

The Essence of MyNoke

Transforming New Zealand's organic
waste into reusable resources

MYNOKE
Soil to Soil™

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01 THE MYNOKE JOURNEY



Learn about the MyNoke journey (YouTube video)

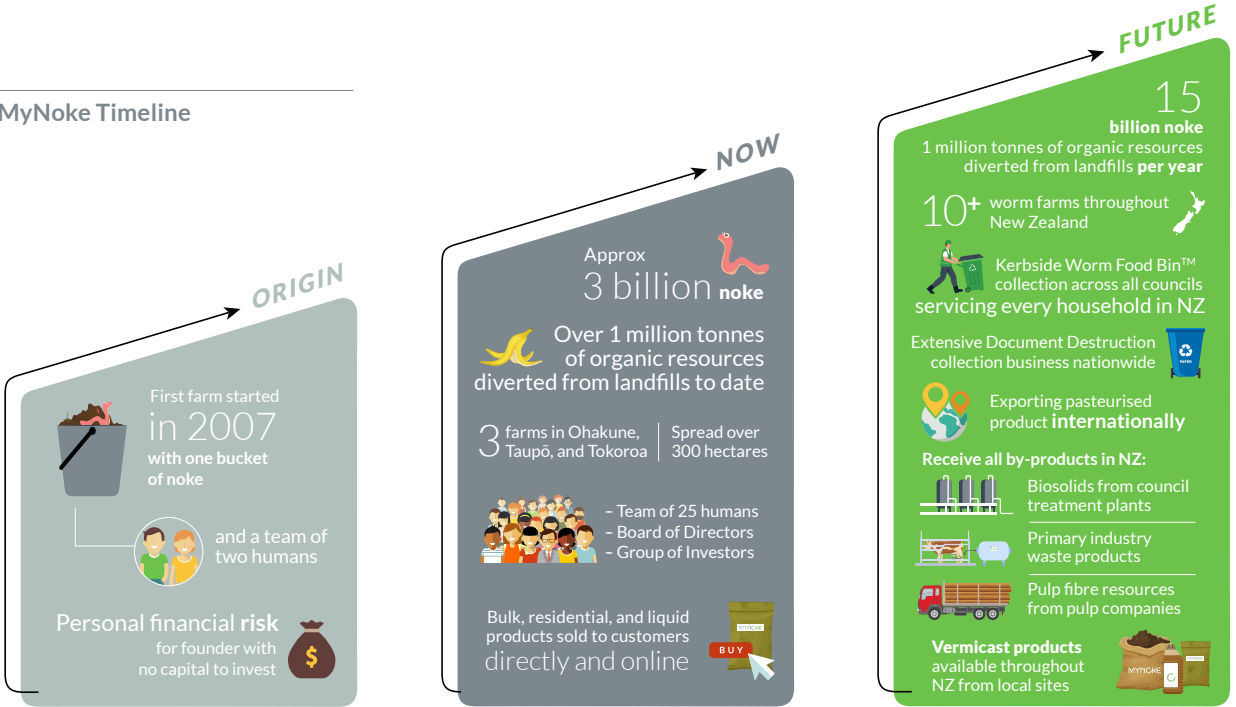
MyNoke was established in 2007, when our soil scientist-founder, Dr. Michael Quintern, was developing big ideas for environmentally conscious waste disposal at an industrial level.

Unable to explore those ideas in his salaried position, Michael gambled his future on developing a trial commercial worm farm to process pulp mill fibre waste at a Waikato-based mill. The trial was a success and MyNoke was born.

MyNoke, meaning 'my earthworm' in Te Reo Māori, continues to have a strong social conscience, and has grown and developed through the last fifteen years to encompass biosolids disposal as well as food and paper waste at a number of locations.

To date, the work of MyNoke has diverted over **one million tonnes of organic waste from landfill.**

MyNoke Timeline



02

MYNOKE SITES

Every vermicomposting site is environmentally managed as an entirely natural process. No synthetics or chemicals are used in our vermicomposting process.

