



Mark Baker (centre) supervises helpers turning compost heaps at Heeley City Farm in Sheffield, which is a part of the Community Composting Network

Heaps of enthusiasm

Composting is nature's way of recycling, producing free soil improver and stopping biodegradable waste reaching landfill sites.

JOANNA WHITTINGHAM discovers how a fast-growing network of composters is promoting the recycling of organic waste

GARDENERS DO NOT need to be told the value of good compost. It has been produced on garden heaps for generations, to enrich the soil in flower beds and vegetable patches. But, like any well-tended heap, the issue of compost has been hotting up and has become an integral part of Government targets to reduce the amount of waste deposited in United Kingdom landfill sites.

As a nation our 'chuck it in the bin' mentality is deeply rooted. Households in England produce 25 million tonnes of rubbish per

year, more than half of which consists of garden and kitchen waste, paper and card. A massive 78 percent of this total goes into landfill, while only 12 percent is recycled. Such figures do not compare well with most European countries.

Our national attitudes need to change. European legislation requires that, by 2010, national quantities of landfilled biodegradable municipal waste (mostly compostable kitchen and garden rubbish) should be reduced to 75 percent of their 1995 level. It is here that the environmental benefits of

composting could be realised. Government agencies have now been mobilised to work towards this aim, but for almost 10 years an independent organisation in the UK called the Community Composting Network (CCN) has been co-ordinating the efforts of groups around the country.

Encompassing composting

An umbrella organisation, the CCN provides advice and support to its existing members, which include many community composting projects and Local Authorities. The ➤



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BOKASHI: A JAPANESE COMPOSTING METHOD

The Coach House Trust in Glasgow works to promote composting in the local community. Spearheading this work is Rita Winters, who is championing the bokashi method, still relatively unknown in the UK.

Bokashi 1 is a substance made from a combination of wheat bran, molasses and effective micro-organisms (EM), which is already used widely in Japan for composting and soil improvement. Typical EM contains more than 80 micro-organisms, including bacteria that thrive in conditions without oxygen (anaerobic) and yeasts. When applied to organic waste, bokashi causes it to ferment rather than putrefy and smell, so it is ideal for treating kitchen waste

stored indoors. The occupants of more than 100 Glasgow flats are successfully using bokashi bins.

To use the bokashi technique, two buckets or tubs are required, one that will fit inside the other. The inner bucket should have holes in the base for excess liquid to drain through 2. Place cooked and uncooked kitchen scraps into the bucket (in domestic gardens meat and fish can be treated with this method, but the end product should only be applied to ornamental beds) then sprinkle bokashi over it 3. Repeat this process until the bin is full, squashing the contents to remove air pockets, then put on a tight-fitting lid and leave for two weeks. During this time the micro-organisms ferment the waste material, so

that when the lid is removed the contents smell of vinegar. The treated waste does not look like it has decomposed 4, but when it is incorporated into soil or added to a conventional compost heap it breaks down rapidly. Work the waste into the soil and chop it up with a spade 5.

Bear in mind that the end product is acidic, so it is recommended to let the soil rest for a few weeks before planting. The liquid that collects in the bottom bucket can be used as a fertiliser or even an effective drain cleaner.

Tests have found that pathogenic bacteria, such as *E. coli*, are not found in bokashi bins. This coupled with the lack of foul smells makes it an ideal technique for dealing with kitchen waste.



HIGH-FIBRE COMPOSTING

The Centre for Alternative Technology in Powys, Wales has been trialling a technique known as high-fibre composting. This combines composting with waste minimisation by using non-recyclable paper and cardboard 6 to improve the structure of the compost heap.

Many people are frustrated when their compost heap becomes unpleasantly smelly and slimy instead of producing a crumbly, deep brown soil improver 9. The key to success is providing the composting micro-organisms with four essential substances – carbon, nitrogen, oxygen and water – in the correct proportions. The high-fibre composting technique makes this balance easier to achieve.

An imbalance in the carbon-to-nitrogen ratio results in a slimy heap. A healthy heap should consist of about 30 parts carbon, derived from woody, non-green material, to one part nitrogen, from soft, green waste, such as grass clippings. Excessive nitrogen disturbs this balance, causing putrefaction.

High-fibre composting counteracts this

problem by adding extra carbon in the form of non-recyclable paper and card: egg boxes, for example. This is screwed up and added to the heap with garden and kitchen waste 7. The bulk of this material also helps to maintain an open structure to the compost as it decomposes 8, allowing air to circulate and provide oxygen for the composting micro-organisms.

Maintaining this open structure is beneficial to the bacteria, but also to the gardener, as it can reduce or even remove the need to turn the heap. This is obviously good news, but especially for those with limited time to spend in the garden, or with plastic compost bins, which can make compost awkward to access.

The paper and cardboard also help to balance the last of the four essential elements for healthy compost, water. Green, high-nitrogen garden and kitchen waste can also often be wet. The addition of high-fibre elements helps to soak up excess moisture, preventing water-logging and keeping oxygen circulating, producing fine, well-rotted compost 9.

infectious enthusiasm and energy of those involved have helped to promote community composting as an activity that benefits the environment and local populations. Its body of more than 180 members, spread throughout the UK, is growing, giving the CCN an increasingly influential voice to lobby the Government or regional authorities. But it is individual composting projects that are pushing ideas and techniques forward and encouraging people from all walks of life to get their hands dirty, perhaps for the first time.

