

The State of Composting and Biological Waste Treatment in the UK

2005/06



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Detailed survey investigation of the UK composting and biological treatment industry in 2005/06 showing growing quantities of waste being composted and market development for the resultant compost products.

Authors

Chloe Nikitas¹, Robert Pocock¹, Ingrid Toleman² and E. Jane Gilbert³

¹ M.E.L Research, 8 Holt Court, Aston Science Park, Birmingham B7 4AX

² Waste & Resources Action Programme, The Old Academy, 21 Horse Fair, Banbury, Oxon OX16 0AH

³ The Composting Association, 3 Burystead Place, Wellingborough, Northamptonshire NN8 1AH

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Material change for
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3 Burystead Place, Wellingborough, Northamptonshire NN8 1AH

Tel: + 44 (0) 870 160 3270 Fax: + 44 (0) 870 160 3280

E-mail: info@compost.org.uk www.compost.org.uk

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Executive summary

Key findings

- In 2005/06 3.4 million tonnes of source segregated waste was composted, an increase of 28% on the previous year
- 85% was municipal waste, with just over half of this collected at civic amenity sites
- Less than one per cent of municipal waste was kitchen waste collected at the kerbside
- 65% of waste composted was composted at dedicated composting / biological treatment sites, with 10% on farm and 11% at landfill sites
- 74% was composted at sites with throughputs in the 10,000 – 50,000 tonnes a year category
- The majority of waste (81%) was composted using open air mechanically turned windrows, with only 14% composted in-vessel
- Annual turnover of the composting and biological treatment industry was estimated at just over £ 90 million
- Employment was estimated at 1,200 full time equivalents
- Just over two million tonnes of compost products were produced, an increase of about a third on the previous year
- Agriculture was the largest market sector, with one million tonnes supplied. The majority was used on arable and cereal crops
- Horticulture and landfill restoration / daily cover accounted for approximately a quarter of a million tonnes each
- Mixed waste treatment accounted for just over 80,000 tonnes of organic waste, with the majority of the outputs used on site
- There was an estimated two million tonnes of new capacity expected to come on-line over the next five years

This annual market survey of the UK composting and biological treatment industry was carried out on behalf of the Composting Association (TCA) and the Waste and Resources Action Programme (WRAP) by M·E·L Research. It followed on from previous surveys implemented by or on behalf of the Composting Association.

Information was gathered on composting and mechanical biological treatment (MBT) of municipal and non municipal waste in the UK, as well as anaerobic digestion (AD). The survey had an excellent response rate this year from composting companies with survey information obtained from 126 companies who, between them ran 321 composting or biological treatment sites in 2005/06. Comparison with UK municipal waste data showed that the survey had captured detailed information on over two thirds of all UK municipal waste composting.

The high survey response rate has meant that for the first time it has been possible to make robust estimates for the financial turnover of the UK composting industry covering the production (not including blending), distribution and sales of compost. The 2005/06 turnover is estimated to be about £90 million.

It has also been possible for the first time to make reliable estimates of employment in the UK composting industry. The employment in the composting industry in 2005/06 is estimated as 1,200 full time equivalent employees.

The quantity of source segregated waste composted in 2005/06 was 3.4 million tonnes. This is an increase of three quarters of a million tonnes (28%) on the 2004/05 figures. In total 85% of this was municipal waste with just over half of the municipal waste coming from materials deposited at civic amenity sites, and just under half from household kerbside collections.

Just over two million tonnes of compost products were produced from source segregated waste in the UK in 2005/06. Nearly half of this compost was sold, the majority direct to end users. About a third was used on the site of production and about a fifth distributed with no charge.

The market sector using by far the greatest quantity of composted products manufactured from source segregated waste was agriculture, with one million tonnes of compost products being supplied in 2005/06. Most of the compost going to agriculture went to arable and cereal crops. The next most important market sectors were horticulture and landfill restoration/ daily cover which used about a quarter of a million tonnes of compost each in 2005/06. Nearly half of compost produced from source segregated waste was sold with about a third used on the site of production.

The survey asked for the first time for information on the distances compost products were transported to the point of use. The results for compost from source segregated feedstocks showed, as would be expected, that the lower value per tonne market sectors such as agriculture and landfill restoration/ daily cover showed more local distribution, while the higher value per tonne market sectors such as horticulture, sports turf and landscaping showed more regional and UK wide distribution.

Composting companies using source segregated feedstocks saw agriculture, landscaping and land restoration as the market sectors offering the greatest potential for growth for their compost businesses in the year ahead.

There was also a small amount of biological treatment of mixed waste with an estimated 100,000 tonnes originating in this form which equated to processing of just over 80,000 tonnes organic waste. In contrast with source segregated composting, nearly all (99%) of the output from mixed waste feedstock was used on the site of production or other sites of the producer with less than 1% sold. The market sector distribution was also very different with over 80% of output from mixed waste going for landfill restoration/ daily cover.

Many compost companies have definite plans to expand their composting capacities at existing and/ or new sites. The vast majority of this expansion is for source segregated waste rather than mixed waste composting with an estimated two million tonnes new capacity for source segregated waste inputs due to come on line over the next five years.

I.0 Introduction

The 2005/06 market survey of the UK composting and biological treatment industry was undertaken in the spring of 2007 by M·E·L Research on behalf of the Composting Association and WRAP. It followed on from surveys carried out in preceding years by or on behalf of TCA. Many of the topics covered by this 2005/06 survey were similar to those covered in previous years by TCA surveys of the compost producing sector. Such areas included quantities and types of waste materials which were being composted, the amounts of compost that were produced, and the markets that the composted products were going into. Direct comparison of this 2005/06 survey with previous years could thus be carried out and trends over recent years investigated. Other topics covered in the 2005/06 survey, for example questions on composting capacity and distance travelled by compost products to their point of end use, were new to the 2005/06 survey.

2.0 Survey methodology

2.1 Design of survey forms

The survey questionnaire was developed by WRAP, TCA and M·E·L Research. It was based on that used in the 2004/05 survey but focussed primarily on compost producers. Local authorities, which had been included in previous years of this survey, were not surveyed this year. This is because local authorities now report information about their organic waste collections via WasteDataFlow, a web based system for municipal waste data reporting by UK local authorities to government. The period covered was the financial year 2005/06 or the time period best approximating to this, for which data were available. Two questionnaire formats were produced with the same content. One was suitable for printing and completing by hand, and the other format was a version suitable for completing electronically. Those compost producers who operated more than one composting/ biological treatment site were asked to complete separate survey forms for each site. Copies of the survey questionnaire and covering letters are shown in Appendix 1.

2.2 Organisations surveyed

UK members of the Composting Association were surveyed. Nearly all of the larger composting companies in the UK, and a great many of the smaller ones are known to be members of TCA. There were just over 300 companies on TCA's database. Details of some 20 additional compost companies in England were also provided through an Environment Agency database of licensed and exempt composting sites in England and Wales. All companies on both databases were surveyed. The aim was to gather information on composting operations from as many compost companies in the UK as possible.

This survey did not target the community sector specifically. There was only one survey response from a community sector company, which was also a member of TCA. However, a survey of community composting activity in the UK in 2006 was carried out as part of a separate Defra funded project (WR0211) called "Unlocking the potential of community composting". The project is being carried out Integrated Waste Systems group at the Open University in association with the Community Composting Network (CCN), London Community Recycling Network (LCRN) and the New Economics Foundation. To avoid duplication of effort, the community sector was therefore not specifically targeted in the current survey. Further information about the Defra funded project can be found in Appendix 2.

2.3 Administration of survey

Survey forms were sent out by email, where email addresses were available, in early January 2007 to those companies which had responded to last year's composting survey. These companies were also telephoned in January 2007 and given the further opportunity to complete the survey by telephone. This option had a good uptake. Survey forms were posted out to all the other smaller compost producers on TCA's database in early January. The Environment Agency database became available in February and survey forms were posted out to all organisations on this database in mid February.

TCA had indicated which of their members were likely to have processed the largest amounts of organic waste in 2005/06 (20). These companies, the "larger throughput sites", were surveyed separately from the other companies on TCA's list.

Most were initially posted survey forms. These companies were then telephoned and the best contact or contacts for answering the survey were identified. It was then established by telephoning these contacts whether it would be easier for them to fill in forms by hand and post them back, complete the questionnaire electronically or, alternatively, to go through the survey information by phone. The survey was then completed by the company's preferred method.

2.4 Checking of returned survey forms

Survey forms returned by post and by email were checked through to ensure that respondents had answered all questions and that answers were consistent with each other. For example, it was checked that the quantity of compost product was lower than the quantity of waste input and that both totalled correctly. Where there were omissions or inconsistencies, respondents were telephoned or emailed for clarification.

Where respondents did not provide data on the quantities of compost produced, they were asked to provide a factor to convert the tonnes input to their composting processes to tonnes output. This factor was then used to calculate the output quantities. Where respondents could not do this, it was assumed that output was 67% of input. In the small number of cases where output quantities were provided in cubic metres instead of tonnes, density conversion factors provided by the Environment Agency were used to convert volume to tonnes.

2.5 Telephone surveying of non respondents

In order to gather survey information from as many UK sites as possible, in February 2007, the process of ringing all non respondents was started. If it proved possible to get through to someone able to deal with the survey, non respondent companies were given the option of completing the survey either there and then by telephone, or an appointment was made in some cases for M·E·L Research to ring back at a more convenient time. Where the telephone numbers provided were incorrect, directory enquiries were used. In some cases where it was not possible on several occasions to get through by telephone, email messages were sent to email contacts on the databases. In the case of difficult to contact companies, repeated attempts were made to contact them before registering them as a survey non respondent.

3.0 Survey response rate and allowing for non respondents

3.1 Response rate

The overall survey response rate was 59% of the 328 companies surveyed.

Responses to the survey were received from 193 of the 328 companies targeted. Of these, 128 respondents composted in 2005/06 and 65 did not. Sixteen out of the twenty bigger companies provided information on all of their sites, and a further two provided information on some, but not all of their sites. Overall, information was gathered on 231 sites at which composting took place in 2005/06 (as some companies operated multiple sites). This gives an overall response rate of 59% (Table 1).

Table 1 Summary of survey response, 2005/06

	Number of companies
Overall number of companies surveyed	328
Respondents which composted in 2005/06	128
Respondents not composting in 2005/06	65
Non respondents	135
Response rate	59%

3.2 Estimating composting by non survey respondents

The non response rate for the survey was 135 companies which was 41% of those companies surveyed. Over a third of the survey respondents did not compost in 2005/06 and it is therefore likely that a considerable number of the non respondent companies also did not carry out any composting activities in 2005/06. This is particularly likely where company contact information was out of date and current details could not be found. The picture is further complicated by the existence of some composting companies that were not members of TCA nor included on the Environment Agency database.

A good validation check on the proportion of composted waste that was captured by the survey can be made by comparing the survey results with official municipal waste data for the quantities of municipal waste collected and sent for composting. This official municipal waste data are known to be high quality, reliable data. Table 2 shows the percentage of municipal waste composting that was captured by this survey. The percentages were worked out by comparing the survey data from this survey with the official data on the quantities of municipal waste sent for composting in each of the four nations of the UK.

For the UK as a whole, Table 2 shows that 67% of municipal waste composting was captured by this survey, in other words that 67% of municipal waste composting was carried out by survey respondents. This is a very good overall proportion to have been achieved by the survey. Looking at the situation in the individual UK nations, it can be seen from Table 2 that the capture rate of municipal waste composting by the survey while excellent for England and Wales, was poor for Northern Ireland at 14% and moderate for Scotland at 41%.