The sites are similar to farms in that agricultural machinery is used. The output from the process is a biologically active soil conditioner. Vermicast is in high demand where there is a full understanding of the importance of enhancing soil fertility to improve health.

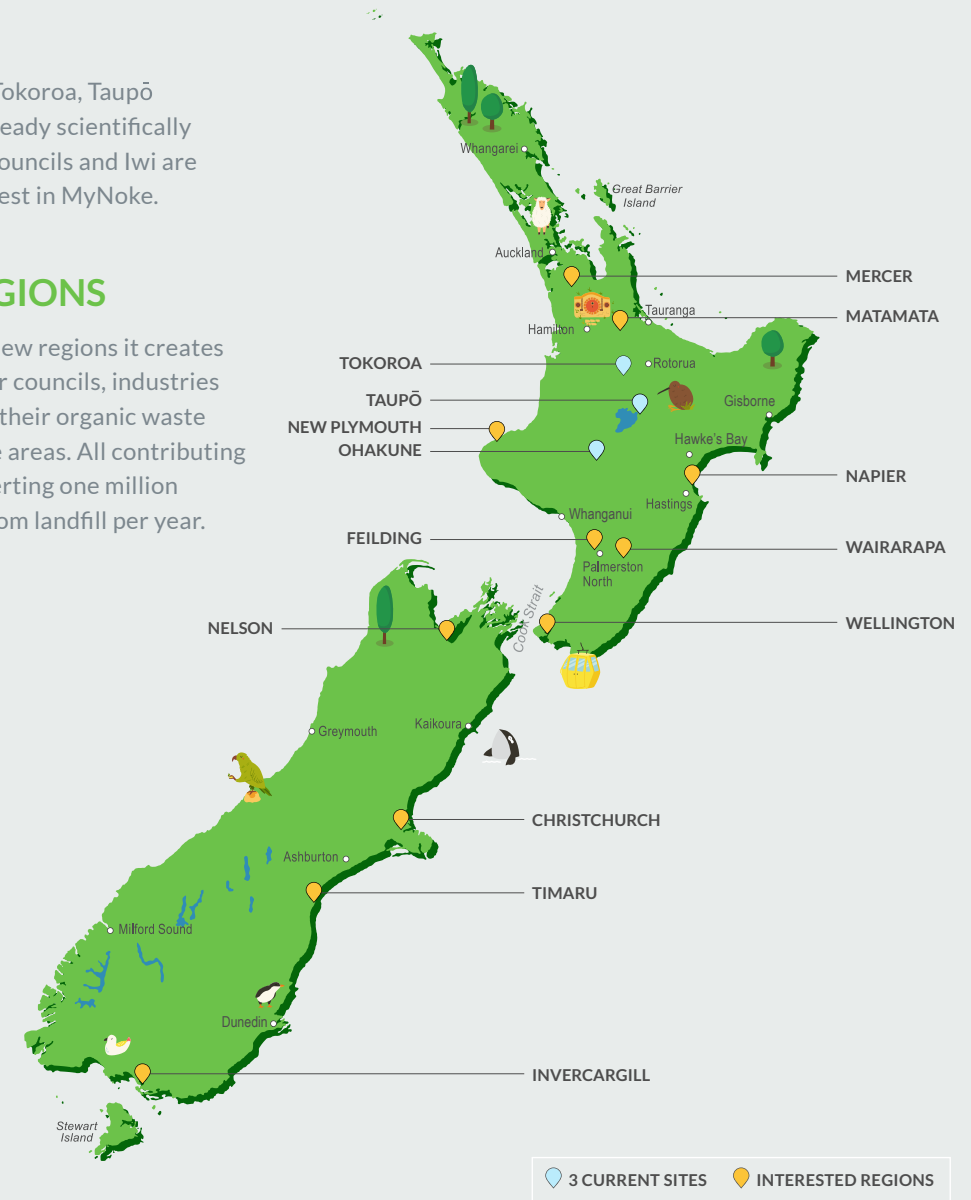
The expansion of farms throughout New Zealand is a key component of our strategic business plan. The opportunities hinge on a number of required steps to establish new sites. This largely relies on having adequate organic waste streams available in the region, council resource consents being approved and local Iwi approvals in particular regions where sites are being considered.

