

# BOOST YOUR SOIL

Vermicast application for  
healthier soils and plants



# OUR STORY

## INNOVATION FOR AN ORGANIC WASTE-FREE NEW ZEALAND.

It takes a few people and a whole lot of worms to create our high quality vermicast. We provide a carefully curated buffet of organic wastes and in return, our noke (earthworms) produce a biologically active soil conditioner, vermicast—otherwise known as worm poo.

Not your run-of-the-mill compost, vermicast is a nutritious and humus-rich additive, ideal for everything from depleted agricultural and forestry soils, horticulture and landscaping, to home gardens.

## THE MYNOKE STORY

Our story began in 2007 with one man, a bucket of worms and a pile of 'waste'.

Harnessing the power of this natural workhorse, today we are the largest global enterprise of our kind, servicing New Zealand's organic waste producers. We are the market leaders in sustainable innovation in vermicomposting.

Our mantra at MyNoke is 'Soil to Soil', meaning what is taken from the soil should be returned to soil. Worldwide, many agricultural practices strip soils of their carbon and nutrients, relying on overuse of synthetic or mined fertilisers to continue production. Worse still, thousands of tonnes of nutrient- and carbon-rich organic waste is discarded in landfills—wasting nutrients and producing harmful greenhouse gases.

At MyNoke we don't see wastes, we see organic resources. We are in the business of diverting organic wastes from landfills—promoting reuse, ensuring nutrients are returned to soils and maintaining soil health over generations.



# BENEFITS OF VERMICAST

Vermicast is a naturally pelletised soil conditioner providing an abundance of physical, chemical and biological benefits to soil.

The main constituent is humus, the complex organic matter which gives healthy soils their rich brown colour and fluffy texture. Humus holds nutrients in the soil, retains moisture through increased porosity, and provides a home and source of food for a diverse range of microbes.

Our worms add more than just humus though. As the worm gut and associated microbes act to break down organic waste, any incoming pathogens are killed while beneficial microbes (fungi, bacteria, protozoa) are enriched within the castings. Diverse microbiota are key to healthy soils and plant growth—outcompeting and suppressing unhealthy pathogens—resulting in the suppression of plant diseases. Further, worm-associated microbes produce growth promoting regulators such as auxins and gibberellins, which aid the development of plant shoots and roots.

Last but not least, our worms add capsules (worm eggs) which will inoculate soils with their own worm population.

## Typical nutritional values

Organic Matter	30.5%
Total Nitrogen	1.0%
Total Phosphorus	6,480 mg/kg
Total Sulphur	2,510 mg/kg
Total Potassium	1,710 mg/kg
Total Magnesium	2,400 mg/kg
Total Calcium	98,400 mg/kg
Total Sodium	1,500 mg/kg
pH	6.8 - 7.1 (neutral)
C/N ratio	15
Active Bacteria	High
Total Fungi	High

## FOR SOILS

- Adds stable, mature humus
- Increases soil organic matter
- Increases water-holding capacity
- Improves soil structure and promotes stable soil aggregates
- Increases nutrient-holding capacity (high cation exchange capacity)
- Buffers soil pH
- Adds natural plant growth biostimulants and enzymes
- Unlocks plant nutrients like phosphate
- Adds beneficial soil organisms: fungi (including mycorrhiza), bacteria, nematodes
- Adds earthworm capsules (eggs)

## FOR PLANTS

- Stimulates plant root growth and activity
- Increases nutrient uptake
- Increases yields, flowers and fruit size
- Improves fruit quality and shelf life
- Suppresses plant diseases
- Reduces root-damaging nematodes
- Strengthens plants against insect attack: aphids, caterpillars, etc
- Adds trace elements

## FOR THE ENVIRONMENT

- A natural product, sparing additional use of synthetic fertilisers and pesticides
- Reduces greenhouse gas emissions from landfills
- Promotes circular economy and reuse of organic resources