In order to allow for composting and mechanical biological

treatment (MBT) not captured by this survey, the survey data on inputs of municipal wastes to composting sites for composting were scaled up so that this input data matched the official municipal data on municipal wastes input to composting. The non municipal waste quantities composted by survey respondents were scaled up by the same factor. This assumed that the proportion of municipal and non municipal waste composted by survey respondents was representative of the UK composting industry as a whole. This is an established statistical method for projecting sample data onto a known national total, and is more reliable and robust than the alternative of grossing up the respondent sample by assuming non-respondents match respondents. The effect is to apportion the nationally known tonnages to the known characteristics of the respondent sample. We have assumed the same factor applies in estimating national MBT totals and while there is no method for verifying this assumption, this is the best method available for making national estimates of MBT tonnages.

Table 2 Percentage of municipal waste recorded by survey respondents, 2005/06

Nation	Capture rate of municipal waste collected for composting in the UK
England*	73%
Wales*	61%
Scotland**	41%
Northern Ireland*	14%
UK total	67%

* Data for England, Wales and Northern Ireland were from WasteDataFlow 2005/06 returns.

**Data for Scotland were from SEPA Local Authority Waste Arisings Survey 2005/06.

4.0 Survey results

4.1 Nature of the UK composting industry

4.1.1 Types of organisation carrying out composting

Table 3 below shows the main business activities of composting companies responding to the survey. In 2005/06 approximately 41% of composting companies stated that their main business activity was compost producer/ biological treatment. Just over 20% of composting companies considered their main business activity to be agricultural activities and 20% were solid waste treatment/ disposal companies. Many of the larger composting companies were in the "waste treatment/ disposal" category with waste inputs to composting from such companies accounting for nearly 40% of the total inputs in 2005/06.

The "other" category in Table 3 includes three companies with waste haulage as their main business activity, and one each with landfill restoration, feed manufacture and construction. An additional six respondent companies did not specify their main business activity and are therefore not included in Table 3.

It should be noted that the survey did not specifically gather information from the community/ not for profit sector. This is because a separate Defra funded project has investigated composting in the community sector in the UK (see Appendix 2). As a result of this the proportion of community/ not-for-

profit businesses represented by this survey in Table 3 is unlikely to be representative.

For comparison, Table 3 also shows the percentages for the previous year, 2004/05. The distribution of composting companies over different main business activities were very similar to those in 2005/06 indicating that there has been no major change in the balance of types of composting companies over this time period.

4.1.2 Financial size of the UK composting industry

Composting companies were asked about the annual financial turnover of the composting and biological treatment aspects of their business including the production, distribution and sales of their compost. Table 4 shows the distribution by turnover bands of the 105 survey respondents who answered this question. Only about a quarter of companies had turnovers relating to composting of less than £100,000 with over a third of companies in the £100,000 to £500,000 band. There was a sizeable number (19) of survey respondents with turnovers over £1 million per annum. A number of survey respondents (21) chose not to answer the question on turnover, with more smaller composting companies not wishing to provide this information.

Table 3 Types of respondent companies operating composting sites in the UK in 2005/06 and comparison with 2004/05

Main business activity	Number of companies in 2005/06	% of total companies in 2005/06	% of total companies in 2004/05
Compost producer / biological treatment	50	41%	47%
Agricultural activities	27	22%	16%
Solid waste treatment / disposal company	25	20%	24%
Local authority	5	4%	4%
Horticultural / landscaping activities	3	2%	5%
Wood recycling	2	2%	-
Water treatment company	2	2%	0%
Community group / not-for-profit business ¹	1	1%	0%
Equipment / plant supplier / hire company	1	1%	1%
Other	6	5%	3%
Total	122	100%	100%

¹ While this Table reports only one response from the community sector, we have included later in this report, the figures generated through a separate survey of this sector referenced later, undertaken for the Community Composting Network (CCN).

Table 4 Turnover for the UK composting industry, 2005/06

Turnover band	Number of companies (survey respondents only)	% of total companies in each band	Total estimated turnover per band
Less than £10,000	8	8%	£40,000
£10,000 - £50,000	12	11%	£360,000
£50,000 - £100,000	16	15%	£1.2 million
£100,000 - £500,000	37	35%	£11.1 million
£500,000 - £1 million	13	12%	£9.8 million
More than £1 million	19	18%	£36 million
Total for respondents providing turnover information	105	100%	£58 million
Estimate for survey respondents not providing turnover information			£4.6 million
Estimate for survey non respondents			£28 million
Total estimated turnover for UK composting industry			£91 million

The turnover information provided by respondents was used to calculate the financial size of the UK composting industry. For those composting companies with compost related turnovers of under a million pounds in 2005/06, the midpoints of the turnover bands were used in the calculations. Additional information was provided by WRAP to help estimate the turnover of the companies with turnovers over £1 million. The method used was based on their waste input and product output quantities and composting methods. The total turnover for respondents answering the survey question on turnover was thus estimated to be £58 million. An additional £4.6 million was estimated for survey respondents who did not provide turnover information. This estimate was obtained by calculating turnover per tonne of source segregated waste input for those answering the turnover question and applying this to respondents not answering the turnover question. In order to allow for survey non respondents, the financial turnover of these operators was scaled up in proportion to their municipal waste inputs as described in Section 3.2. This method gave a turnover for survey non respondents of £28 million.

The total estimated turnover for the UK composting industry in 2005/06 is thus calculated to be of the order of £91 million. This is the first time that a robust calculation of the financial size of the industry has been possible.

4.1.3 Employment in the UK composting industry

Composting companies were asked to provide information on how many full time equivalent (FTE) staff they employed in the composting and biological treatment aspects of their business. This could cover more than one site where a single company operated multiple composting sites. Bands were provided (see Table 5) on the survey form. The most common of which was the 1 to 5 FTE band with over half of companies falling into this category. No companies responding to the survey employed more than 50 FTE staff on composting related activities.

The overall employment in the UK composting industry was estimated from the survey results. The three survey respondents choosing not to answer the question on employment were allowed for by assuming that their staff numbers per quantity of input source segregated waste were the same as the average for those answering the question on employment. Survey non respondents were allowed for by assuming the same scaling factor based on their municipal waste inputs as described in Section 3.2.

Table 5 Employment in the UK composting industry, 2005/06

Number of FTE employed per company	Number of companies (survey respondents only)	Total FTE employment
Less than 1	11	6
1 to 5	73	219
6 to 10	18	144
11 to 20	15	233
21 to 50	6	213
More than 50	0	0
Total for respondents providing employment information	123	814
Estimate for respondents not answering this question		15
Estimate to allow for survey non respondents		365
Total FTE employment in UK composting industry		1,194

The overall employment in the UK composting industry in 2005/06 is estimated at 1,200 FTE staff.

In addition to these employment estimates there was also considerable volunteer and trainee opportunities in the community composting sector. This is covered by the Defra funded project looking at community composting activity in the UK in 2006 (see Appendix 2 for further information about this project).

4.1.4 Types of composting sites operated by survey respondents

Survey respondents were asked to categorise the nature of their sites using a pre-defined list on the survey form (see Table 6). Half of the 321 composting sites operated by survey respondents were described as dedicated composting/biological treatment sites. A third of sites were described as farm sites. The remaining 16% of sites came under a variety of site type classifications. It should be noted that some of the dedicated composting sites were actually located on other types of sites such as farms or landfill sites but were classified by their operators as dedicated composting sites because they operated independently of the farm or landfill business.

Table 6 Types of composting sites operated by survey respondents in the UK, 2005/06

Site type	Number of sites	% of total sites
Dedicated composting / biological treatment site	115	50%
Farm	78	34%
Landfill site	15	7%
Materials recycling facility	4	2%
Horticultural / landscaping activities	4	2%
Civic amenity site	3	1%
Wood recycling	2	1%
Transfer	2	1%
Sewage works	2	1%
Community based project	1	<1%
Other (one construction, one other waste type site)	2	1%
Total	2208	100%

4.1.5 Location of composting sites

The location of composting sites operated by survey respondents are summarised in Table 7. Approximately 90% of sites were in England.

Table 7 Location of composting sites operated by survey respondents in the UK, 2005/06

Country/ region	Number of sites	% of total sites
East Midlands	18	8%
East of England	26	11%
London	5	2%
North East	14	6%
North West	22	9%
South East	33	14%
South West	61	26%
West Midlands	19	8%
Yorkshire & the Humber	15	6%
Total England	215	90%
Wales	9	4%
North Scotland	4	2%
South Scotland	7	3%
Total Scotland	11	5%
Northern Ireland	3	1%
UK TOTAL	236	100%

4.1.6 Source of composted waste

The vast majority of sites, 94%, composted waste which was solely brought in from outside the site (imported) (Table 8).

Table 8 Source of composting feedstock at sites operated by survey respondents in the UK, 2005/06

Composting feedstock	Number of sites	% of total sites
Produced on site	5	2%
Imported from off site	216	94%
Both	8	4%
Total	229	100%

4.1.7 Animal By-Products Regulations

Approximately 12% of composting sites (28 sites) in the survey had full approval under the Animal By-Products Regulations with a further 6% (13 sites) being under discussion as regards the Regulations (Table 9)

Table 9 Sites coming under the Animal By-Products Regulations, 2005/06

Animal By-Products Regulations	Number of sites	% of total sites
Site has full approval	28	12%
Under discussion	15	6%
In verification	0	0%
Not under consideration	188	82%
Total	231	100%

4.2 Composting of source segregated wastes

4.2.1 Quantities and types of source segregated waste composted in 2005/06

The survey asked about the quantities and types of source segregated waste which were composted. Scaling up of the survey results to allow for non respondents was carried out as described in Section 3.2.

The total quantity of source segregated waste composted in the UK in 2005/06 was estimated to have been 3.4 million tonnes. Of this, 85% (2.9 million tonnes) was municipal waste and the remaining 15% (0.5 million tonnes) was non municipal waste. This equates to an increase of 28% on the 2.7 million tonnes of total waste composted in 2004/05.

Figure 1 shows the trends in quantities of organic waste composting from 1994 up to and including the current 2005/06 data. Where data were available, municipal and non municipal wastes input to composting are shown separately. The trend over the last three years' data is for sizeable year-on-year increases in the overall quantities composted with municipal waste composting going up more than non municipal waste composting. More than 50 times more organic waste was composted in 2005/06 than in 1994.

Table 10 shows the types and quantities of waste composted in 2005/06 with data from 2004/05 also shown for comparison. Just over half the municipal waste composted in 2005/06 was from civic amenity sites with approximately 39% coming from kerbside collections. Compared with 2004/05, there has been a 28% increase in the quantity of municipal waste composted in the UK which corresponds to an additional 750,000 tonnes. The relative proportions of different municipal waste types being composted have stayed very similar with almost identical percentages of civic amenity site and kerbside garden waste only collections in the two years. The relative proportions of municipal and non municipal waste have also stayed almost identical. The large increase between 2004/05 and 2005/06 in wastes input to composting has therefore come from across the board increases in the quantities of all waste types.

The data reported in Figure 1 and Table 10 take some account of the waste composted by the community sector through the respondent organisation responding to this survey. However we estimate there may be an additional quantity of up to 15,000 tonnes over and above these figures, composted by community sector organisations, based on the results of a separate survey undertaken by the Open University for the Community Composting Network which showed a total of 21,500 tonnes composted by this sector in the calendar year 2006.²

² Information about community sector obtained from "Community composting activity in the UK - 2006" interim report published by Integrated Waste Systems, The Open University, as part of the Defra funded project (WR0211) "Unlocking the potential of community composting". May 2007.