CURRENT SITES

With three active sites in Tokoroa, Taupō and Ohakune that have already scientifically proven their worth, local councils and Iwi are increasingly showing interest in MyNoke.

INTERESTED REGIONS

As MyNoke expands into new regions it creates countless opportunities for councils, industries and businesses to process their organic waste streams in their respective areas. All contributing to MyNoke's BHAG of diverting one million tonnes of organic waste from landfill per year.



03 MYNOKE PROCESS

Organic waste materials are processed at vermicomposting sites by carefully managing proportions of 'dry' (pulp and paper) and 'wet' (nitrogen-rich) wastes, to create the optimum diet for a range of earthworm species. Our earthworms reduce the waste volume by close to 80% and a valuable soil conditioner - 'vermicast' - results. This is then sold to agriculturists, horticulturists and market gardeners to improve soil health.

STAGE 1

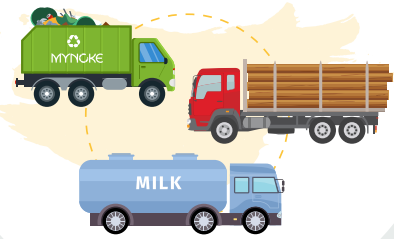
Millions of tonnes of organic waste need to be diverted from landfill each year



Includes: General food scraps, waste resources from fibre and dairy companies, biosolids from treatment plants, paper, cardboard, and soft green waste

STAGE 2

Trucks collect various organic waste resources from customers



STAGE 3

Trucks unload various waste resources at the 'MyNoke Kitchen'



Larger plastic, glass or wood contaminants are removed

STAGE 4

Organic waste resources are mixed in a large 'Mixing Bowl' trailer



Internal blades churn and mix all the resources together to create the perfect recipe for the worms

STAGE 8

Customers use vermicast to grow pastures, crops, feed and plants - returning it to the soil where it came from: Soil to Soil™



STAGE 7

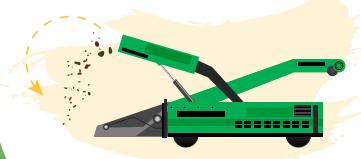
Vermicast (worm poo) is the end product, which is sold via bulk and retail channels



Bulk supply to the likes of agriculturists and horticulturists, as well as councils for use on sports fields and in greening projects

STAGE 6

It takes around 18 months to process into vermicast



Screening removes contaminants like stones and plastic that earthworms do not eat

STAGE 5

Mixed product is laid out on farmland in windrows



Earthworms reduce the waste volume by 80%, leaving only vermicast behind



STAGE 1

Millions of tonnes of organic waste need to be diverted from landfill each year



STAGE 1

ORGANIC WASTE STREAMS

The following are examples of organic wastes we can process, however we are not limited to this list.

FIBRE



Pulp Mill WWTP Fibre

Cardboard: Clean &/or Contaminated, Solid Rolls & Inner Tubes, Packaging (Plastic Free)

Bamboo: Dishes & Cutlery, Food Packaging



Paper: Cups & Lids (Plastic Free), Packaging, Bags (Clean &/or Contaminated), Shredded, Hand Towels, Paper Serviettes / Napkins, Egg Cartons, Paper Based Fillers

Bark

Sawdust



BULK ORGANIC



Biosolids: WWTP - Digested, WWTP - Undigested, Geo-bags, Dewatered Ponds

Sludge: Screened & Dewatered Septic Tank, Settling Pond, WAS (Waste Activated Sludge), DAF (Dissolved Air Flotation) Sludge

Activated Biochar from WWTPs

All Fruit & By-Products: Avocado Waste (incl stones), Kiwifruit Dust & Fruit, Grape Marc, Pips



Animal: Meat, Bones, Blood, Paunch, Manure, Stock Truck Effluent, Sheep Pelts, Wool, Animal Skins, Small Dead Animals (Chickens etc), Animal Waste Screenings, Animal Bedding

Mussel Shells & Meat



GREENWASTE



Lawn Clippings

Shredded Green waste

Mulch



Flower Cuttings

Soft Plant Waste

Lack & Drain Weeds



STAGE 2

STAGE 2

Trucks collect various organic waste resources from customers



COLLECTION

MyNoke works with various contracted collection companies which client's contract to distribute the waste to the worm farms. Alternatively, MyNoke assist with sourcing the right transportation options to avoid any issues.



