

Compost for Vegetable Growers

Fact Sheet 1: What is Compost?



Compost is partially decomposed organic matter produced by naturally occurring microorganisms. Compost is a dark, crumbly mixture that can help improve the chemical, physical and biological aspects of soil. Compost will often have an earthy smell and its odour should not be unpleasant.



Quality compost products can be used to:

- improve and maintain soil quality;
- reduce use of water, fertiliser and pesticides;
- increase productivity, and
- reduce nutrient run-off and soil erosion.

How is compost made?

Many different organic materials can be safely composted, including animal manures, garden organics (eg grass, tree prunings etc), food, wood, shellfish & other fish by-products, wool & hair and biosolids. Many of these ingredients can be composted on their own, but the best result often occurs when a number of materials are blended together.

Typically organic materials must be shredded or pre-processed and mixed in a balanced and consistent 'recipe' to ensure optimal conditions for biodegradation to produce high quality and uniform compost. Naturally occurring microorganisms then begin the process of rapid break-down of the organic materials by using the available food (principally carbon and nitrogen), water and oxygen to grow and multiply. The microorganisms generate heat as they break-down the organic matter. This heat (usually in excess of 55 °C) is very important in ensuring that weed seeds and pathogens are eliminated.

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This is the first fact sheet in a series for vegetable growers. These sheets will provide you with information about composting, compost products and how to best use them to suit your needs.



Further information is available from:

Primary Industries
Research Victoria (PIRVic)
Knoxfield Centre, Private
Bag 15, Ferntree Gully
Delivery Centre, Victoria
3156.

Phone: 03 9210 9222
www.dpi.vic.gov.au

EcoRecycle Victoria
Level 2, 478 Albert St. East
Melbourne Victoria 3002
Phone: 03 9639 3322
www.ecorecycle.vic.gov.au

Department of
Agriculture, Western
Australia,
Locked Bag 4, Bentley
Delivery Centre,
Western Australia 6983,
Phone: 08 9368 3333
www.agric.wa.gov.au

For quality control purposes, composting conditions are monitored regularly, usually by recording moisture content and the internal temperature at several locations within a heap. Heaps are turned frequently (e.g. weekly) for aeration and to mix the outside into the centre (see picture).



PTO-driven compost turner

The entire process is usually complete within 8 to 24 weeks, at which point the compost cools down, and the rate of breakdown slows. The compost is then screened to remove rocks and contaminants and to produce a product with the desired particle size grading (ie coarse or fine grade). This is the point at which composts are most versatile, and can be used for many plant growth and soil conditioning purposes.

Compost quality

Quality composts are safe to use, meeting both industry and government standards and are also 'fit for purpose'.

It is important to first identify why you want to use compost and what you want to achieve. When you have done this, talk to a supplier of quality compost that can help you select the right product for your requirements. The highest form of guarantee for compost is certification to the Australian Standard for Composts, Soil Conditioners and Mulches (AS 4454-1999).



These standards ensure that compost will be safe to use but do not necessarily determine which use they are best suited for.