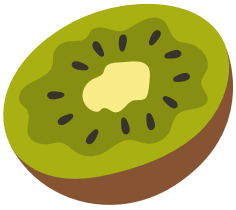
COMPOST VS VERMICAST USE IN KIWIFRUIT ORCHARDS

A COMPARISON



The following is a comparison between compost and vermicast application in kiwifruit orchards. While both add organic matter and support soil health, vermicast provides a richer source of bioavailable nutrients and beneficial microbes, whereas compost is primarily used for bulk organic matter input. Choosing the right option depends on soil needs, budget, application methods, and long-term fertility goals.

COMPOST APPLICATION	ASPECT	VERMICAST APPLICATION
Generally higher cost per tonne.	**Upfront Cost**	Generally lower cost per tonne.
Typically 10-20 tonnes per hectare. Varies depending on orchard requirements.	**Application Rate**	Typically 10-20 tonnes per hectare. Varies depending on orchard requirements.
May require multiple applications per season, depending on the needs of the orchard.	**Frequency of Application**	May require multiple applications per season, depending on the needs of the orchard.
Likely to be similar to vermicast.	**Cost per Application Cycle**	Likely to be similar to compost.
Likely to be similar to vermicast. Compost has a coarser texture, making it more difficult to incorporate into the soil and less suitable for seedlings.	**Labour & Equipment Costs**	Likely to be similar to compost. Vermicast has a fine, crumbly texture, making it easier to incorporate into the soil.
Bulky but can be stockpiled for later use, as long as a weed control program is implemented.	**Storage and Transportation**	Bulky but can be stockpiled for later use, as long as a weed control program is implemented.
Improves soil structure but unlikely to have the same long-term productivity as vermicast.	**Yield Impact**	Improves soil health and long-term productivity.
Varies based on feedstock, decomposition process and stage.	**Nutrient Content**	Broad spectrum of minerals, micronutrients, and beneficial microbes. There is some degree of nutrient variability due to variation in feedstock.
Nutrients aren't always in plant available forms. Bioavailability can depend on factors such as the organic materials used, the composting process, and soil conditions. Major nutrients (P,K) typically bound and require longer term for release.	**Nutrient Release**	Bioavailable nutrients, providing higher nutrient availability.
Adds organic matter and microorganisms however some beneficial microbes may be lost during the high-heat composting process. Compost can also have a variable pH level, which may require monitoring and adjustment for some plants.	**Soil Health**	Improves soil structure, moisture retention, and promotes microbial life. Neutralises soil pH.

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COMPOST APPLICATION	ASPECT	VERMICAST APPLICATION
Minimal run-off, however a slightly higher risk than vermicast due to nutrients not being in the same bioavailable form.	**Environmental Impact**	Minimal run-off; nutrients are in a more plant available form than compost.
Microorganisms present but not as densely populated as worm castings, with content depending on the composting process and feedstock. As process is fungal- and microbial-driven, higher numbers of fungal colonies are present.	**Microbial Content**	Contains a diverse mix of beneficial microorganisms from the worm's gut that enhance soil biology. Microbial-driven process, with fewer fungus' and more microbes.
Adds organic matter and carbon, enhancing soil aeration. Note: Carbon:Nitrogen ratio is usually higher, which can cause microbial imbalance in the soil and potentially consume nutrients plants require while trying to break down the excess carbon.	**Soil Organic Matter**	Adds organic matter and carbon, enhancing soil aeration. Typically lower Carbon:Nitrogen ratio meaning less chance of soil microbial imbalance.
Improves soil quality but may require additional soil amendments.	**Long-Term Usage**	Enhances soil fertility, resilience, and health over time.
Adds organic material but as nutrient and microbial life levels are highly variable, composts are unlikely to deliver the same reduction in future fertiliser dependency and regenerative soil health.	**Long-Term Investment**	Reduces future fertiliser dependency and supports regenerative soil health.
Generally low compliance costs due to minimal environmental impact when applied appropriately. Due to predominant feedstocks, typical composts in NZ are controlled by non-binding guidelines, so may have higher chance of undesired metals contents.	**Environmental Compliance Costs**	Generally low compliance costs due to minimal environmental impact when applied appropriately. Due to the predominant feedstocks, typical vermicasts in NZ are controlled by binding guidelines so will have a consistent product.
Compost supports soil health however the soil is likely to require additional inputs for balanced fertility.	**Soil Health-Related Savings**	Reduces need for other soil amendments due to organic matter, nutrient and microbial content.

CONTACT US

Feel free to get in touch for any enquiries about our products and services.

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