Figure 1 Growth in UK composting based on quantities of input source segregated waste materials

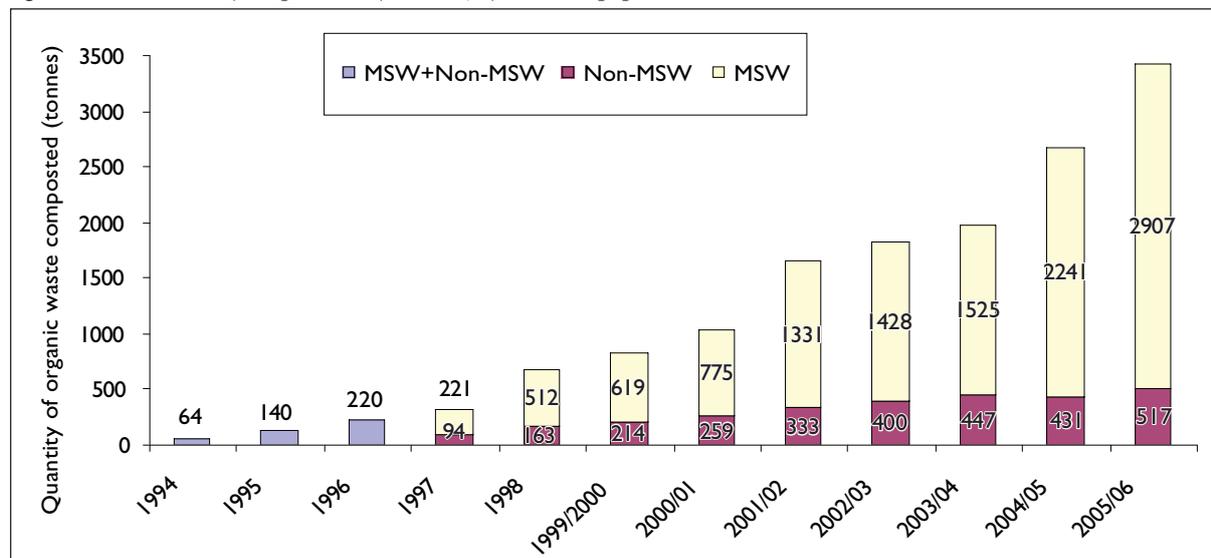


Table 10 Quantities and types of wastes composted in the UK, 2005/06

	2005/06			2004/05		
	Estimated total collected ('000 tonnes)	% of total collected	% of total collected by waste category	Estimated total collected ('000 tonnes)	% of total collected	% of total collected by waste category
Municipal waste						
Garden waste from civic amenity/bring sites	1,477	43%	51%	1,127	42%	50%
Garden waste only from kerbside collection	986	29%	34%	779	29%	35%
Garden and kitchen waste from kerbside collection	310	9%	11%	128	5%	6%
Kitchen waste only from kerbside collection	12	<1%	<1%	3	<1%	<1%
Garden and card waste from kerbside collection	45	1%	2%			
Council parks / gardens waste and green waste from educational institutes	38	1%	1%	57	2%	2%
Council-collected food processing by-products and food waste from retailers	1	<1%	<1%			
Other municipal waste (includes fly-tipping, wood etc and unspecified municipal waste)	38	1%	1%	147	6%	7%
Total municipal waste	2,907	85%	100%	2,241	84%	100%
Non municipal waste						
Landscape/grounds maintenance	153	4%	30%	135	5%	31%
Forestry/timber/bark/by-products	88	3%	17%	57	2%	13%
Food processing by-products and food waste from retailers	155	5%	30%	95	4%	22%
Other non municipal waste (includes tannery waste, site clearance waste, mixed industrial and commercial waste etc)	116	3%	23%	144	5%	34%
Unspecified	5	<1%	1%			
Total non municipal waste	517	15%	100%	431	16%	100%
TOTAL INPUT WASTE	3,424	100%	-	2,672	100%	-

Table 11 shows the quantity of source segregated waste processed by the main business activities of composting companies responding to the survey. In 2005/06, nearly half of the source segregated waste (42%) was processed by companies in the compost producer / biological treatment industry and 39% was processed by solid waste treatment/ disposal companies.

It was found that 3,424,000 tonnes of source segregated waste was processed in 2005/06 (Table 12). Of this amount of source segregated waste, 31% was processed by companies with

Table 11 Quantity of source segregated waste processed by main business activity in 2005/06

Main business activity	Quantity composted ('000 tonnes)	% of Quantity composted
Compost producer / biological treatment	1,447	42%
Agricultural activities	289	8%
Solid waste treatment / disposal company	1,332	39%
Local authority	51	2%
Horticultural / landscaping activities	78	2%
Wood recycling	45	1%
Water treatment company	46	1%
Community group / not-for-profit business	<1	<1%
Equipment / plant supplier / hire company	27	1%
Other	72	2%
Un-specified	36	1%
Total	3,424	100%

Table 12 Quantity of source segregated waste processed by turnover in 2005/06.

Turnover band	Quantity composted ('000 tonnes)	% of Quantity composted
Less than £10,000	19	1%
£10,000 - £50,000	66	2%
£50,000 - £100,000	113	3%
£100,000 - £500,000	570	17%
£500,000 - £1 million	328	10%
More than £1 million	1,054	31%
Total for respondents providing turnover information	2,150	63%
Estimate for survey respondents not providing turnover information	228	7%
Estimate for survey non respondents	1,047	31%
Total estimated turnover for UK composting industry	3,424	100%

compost related turnovers of over £1 million. For the smaller companies with compost related turnovers of less than £100,000, the quantity of source segregated waste processed was 3% or less of the total estimated turnover for the UK composting industry.

The majority of source segregated waste processed in 2005/06 was from companies that categorised the nature of their sites as dedicated composting / biological treatment sites. A further 11% was from sites described as landfill sites and a further 10% was from sites described as farms (Table 13).

Table 13 Quantity of source segregated waste processed by type of site in 2005/06

Site type	Quantity composted ('000 tonnes)	% of Quantity composted
Dedicated composting / biological treatment site	2,240	65%
Farm	342	10%
Landfill site	360	11%
Materials recycling facility	123	4%
Horticultural / landscaping activities	98	3%
Civic amenity site	37	1%
Wood recycling	63	2%
Transfer station	3	<1%
Sewage works	19	1%
Community based project	<1	<1%
Other	81	2%
Un-specified	58	2%
Total	3,424	100%

4.2.2 Quantities of waste composted by individual sites

There were found to be (Table 14a) a considerable number of smaller composting sites with 41% of all sites in the survey composting fewer than 5,000 tonnes of waste in 2005/06. There was also a large number of mid range size sites with 40% of all sites composting between 10,000 and 50,000 tonnes of waste in 2005/06. There were very few sites which composted over 50,000 tonnes in 2005/06 with the highest intake at any one site in 2005/06 being just over 60,000 tonnes.

The majority of waste composted (74%) in the UK in 2005/06 was found to be from the mid range sized composting sites that were composting between 10,000 and 50,000 tonnes. The smaller sites (composting less than 5,000 tonnes of source segregated waste) were found to be treating only 5% of the total amount of waste composted in the UK in 2005/06 (Table 14b).

Table 14a Source segregated wastes inputs to sites in the UK, 2005/06

Source segregated waste input (tonnes)	Number of sites operated by survey respondents	% of total sites
Less than 5,000	93	41%
5000 - 10,000	39	17%
10,000 – 50,000	92	40%
50,000 - 100,000	4	2%
Total	228	100%

Table 14b Quantity of source segregated waste processed by input band in the UK, 2005/06

Source segregated waste input (tonnes)	Quantity composted ('000 tonnes)	% of Quantity composted
Less than 5,000	187	5%
5000 - 10,000	381	11%
10,000 – 50,000	2,550	74%
50,000 - 100,000	305	9%
Total	3,424	100%

4.2.3 Composting methods used

The composting methods used at individual composting sites in 2005/06 are summarised in Table 15. More than one

Table 15 Percentage of sites using different composting processes in the UK, 2005/06

Composting method	Number of sites	% of total sites
Open air mechanically turned windrow	205	90%
In-vessel composting	25	11%
Static pile with aeration	5	2%
Table composting	3	1%
Covered mechanically turned windrow	2	1%
Thermophillic aerobic digestion	0	0%
Anaerobic digestion	0	0%
Other/ not fully specified	2	1%

composting method was used at some sites. The vast majority of sites (90%) used open air mechanically turned windrow composting. Approximately 11% of sites composted in-vessel.

Estimates of the quantities of source segregated waste composted using each method were calculated. These estimates are shown in Table 16. For the small number of sites where more than one composting method was used, the different methods were assumed to compost equal proportions of the wastes input at those sites.

An estimated 81% of waste was composted by open air mechanically turned windrow with in-vessel composting the method used for 14% of waste. Between them, these two composting methods are therefore estimated to have accounted for 95% of all composting of source segregated waste in 2005/06.

Estimates of the quantities of mixed waste treated are shown in Table 17.

Table 16 Source segregated wastes composted by different processes in the UK, 2005/06

Method of composting	Quantity composted ('000 tonnes)	% of total waste composted
Open air mechanically turned windrow	2,773	81%
Covered mechanically turned windrow	15	<1%
In-vessel composting	481	14%
Static pile with aeration	59	2%
Table	46	1%
Other/ not fully specified	14	<1%
Not specified	36	1%
Total	3,424	100%

Table 17 Quantities of mixed wastes input to biological treatment in the UK, 2005/06

	Estimated quantity (tonnes)
Input municipal mixed waste	105,100
Input non municipal mixed waste	1,600
Total input mixed waste	106,700
Biodegradable fraction of municipal waste	80,000
Biodegradable fraction of non municipal waste	1,600
Total biodegradable fraction of the mixed waste	81,600

4.3 Compost products from source segregated waste

4.3.1 Types and quantities of different compost products

The quantity of compost produced from source segregated feedstock has increased from 1.60 million tonnes in 2004/05 to 2.07 million tonnes in 2005/06. This is an increase on the 2004/05 levels of approximately 33%.

