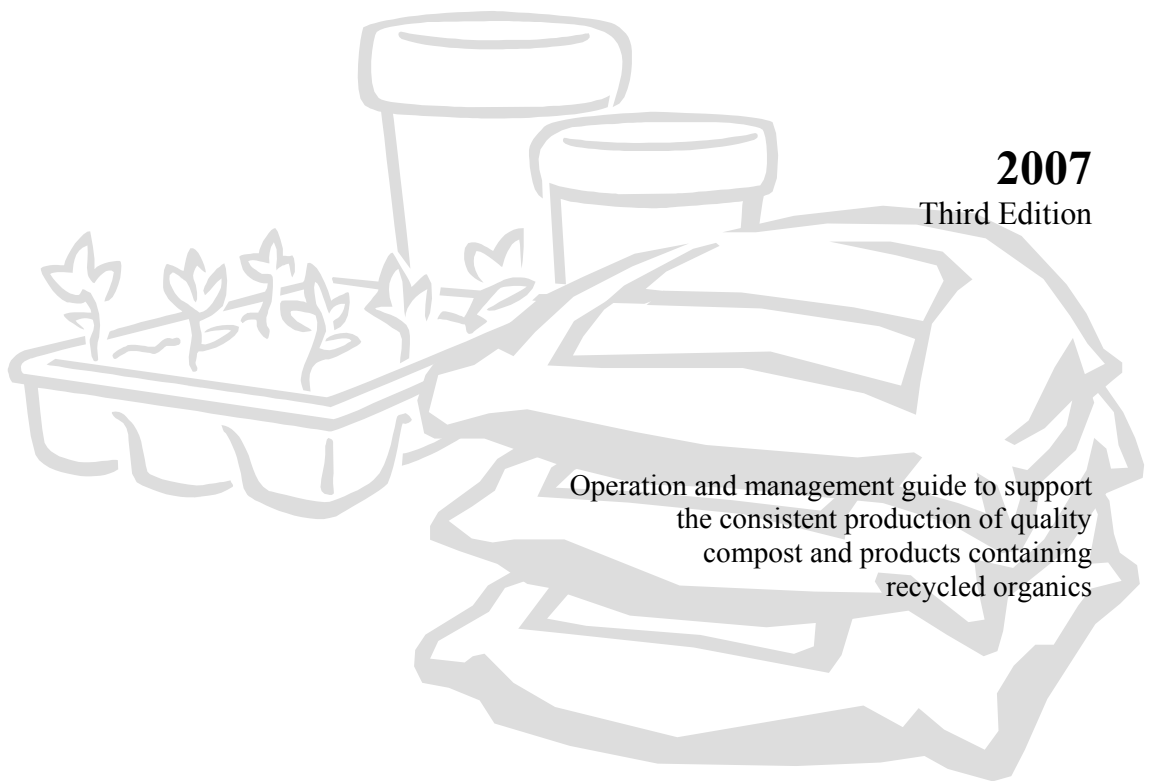


Producing Quality Compost

2007
Third Edition



Operation and management guide to support
the consistent production of quality
compost and products containing
recycled organics

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This package has undergone national peer review by a range of technical and industry experts (see acknowledgments) and has been endorsed by COMMPOST NSW and the NSW branch of the Waste Management Association of Australia.



Preface to the *Producing Quality Compost* Information Sheets

The *Producing Quality Compost* series of Information Sheets have been produced to support the continuing development of the Recycled Organics (RO) industry in New South Wales through a greater focus on operation and management for quality.

Work commissioned by Environment Australia (Environment Australia, 1999)¹ indicated that market acceleration for recycled organics products is dependent on the sale of quality products that meet the needs of specific market sectors. Since the publication of this report and the first edition of *Producing Quality Compost* (Recycled Organics Unit, 2001), significant progress has been made in developing markets for recycled organics products, with novel markets being developed in intensive agriculture (e.g. viticulture), a variety of large-scale landscaping projects and in urban stormwater treatment to mention a few.

Greater adherence to process certification and product standards in the recycled organics sector is providing users with higher quality, fit for purpose products which can be used reliably for the intended application. Whilst certification against recognised product standards is increasing, industry-wide adoption of these standards will provide the market with an improved level of confidence in products being made available for sale, and potentially resulting in enhanced demand-side pull of product into the market.

Clear product standards and adoption of these by the recycled organics industry is proving to be an important driver in allowing Local Government to select appropriate technologies and processes to convert compostable organic materials into saleable products, in a bid to increase the diversion of valuable organic matter from landfill.

It is widely recognised that increased use of industry best practice guidelines and (currently) voluntary national product standards (e.g. those published by Standards Australia) will increase the quality of products manufactured from compostable organic materials. Increased product quality and better labeling to inform consumers as to how the products can be beneficially used will result in considerable market acceleration, and market penetration, into areas where recycled organics products are not traditionally used.

Quality recycled organics products are manufactured when an organisation employs elements of best practice — that is, strong process control to ensure that products manufactured conform to previously designed specifications and market requirements.

Strong process control systems are based upon a number of key steps, including on-site monitoring and testing at all stages of production, and product testing by independent laboratories to confirm that a product meets specification.

