



Abbron

The grass is greener



"We chose Abron out of a host of fertiliser suppliers because they had a simple and effective, well-recorded fertiliser regime"

Willy Leferink, Canterbury



The Abron Story

“Yes we’re a fertiliser company, but that’s not what gets us up in the morning. We see our real job as getting your soil and pasture in the best health it’s ever been”.

That’s actually a big distinction, a whole different tack. You can heap increasingly more fertiliser onto the land and get the same results every year, or you can transform your pasture and business from the soil up.

Healthier soil and pasture means boosted production and thriving animals. And that means better financial performance, all while improving fertiliser efficiency.

We easily go head to head with the big boys, because we’re focused on quality, not quantity. And our people aren’t sales reps - they’re your partners in improving farm profitability.

Yes, our approach is far better for the environment. And when you want to take care of your asset, meet the inevitable future demands of a much more health conscious consumer market, and stay ahead of tightening environmental regulations, that’s important. But it’s also better for your bottom line - healthier soil, pasture and animals, meaning healthier financial returns.

Ask us to show and prove it - “we can”



The landscape of NZ farming is changing – not that we need to tell you that. You’re looking for higher production and profitability, while at the same time, consumers and local authorities are demanding it to be done in an environmentally sustainable way. Better financial performance, while looking after the environment. The Abron system can deliver both.

- Russell Snodgrass, CEO Abron

Abron fertiliser system

“Abron have provided me with practical solutions to managing soil health and improving overall farm performance. We are seeing measurable gains each year on-farm without increasing farm fertiliser spend. Abron are a key member of our ‘Farm Business Team’.”
Bruce Wilton, Waikato





Fertiliser

Calci-Life/Calci-Life Phosphate

- » Customised, composted Lime/RPR blends
- » Magnesium and trace minerals
- » Improves soil health
- » Encourages and stimulates biological activity

BION

- » Dissolved urea additive
- » Improves nitrogen efficiency
- » Contains humic and fulvic acid

Soluble Humic Acid Granules

- » Improve efficiency of soluble fertilisers
- » Soil conditioning product
- » Promote development of good soil structure
- » Stimulate biological activity



Future Proofing

Building Resilience

- » Improved pasture production in all weather extremes
- » Better pasture quality through soil improvement
- » Drought tolerance

Environmental Compliance

- » Help maintain productivity in a regulatory environment
- » Reduce risk
- » Create sustainable farming systems

Creating Future Value

- » Taking future opportunities driven by consumer demand
- » Making your produce more desirable
- » Providing more options for innovative farmers



Monitoring

Visual Soil Assessment (VSA)

- » Soil texture and structure
- » Rooting depth
- » Earthworm numbers
- » Clover % and health of nodules
- » Soil smell
- » Thatch

Soil Testing

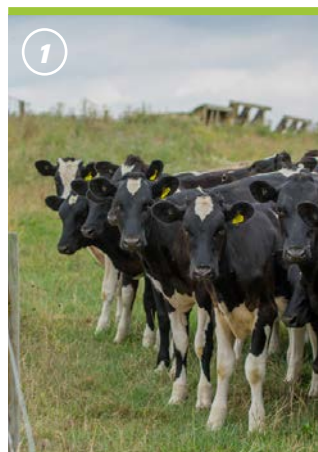
Herbage Testing

Annual OVERSEER® Nutrient Budget

Farm Environment Plans



The Abron 6-step system to building resilience into your farm



1



Initial visit Farm discovery day

To gain an in-depth understanding of your farming operation including soil and herbage tests and a visual soil and pasture assessment.



2



Prepare a farm nutrition plan

You'll receive a comprehensive report that details soil fertility, soil health, and provides recommendations for optimal production of nutrient-dense pasture and crops.



3



Apply appropriate amounts of the foundation minerals **n, p, k, s, mg, ca and na**

To correct nutrient deficiencies and maintain soil fertility for optimal production of nutrient-dense pasture and crops.



