***Tiakina Te Whenua Tiakina Te Moana***


## Who is Bio*Ag*?

We are a privately owned company based in New Zealand and Australia specialising in advanced microbial ferment technology for enhanced soil, vine and fruit performance. Our partners, Steven Haswell (NZ), Anton Barton (Aus) and retired founding partner Jeptha Gates (USA), have international agronomy experience in biological agriculture, horticulture and viticulture systems spanning over 40 years.

BioAg was established in Australia in 1999 and New Zealand in 2007. Founding partner and scientist Jeptha Gates began developing BioAg's microbial technology and agronomic system in 1983 after witnessing soil quality, crop health and yield decline under mainstream fertilisation systems in the USA.

## What do we do?

In addition to manufacture and supply of BioAg's unique biological cultures and bio-active solid fertilisers Bio*Ag* provides complete soil and vine fertility programmes based on comprehensive soil sampling, visual soil assessments, vine health indicators, and incorporates viticultural and wine making objectives.

Bio*Ag* focuses on the biological function of soils to enhance vine health, fruit quality and yields whilst contributing to nutrient efficiency, nutrient density of fruit, vineyard profitability and environmental performance.

Bio*Ag's* comprehensive programmes include all situation appropriate soil minerals and nitrogen inputs together with growth and maturation targeted biological foliar treatments. A core focus is addressing causes rather treating symptoms.

Bio*Ag* services customers NZ wide including arable, dairy, deer, horticultural tree crops, produce crops, sheep and beef and viticulture production.

We are justly proud of our motto. Better soils. Better crops. Better stock. ™

## Contact

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"All farming involves the management of an ecosystem"

Professor Emeritus Don M. Huber, Purdue University

BioAg®
Biological Solutions

# The BioAg System


- Productivity
- Quality
- Fertiliser Efficiency
- Cost Effectiveness
- Humus Development
  - Soil Quality
  - Soil Carbon
- True Sustainability

0800 2 BIOAG
www.bioag.co.nz

Better soils - Better crops - Better stock

*Life begins in the soil*

## Complexed Biological Food Resources

The unique BioAg cultures are produced as a food resource containing a mass of complex secondary metabolites – vitamins, minerals, proteins, enzymes, amino acids, carbohydrates, and natural growth promoters (by-products of humus formation) that provide high levels of biochemical energy. The cultures are based on highly productive and biologically advanced soils which host an enormously diverse range of beneficial micro-organisms. These metabolites are in forms that are most readily available to micro-organisms in the soil and on plant surfaces. They do not require further digestion or transformation to be available to soil and plant life.

## Feed the Soil and enhance your natural capital

In a highly developed and functioning biological system there are some 60,000 – 100,000 species of organisms in the soil (one teaspoon of soil could contain 5 billion bacteria, 20 million fungi and 1 million protozoa and algae!). Even systems subjected to harsh practices may have 5,000 – 10,000 species functioning and many more just waiting for the appropriate food resources. The mass of complex metabolites in the BioAg products help balance the soil, thereby balancing the plant and fruit. The principle is to feed the soil which in turns feeds the trees, vines, crops or pasture as is the natural ecological process. This allows plants to fully express their natural potential for nutrition and resilience.

## Mineral Balance

Correct mineralisation in soils is essential. The BioAg approach always considers this important aspect with particular attention given to calcium and phosphorus and how these key nutrients are functioning. The BioAg system is a process of rejuvenation and enhancement – it is not a miracle cure.

## Sustainability – Future Proofing Productivity

The BioAg system improves the efficiency of all mineral and fertiliser inputs positively impacting a broad range of factors that make up a farm, orchard or vineyard productivity and thus the bottom line. This applies whether the system is conventional, organic or any other approach. The BioAg system sustains our natural capital of soil and plant resources while maintaining essential soil humus and soil fauna ecosystems.

## Low Rates - High Response

A high population of healthy micro-organisms in the soil and on the plant increase the functional availability of nutrients and minerals. BioAg liquids are applied at very low rates and any additional supplementary minerals and nitrogen (conventional or certified organic forms) are commonly used at reduced rates due to increased efficiency.

## Treat the Patient Not the Symptom - Common sense

The BioAg approach addresses causes, rather than "treat" symptoms. Central to this is optimising the soil processes of mineralisation and humification. The BioAg programmes are not an additional farm input to existing fertilisers, they form a complete soil, vine and fruit fertility programme in their own right.

## Bio*Ag* Liquid Biological Cultures

- **Improve** soil structure and fertility by enhancing the population, diversity and activity of soil organisms
- **Enhance** nutrient cycling, build humus and sequest soil carbon
- **Increase** plant sugar levels which provide natural resilience to pests and disease
- **Stimulate** the mechanisms of plant induced resistance
- **Create** a balance of functionally-available nutrients in the soil encouraging desirable species to thrive
- **Optimise** the processes of humification and mineralisation
- **Unlock** previously applied inputs including phosphorus and calcium, and make them plant available
- **Maximise** nutritional potential of pastures and crops thus improving growth rates, yields & quality

**Excerpt from Soil Microorganisms and Higher Plants, Krasilnikov N.A.**

*The principal property of the soil fertility is determined by biological factors, mainly by microorganisms. The development of life in soil endows it with the property of fertility. "The notion of soil is inseparable from the notion of the development of living organisms in it". Soil is created by microorganisms. "Were this life dead or stopped, the former soil would become an object of geology" (Vi'lyams, 1950, p 204)*

CERTIFIED INPUT for ORGANICS bio gro NEW ZEALAND

AGRECOVERY