Process control is an integral part of a quality management system. A quality management system is a set of procedures an organisation establishes to guarantee its products will satisfy consumers. Thus, adoption of quality management and process control systems is needed to consistently produce quality recycled organics products that achieve consumer confidence and market satisfaction.

¹ Environment Australia (1999). *Environment Australia Organics Market Development Strategy*. Report prepared for Environment Australia by Meinhardt (Vic) Pty Ltd, Strategic Multimedia, EC Sustainable Environment Consultants and Environment Resource Management (QLD) Pty Ltd. October 1999.



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Australian Standards for recycled organics products have been published for composts, soil conditioners and mulches, general and specialist potting mixes, general and specialist soils, and for products referred to as 'soft fall' mulch which can be used for playground surfacing to reduce the extent of injuries suffered by children.

Increased use of these product standards is necessary to improve the quality of recycled organics products that meet customer requirements on the market place, and to accelerate demand for these products. The second edition also contains updated references to Australian Standards AS 4454 (Composts, soil conditioners and mulches), AS 3743 (Potting mixes) and AS 4419 (Soils for landscaping and garden use), which have recently been updated.

These Information Sheets have been developed to complement existing information resources and to provide an easy-to-read account of how a quality management system can be put in place in an organisation.

It gives practical guidance to the development of an on-site testing program to maintain process control, and it also provides a simple overview of the key Australian Standards that are relevant to recycled organics products.

It is hoped these Information Sheets will continue to assist industry to consistently produce quality, high value compost and products containing recycled organics that meet customer requirements.

Please note that a competency-based training program is under development by the Institute for Horticultural Development and the Recycled Organics Unit in a number of areas relating to the issues addressed in *Producing Quality Compost*. Final details regarding training will be made available towards the end of 2002, and will be advertised on the Recycled Organics Unit's web site, <http://www.recycledorganics.com>

1. Information Sheets in “Producing Quality Compost”

This package contains a collection of eleven Information Sheets:

- Information Sheet No. 3-1: Striving for quality: basics of a quality management system
- Information Sheet No. 3-2: Quality assurance systems
- Information Sheet No. 3-3: On-site field testing and monitoring for quality
- Information Sheet No. 3-4: On-site laboratory testing for quality
- Information Sheet No. 3-5: Off-site testing for quality: recommended tests and how to select an independent laboratory
- Information Sheet No. 3-6: Quality of biosolids: risk minimisation during re-processing
- Information Sheet No. 3-7: Manufacturing quality products: introduction to Australian Standard AS/NZS 4422–1996 for playground surfacing
- Information Sheet No. 3-8: Producing quality compost: introduction to Australian Standard AS 4454–2002 composts, soil conditioners and mulches
- Information Sheet No. 3-9: Manufacturing quality products from compost: introduction to Australian Standard AS 3743–2002 for potting mixes
- Information Sheet No. 3-10: Manufacturing quality products from compost: introduction to Australian Standard AS 4419–2002 soils for landscaping and garden use
- Information Sheet No. 3-11: Sample management for consistent analysis of product quality

2. Who should read the Information Sheets?

The package of Information Sheets has been developed for all stakeholders in the recycled organics sector who wish to gain a better knowledge of the key documents relating to quality management systems, industry best practice, and product standards that significantly influence product quality.

More specifically, the package of Information Sheets have been developed for:

- prospective recycled organics product manufacturers;
- experienced manufacturers of products from compostable organic materials;
- manufacturers, blenders and suppliers of recycled organics products;
- marketing agencies;
- Resource NSW officers;
- Local Council waste management officers;
- Local Council planning and approvals officers;
- waste educators;
- relevant government policy makers; and
- industry consultants.

3. Other Packages

A series of eight packages are available on important aspects of recycled organics industry development. These are listed below.

- Package 1: Establishing a licensed composting facility;
- Package 2: Guide to developing a process control system for a composting facility;
- Package 3: Producing quality compost;
- Package 4: Guide to selecting, developing and marketing value-added recycled organics products;
- Package 5: Composting science for industry;
- Package 6: Buyers guide for recycled organics products
- Package 7: How to use recycled organics products;
- Package 8: Occupational health and safety and commercial composting.

All of these packages are obtainable from <http://www.recycledorganics.com>

4. Terminology

Terms used throughout this package of Information Sheets have been officially adopted by the NSW Waste Boards (now Resource NSW) in July 2000 in the form of the *RO Dictionary and Thesaurus: Standard terminology for the New South Wales recycled organics industry*, produced by the Recycled Organics Unit. This document is freely downloadable from <http://www.rolibrary.com>

5. How to cite this publication

This publication consists of a series of Information Sheets that are compiled into a set. When citing information from this publication, the set of Information Sheets must be cited (not individual Information Sheets), as shown below:

Recycled Organics Unit (2003). *Producing Quality Compost: Operation and management guide to support the consistent production of quality compost and products containing recycled organics*. Third Edition. Recycled Organics Unit, internet publication: www.recycledorganics.com

6. Training

Please note that an accompanying training program will be available soon on *Producing Quality Compost*, details of which can be found at our web site, <http://www.recycledorganics.com/training>

7. Acknowledgements

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- Mr Garry Kimble, Quality Assurance Services and [past] Chairman of COMPOST NSW.
- Mr Chris Rochfort, Principal, EC Sustainable Environment Consultants.
- The committee of COMPOST NSW.