This increase continues the trend shown in recent years in Table 18 and Figure 2. The quantity of compost produced in the UK

Figure 2 Compost products from source segregated feedstock manufactured in the UK, 2001/02 to 2005/06

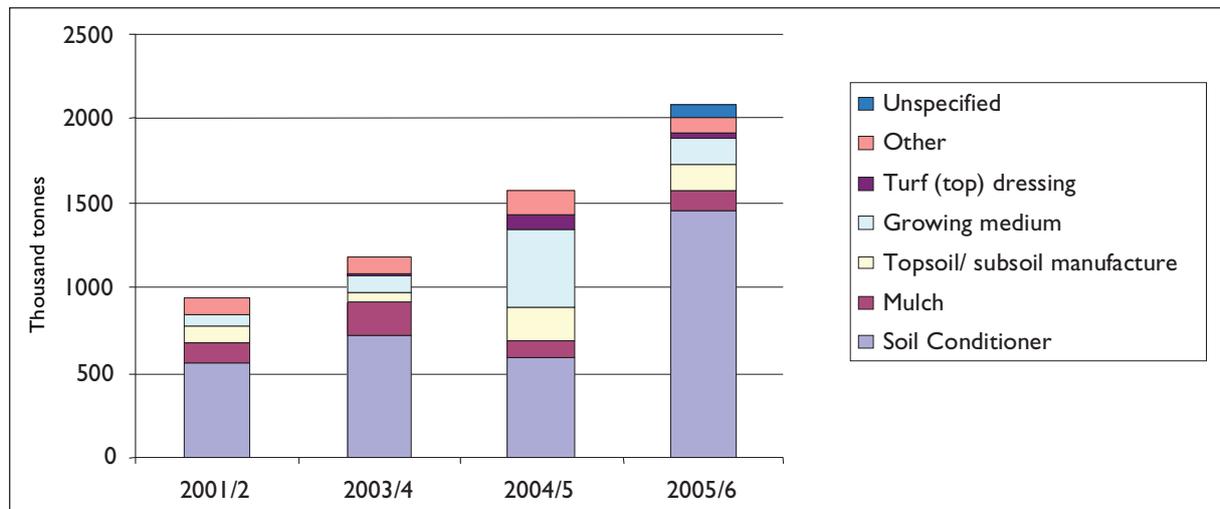


Table 18 Compost products from source segregated feedstock manufactured in the UK, 2001/02 to 2005/06

Product	2005/06	2004/05	2003/04	2001/02
Estimated quantity ('000 tonnes)				
Soil conditioner	1,463	591	722	562
Mulch	127	98	188	117
Topsoil/ subsoil manufacture	138	198	68	95
Growing media	155	459	102	67
Turf (top) dressing	37	94	15	6
Other	88	150	94	99
Unspecified	67			
Total	2,073	1,603	1,189	946
Proportion (%)				
Soil conditioner	71%	37%	60%	60%
Mulch	6%	6%	16%	12%
Topsoil/ subsoil manufacture	7%	12%	6%	10%
Growing medium	7%	29%	9%	7%
Turf (top) dressing	2%	6%	1%	1%
Other	4%	9%	8%	10%
Unspecified	3%			
Total	100%	100%	100%	100%

has more than doubled over the four year period between 2001/02 and 2005/06.

The most common product in 2005/06 was soil conditioner which accounted for 71% by weight of all compost products. The proportion of soil conditioner is similar to the 60% estimated by the surveys in 2003/04 and 2001/02, but very different from the 37% measured in 2004/05. In the light of the low response rate in 2004/05, it could be that the respondents to the 2004/05 survey were not representative, in terms of product proportions, of the composting industry as a whole in that year. Therefore, since 2001/02, there has been a general increase in the quantities of compost used in topsoil/ subsoil manufacture, in growing media, and in turf dressing if the

2004/05 estimates are discounted.

4.3.2 Product distribution of compost from source segregated waste

Nearly half (46%) of the compost produced from source segregated feedstock in 2005/06 was sold, with the majority of this fraction being sold directly to end users. About a third of the compost was used on the site of production and about a fifth of the compost produced was distributed with no charge, which included, in some cases, the producer paying to distribute the compost.

Figure 3 shows a comparison of compost product distribution in 2005/06 with previous years. It can be seen that the quantity of compost that was sold more than doubled from 2001/02 to

Figure 3 Compost product distribution by UK companies, 2001/02 to 2005/06

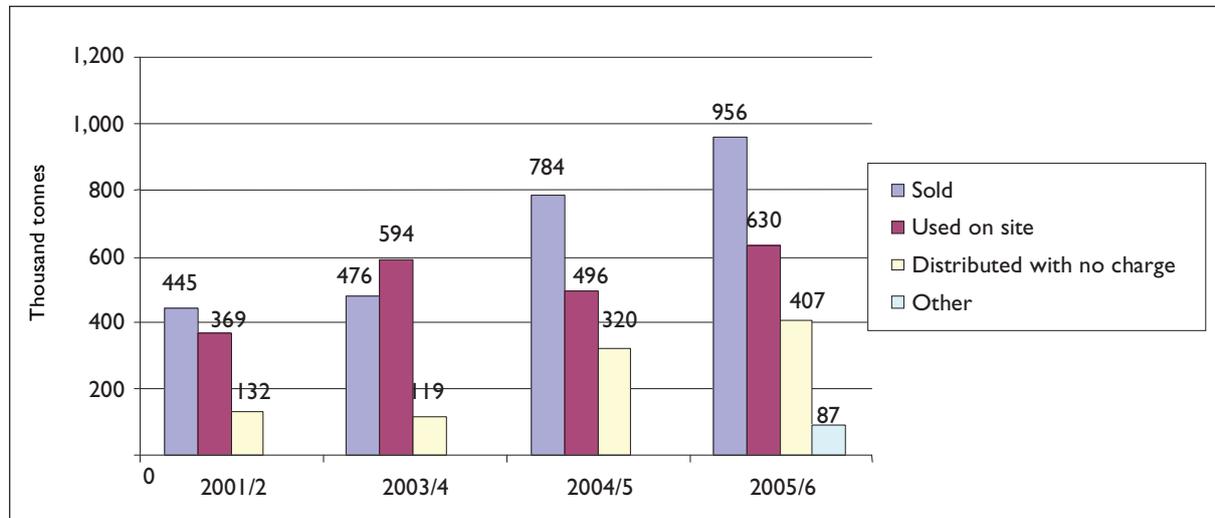


Table 19 Compost product distribution by UK companies, 2005/06

	Estimated quantity ('000 tonnes)	% of total product
Sold directly to end users	581	28%
Sold on to third parties	226	11%
Sold (unknown whether direct to end users or to third parties)	148	7%
Distributed (no charge)	317	15%
Producer paid to distribute	84	4%
Used on site	630	30%
Used on other sites operated by same producer	7	<1%
Other	80	4%
Total	2,073	100%

2005/06. The percentage that was sold has not altered significantly over the four year period, for example, 47% was sold in 2001/02 compared with the 46% sold in 2005/06. There

was a big increase in the quantity of compost that was distributed with no charge which went up by more than three-fold. The quantities of compost used on site have also increased over the four year period, but to a lesser extent. In order to compare the compost distribution data in 2005/06 with previous years, some of the categories in Table 19 were amalgamated.

4.3.3 Markets for composted products made from source segregated waste

In 2005/06, the biggest UK market for composted products from source segregated feedstock was agriculture which used one million tonnes of composted product (Table 20).

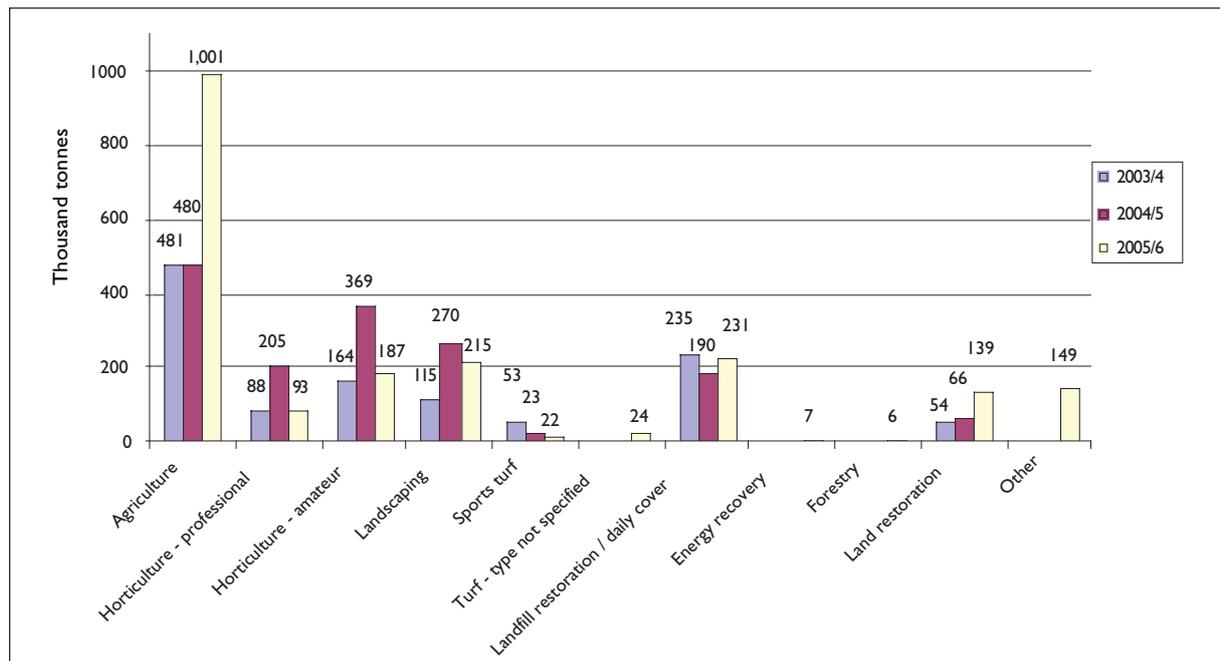
Agriculture used nearly half (47%) of all compost products in 2005/06. Over 70% of the sites in the survey provided compost to this market sector. The next biggest market sectors were landfill restoration and daily cover which used 11% of composted products with just under a quarter of a million tonnes in 2005/06.

Considering the higher value markets, over a quarter of a million

Table 20 Distribution of composted products in the UK by market type, 2005/06

	Estimated quantity of compost product going to each market sector ('000 tonnes)	% of compost product going into each market sector	% of sites servicing market sector
Agriculture	1,001	47%	72%
Horticulture – professional	93	4%	14%
Horticulture – amateur	187	9%	24%
Landscaping	215	10%	27%
Sports turf	22	1%	4%
Turf – type not specified	24	1%	1%
Landfill restoration / daily cover	231	11%	16%
Energy recovery	7	<1%	<1%
Forestry	6	<1%	1%
Land restoration	139	7%	7%
Other or unknown	149	7%	11%
Total	2,073	100%	-

Figure 4 Markets for composted products in the UK, 2003/04 to 2005/06



tonnes went into horticulture with the quantity going to amateur horticulture double that going to professional horticulture. Landscaping used over 200,000 tonnes corresponding to 10% of the UK market for composted products with over a quarter of all sites producing compost for this market sector.

The "other" category includes composted products for which the market was not specified, and also compost still stored on the site of production.

The survey also asked those supplying compost to the agriculture sector which crops their composted products were used on. By far the most common type of crop was the arable/cereal category. Fewer sites supplied to grassland, and the vegetables/ fruit/ salad crops category. None of the sites in the survey supplied to glasshouse crops. Some of the "other or unknown" category refers to use on set aside land (Table 21).

Figure 4 compares the markets for 2005/06 with the previous two years. The quantities of compost going into amateur and professional horticulture and landscaping are shown as being about twice as high in 2004/05 as in 2005/06. However, as discussed earlier the quantities of compost going into growing media and topsoil/ subsoil manufacture were estimated as

unusually high in 2004/05, most likely due to the low response rate leading to unrepresentative market sector results in that year's survey.

4.3.4 Distribution of products from source segregated feedstocks

The survey asked where compost products used in the different market sectors were distributed in 2005/06. A clear difference can be seen in Table 22 for the lower value per tonne market sectors of landfill restoration/ daily cover and agriculture compared with the higher value per tonne market sectors of horticulture, sports turf and landscaping. The lower value market sectors show more local distribution and less regional and UK wide distribution compared with the higher value market sectors.