STAGE 3

Trucks unload various waste resources at the 'MyNoke Kitchen'



STAGE 4

Organic waste resources are mixed in a large 'Mixing Bowl' trailer



STAGE 3 & 4

RECEPTION AREA & MIXING

All waste streams are delivered to our large concrete pads in the reception area (or kitchen, as we like to call it). Here, the various wastes are mixed according to our proprietary worm food recipes.



Taupō concrete pad reception area (left), mixer (right), loading mixer (bottom)

STAGE 5

Mixed product is laid out on farmland in windrows



WINDROWS

After the right worm food mix has been created, the mix is then driven out onto the farm and laid out in windrows. Hungry worms migrate to the windrow and the party starts! It takes around 18 months for the windrow mix to break down (80% volume reduction) leaving behind our vermicast.



Ohakune windrows

STAGE 6

It takes around 18 months to process into vermicast

STAGE 6

HARVEST

The matured windrows are then harvested. The vermicast is picked up and run through a screener machine. This screens out unwanted contaminants, down to 6mm in size.



Screener machines

STAGE 7

STAGE 7

Vermicast (worm poo) is the end product, which is sold via bulk and retail channels



VERMICAST PRODUCTS

The end result is an all-natural soil conditioner (vermicast) that is sold either in bulk or bagged for retail sales.

Bulk sales are usually sold as 1,000L bags or by the tonne in truck and trailer units through the MyNoke network of distributors. We also have 17L bags, as well as liquid vermicast extract - available in 1L, 20L and 1,000L volumes.

We also have organic products, which are certified organic through AsureQuality's organic certification process.



