COMPOST IN ORCHARDS

Premium Compost right here in the Goulburn Valley

Get the Back 2 Earth Edge

Incorporate into the soil *or* as a mulch

ARE YOU LOOKING TO

- Reduce input costs (fertiliser, herbicides, pesticides and water)
- Increase nutrient availability and soil fertility
- Suppress weed germination and growth
- Improve soil structure, soil organic matter and carbon levels
- Conserve moisture and improve water infiltration
- Increase plant health and long-term sustainability

COMPOST AT PLANTING

Planting is a critical time for orchardists, using compost as a mulch or incorporated into the soil at planting can produce many beneficial long-term gains.

Incorporated into the soil

According to Compost For Soils[1] incorporating compost into the soil at planting can produce these results –

- Increased tree growth and fruit yield
- Improved water and nutrient retention around the root zone, where it is needed most
- Increased soil organic matter
- Stimulation of soil microbes, improving soil structure and allowing roots to grow more freely
- Setting up an effective root system for the long term life of the tree

Application

- Aim to apply enough good quality compost to achieve an overall concentration of 20% - 25% compost is the most economical.
- Top 10cm – 25cm along the plant row with a width of 50cm
- Choose a good quality compost that is well decomposed.
- Look for compost with a Carbon:Nitrogen ratio of 20:1

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Benefits of Compost incorporated into the soil

- Soil amendments such as lime and gypsum can be combined with the compost
- The organic matter and biological activity in the compost increases the effectiveness of the soil amendments

Research

Australian research has demonstrated incorporating compost at planting results in taller trees with thicker trunks. This was proven in trials with apple, citrus and almond orchards, with those trees planted in soil with compost having a significant advantage[1].

As a mulch

Compost For Soils[1] has reported the following findings when compost is used as a mulch at establishment;

- Young trees are protected from heat and moisture stress
- Young trees grow faster when protected
- Woody compost is best to use as a mulch as it allows water and air to move through to the soil

NSW DPI[2] has published the following findings when using compost as a mulch;

- Weed and disease suppression
- Erosion protection
- Reduced temperature variation and water loss
- Increased water-holding capacity in the soil
- Improved soil fertility (through increased CEC – cation exchange capacity)

Application

A layer of mulch 50mm - 75mm deep and 40cm – 100cm wide

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More Research

Research from the Recycled Organics Unit[3] into compost mulch used in orchards in NSW report.

Benefit	Benefit Range
Reduced Weed Growth*	60% - 100%
Reduces irrigation water use and reduces risk of crop failure*	Greater than 30%
Reduces soil temperature fluctuations*	Up to 3°C
Improves overall soil health and land productivity.	By 5% - 25%
*Long-term presence of mulch cover to depth of 10cm	

The Role of Biology

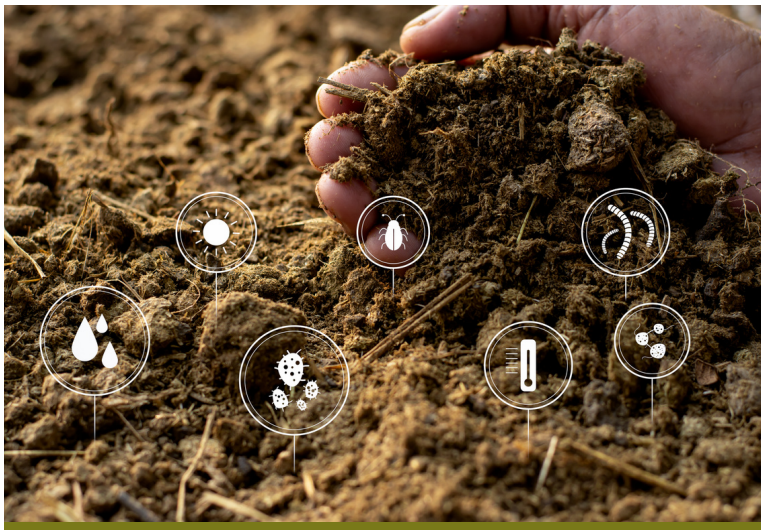
When plants are photosynthesising they leak exudates (carbohydrates) into the soil, these exudates feed the life in the soil (bacteria and fungi etc) and in exchange for these exudates the soil microbes gather nutrients for the plant. Biologically diverse soils create a healthy environment, producing healthier plants better able to cope with the pressures from frost, heat, pests and diseases. Compost not only provides a source of microbes, but it also feeds your underground workforce, building soil organic matter, therefore soil carbon, and ultimately improving water retention to create more resilient soils for long-term soil and plant health.

Why Back 2 Earth Composting

Back 2 Earth Composting is located in Kotupna in northern Victoria. Our family business produces premium horticulture / agricultural grade composts on our organic farm.

Our thorough composting procedure and monitoring ensure the minimal likelihood of weeds and contamination, delivering a consistent quality compost to improve the health of your most important asset – your soil.

We are passionate about soil health and agriculture, recycling organic materials and green waste to build sustainable food production systems and viable family farms.



Quality compost contains microbes such as bacteria, fungi and protozoa, along with microorganisms such as mites, centipedes and worms. Compost helps regulate soil temperature, increases water infiltration and helps soil retain moisture.

COMPOST IN VITICULTURE

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Sample Analysis

Sample analysis with EAL (Environmental Analysis Laboratory)

Back 2 Earth Compost;

- Meets the Australian AS4454 standards for compost
- Compost is safely below the contaminants guidelines and is safe to use on farm
- Contains good organic matter and humus levels, which will help stabilise soils, stimulate biology and improve water-holding capacity
- Contains a full spectrum of macro and micro nutrients to promote plant growth
- Average Nitrogen content **1.29%** - well above the AS4454 guideline of 0.8%
- Average Estimated Organic Matter content - **27.8%**

PRODUCTS

Premium Horticulture Grade Compost

$44 / m^3 (inc GST)

Fungi Power Compost

(25% compost 75% wood)

$15 / m^3 (inc GST)

BACK 2 EARTH COMPOSTING

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References

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2. May 2021, Primefact 21/281 Using Compost in macadamia orchards, second edition, replaces Agnote DPI-472 Abigail Jenkins, Development Officer – Soils Unit, Wollongbar Jeremy Bright, Development Officer – Macadamia, Wollongbar.
3. Interim Product Specifications and Application Guidelines for Compost Mulches for Orchard Production in NSW. Recycled Organics Unit Summary Specifications, February 2004