# BENEFITS OF VERMICAST APPLICATION TO SOIL, PLANTS, WATER, AND ATMOSPHERE

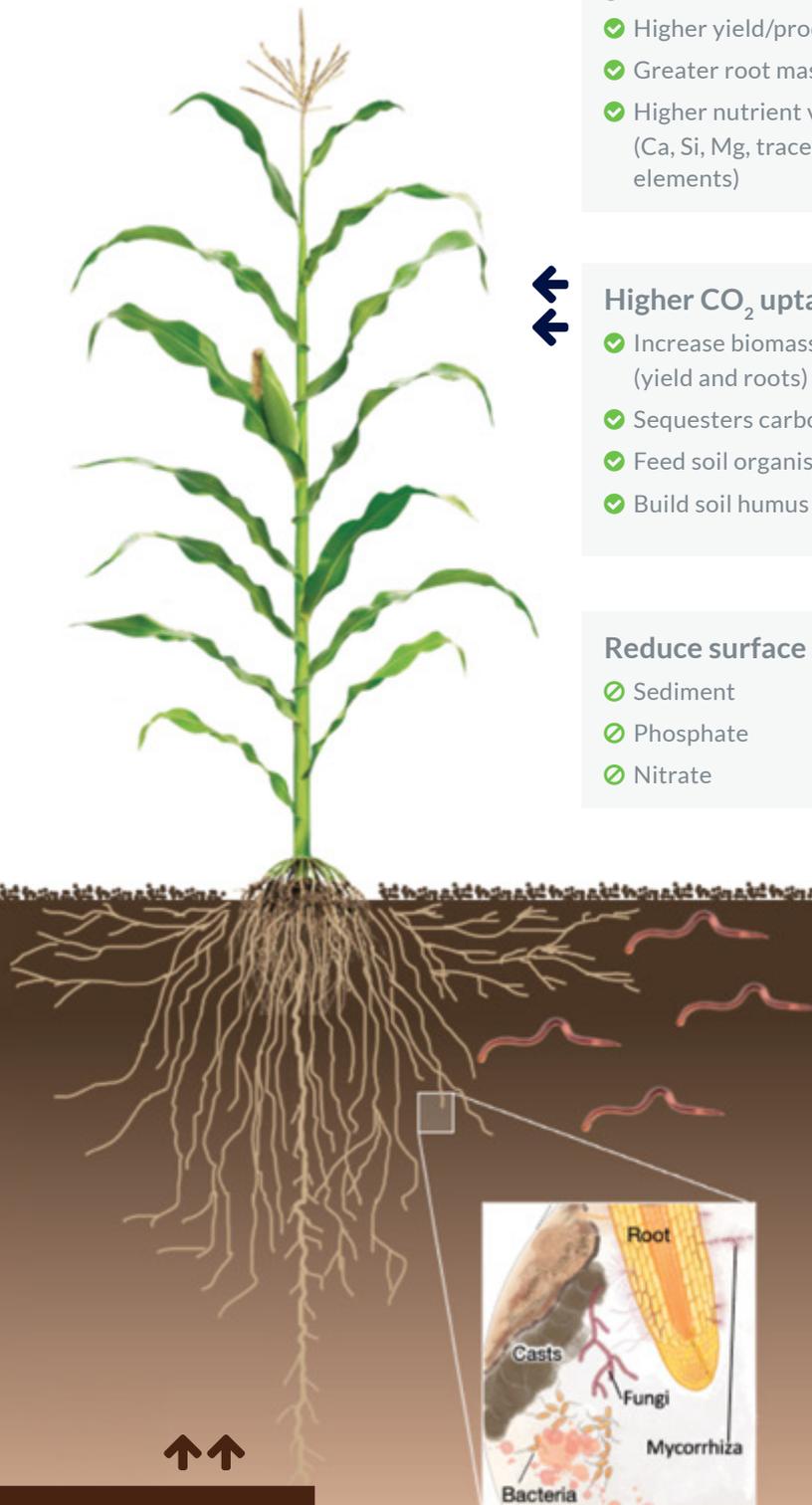
- ✓ Humus
- ✓ Carbon
- ✓ Nutrients (N, P, Ca, Mg, K, S, Na)
- ✓ Microorganisms:
  - ✓ Fungi
  - ✓ Bacteria
  - ✓ Mycorrhiza
  - ✓ Beneficial nematodes
- ✓ Enzymes
  - ✓ Phosphatase
- ✓ Plant growth promoters
  - ✓ Auxins
  - ✓ Gibberellins
  - ✓ Indole acetic acid (IAA)
- ✓ Trace nutrients
- ✓ Silicate
- ✓ Earthworms

## INPUTS FROM VERMICAST



## Reduce nutrient leaching

- ⊗ Nitrate
- ⊗ Potassium
- ⊗ Phosphate



## Increased plant growth

- ✓ Higher yield/production
- ✓ Greater root mass
- ✓ Higher nutrient value (Ca, Si, Mg, trace elements)