04

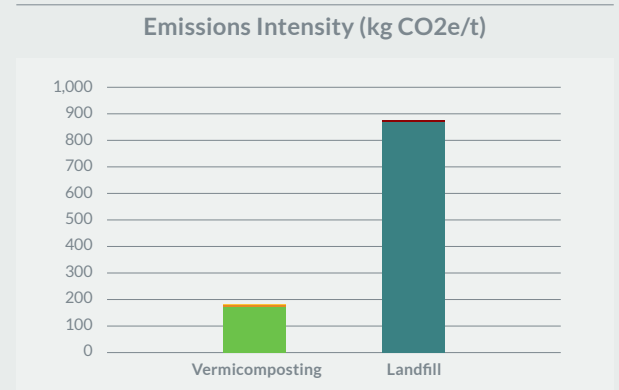
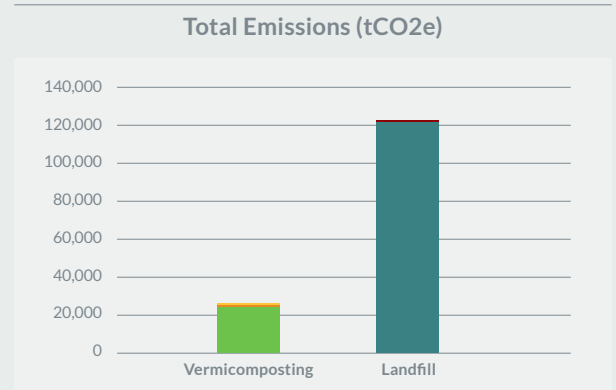
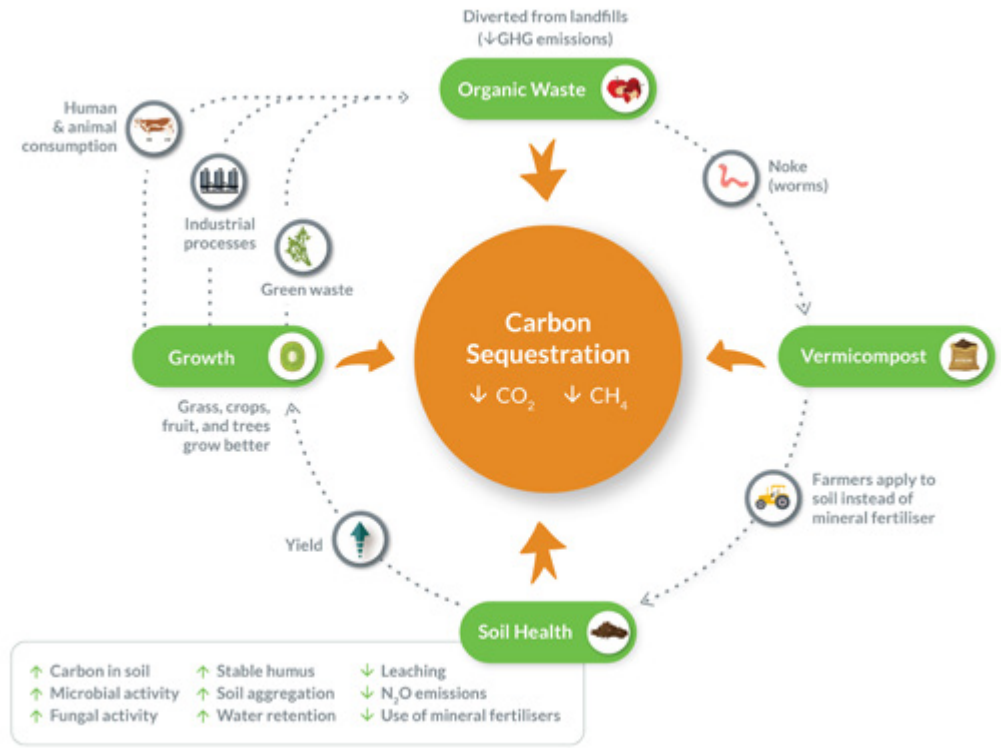
WHY MYNOKE?

WATCH
 'THE ESSENCE OF MYNOKE'

FIVE KEY ADVANTAGES

1. Wide range of organic wastes accepted
2. Low setup costs and infrastructure requirements
3. Circular economy in action
4. Greenhouse gas emissions reduction
5. Carbon sequestration

Carbon Sequestration



■ Office, transport fuels
 ■ Freight: waste to worm farms
 ■ Freight: waste to landfill
 ■ Landfill decomposition
 ■ Vermicomposting

05 COMMUNITY SUPPORT

MyNoke commits time and funds into supporting local community initiatives while educating on soil health.



TARGET 1,000

A sponsorship initiative where MyNoke is committed to hitting our target of donating 1,000 tonnes of pure vermicast to various community group initiatives. Recent recipients have included schools and community planting groups, to kick-start their gardens and foster soil health education. In 2022/23, MyNoke donated vermicast to Project Tongariro and Greening Taupō to get 19,207 school kids involved in planting 31,000 native plants!

We also help in setting up onsite school composting programmes by donating composting starter packs, including an initial community of worms.



MYNOKE FUNDRAISING PROGRAM

A fundraising initiative has been created to help schools and many community groups to fundraise for initiatives.

This involves MyNoke offering groups a heavily discounted product pricing model to enable an attractive return on any vermicast product sales made by the group and its members.



MYNOKE MĀRA KAI

A commitment to growing food for the local community, our staff, and their whānau.

We have planted fruit trees at our Taupō farm, as well as gifting fruit trees and vermicast to our team to grow their own kai at home.



AKO MYNOKE

We are developing a learning platform that trains the team across all aspects of vermiprocessing.

A core component to this are the resources already available on our website, for the public, distributors, and consumers to learn from.