Table 21 Agricultural crops where composted products were used in the UK, 2005/06

Crop	Number of sites supplying to crop type	% of sites
Arable/cereal	132	88%
Grassland	18	12%
Vegetables/fruit/salad crops	17	11%
Other or unknown	12	8%
Glasshouse protected crops	0	0%

Table 22 Distribution of compost products in the UK, 2005/06

Market sector	Local distribution	Regional distribution	UK wide distribution
	Number of respondent sites		
Agriculture	160	19	12
Horticulture – professional	25	10	6
Horticulture – amateur	45	22	17
Landscaping	51	28	14
Sports turf	8	3	2
Landfill restoration/daily cover	39	3	0
Energy recovery	1	0	0
Forestry	1	0	1
Land restoration	12	4	0
Other	12	9	0
	% of respondent sites		
Agriculture	97%	12%	7%
Horticulture – professional	76%	30%	18%
Horticulture – amateur	80%	39%	30%
Landscaping	84%	46%	23%
Sports turf	80%	30%	20%
Landfill restoration / daily cover	100%	8%	0%
Energy recovery	100%	0%	0%
Forestry	50%	0%	50%
Land restoration	75%	25%	0%
Other	60%	45%	0%

4.3.5 Market sectors offering potential for growth for compost products in the next year

The survey asked composting companies to specify which market sectors they saw as offering the greatest potential for growth for their organisation in the year ahead (Table 23). Over half of those composting source segregated feedstock mentioned agriculture which is the market sector currently using the

greatest quantities of compost. The next most commonly mentioned market sector was landscaping which was cited by over a third of compost companies even though only 10% of compost products went into the landscaping market in 2005/06. Land restoration was mentioned by 29% of respondents even though only 13% of compost products went into this market in 2005/06.

Table 23 Market sectors viewed by composting companies as offering greatest potential for growth in the UK

Market sector	Number of sites	% of operators considering market sector offers potential for growth for them
Agriculture	68	57%
Landscaping	41	37%
Land restoration	35	29%
Horticulture – professional	21	18%
Horticulture – amateur	21	17%
Sports turf	17	15%
Landfill restoration/daily cover	14	11%
Energy recovery	8	7%
Forestry	4	3%
Other	6	5%

4.4 Mixed waste biological treatment

The survey also asked about mechanical biological treatment (MBT) of mixed waste. MBT of mixed waste tends to produce a lower value output that is harder to market than compost product from source segregated feedstocks, and remains subject to regulatory control. There were only six responses to the survey from companies which operated MBT or biological treatment of mixed waste (Table 24). Three of these companies solely processed mixed wastes and three also composted source segregated wastes. Due to the small number of companies operating mixed waste biological treatment on which the survey gathered data, care had to be taken in interpreting the data as it may not be fully representative of mixed waste biological treatment in the UK.

The estimated quantity of mixed waste processed in the UK in 2005/06, grossed up to allow for survey non respondents using the same factor as described in Section 3.2 was just over 100,000 tonnes. The biodegradable component of the waste was just over 80,000 tonnes. This quantity was approximately 3% of that composted by source segregated composting.

Table 24 Summary of survey results on the mechanical and biological treatment of mixed wastes in the UK in 2005/06

Total mixed waste processed grossed up to allow for survey non respondents		106,700 tonnes
Results below relate to the six sites for which MBT data were reported only		
Technique	Aerobic	5 sites
	Anaerobic	1 site
How outputs distributed	Less than 1% sold; 99% of outputs for which the use was specified were used on the site of production or other sites of the producer	
Output types	Soil conditioner	2 sites
	Topsoil/ subsoil manufacture	2 sites
	Stabilized biowaste	1 site
	Unspecified outputs	3 sites
End uses	Landfill restoration/ daily cover	4 sites - accounting for over 80% of all mixed waste output
	Still stored on site of production	1 site
	Unspecified	1 site
	Agriculture	1 site
	Land restoration	1 site

Approximately 98% of the waste undergoing MBT or biological treatment of mixed waste in 2005/06 was municipal waste. There were big differences in the outputs from mixed waste biological treatment and how they were used compared with source segregated composting. A very high proportion, over 99% of outputs from mixed wastes for which the distribution was specified, were distributed on the site of production or other sites of the producer. Over 80% of output from mixed waste feedstock was used on landfill sites.

4.5 Additional processing capacity

The survey asked about whether composting and biological treatment companies had any unused capacity in 2005/06, and if that was the case, how much additional waste could have been processed in 2005/06. The survey also asked about whether there were definite plans (i.e., with any required permits and necessary investment in place) to expand the processing capacity of current sites during the next five years. Quantities of additional source segregated and mixed waste capacity that would be generated by such expansion were requested. Although not specifically asked for in the questionnaire, some companies provided details of new sites that they would be opening during the next five years. Since details of capacity in new sites were not specifically asked for on the survey forms, it could be that the survey missed some new sites that respondents intend to open.

There was some confusion from some survey respondents in answering these capacity questions with a number of respondents specifying that they had unused capacity in 2005/06 because their waste management licences permitted more composting even though they did not in fact have the infrastructure or space to compost up to the licence limits. Some respondents also provided information on new capacity to be generated at sites over the next five years even though

Table 25 Unused composting and biological treatment capacity in the UK in 2005/06 and future expansion to composting and biological treatment capacities

	Annual capacities ('000 tonnes)
Unused source segregated capacity in 2005/06	981
Unused mixed wastes capacity in 2005/06	104
Additional source segregated capacity within five years	1,530
Additional mixed wastes capacity within five years	120
New capacity for source segregated capacity at new sites	440
Total	3,175

the plans for expansion were not definite. Several respondents entered planned new capacity twice, both as unused capacity in 2005/06, and as new capacity to be generated over the next five years. For surveys completed over the telephone, further checking of respondents' answers was possible to make sure that the capacity information gathered was accurate. Where survey forms were sent in by post and email, composting operators that appeared to have double counted were contacted to check their survey answers. Therefore while every effort was made to verify and clarify the information, it is likely that the additional capacity (unused and/or new) calculated from this survey are over estimated. It is clear that the questions on the survey form covering capacities could be improved in order to gather the required data more effectively. In the light of this year's experience, the capacity questions will be revised on next year's survey form.

The results obtained, scaled up to allow for survey non respondents are shown in Table 25. The estimated unused source segregated capacity in 2005/06 is estimated to be just under a million tonnes and the unused capacity for the biological treatment of mixed waste in 2005/06 is estimated to be about 100,000 tonnes. An additional million and a half tonnes of source segregated capacity is estimated to be generated at existing sites over the next five years with a small additional capacity for biological treatment of mixed wastes. Nearly half a million tonnes of new capacity for source segregated waste at new sites is estimated to become available over the next five years.

5.0 Summary and conclusions

5.1 Source segregated waste treatment

The long term trend of increasing quantities of waste being composted in the UK has continued in 2005/06. The total quantity of source segregated waste which was composted in 2005/06 was 3.4 million tonnes of which 2.9 million tonnes (85%) were municipal waste. Just over half of this municipal waste was from civic amenity sites, and just under half from kerbside collections. The non municipal waste component was half a million tonnes (15% of the total) of which about a third was from landscaping/ grounds maintenance, and a further third from food industry wastes.

5.2 Mixed waste treatment

The quantities of mixed waste undergoing biological treatment were much lower than for source segregated composting with an estimated 100,000 tonnes which equated to processing of just over 80,000 tonnes organic waste.

5.3 Industry composition

Open air mechanically turned windrow was by far the most common composting method used in 2005/06 with an estimated 81% of all source segregated waste composting carried out by this method and a further 14% carried out by in-vessel composting.

The size distribution of composting sites showed there to be large numbers of small sites, with 41% of sites (93 out of the 228 responding sites) taking less than 5,000 tonnes of input materials in 2005/06. There were also found to be a large number of mid range sites, with a further 40% of sites (92 out of the 228) taking in 10,000 to 50,000 tonnes in 2005/06. The proportion of total waste composted is however slanted towards the larger sites; 74% of the total tonnage is processed through the mid range sites taking 10,000 to 50,000 tonnes while only 5% of the total is processed through the small sites taking less than 5,000 tonnes.

The most common main business activity amongst composting operators responding to the survey was compost producer/ biological treatment operator which applied to 41% of operators. Firms in this sector compost 42% of the total. The two next most common main business activities with about 20% composting operators each, were agricultural activities, and solid waste treatment/ waste disposal. However, here we found that only 8% of the total tonnage was processed through agricultural activities, compared to 39% of the total for solid waste treatment/ disposal operators.

As regards composting sites, half of all sites were found to be dedicated composting sites, processing 65% of the total waste composted. A further third of sites were classified by their operators as farm sites, but these only account for 10% of the total waste composted.

The vast majority of sites (94%) solely composted waste that was imported from outside the composting site.

5.4 Future capacity increases

It is estimated that in 2005/06 there was up to one million tonnes of unused source segregated waste processing capacity and approximately 100,000 tonnes of unused mixed waste processing capacity available in the UK. This is in addition to the

3.4 million tonnes of source segregated and 100,000 tonnes of mixed waste that was actually processed in 2005/06.

Many compost producers also indicated that they had definite plans to expand their composting capacities at existing and/or new sites. The vast majority of this expansion would be for source segregated waste rather than mixed waste processing with an estimated two million tonnes of new capacity for source segregated waste inputs, and over 100,000 tonnes of mixed waste processing capacity due to come on line over the next five years.

The survey results clearly indicate that additional processing capacity will be coming on stream in the UK in the near future. However, the figures for this 'currently unused' and 'additional new' capacity should be treated with a degree of caution as there were a number of inconsistencies with the information provided for these sections of the survey. These included potential double counting of unused and new capacity as well as specifying waste management licence capacity limits rather than the actual, much lower, site capacity limits. Every effort was made to clarify the unused and new capacity information provided, however; the results should still be interpreted with care and should be considered overestimates of future capacity in the UK.

5.5 Financial estimate

For the first time it has been possible to derive good quality estimates of the financial turnover of the UK composting industry covering the production (not including blending), distribution and sales of compost, and employment in the industry. This has been made possible by the high survey response rate and the use of data available on the UK composting industry. The 2005/06 turnover is estimated to be about £90 million. Employment in the composting industry in 2005/06 is estimated as 1,200 full time equivalent employees.

5.6 Markets for compost

The quantity of compost produced from source segregated in the UK in 2005/06 was just over 2 million tonnes, an increase of 28% from 2004/05 and more than double the quantity produced four years ago. The predominant product accounting for nearly one and a half million tonnes (71%) was soil conditioner. The proportion of soil conditioner produced has increased in recent years from around 60% four years ago. In terms of absolute quantities, the overall quantity of soil conditioner produced was nearly three times higher in 2005/06 than in 2001/02. Amongst the other products, there have also been increases in the quantities of turf dressings and growing media products since 2001/02 if the 2004/05 data are excluded.

Nearly half of all composted products produced in the UK in 2005/06 from source segregated feedstock were sold with a further third used on the site of production and a further 20% distributed with no charge. There has been no change in the proportion of compost product sold over the last four years. However, there has been an overall increase in market size of 119%, rising from 946,000 tonnes in 2001/02 to 2,073,000 tonnes in 2005/06. The proportion of compost product used on site has declined while the proportion distributed with no charge has increased. This suggests that the market for compost use on site may be saturated at many composting sites.

As regards market sectors where compost products were used, nearly half (47%) of all products from source segregated composting went to agriculture in 2005/06. The most common crop type for compost usage was arable/ cereal. The next most common market sectors were horticulture (amateur and professional combined) using 13%, landfill restoration/ daily cover, 11%, and landscaping, 10%.

The market sectors which composting companies operating source segregated composting considered to offer the greatest potential for growth for their businesses were agriculture, pinpointed by over half of respondents, followed by landscaping with just over a third of respondents, and land restoration mentioned by just under a third of respondents. Since agriculture was the dominant market sector in 2005/06, it is not unexpected that companies see potential for growth in this sector. Landscaping and land restoration used much smaller quantities of composted products in 2005/06, compared with the number of composting companies seeing potential for growth in these sectors.

The distribution of compost products from source segregated feedstocks showed that lower value market sectors such as agriculture and landfill restoration/ daily cover showed more local distribution, while the higher value per tonne market sectors such as horticulture, sports turf and landscaping, as would be expected, showed more regional and UK wide distribution.

