



Knowledge Tree

On Farm / Home Composting

Version 2

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Introduction

Preamble

Composting is the process of breaking down organic matter, which is anything that was once living. It is a form of waste disposal where organic waste decomposes naturally under oxygen-rich conditions. The final compost product, often called humus, is full of rich nutrients used to fertilize plants, amend poor soil and aid in water retention.

Simply put, it is used to recycle vital nutrients to improve soil quality.

This precis aims to clarify what composts are allowable in a certified organic system, and to define a process that can be used by private, non-commercial, on-farm or home-based operations wishing to produce composts that contain material from conventional plant or animal products.



SXC Knowledge Tree Publications

SXC Knowledge Tree publications contain information which is designed to enhance the understanding of certification scheme standards and regulations. The information is guidance only. If you have questions about the suitability of your specific implementation, please contact SXC (contact details are on the first page).

On Farm / Home Composting

Composts Allowable in a Certified Organic System

In order to use compost in a certified organic system, the compost can be:

1. Produced entirely from plant based organic matter from a certified organic source; OR
2. Produced using animal manures or wastes or non-certified or conventional plant or animal products or by-products, so long as it is composted using the method described below (which is from Australian Standard AS4454-2012).

Equipment

This process is based on Section 3.2.1 of Australian Standard AS 4454-2012. In order to use this process, the following is required :



1. A temperature thermometer / probe capable of reading compost temperature between 40 and 100 °C. Temperature readings should be taken from the centre of the pile.
2. An area to pile the compost or to form windrows, with enough access to be able to turn the pile or windrow.
3. Equipment to "turn" the compost – that is, bringing the material from the outside of the pile into the inside of the pile and vice versa.

Composting Method

Section 3.2.1 of AS 4454-2012 states that Pasteurisation of composted material occurs as a result of a 'time / temperature' relationship. It involves the turning of the outer material to the inside of the windrow / pile so the whole mass is subject to a minimum internal temperature for a prescribed minimum period before being turned again. The "prescribed minimum period," is determined by the risk profile of the material used. AS4454-2012 breaks Section 3.2.1 into two parts:

1. Low Risk Materials

This includes all materials that are likely to have a low number of plant and animal pathogens and plant propagules, such as plant based materials, harvest waste, forest mulch, wood chip and sawdust. Low Risk Material must be subjected to a minimum of three consecutive days where the internal temperature must not drop below 55°C. After three consecutive days at a minimum of 55°C, it can be turned. It must be turned a minimum of three times.

Therefore, it will take a minimum of nine days, and may require more, at a minimum of 55°C to fully comply.

2. High Risk Materials

This includes all materials that are likely to have a high number of plant and animal pathogens and plant propagules, including animal based materials or manures or food or grease trap wastes. High Risk Material must be subjected to a longer period at 55°C or higher and require more turns whilst maintaining 55°C or higher.

For all High Risk Materials, the core temperature of the compost mass shall be maintained at 55°C or higher for 15 days or longer. During this 15 day period, the windrow must be turned a minimum of five times.

Please be aware that the use of animal carcasses / meals can make the composting process complex and more difficult to control.

Please Note:

Shredded garden organic materials and vermicast that have spent three days in a suitable in-vessel composting system, in which all materials contained within achieve a minimum of 55°C, or that have spent two to three weeks in well-managed, turned windrows, are likely to meet pasteurization criteria. (Ref: Section 3.2.1(b)1)

Records Required

The following records will be required if the method described above has been used to compost material:

- Knowledge of source of raw materials, and records of all "brought in" source materials.
- Time / Temperature records that detail temperature readings daily for each batch made, and show Peak temperature of compost pile (Should be declining or significantly reducing after turning with suitable moisture). [An example of these records can be found in the resources section of your SXC portal.](#)
- Mix / Batch records that show the source materials for each batch made.

Summary

This guide refers only to On Farm or Home composting operations where the product is used on the certified operation and is not sold commercially. As such, these operators are responsible for any physical and chemical testing or nutritional analysis that they deem necessary for their own product.