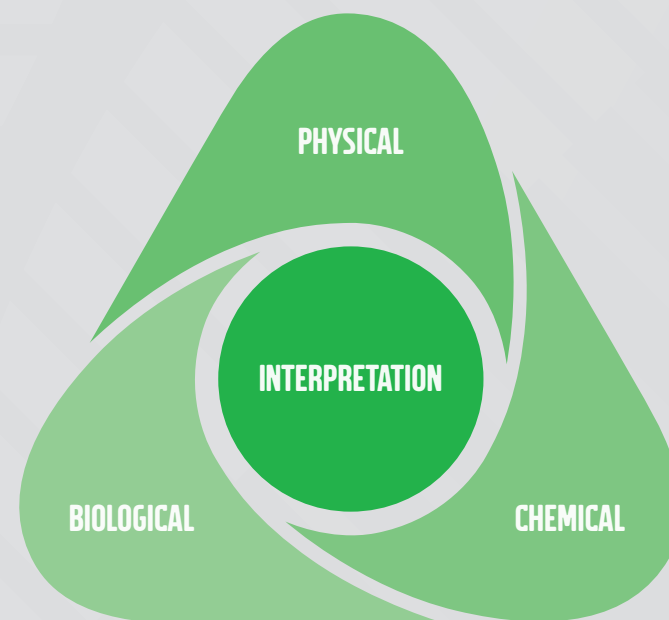
# LET'S GET ACCURATE

Australian farmers manage approximately 60% of the Australian landscape. Like you, they witness every day the role soil health plays in driving the productivity, profitability and sustainability of Australian farm businesses. For more than 60 years, Nutrient Advantage has been a valued partner in providing accurate, scientifically verified and objective indicators of soil health to help guide on-farm decision making.

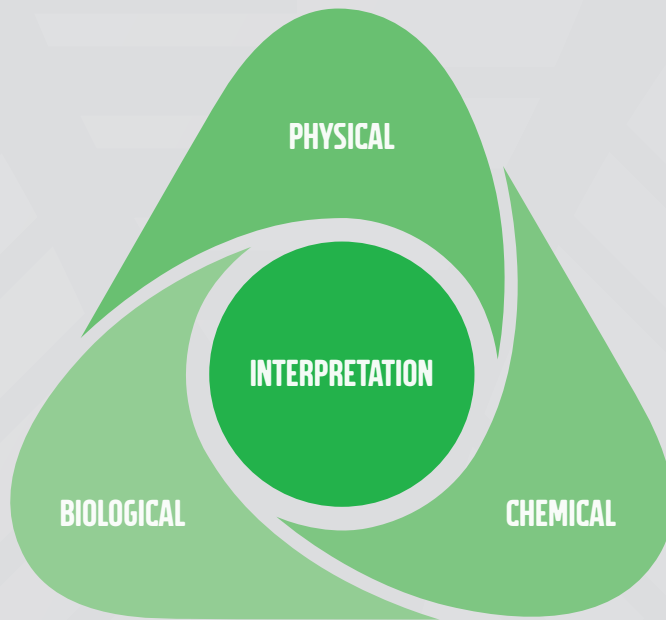


# SOIL HEALTH TEST PACKAGE

Soil health is a measure of key biological, chemical and physical characteristics. The soil health test package enables analysis of the interactions between all three and how together they impact soil health.



# THE SOIL HEALTH TEST PACKAGE COMPRISES OF THESE TEST COMPONENTS



## LABILE (ACTIVE) CARBON

Labile carbon is a fraction of the organic carbon pool that breaks down relatively quickly (<5 years). It is the major food source for soil microbes, acting to supply and recycle nitrogen, and is involved in the formation of soil aggregates. Labile carbon levels respond quickly to crop management practice changes, and it is a useful indicator of management impacts on organic matter and soil health.

## TOTAL CARBON

Total carbon is the sum of three carbon forms: organic, elemental and inorganic. Total organic carbon influences many soil characteristics including colour, nutrient holding capacity, nutrient turnover and stability, which in turn influences water relations, aeration and workability.

## TOTAL NITROGEN

Nitrogen presents in soil in two forms: inorganic, as mineral nitrogen; and organic, such as soil organic matter, microorganisms and plant residues. Total nitrogen is a measure of all nitrogen present in the soil.

## C:N RATIO

Carbon: Nitrogen ratio is the capacity of micro-organisms to release plant-available nitrogen and is influenced by the carbon to nitrogen (C-to-N) ratio of organic matter inputs. Net release of nitrogen occurs when the C-to-N ratio of residues is or falls below 20:1. High stubble loads and residue quality, as reflected in the C:N ratio (>20:1) can result in large changes to N supply in the soil. As the amount of N decreases in residues, microbial demand for soil N increases, resulting in less plant available N.



## AGGREGATE SLAKING & DISPERSION

Slaking generally occurs in soils that contain low levels of organic carbon. Soil aggregates break down to form small particles, forming soil crusts which reduce seedling emergence, water infiltration and soil aeration. Dispersion (sodicity) is a collapse of soil aggregates and a separation of clay particles. This is generally caused by too much sodium (Na) (ESP > 6%), potassium (K) and/or magnesium (Mg), with a lack of soluble calcium (Ca). Soils that are well structured with good stability allow plants to develop root systems that explore the soil profile accessing water nutrients and oxygen.



## MICROBIAL RESPIRATION (ACTIVITY ESTIMATION)

The microbial respiration test measures the amount of CO<sub>2</sub> released from soil microbes after the soil has been dried and re-wetted over a 24-hour period. This test provides an indication of the potential aerobic microbial activity from the soil's microbial biomass. Microbial activity affects the nutrient cycling rate, soil aggregation and organic matter formation, disease suppression and stimulation of plant growth.

# HOW IT WORKS

The soil health test package helps you understand the interactions between physical, chemical, and biological properties found in soil. By understanding these differences you can make targeted improvements, and increase your productivity and sustainability.

Continue your regular soil testing program and Add-on the Soil Health test Package.

Benchmark and measure any movements in the key indicators of soil health.

Rotate sampling of paddocks every 3-4 years

Take the samples the same time of year and if possible, with the same level of soil moisture.

After the testing is complete, Nutrient Advantage will provide a report that includes the optimal range values, interpretation of the values, along with a number of comments recommendations in order to change management practices and improve soil health.



SCAN THIS FOR  
PACKAGE DETAILS  
AND PRICING.

## TRUST THE SPECIALISTS

Our team of industry-leading soil health specialists work in what is regarded as one of the country's leading nutrient testing laboratories, with an extensive range of National Association of Testing Authorities (NATA) accredited nutrient tests in Australia.

We provide you and your farming clients with professional agronomic advice tailored to their specific needs, as well as expert interpretation of results to help you make better informed agronomic decisions for a sustainable advantage.