In contrast with source segregated composting, nearly all (99%) of the output from mixed waste feedstock was used on the site of production or other sites of the producer compared with only a third for compost from source segregated feedstock. Less than 1% was sold compared with nearly half from source segregated feedstock. This shows that the output from mixed waste composting tends to be of lower value. The market sector distribution was also very different from that of compost from source segregated feedstock for which the main market sector was agriculture, with over 80% of output from mixed waste going for landfill restoration/ daily cover.

5.7 Conclusion

Overall, the 2005/06 survey shows that UK composting has increased substantially again on the previous year's quantities. The high survey response rate and detailed information gathered has meant that an in depth picture of the UK composting industry is available for 2005/06 covering its financial size, employment, feedstocks used, and products produced including product types, markets the products are used in and how they are distributed.

The survey showed some important trends, such as the overall expansion of the sector. However, the majority of the waste composted continued to be treated in open air mechanically turned windrows, with less than a fifth composted in-vessel. Given Government's recent policy focus on food waste it appears that a marked increase in both separate collection and treatment capacity is required. It was unclear whether the anticipated 1.5 million tonnes of additional source segregated capacity within five years would accommodate this need.

This survey will prove valuable in benchmarking future trends in UK composting in the years ahead.

Appendix I

Survey form

The Composting Association's annual survey of: The UK Composting and Biological Treatment Industry 2005/06

The Composting Association is working in association with the Waste and Resources Action Programme (WRAP) to conduct its annual survey of the UK Composting and Biological Treatment Industry. The survey is being administered by M·E·L Research on behalf of the Composting Association and WRAP.

It is important that you take part because the results will be of interest to all **compost producers**. The results will help you:

- Identify industry trends in operating methods and processing technologies
- Plan for diversification and treatment of new feedstocks in the future
- Prepare business plans for investment, based on sound market knowledge
- Formulate long-term strategies based on detailed knowledge of the scale and rate of growth of the sector
- Identify product development and marketing opportunities
- Prepare for impacts from competing products and services

The survey covers the period 1 April 2005 to 31 March 2006.

All responses will be treated in strict confidence and will not be accessible to anyone outside of the project team. All published results will be in aggregate form and individual responses will not be identified.

Need help filling in the survey form?

If you have any questions about the survey or if you require help filling in the survey form please:

Ring the **Composting Survey Helpline** at M·E·L Research on **0121 604 4664** and speak to Pinder Mahal, Stephanie Boulos or Ian Stone; or E-mail composting.survey@m-e-l.co.uk with your query.

Survey closing date: Friday 26th January 2007

Please return the completed survey form to M·E·L Research:

Fax to: 0121 604 6776

E-mail to: composting.survey@m-e-l.co.uk

Freepost to: Composting Survey, M·E·L Research Ltd,
FREEPOST, Birmingham, B7 4BR

Thank you for supporting this survey.

Section A – Contact details

Name
Telephone
E-mail
Company Name
Company Postcode

Section B – Company information

B1. What is the main business activity of your company?

(Please select one option only)

- Compost producer / biological treatment
- Horticultural / landscaping activities
- Water treatment company
- Community group / not-for-profit business
- Solid waste treatment / disposal company
- Local authority
- Equipment / plant supplier / hire company
- Other – please specify
- Agricultural activities

B2. What was the turnover of the composting / biological treatment aspects of your business (including production, distribution and sales) in 2005/06?

(Please select one option only)

- Less than £10,000
- £50,000 - £100,000
- £500,000 - £1 million
- £10,000 - £50,000
- £100,000 - £500,000
- More than £1 million

B3. How many full time equivalent staff were engaged in the composting / biological treatment aspects of your business (including production, distribution and sales) in 2005/06? *(Please select one option only)*

- Less than 1
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- More than 50

Section C – Site information

C1. How many composting / biological treatment sites did your company operate in the UK in 2005/06?

site(s)

If you operated more than one composting / biological treatment site please fill in Sections C to H for each site.

Additional copies of the survey form can be obtained: by photocopying, reprinting or electronically copying this form from The Composting Association website www.compost.org.uk from M·E·L Research (contact details on front of this survey form)

C2. If you operated more than one site please indicate which of your site(s) this specific survey form relates to.

Site of (e.g. Site 1 of 3)

- Operating site name
- Operating site postcode or nearest town/village
- County or local council area where site located

C3. Which of the following best describes the nature of this site? (Please select one option only)

- Dedicated composting / biological treatment site
- Materials recycling facility
- Community based project
- Civic amenity site
- Farm
- Other – please specify
- Landfill site
- Horticultural / landscaping activities

C4. In 2005/06 was the composting feedstock for this site:
(Please select one option only)

- Produced on site?
- Brought in from outside site?
- Both?

C5. Is any part of this site approved by the State Veterinary Service under the Animal By-Products Regulations?

- Yes – full approval Under discussion
- In verification No – not under consideration

Section D – Source segregated waste treatment processes

D1. Did you compost or digest source segregated waste at this site during 2005/06? (Excluding MBT and mixed wastes treatment which are covered in Section E)

- Yes – Please complete the rest of Section D
- No – Please go to Section E

D2. What was the total input of source segregated waste to composting and/or digestion processes at this site in 2005/06? (Excluding MBT and mixed wastes treatment which are covered in Section E)

tonnes

D3. In the table below, please provide an approximate breakdown of the total input of source segregated waste in 2005/06. (Excluding MBT and mixed wastes treatment which are covered in Section E)

Waste input	Tonnes of source segregated waste input
Municipal waste inputs (i.e. household waste and any other waste collected by or on behalf of local authorities)	
Garden waste from civic amenity/bring sites	tonnes
Garden waste only from kerbside collection	tonnes
Garden and kitchen waste from kerbside collection	tonnes
Kitchen waste only from kerbside collection	tonnes
Council parks / gardens waste and green waste from educational institutes	tonnes
Council-collected food processing by-products and food waste from retailers	tonnes
Other municipal waste – please specify	tonnes
Non-municipal waste inputs (i.e. commercial/trade/industrial wastes not collected by or on behalf of local authorities)	
Landscape / grounds maintenance	tonnes
Forestry / timber / bark / by-products	tonnes
Food processing by-products and food waste from retailers	tonnes
Other non municipal waste – please specify	tonnes
TOTAL	= Question D2

D4. What processes were used to treat source segregated waste at this site in 2005/06? (Please select all that apply)

- Open air mechanically turned windrow
- Table composting
- Thermophillic aerobic digestion
- Covered mechanically turned windrow
- In-vessel composting
- Other – please specify
- Static pile with aeration
- Anaerobic digestion

Section E – Mixed (unsorted) waste treatment processes

E1. Did you compost or digest mixed (unsorted) waste at this site during 2005/06? (Excluding source segregated organic waste treatment which is covered in Section D)

- Yes – Please complete the rest of Section E
 No – Please go to Section F

E2. What was the total input of mixed (unsorted) waste to composting and/or digestion processes at this site in 2005/06? (Excluding source segregated organic waste treatment which is covered in Section D)

tonnes

E3. In the table below, please provide an approximate breakdown of the total input of mixed (unsorted) waste in 2005/06. (Excluding source segregated organic waste treatment which is covered in Section D)

Waste input	Tonnes of mixed (unsorted) waste input
Municipal waste	tonnes
Non-municipal waste – please specify	tonnes
TOTAL	= Question E2

E4. For each of the waste inputs you specified in Question E3 what percentage was organic (biodegradable)?

Waste input	% that was organic (biodegradable)
Municipal waste	%
Non-municipal waste	%

E5. Was the active phase of treatment of the mixed (unsorted) waste at this site in 2005/06 aerobic or anaerobic? (Please select one option only)

- Aerobic Anaerobic

Section F – Additional processing capacity

F1. Was the total amount of waste (both source segregated and mixed) processed at this site in 2005/06 the maximum that was able to be processed (i.e., was the site operating at its maximum capacity)?

- Yes – Please go to Question F3
 No – Please go to Question F2

F2. Please estimate how much additional waste could have been processed at this site in 2005/06 assuming that any restrictions placed on you by site licences or planning consents remain in place.

tonnes more

F3. Do you have definite plans (with required permits and necessary investment in place) to expand the processing capacity of this site during the next five years?

- Yes – Please complete the rest of Section F
 No – Please go to Section G

F4. In the table below, please indicate how much additional annual processing capacity will be generated at this site as a result of the expansion.

Waste input	Tonnes per annum of additional processing capacity planned
Source segregated waste	tonnes per annum
Mixed (unsorted) waste	tonnes per annum

Section G – Compost products

G1. In the table below, please provide an approximate breakdown of the products you produced at this site in 2005/06. (Please note this question relates to compost products before blending)

Product type	Quantity of compost products produced (before blending) (Choose units as appropriate: tonnes/m ³)
Soil conditioner (incorporated by digging or ploughing into soil to improve structure, nutrient and biological properties)	tonnes
Mulch (surface application of large particles used to suppress weeds, retain moisture, prevent soil erosion and for decorative purposes)	tonnes
Topsoil/subsoil manufacture (mixed with soils or other materials to produce topsoil or subsoil for landscape applications)	tonnes
Growing medium constituent (material other than soils used alone or in mixtures to grow plants)	tonnes
Turf (top) dressing (fine composts to improve establishment and growth of turf)	tonnes
Stabilised biowaste (stabilised material from mixed municipal waste composting/ MBT)	tonnes
Other – please specify (e.g. landfill cover, biofuel)	tonnes
TOTAL COMPOST PRODUCT PRODUCED	tonnes

G2. In the table below, please provide an **approximate** breakdown of how the compost products produced at this site were used in 2005/06. (Please note this question relates to compost products before blending)

Compost product use	Quantity of compost products (before blending) (Choose units as appropriate: tonnes/m3)
Sold directly to end users	<input type="text"/> tonnes
Sold on to third parties	<input type="text"/> tonnes
Distributed with no charge	<input type="text"/> tonnes
Used on the site where it was produced	<input type="text"/> tonnes
Other – please specify	<input type="text"/> tonnes
TOTAL COMPOST PRODUCT PRODUCED	= Total from Question G1

Section H – Markets for compost products

H1. In the table below, please provide an **approximate** breakdown of the markets to which the compost products produced at this site were distributed in 2005/06. (Please note this question relates to compost products before blending)

Market sector	Quantity of compost products distributed (before blending) (Choose units as appropriate: tonnes/m3)
Agriculture Horticulture – professional (either via growing media manufacturers or direct to professional growers)	<input type="text"/> tonnes
Horticulture – amateur (either via growing media manufacturers or direct to retail outlets, civic amenity sites)	<input type="text"/> tonnes
Landscaping (e.g. tree / shrub planting, bed establishment)	<input type="text"/> tonnes
Sports turf (e.g. golf, cricket, football)	<input type="text"/> tonnes
Landfill restoration / daily cover	<input type="text"/> tonnes
Energy recovery (e.g. burning oversize)	<input type="text"/> tonnes
Forestry	<input type="text"/> tonnes
Land restoration	<input type="text"/> tonnes
Other – please specify	<input type="text"/> tonnes
TOTAL COMPOST PRODUCT PRODUCED	= Total from Question G1

H2. If you distributed compost products to the **agriculture** sector in 2005/06 please specify the **main** agricultural crop(s) your products were used for. (Please select all that apply)

- Arable / cereal
- Glasshouse protected crops
- Vegetables / fruit / salad crops
- Other – please specify
- Grassland Not applicable

H3. Where did you distribute the compost products that were produced at this site in 2005/06? (Please select all that apply)

Market sector	Locally	Regionally	UK wide	Outside UK	N/A
Agriculture	<input type="checkbox"/>				
Horticulture – professional	<input type="checkbox"/>				
Horticulture – amateur	<input type="checkbox"/>				
Landscaping	<input type="checkbox"/>				
Sports turf	<input type="checkbox"/>				
Landfill restoration / daily cover	<input type="checkbox"/>				
Energy recovery	<input type="checkbox"/>				
Forestry	<input type="checkbox"/>				
Land restoration	<input type="checkbox"/>				
Other – please specify	<input type="checkbox"/>				

H4. Which of the following market sectors do you think offer the greatest potential for growth for your business in the next year? (Please select all that apply)

- Agriculture
- Sports turf
- Land restoration
- Horticulture – professional
- Landfill restoration / daily cover
- Other – please specify
- Horticulture – amateur
- Energy recovery
- Landscaping Forestry

Section I – Further comments and feedback

The Composting Association and WRAP are continually looking at ways to improve this survey and we would appreciate your feedback.