4



Supply trace elements

Supplied in plant-available forms and an important aspect of building healthy soil with optimal production potential.



5



Stimulate biological activity and build humus

Enhancing your microbial workforce is key to unlocking your soils potential.



6



Monitor and fine tune

Abron Soil Nutrition Consultants use proven testing procedures to measure progress, adjusting your programme according to results achieved on your farm.



It is important to ensure that the plant has the correct balance of macro and micro nutrients to support not only optimal dry matter production but quality pasture production too.

Maximising the chemical, physical, and biological attributes of the soil results in optimal mineral uptake into the plant. Many treat the soil as little more than a medium to hold plant roots

and it is this lack of understanding that has led to increasingly inefficient and expensive fertiliser practices. Understanding how your soil functions and what gains can be made from capitalising on natural processes in the soil will lead to greater outputs from fertiliser inputs.

The first step required for efficient management of our soil resource is to complete soil tests. Soil tests are used

to determine the quantity or relative concentrations of nutrients. We use this information to correct nutrient deficiencies and maintain soil fertility for optimum production. An Abron fertiliser programme will provide the sufficient macro nutrients - nitrogen, phosphorus, potassium, sulphur, magnesium, calcium and sodium.

The foundation minerals and trace elements

Calcium

- » Should be the most dominant cation in the soil
- » Considered the trucker of all minerals
- » Involved in many mineral relationships in the soil
- » Improves soil structure, plant health, root development and enhances microbial activity

Magnesium

- » Is essential for photosynthesis and energy transfer in the plant

Potassium

- » Involved in the uptake of other soluble nutrients (eg. N and the other cations)
- » Involved in the regulation of around 50 enzymes in a plant
- » Facilitates the movement of sugar and starches
- » Important in sizing up fruit and grain

Phosphorus

- » Essential for root and shoot growth, pollination and seed formation
- » Plays a vital part in photosynthesis
- » Plant available P is often the pasture production limiting factor

Nitrogen

- » Used by plants to synthesise amino acids which in turn form proteins
- » Vital component in chlorophyll, which is required for photosynthesis

Sulphur

- » Essential component for the formation of true proteins, and of vitamins and chlorophyll
- » Availability for maximum pasture production is often an issue in colder months

Sodium

- » Involved in osmotic (water movement) and ionic balance in plants

Addition of trace elements in a plant available form is also an important component in building an efficient, mineralised soil.

Boron

- » Required for the uptake and efficient use of calcium in the plant
- » Essential for cell division and development of the roots and shoots
- » Affects pollination and promotes flowering
- » Required for the movement of sugars within the plant

Cobalt

- » Essential catalyst for nitrogen fixation in legumes
- » Required for synthesis of vitamin b12 in animals
- » Important for fertility in stock

Copper

- » Plays an essential role in chlorophyll production, proteins, sugar synthesis and root metabolism

Selenium

- » Deficiency can depress conception rates, lamb and calf survival and growth rates

Manganese

- » Critical for seed germination
- » Important for nitrogen metabolism

Zinc

- » Essential for phosphorus uptake
- » Regulates plant sugar levels
- » Critical for the uptake of moisture

Molybdenum

- » Essential for the rhizobia bacteria on legumes
- » Required for efficient nitrogen fixation



Your soil is the engine of your farm



Your soil is the engine of your farm. It powers your farm through pasture and animal production. The microbe work force that surrounds the roots maintains the engine and ensures peak performance. Under-performing soil running at say, 50% of its potential, uses a lot of fuel (fertiliser) and under-delivers on its potential horse power.

Above ground is the sugar factory. Plants use the energy from sunlight plus CO2 from the air and nutrition from below ground to produce sugar through the process of photosynthesis.

