

18 To Contain or Not

The majority of Community Composting projects currently make compost in heaps or bins; a few also use windrows.

Heaps and windrows

Free standing compost heaps can be made up to a size of around two to four cubic metres. If the heap gets much larger than this, the weight of material tends to force air out and the process turns anaerobic. Once a heap has reached 1.5 m or so in height, it should be extended lengthways, making what is known as a windrow. This is basically a long, low mound shaped heap, wider at the bottom than at the top.

Pros

- ✓ No container costs
- ✓ Easy for turning, especially with machinery
- ✓ Good for large quantities; only limitation is land
- ✓ Can easily absorb an extra flush of materials

Cons

- ✗ Covering, or a central site may be needed
- ✗ May not look so neat and "tidy"
- ✗ More land required
- ✗ Mechanical operations in adverse weather require good ground surface

Windrow composting

Windrow composting is a good method for larger quantities of materials, especially where machinery for building and turning is available. The result can be a quick return of good quality compost.

The size of a windrow will depend on the nature of the material being composted, and the reach of the machinery, or people available for making and turning it. Strawy manures, for example, are very dense. To ensure sufficient aeration through a manure rich heap, the maximum height should be around one metre. Lighter, fluffier materials may start off in a windrow up to four metres high, if the machinery, or workers, can cope.

The width of a windrow can vary from around three to six metres, and it can be as long as the site allows. Smaller windrows are not advisable. They will quickly lose heat, may not heat through and will tend to get soaked in the rain, unless covered.

As a windrow diminishes in size as it composts, two can be combined to make one. This is particularly useful in winter to retain heat, and it also liberates space.

Ideally windrows should be covered, or made under cover. In practice this seems to be rarely the case. Larger windrows will usually generate sufficient heat to evaporate

excess moisture from the rain. Smaller heaps are best covered – with, for example, a layer of spoiled old hay, used silage bags or even a 'thatch' of brushwood and conifer prunings.

Once the compost has finished heating it can be left to manure in situ, or made into a larger windrow, around two metres high and four to five wide. As this is not producing any heat, some form of cover is recommended.

Windrows should be turned regularly, at least in the early stages, to ensure that all material spends some time in the warm moist centre of the heap.

Making compost bins

The most practical option is for Community Composting projects to make their own containers, using the most appropriate materials available. Timber is the most popular. Use recycled materials wherever possible, to cut down costs and maintain the ethos of the project.

Some options

- Wooden pallets - cheap
- Forestry offcuts – cheap
- Larchlap fencing lined with pallets
- Tanalised softwood – costly; long lasting; treatment not environmentally friendly
- Railway sleepers – high cost; long lasting
- Concrete blocks

Gaps in the side can be lined with flattened cardboard boxes, carpet etc.

Wood preservatives

The decision whether to treat wood, or buy treated timber, is a difficult one. Wood preservatives are, because of their function, toxic. Tanalised (CCA treated) timber has a long life, but the treatment involves the use of copper, chrome and arsenic. Creosote also has environmental disadvantages.

There are some so-called 'organic' materials available, but they tend to be more expensive. Another option is to use free/cheap materials and replace them when they rot. At Chagford they save up old cooking oil and saturate the wood with that.

How many bins?

The number of bins used ranges from three to 10 in current projects. The general feeling is that the process is easier to manage and monitor if there are more, rather than fewer.

Containers

A compost bin is some form of enclosure that contains the composting materials.

Pros

- ✓ Can look 'neat'
- ✓ Retains heat and moisture
- ✓ Keeps rain out
- ✓ Ideal for smaller quantities
- ✓ Good where space is more limited

Cons

- ✗ Cost of materials and labour to construct bins
- ✗ Less flexible for varying quantities
- ✗ Not suitable for mechanical turning

Compost bins

The optimum size of a compost bin is around 1.2 x 1.2x 1.5m. anything bigger can get unmanageable, and may be an overwhelming sight when it comes to turning the heap. Some projects, such as Seagull, do however use larger bins.

There is nothing complex or mystical about the design of a compost bin. It is simply a four-sided container. The important aspects to consider when buying or making a bin are as follows.

- **Easy access** for emptying the container. A removable front, in the form of slats, or solid section that is easily lifted off is advisable. If the back is also removable two people can have access at the same time – but bracing would be needed to keep the sides in place.
- **Sturdy.** Compost is heavy stuff and can soon burst out of a flimsy container.
- **Rainproof cover, lid or roof.** Rain will cool a heap and wash nutrients out, a waterproof cover such as a tarpaulin, corrugated iron, or even plastic bags should be used to keep the rain off.
- **Solid sides** to retain warmth and moisture.

Other relevant cards

- Case Studies
- Making Compost 1 & 2