The current survey is based on activity within a single financial year and we would like to know whether this is the best time frame for you to provide data and information relating to the operation of your site(s).

Which of the following reporting periods would you prefer for next year's survey? (Please select one option only)

- Financial year (1 April to 31 March)
- Another period – please specify
- Calendar year (1 January to 31 December)
- Don't mind
- Any other comments

Thank you for taking the time to complete this survey form.

Appendix 2

Community composting activity in the UK – 2006 (Defra funded project WR0211)

The Community Composting Sector

It is well known that the community composting sector is made up of a diverse range of groups and organisations. All these companies operate on a not-for-profit basis and while community composting is often a main focus, other environmental, social and educational objectives are also important. Consequently the survey design used for the commercial composting sector was considered to be inappropriate for the community composting sector and the community sector was therefore not specifically included in the main survey.

However, a separate project called 'Unlocking the Potential of Community Composting' is profiling and characterising the community composting sector in the UK in 2006. This work is being funded by Defra under their Waste and Resources R&D Programme (ref WR0211). The project is being carried out by the Integrated Waste Systems group at The Open University in association with the Community Composting Network (CNN), London Community Recycling Network (LCRN) and the New Economics Foundation.

The first part of the project is a survey of the environmental, social and educational activities of organisations involved in promoting or carrying out composting activity in their communities. The survey report "Community composting activity in the UK – 2006" has been published by Integrated Waste Systems, The Open University, Milton Keynes in May 2007. It is available via the following link to the Defra website:

http://www2.defra.gov.uk/research/Project_data/More.asp?I=WR0211&M=CFO&V=UOPEN

The findings presented in the above report represent the first time a comprehensive profiling of the community composting sector has been conducted and results published. The data reported are for the 2006 calendar year. In total 243 organisations were surveyed.

Appendix 3

National and regional breakdown of wastes input to composting

Regional breakdown of wastes input to composting Comparison of survey data with municipal waste data

Table A3.1 shows the quantities of municipal wastes input to composting in 2005/06 by survey respondents. The table also shows the quantities of municipal wastes input to composting which came from civic amenity (CA) site collections and from kerbside collections on a regional basis for England, and on a national basis for the other UK countries. These data have then been compared with municipal waste data on quantities of waste collected by local authorities in these regions/ countries to calculate the percentages of civic amenity wastes and kerbside wastes arising in each region/ country which has been composted by survey respondents in that region/ country. It should be noted that not all waste for composting will be composted in the region where it is collected.

It can be seen that overall 78% of civic amenity waste for composting has been captured by the survey, and 59% of kerbside waste. It is not clear why there is this difference. Perhaps kerbside waste collected for composting is more likely to go to small farm sites which were not on the composting operator databases used for the survey.

There are some figures over 100%; for civic amenity waste in London and the North East. This result for London is surprising. It seems to indicate that either that waste from civic amenity sites outside London was being composted within the London area or that there is an issue of under reporting to WasteDataFlow. The kerbside capture rate for London is very low at 25% and the kerbside capture rate for the South East region is very high at 92%. This indicates that quantities of kerbside collected waste from London are being

composted in the South East region. Yorkshire and the Humber has very low capture rates both for civic amenity waste capture (16%), and for kerbside waste capture (24%). A considerable percentage of the civic amenity site waste may well have been composted in other regions. Two neighbouring regions have high civic amenity composting capture rates with the North West on 97% and the North East on 120%. It is also possible that there was major composting activity taking place in Yorkshire and the Humber which was not picked up by the survey.

Quantities and types of waste composted in individual UK nations and in regions of England

Table A3.2 shows the quantities and types of waste composted by survey respondents in the individual UK nations and Table A3.3 shows this information for the England regions. It should be noted that the waste quantities in these tables have not been grossed up to allow for survey non respondents. They are the combined quantities from survey respondents.

It can be seen from Table A3.2 that in Scotland kerbside collected waste for composting makes up much higher percentage of the total input of wastes to composting at 51% of wastes composted compared with only 20% from civic amenity sites. All the other UK nations had more composting of civic amenity site waste than kerbside collected waste.

In table A3.3, it can be seen that the Yorkshire and the Humber region has an atypical waste input pattern. All the other regions have municipal waste composting dominating non municipal waste composting with at least 75% of input waste being municipal. For the Yorkshire and Humber region, only 28% of the waste composted by survey respondents was municipal with the remaining 72% being a range of non municipal waste types.

Table A3.1 Regional and national comparison of wastes input to composting by survey respondents with municipal waste data, 2005/06

	MSW input survey respondents	Survey respondents CA input tonnes	Survey capture rate of CA waste	Survey respondents kerbside input tonnes	Survey capture rate of kerbside waste
England					
East Midlands	193,799	88,835	79%	104,664	62%
East of England	327,811	117,696	91%	205,615	78%
London	116,560	87,560	111%	24,000	25%
North East	76,756	42,445	120%	33,930	59%
North West	204,708	112,097	97%	88,011	41%
South East	395,361	249,354	94%	132,391	92%
South West	209,466	140,379	84%	49,907	43%
West Midlands	224,438	73,784	69%	150,411	91%
Yorkshire & the Humber	36,487	17,664	16%	18,823	24%
England total	1,785,386	929,814	83%	807,752	62%
Wales	88,824	51,460	86%	36,581	89%
Scotland	130,004	34,970	51%	90,194	44%
Northern Ireland	13,700	8,900	13%	4,800	16%
UK TOTAL	2,017,914	1,025,144	78%	939,327	59%

Table A3.2 Quantities and types of waste composted by survey respondents in UK countries, 2005/06

	England		Northern Ireland		Scotland		Wales	
	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total
Municipal waste								
Garden waste from civic amenity/bring sites	929,814	45%	8,900	37%	34,970	20%	51,460	55%
Garden waste only from kerbside collection	581,464	28%	.	.	90,194	51%	13,081	14%
Garden and kitchen waste from kerbside collection	187,161	9%	4,800	20%	.	.	23,500	25%
Kitchen waste only from kerbside collection	8,227	0%	.	.	.	.	.	.
Garden and card waste from kerbside collection	30,900	1%	.	.	.	.	.	.
Council parks / gardens waste and green waste from educational institutes	20,570	1%	.	.	4,840	3%	783	1%
Council-collected food processing by-products and food waste from retailers	1,000	0%	.	.	.	.	.	.
Other municipal waste	26,250	1%	.	.	.	.	.	.
Total municipal waste	1,785,386	86%	13,700	57%	130,004	73%	88,824	95%
Non municipal waste								
Landscape / grounds maintenance	99,196	5%	300	1%	5,222	3%	1,200	1%
Forestry / timber / bark / by-products	59,573	3%	.	.	1,408	1%	.	.
Food processing by-products and food waste from retailers	68,406	3%	.	.	39,375	22%	.	.
Other non municipal waste	65,429	3%	10,000	42%	2,340	1%	3,080	3%
Unspecified	3,250	0%	.	.	.	.	.	.
Total non municipal waste	295,854	14%	10,300	43%	48,345	27%	4,280	5%
Total	2,081,240	100%	24,000	100%	178,349	100%	93,104	100%

Table A3.3 Regional data on wastes composted by survey respondents in England's regions, 2005/06 – part 1

	East Midlands		East of England		London		North East	
	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total
Municipal waste								
Garden waste from civic amenity/bring sites	88,835	43%	117,696	32%	87,560	75%	42,445	47%
Garden waste only from kerbside collection	72,847	35%	123,065	34%	14,000	12%	33,167	37%
Garden and kitchen waste from kerbside collection	4,317	2%	82,550	23%	8,000	7%	.	
Kitchen waste only from kerbside collection			.		2,000		763	1%
Garden and card waste from kerbside collection	27,500	13%	.		.	.	.
Council parks / gardens waste and green waste from educational institutes	300	0%	3,500	1%	5,000	4%	.	
Council-collected food processing by-products and food waste from retailers	.		.		.	.	.
Other municipal waste	.		1,000	0%	.		381	0%
Total municipal waste	193,799	93%	327,811	90%	116,560	100%	76,756	85%
Non municipal waste								
Landscape / grounds maintenance	1,593	1%	11,172	3%	.	.	1,954	2%
Forestry / timber / bark / by-products	5,949	3%	3,631	1%	.	.	1,181	1%
Food processing by-products and food waste from retailers	.		15,900	4%	.		10,000	11%
Other non municipal waste	7,500	4%	6,450	2%	.	.	600	1%
Unspecified	.		.		.		.
Total non municipal waste	15,042	7%	37,153	10%			13,735	15%
Total	208,841	100%	364,964	100%	116,560	100%	90,491	100%

Table A3.3 Regional data on wastes composted by survey respondents in England's regions, 2005/06 – part 2

	North West		South East		South West		West Midlands		Yorkshire & The Humber	
	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total	Input tonnes	% of total
Municipal waste										
Garden waste from civic amenity/bring sites	112,097	42%	249,354	56%	140,379	67%	73,784	31%	17,664	14%
Garden waste only from kerbside collection	84,997	32%	75,497	17%	36,457	17%	122,611	51%	18,823	15%
Garden and kitchen waste from kerbside collection	3,000	1%	56,894	13%	4,600	2%	27,800	12%	.	
Kitchen waste only from kerbside collection	14	0%	.		5,450	.	.		.	
Garden and card waste from kerbside collection	.		.		3,400	2%	.		.	
Council parks / gardens waste and green waste from educational institutes	4,600	2%	683	0%	6,387	3%	100	0.04%	.	
Council-collected food processing by-products and food waste from retailers	.		.		1,000	.	.		.	
Other municipal waste	.		12,933	3%	11,793			143	0.1%	.
Total municipal waste	204,708	77%	395,361	89%	209,466	91%	224,438	94%	36,487	28%
Non municipal waste										
Landscape / grounds maintenance	48,683	18%	15,279	3%	14,461	6%	4,614	2%	1,440	1%
Forestry / timber / bark / by-products	2,000	1%	24,214	5%	.	.	1,833	1%	20,765	16%
Food processing by-products and food waste from retailers	5,125	2%	4,514	1%	.		7,200	3%	25,667	20%
Other non municipal waste	4,112	2%	.		2,409	1%	.		44,358	34%
Unspecified	.		3,000	1%	.		.		250	0.2%
Total non municipal waste	59,920	23%	47,007	11%	16,870	.	13,647	6%	92,480	72%
Total	264,628	100%	442,368	100%	226,336	100%	238,085	100%	128,967	100%

Appendix 4

National and regional manufacture of compost products

National and regional manufacture of compost products

The quantities of compost products manufactured from source segregated wastes in each of the countries of the UK in 2005/06 by survey respondents are shown in Table A4.1 below. The proportion that each product makes up of the total produced is also shown. The quantities have not been grossed up to allow for survey non respondents.