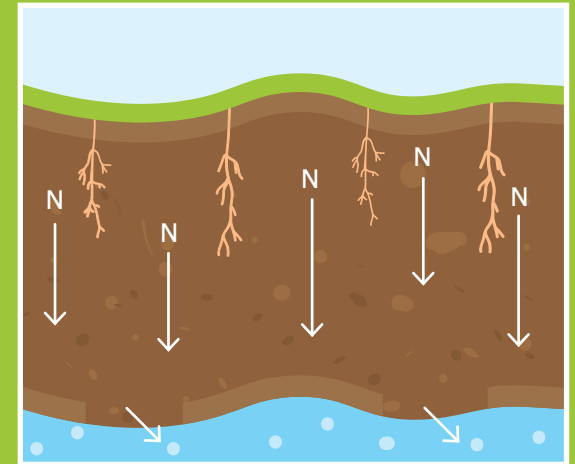
Below ground is the engine powering the sugar factory. If it is operating below its potential, then output from the sugar factory will be down.

“For starters, our input costs have dropped dramatically. We completely stopped applying nitrogen four years ago and there has been no negative change to pasture growth - we know this as we monitor closely using FARMAX on a monthly basis.”

Andrew Russell, Tuna Nui Station

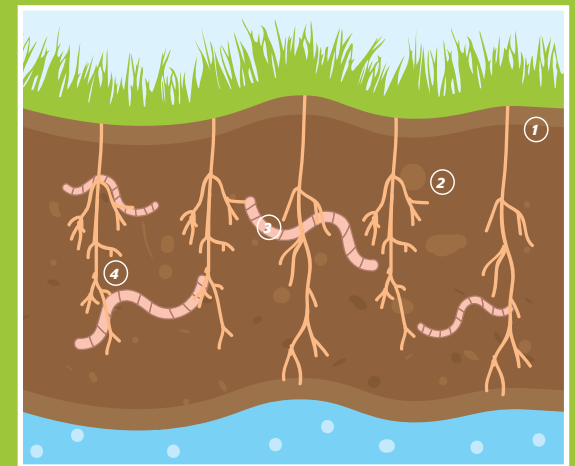
What key performance indicators would we see with the engine running at 50%

- » Increasing nitrogen use with declining pasture production
- » Less than 10% clover
- » Poor summer resilience to dry conditions
- » Pasture pulling
- » Open pasture sward
- » Low earthworm numbers
- » Water ponding on soil surface after rain
- » Low brix
- » Low VSA score



What key performance indicators would we see with the engine running at 100%

- » Low nitrogen use with increasing pasture production
- » High clover %
- » Good drought tolerance, responds quickly after rain
- » No pasture pulling
- » Dense pasture sward
- » High earthworm numbers
- » No water ponding on soil surface after rain
- » High brix
- » High VSA score



A living soil system operating at 100% will hold on to nutrients. The outcome being less wastage out the bottom and cleaner lakes and rivers.



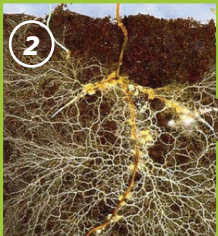
The microbe workforce:

» Each gram of soil contains millions of bacteria, fungi, protozoa, nematodes and EARTHworms



This soil foodweb plays a big role in:

- » Acquisition of nutrients and water
- » Production of antibiotics to deter pathogens and toxins to deter pests
- » Production of hormones and other compounds to spur growth
- » Development and maintenance of good soil structure



Mycorrhizal fungi

- » Act as a surrogate root system and delivers nutrients and water to the plant



Earthworms

- » High populations indicate healthy soil
- » Increase nutrient availability
- » Improve the production and diversity of microbes
- » Promote soil structure improvements



Rhizobia bacteria

- » Inhabit nodules on the roots of legumes
- » Convert N gas to plant-available forms of nitrogen
- » Lots of pink nodules on clover indicate good N fixing activity



Case Studies

Waikato dairy farmers Peter and Mandy Paterson have been on an Abron Soil Nutrition Programme for eight years.