## Higher CO<sub>2</sub> uptake

- ✓ Increase biomass (yield and roots)
- ✓ Sequesters carbon
- ✓ Feed soil organisms
- ✓ Build soil humus

## Reduce surface runoff

- ⊗ Sediment
- ⊗ Phosphate
- ⊗ Nitrate



## IMPACTS OF VERMICAST

### Humus increases

- ✓ Nutrient storage
- ✓ Water-holding capacity
- ✓ Aggregate stability
- ✓ Food for soil organisms

### Beneficial microorganisms

- ✓ Mobilise nutrients
- ✓ Suppresses diseases and pests
- ✓ Mycorrhiza 'extend' root zone
- ✓ Stabilise soil aggregates

### Plant growth promoters increase

- ✓ Root growth (density, depth)
- ✓ Root activity (nutrient uptake)
- ✓ Carbon sequestration

### Enzymes unlock nutrients

- ✓ Phosphates
- ✓ Trace elements



# VERMICAST APPLICATION

	Vermicast application rate	Liquid vermicast extract	Soil-dwelling earthworms
<b>Crops: maize, lucerne, fodder beet, other crops</b>	Before and after planting 5 t/ha for good soil, 20 t/ha for weak soils	20 to 40% in water applied fortnightly to dripping point for foliage application 50 to 200L per ha for ground application	After soil tillage
<b>Market gardens</b>	Before or after planting 10 t/ha for good soils 30 t/ha for poor soils	20 to 40% in water applied fortnightly to dripping point for foliage application 50 to 200L per ha for ground application	After soil tillage
<b>Pasture: dairy and dry stock</b>	During regrassing After grazing or mowing 10 to 20 t/ha for regrassing 5 to 7.5 t/ha side dressing	Ground application 50 to 200L per ha for ground application	Spring, Summer and Autumn
<b>Orchards: kiwi, avocado, apple, plum</b>	In plant holes for new orchards As side dressing Autumn to spring Broadcast or band applied 5 t/ha for good soils 20 t/ha for poor soils	20 to 40% in water applied fortnightly to dripping point for foliage application 50 to 200L per ha for ground application	Spring and early summer
<b>Vineyards</b>	In plant holes for new vineyards As side dressing Autumn to spring Broadcast or band applied 1 litre per plant when planting 5 to 20 t/ha band application vineyards	20 to 40% in water applied fortnightly to dripping point for foliage application 50 to 200L per ha for ground application	Spring and early summer
<b>Flowers</b>	Before and after planting 1 handfull per plant, 3x per year	20 to 40% in water applied fortnightly to dripping point for foliage application 50 to 200L per ha for ground application	Spring and early summer
<b>Greenhouse</b>	5 to 10mm mixed 100mm into soil 10 to 20% in potting mixes	Added to drip irrigation, hydroponics, foliar application Add approximately 5ml per plant per week through drip irrigation	-
<b>Sports fields</b>	Preparing for seeding new turf After mowing 1 to 4kg/sqm	For golf course greens add 50 to 200L for ground application	Spring and early summer (not on greens)
<b>Plant nurseries</b>	Potting mix In plant holes or band application 10 to 20% in potting mixes 0.2 to 1 litre per plant hole 5 to 20 t/ha band application	As foliar application to strengthen foliage 20 to 40% in water applied fortnightly to dripping point for foliage application	Spring and early summer
<b>Berries</b>	Planting runners (strawberries) 5 to 20 t/ha band or ridge application	Added to drip irrigation if ridges are covered with foliage	-

# OUR PRODUCTS

## VERMICAST

MyNoke offer a range of high-quality, nutrient-rich solid vermicast options, including an Organic Certified product.

All vermicast products are screened and suitable for most commercial fertiliser spreaders. We also have a finer 6mm screened product, suitable for potting mixes and hydroseeding.

Vermicast can be ordered in bulk e.g. truck and trailer unit, bulk 1,000 litre bags, or smaller 17 litre bags.



## LIQUID VERMICAST EXTRACT

An extract developed for spraying on foliage, soils and seeds, adding to hydroponic and irrigation systems, and for daily watering.

Supplied in 1 litre, 20 litre and 1,000 litre containers.



All MyNoke products are naturally produced and nurtured by free range, living earthworms, and may contain seeds.

**We would love to hear from you!**

For questions or comments, contact us using the details below.

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**MYNOKE**  
Soil to Soil™