There were not many respondents and a poor response rate in Northern Ireland which means that the survey results presented here may well not be typical of the Northern Ireland composting industry as a whole.

Table A4.2 shows the quantities of different compost products manufactured in the English regions by survey respondents and the proportion that each product type made up of the total produced in 2005/06.

Table A4.1 Compost products manufactured by survey respondents in UK countries, 2005/06

	England	Northern Ireland	Scotland	Wales
Quantity (tonnes)				
Soil conditioner	914,103	9,200	63,015	28,953
Mulch	84,397	.	.	3,500
Topsoil/subsoil	79,512	.	12,280	3,770
Growing medium	90,873	15,000	.	1,500
Turf (top) dressing	12,260	.	10,050	3,250
Other	45,152	.	7,855	8,150
Unspecified	46,317	.	.	.
Total	1,272,614	24,200	93,200	49,120
Proportion (%)				
Soil conditioner	72%	38%	68%	59%
Mulch	7%			7%
Topsoil/subsoil	6%		13%	8%
Growing medium	7%	62%		3%
Turf (top) dressing	1%		11%	7%
Other	4%		8%	11%
Unspecified	4%			
Total	100%	100%	100%	100%

Table A4.2 Compost products manufactured by survey respondent in the regions of England, 2005/06

	East Midlands	East of England	London	North East	North West	South East	South West	West Midlands	Yorkshire & The Humber
Quantity (tonnes)									
Soil conditioner	104,926	136,186	62,900	32,626	85,111	184,754	99,457	131,205	76,937
Mulch	4,332	36,547	3,400	129	19,890	15,799	4,000	300	.
Topsoil/subsoil	.	4,740	.	.	28,250	23,133	18,000	100	5,289
Growing medium	17,500	6,000	7,000	5,950	34,560	9,363	1,000	6,000	3,500
Turf (top) dressing	.	2,050	.	.	2,210	3,000	5,000	.	.
Other	.	6,746	5,000	648	700	13,158	18,400	500	.
Unspecified	.	33,150	.	.	10,500	.	2,667	.	.
Total	126,758	225,419	78,300	39,353	181,221	249,207	148,524	138,105	85,726
Proportion (%)									
Soil conditioner	83%	60%	80%	83%	47%	74%	67%	95%	90%
Mulch	3%	16%	4%	0.3%	11%	6%	3%	<1%	
Topsoil/subsoil		2%			16%	9%	12%	<1%	6%
Growing medium	4%	3%	9%	15%	19%	4%	1%	4%	4%
Turf (top) dressing		1%			1%	1%	3%		
Other		3%	6%	2%	0%	5%	12%	<1%	
Unspecified		15%			6%				
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Appendix 5

Compost product distribution – the national and regional picture

Compost product distribution in the countries of the UK and the English regions

Table A5.1 shows how compost products were distributed in the UK countries in 2005/06. The quantities are not grossed up to allow for survey non respondents.

It can be seen in Table A5.1 that in Scotland a high proportion, 50%, of compost was sold directly to end users compared with only 26% for England, and 20% for Wales. More compost

was sold to third parties in England and Wales. This indicates less blending to make compost products in Scotland than in England.

The low number of respondents in Northern Ireland means that the results obtained may not be typical of compost product distribution in that country.

Table A5.2 shows how compost products produced in the different regions of England by survey respondents were distributed in 2005/06. Again, there has been no grossing up of the quantities to allow for survey non respondents.

Table A5.1 Compost product distribution in the UK countries, 2005/06

	England	Northern Ireland Scotland	Wales	
	Quantity (tonnes)			
Sold directly to end users	328,736	18,360	46,772	9,750
Sold on to third parties	142,087	2,240	4,892	7,677
Sold - unknown whether to end users or third parties	102,900	.	.	.
Distributed (no charge)	195,045	72	15,213	9,502
Producer paid to distribute	58,000	.	.	.
Used on site	393,728	3,528	24,323	15,741
Used on other sites of producer	2,500	.	2,000	497
Other	49,617	.	.	5,950
Total	1,272,613	24,200	93,200	49,117
	Proportion (%)			
Sold directly to end users	26%	76%	50%	20%
Sold on to third parties	11%	9%	5%	16%
Sold - unknown whether to end users or third parties	8%	.	.	.
Distributed (no charge)	15%	<1%	16%	19%
Producer paid to distribute	5%	.	.	.
Used on site	31%	15%	26%	32%
Used on other sites of producer	1%	.	2%	1%
Other	4%	.	.	12%
Total	100%	100%	100%	100%

Table A5.2 Compost product distribution for survey respondents for compost produced in each region of England, 2005/06

	East Midlands	East of England	London	North East	North West	South East	South West	West Midlands	Yorkshire & The Humber
	Quantity (tonnes)								
Sold directly to end users	1,200	42,426	45,000	5,261	53,373	94,598	57,448	28,873	557
Sold on to third parties	6,000	31,448	1,650	500	51,108	40,621	9,860	900	.
Sold - unknown whether to end users or third parties	35,000	.	14,000	11,900	26,600	.	.	8,400	7,000
Distributed (no charge)	23,150	32,498	10,000	2,162	23,070	43,265	15,400	16,550	28,950
Producer paid to distribute	.	39,000	.	.	.	.	.	.	19,000
Used on site	60,358	42,796	6,000	19,530	19,071	70,723	62,649	82,382	30,219
Used on other sites of produce	.	1,500	.	.	.	.	.	1,000	.
Other	1,050	35,750	1,650	.	8,000	.	3,167	.	.
Total	126,758	225,418	78,300	39,353	181,222	249,207	148,524	138,105	85,726
	Proportion (%)								
Sold directly to end users	1%	19%	57%	13%	29%	38%	39%	21%	1%
Sold on to third parties	5%	14%	2%	1%	28%	16%	7%	1%	
Sold - unknown whether to end users or third parties	28%		18%	30%	15%			6%	8%
Distributed (no charge)	18%	14%	13%	5%	13%	17%	10%	12%	34%
Producer paid to distribute		17%							22%
Used on site	48%	19%	8%	50%	11%	28%	42%	60%	35%
Used on other sites of producer		1%						1%	
Other	1%	16%	2%		4%		2%		
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Appendix 6

Markets for composted products – the national and regional picture

Markets for composted products in 2005/06 in UK countries and English regions

Scotland and Wales had much lower percentages of composted products going to agriculture with 26% and 12% respectively than England which had 51%. Scotland had higher proportions of compost product going to turf uses than England or Wales. Again, as there were not many respondents in Northern Ireland, conclusions cannot be drawn about the situation there.

Table A6.2 shows the quantities of compost product going into the different markets for the English regions.

Table A6.1 Markets for composted products in UK countries, 2005/06

	England		Northern Ireland		Scotland		Wales	
	Tonnes	% of total	Tonnes	% of total	Tonnes	% of total	Tonnes	% of total
Agriculture	645,778	51%	18,600	77%	24,625	26%	5,658	12%
Horticulture - professional	53,966	4%	.		4,420	5%	6,000	12%
Horticulture - amateur	115,013	9%	560	2%	6,325	7%	8,057	16%
Landscaping	128,027	10%	5,040	21%	12,785	14%	3,157	6%
Sports turf	15,131	1%	.		.		.	
Turf - type not specified	7,000	1%	.		10,000	11%	.	
Landfill restoration/daily cover	139,673	11%	.		13,022	14%	7,570	15%
Energy recovery	5,000	<1%	.		.		.	
Forestry	4,000	<1%	.		.		.	
Land restoration	70,000	6%	.		17,323	19%	9,224	19%
Other - please specify	89,024	7%	.		4,700	5%	9,450	19%
Total	1,272,612	100%	24,200	100%	93,200	100%	49,116	100%

Table A6.2 Regional breakdown of markets for composted products manufactured in the English regions, 2005/06 Part 1

	East Midlands		East of England		London		North East	
	Tonnes	% of total	Tonnes	% of total	Tonnes	% of total	Tonnes	% of total
Agriculture	80,743	64%	129,740	58%	13,667	17%	22,511	57%
Horticulture - professional	2,600	2%	18,034	8%	500	1%	1,510	4%
Horticulture - amateur	12,166	10%	2,010	1%	6,317	8%	5,079	13%
Landscaping	13,766	11%	12,190	5%	7,317	9%	8,606	22%
Sports turf	2,000	2%	2,000	1%	.		.	
Turf - type not specified	.	.	.	.	.		.
Landfill restoration/daily cover	14,381	11%	19,644	9%	.		648	2%
Energy recovery	.		.		5,000	6%	.	
Forestry	.		3,000	1%	.		.	
Land restoration	300	0%	3,000	1%	45,500	58%	1,000	3%
Other - please specify	800	1%	35,800	16%	.		.	
Total	126,756	100%	225,418	100%	78,301	100%	39,354	100%

Table A6.2 Regional breakdown of markets for composted products manufactured in the English regions, 2005/06 Part 2

	North West		South East		South West		West Midlands		Yorkshire & Humber	
	Tonnes	% of total	Tonnes	% of total						
Agriculture	39,747	22%	123,133	49%	69,304	47%	100,394	73%	66,539	78%
Horticulture - professional	12,750	7%	13,223	5%	2,125	1%	3,224	2%	.	
Horticulture - amateur	53,210	29%	11,866	5%	13,158	9%	8,874	6%	2,333	3%
Landscaping	27,190	15%	17,824	7%	33,945	23%	4,300	3%	2,890	3%
Sports turf	.		9,706	4%	1,425	1%	.		.	
Turf - type not specified	.		.		7,000	5%	.		.	
Landfill restoration / daily cover	19,318	11%	42,207	17%	18,400	12%	16,112	12%	8,963	10%
Energy recovery	.		.		.		.		.
Forestry	1,000	1%	.		.		.		.
Land restoration	12,000	7%	.		.		4,200	3%	4,000	5%
Other - please specify	16,008	9%	31,249	13%	3,167	2%	1,000	1%	1,000	1%
Total	181,223	100%	249,208	100%	148,524	100%	138,104	100%	85,725	100%

Appendix 7

Unused composting capacity in 2005/06 and additional composting capacity becoming available regionally and nationally

Unused composting capacity in 2005/06 and additional composting capacity becoming available regionally and nationally

Table A7.1 shows unused composting capacity in 2005/06, and definite new capacities becoming available during the next five years for the UK countries, and for the English regions. The capacities have not been grossed up to allow for survey non respondents.

Table A7.1 *Unused composting capacity in the UK, 2005/06 and definite new capacity becoming available during the next five years*

	2005/06 unused source segregated capacity (tonnes)	2005/06 unused mixed waste capacity (tonnes)	Definite new capacity during next 5 years			Totals (tonnes)
			Source segregated at existing sites (tonnes)	Non source segregated at existing sites (tonnes)	New capacity at new sites (tonnes)	
England						0
East Midlands	7	26	95			127
East of England	102		162		75	339
London	6		5			11
North East	90	41	10	50		191
North West	15		144		45	204
South East	68		53		24	145
South West	10		120	30	51	211
West Midlands	111		219			329
Yorkshire & the Humber	10		77		90	177
England total	419		885	80	285	1,734
Wales	68	5	54	3		130
Scotland	69		85		20	174
Northern Ireland	125		40			165
Total	681	72	1,062	83	305	2,203

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3 Burystead Place
Wellingborough
Northamptonshire
NN8 1AH
Tel: 0870 160 3270
Fax: 0870 160 3280
E-mail: info@compost.org.uk
www.compost.org.uk

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