06 SETTING UP A MYNOKE VERMICOMPOSTING FACILITY

A considerable amount of time is invested in promoting the business concept, gaining resource consents, funding and compliance monitoring.

In addition, ensuring new staff are properly trained in MyNoke's processes, as well as health and safety while dealing with various types of organic waste.

All new sites need their own initial investment in agricultural equipment, infrastructure, and staff before they can begin to operate.



The 5 stages are not necessarily linear and may change order as business demands dictate

SITE ESTABLISHMENT REQUIREMENTS



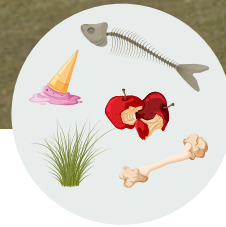
Organic Waste Requirements

- Local industry waste audit
 - Types of organic waste
 - Volumes
 - Type of collection
- Fibre waste audit
 - Pulp mill WWTP fibre
 - Cardboard waste (contaminated or clean)
 - Paper waste (office paper, newspaper, paper towels, food packaging, others, etc)
- Council waste audit
 - Types of organic waste
 - Volumes (one-off, seasonal)
 - Type of collection (bin, truck, etc)
 - Biosolids (at least 2,500 tonnes pa.), from WWTP, oxidation ponds &/or geobags
 - Fibre waste
- Local disposal options audit
 - Disposal methods (technologies such as landfill, composting, land application, feedstock to pigs)
 - Location
 - Costs
 - Limitations and challenges (e.g. LTP aspirations)



Land Requirements

- Reception area
 - 40sqm concrete pad and hardstand surrounding
 - Water access
 - Easy access for large truck and trailer units
 - At least 500m distance away from residential dwellings
 - At least 200m distance away from public roads
- Vermicomposting windrows
 - Ideally within 5km of the reception area
 - Less than 10% slope
 - Dry land (ideally highest seasonal groundwater level 2m below ground level or deeper), low flooding risk
 - Can be farmland, private, council or iwi-owned land
 - Ideally require at least 30ha (based on 20,000t total input). Can be in separate paddocks, etc
 - Greater than 200m distance from residential housing
 - Ideally minimal waterways (windrows would be 20m from any surface water)



Organic Waste Types

- Household (Collected in a single “Worm Food Bin”)
 - Kitchen waste (food scraps: cooked, raw, including dairy, meat, pastry, bones, mussel shells, citrus, onions, fishbones, coffee grounds)
 - Cardboard and paper waste
 - Grass clippings, flowers
- Council
 - Biosolids dewatered from WWTP, oxidation ponds, geo-bags
 - Green waste
 - Paper cups (ideally free from PLA, PFAS & Plastic)
 - Stormwater ponds (limited to sediment quality)
 - Gib boards
 - Lake weeds
- Businesses, offices, schools, supermarkets
 - Office paper
 - Paper towels, paper cups (ideally free from plastic, PLA & PFAS)
 - Food waste (uncooked or cooked)
 - Cardboard
- Food processing (dairy, abattoir, wine making, fruit packaging, oil presses)
 - Waste Activated Sludge (WAS dewatered)
 - Dissolved Air Flotation (DAF) Sludge
 - Paunch, yard manure, hair, wool
 - Fruits, vegetables, marc, skins
 - Wood ash
 - Products out of spec
- Hotels, restaurants, hospitals, rest homes
 - Food waste (cooked, raw, including dairy, meat, pastry, bones, mussel shells, citrus, onions, fish, coffee grounds)
 - Cardboard (contaminated or clean)
 - Office paper
 - Paper towels, paper serviettes
 - Event single-use non-PLA paper cups (ideally free from plastic, PLA & PFAS)
 - Grass clippings, leaves, flowers
 - Cardboard
- Fibre processing industry
 - Pulp mill solids and similar fibres
 - Wood ash
 - Sediments from ponds (depending on sediments)
 - Stormwater ponds (limited to sediment quality)

NEXT STEPS

Contact us for a presentation by one of the team
(online or in person)



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www.mynoke.co.nz