Over this time production has improved from 70,000kg milk solids to 104,000kg milk solids on 79 hectares from 215 cows. Pasture harvested by cows has increased from 10.4T/ha to 13.1T/ha, an increase of 2.7T/ha. This has been achieved with less than 30 kg/ha/yr of applied nitrogen and an OVERSEER® nitrogen loss to water of 23kg/ha/yr. An example that through an Abron fertiliser programme promoting good soil health you can have high farm productivity while looking after the environment and meeting environmental regulations.

Hawkes Bay sheep and beef farmer Andrew Russell, Tuna Nui Station, started with Abron five years ago and has reported significant positive changes:

“For starters, our input costs have dropped dramatically. We completely stopped applying nitrogen four years ago and there has been no negative change to pasture growth – we know this as we monitor closely using FARMAX on a monthly basis.”

“Working root depth has increased from 150mm to over 300mm” says Andrew. Worm numbers have increased to over 20 per spade square and there is much more biological activity. A more balanced pasture quality has also helped contribute to lambs being finished much earlier, which has had obvious positive effects on the business.

Nutrient Management and Environmental Compliance

Nutrient Management has quickly become the latest farming buzz term, with almost all regional councils currently having in place or implementing ‘Regional Plans’ aimed at setting standards for nitrate leaching and phosphate runoff.

These standards will affect future land use and farming intensification options or require changes to your current farming system.

Meeting these proposed standards will most likely require farmers to prepare a Farm Environment Plan (FEP), Sustainable Milk Plan® or Nutrient Management Plan (NMP). They aim to identify and minimise the loss of nutrients from your production system.

Typically, these plans cover categories such as fertiliser management, effluent management, irrigation management and riparian or wetland management.



We can help farmers with:

- » Establishing historic N loss baseline
- » Farm Environment Plans and Nutrient Management Plans
- » Scenario modelling for resource consents and land use change applications
- » Annual OVERSEER® Nutrient Budget

Abron soil nutrition consultants are qualified in the use of OVERSEER® and are able to discuss Farm Environment Plan options in your region.



You can't monitor what you don't measure!

Monitoring is the key to measuring changes in the soil's physical properties and the health of your soil

Abron doesn't just make fertiliser recommendations based on a soil test- we take a closer look at what's happening underneath the pasture. The visual soil assessment (VSA) was developed by Graham Shepherd of BioAgriNomics and is a scientifically proven, repeatable method developed for New Zealand soils.

We use the VSA to assess and monitor soil quality and pasture and crop performance. The assessment gives a 0-2 score for 28 different aspects of your soil and plants. We carry out VSA's twice a year, in spring and in autumn, when weather conditions are favourable - i.e not too wet and not too dry. We record these on a scorecard and look for long-term trends over 3-5 years.

We dig a 200mm cube of topsoil and assess:

- » Soil texture and structure
- » Rooting depth
- » Earthworm numbers
- » Clover % and health of the clover nodules
- » Soil smell
- » Thatch
- » Pasture colour relative to fertility spots

Some of the things we measure are:

- » Brix of the pasture using a refractometer
- » Nitrate levels in the pasture or crop using a sap meter
- » Soil compaction using a penetrometer
- » Length and density of roots

Case Study: Southland Dairy Farm

Before Abron:

- » Tight blocky soil
- » Roots restricted to top 100mm
- » Poor porosity
- » Low worm numbers
- » Poor pasture growth



Improvements:

- » Finer nutty crumb structure is developing
- » Improved drainage and porosity
- » Increased worm numbers from 5-10/spade square to 18-24/spade square
- » Increase rooting depth from 100mm to beyond 250mm
- » Increased pasture growth - the farmer no longer has to miss the paddock every few rounds from lack of growth



The Southland dairy farmer has been on an Abron fertiliser programme for two years.





Abron

Building resilience into your farming system

*Find out how the grass really is greener with a more resilient, farming system.
Request a free no obligation farm visit.*

30 Landsdowne Road, RD1, Waharoa 3474 PO Box 388, Matamata 3440

Phone 0508 FOR FERT **Fax** 07 888 4869 **Email** info@abron.co.nz **Web** www.abron.co.nz