Range of projects

Heeley City Farm in Sheffield provides the administrative base for the CCN, and it also runs several other projects, from small-scale recycling carried out by local children and adults with learning difficulties, to larger-scale commercial enterprises.

As a venue for horticultural training, Heeley City Farm has vegetable beds and poly-tunnels producing herbaceous and bedding plants for sale in the nursery. These activities produce organic waste, which is composted in bays, combined with paper bedding from the animals kept on site. The compost thus produced is used to enrich the farm soil and pot up plants for the nursery. A demonstration area, showing the public the range of different composting bins and containers available, encourages people to extend the recycling ethos into their own gardens.

Recently several large, concrete composting bays have been constructed (pictured, p379), marking the beginning of the Heeley team's new project called the 'dispersed composting network'. Organised in conjunction with Sheffield Wildlife Trust, with funding from Sheffield City Council and the Department for Environment Food and Rural Affairs, this network of small sites around the city will receive large consignments of green waste from household refuse sites. Such a large-scale project has required considerable investment in machinery, staff and the sites themselves. It is hoped that by this summer composting will have begun, helping Sheffield meet its waste-reduction targets. It is anticipated that the end product will be sold to local parks departments and landscaping companies.

Forum for new ideas

A great advantage of the CCN's diversity of members is that they are a rich source of new ideas and techniques. Individual groups are constantly trialling alternative methods, comparing their experiences and discussing new developments and regulations.

One piece of legislation that has affected the activities of the CCN is the Animal By-Product Regulations (ABPR), introduced in 2003 in response to the foot-and-mouth crisis. This draws a distinction between green (garden) waste and catering waste from kitchens. Much more rigorous rules apply to larger-scale sites composting catering waste, which have to comply with ABPR and obtain a Waste Management Licence. This includes the need to maintain high temperatures for a determined period during the composting process in order to kill pathogens, and the enclosure of waste to keep out vermin and wildlife that may spread contaminants to farm animals. Home composters who keep no livestock are exempt from these regulations, but larger-scale community sites handling garden waste need a waste management licence and a licence exemption.

Members of the CCN have been developing various 'in-vessel' composting systems that will enable them to afford to comply with these regulations. Carefully adapted chest freezers, designed with safety in mind, are one innovative option that has been used to keep rats and flies at bay, while allowing air to circulate, supplying oxygen for the bacteria that are essential to the composting process.

Effective brew

A Japanese technique is being tested at the Coach House Trust in Glasgow (see p377), which also aims to help ex-offenders and rehabilitating drug addicts back into the community. Known as the bokashi method, this introduces 'effective micro-organisms' into garden and catering waste, causing the material to ferment. The lack of smells and speed of the process make it ideal for use in flats or properties with small gardens.

The CCN is now in an interesting position; too big to be exempt from regulations and yet too small to compete commercially if



Large, new concrete bays at Heeley City Farm, Sheffield (above, top) form part of their 'dispersed composting network', which by this summer will consist of a number of small sites around the city, composting organic material from municipal waste sites. Compost produced on the farm is used to improve the soil in the vegetable garden (above)

The Community Composting Network promotes community composting at a national level. For details of local groups and membership rates, tel: 0114 258 0483, or visit: (www.communitycompost.org). •Compost Awareness Week is 2-8 May 2004; for information see the Composting Association website: (www.compost.org.uk)

COMPOST CONTACTS

High-fibre composting
Cool Composting: a fresh approach, a factsheet explaining the technique, is available for £3.50 from the Centre for Alternative Technology, Machynlleth, Powys SY20 9AZ. Tel: 01654 705959; (www.cat.org.uk).

Bokashi
For information on bokashi and other uses of effective micro-organisms, tel: 01556 650116, or see: (www.livingsoil.co.uk).

Further reading
RHS mail order – tel: 01483 211320, e-mail: (mailorder@rhs.org.uk) – and the shops at RHS gardens stock several books on composting, including:

- How to Make Soil and Save Earth, by Allan Shepherd (Centre for Alternative Technology, 2003, £4.99, ISBN 1902175166)
- Composting for All by Nicky Scott (Green Books, April 2004, £1.95, ISBN 1903998239).

composting becomes a profitable industry. The EU is considering a Biowaste Directive that is likely to contain statutory composting targets for EU member states. Extra funding may make composting more profitable for large-scale industry which, though it may be good for the environment, will make life more difficult for community composters.

Nevertheless, the CCN will continue to promote composting and provide expertise, while helping people gain skills and become involved with their community. The enthusiasm of those involved in the network is inspiring and if politicians seek to minimise waste reaching landfill, they need to fire the UK population with a similar recycling zeal.

Whether or not Government or European targets interest you, if the UK continues to throw waste into landfill at current rates, then by 2020 the bill to deal with it will be £3.2 billion per year. Traditionally it has been gardeners who have been the keenest composters. Now, more than ever, we all need to make sure that this link continues into the 21st century. ♻️

JOANNA WHITTINGHAM is Trainee Horticultural Journalist at *The Garden*