

Annual Organics Recycling Survey reveals further insight into long term industry trends

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In the previous issue of Composting News (Winter 2008) we reported the headline findings from the 2006/07 Annual Market Survey of the UK composting and biological treatment industry, funded by WRAP and AFOR and undertaken by the specialist environmental consultancy M-E-L Research. Owing to the considerable and growing interest in the survey, this article presents a more in-depth analysis of specific aspects of particular interest to the industry.

The survey has developed substantially over recent years and we report below on the findings from some of the more recently added questions on compost quality. We have also highlighted gaps in the data that are about to be filled by the on-going 2007/08 survey, results from which are due to be released towards the summer. Another merit of the longstanding survey is that where questions have remained consistent we can now plot long term trends within the industry, and we have picked out data on trends in the compost products generated, and trends in the prevalent processes used.

So far as product quality is concerned, the 2006/07 survey asked for the first time for information about the total quantity of compost that was certified to BSI PAS 100 standards. The results showed that of the 2.167 million tonnes of compost product generated by the industry in the UK from source segregated feedstock, around 25% (541,750 tonnes) was fully certified to BSI PAS 100. This figure might appear lower than expected but it should be recalled that we are reporting data pertaining to results for 2006/07 and does not therefore represent the impact of those registered more recently. It will be interesting to see how this figure will change once the 2007/08 results are published.

The 2006/07 survey only asked about PAS100 and did not request data on the quantity of compost that was produced from sites or processes certified under the Quality Protocol. This question has however been added to the new round of the survey, and so a first time benchmark statistic on this indicator will be reported in the summer for the period covering the period 1 April 2007 to 31 March 2008.

The recently published 2006/07 survey also asked for the first time about tonnes of digestate products produced from anaerobic digestion (before blending). It was found that 86,680 tonnes of digestate was produced from source segregated feedstock, the majority of which (58%) was used as soil conditioner. Only five sites out of the 220 covered by the survey reported producing digestate from anaerobic digestion of source segregated feedstock. Because of this small number, care had to be taken in interpreting the data as it may not be fully representative of digestate produced in the UK.

Turning to longer term trends within the industry, we have reviewed the data from previous surveys and present below for the first time, a picture of the changing profile of the main processes operating within the composting industry. In the most recent year 2006/07 an estimated 79% of waste was composted by open air mechanically turned windrow (broadly the same as the 81% in 2005/06) and 11% by in-vessel composting. Between them, these two composting methods are therefore estimated to have accounted for 90% of all composting of source segregated waste in 2006/07, again broadly similar to 2005/06. The apparent 'blip' in 2004/05 in covered windrows, in-vessel composting and static pile, is thought to be due to low survey response rates that year. When looked at over the longer term, the general overall trends are more apparent. The open air mechanically turned windrow accounts for a stable four-fifths of volume input, with in-vessel again broadly constant once 2004/05 is netted out. Static pile aeration has declined to negligible proportions while table composting has significantly increased.

Table 1: Trends in proportion of source segregated waste composted by different processes in the UK, 2001/02 to 2006/07

Method of Composting	2006/07	2005/06	2004/05	2003/04	2001/02
	Estimated quantity ('000 tonnes)				
Open air mechanically turned windrow	2,862	2,773	1,612	1,608	1,196
Covered mechanically turned windrow	17	15	145	18	3
In-vessel composting	388	481	625	236	170
Static pile with aeration	2	59	282	91	97
Table	163	46	N/A	N/A	N/A
Anaerobic digestion	3	0	5	-	N/A
Thermophillic aerobic digestion	10	0	N/A	N/A	N/A
Other	0	14	-	19	56
Unspecified	166	36	-	-	-
Total	3,612	3,424	2,672	1,972	1,523
	Proportion (%)				
Open air mechanically turned windrow	79%	81%	55%	81%	79%
Covered mechanically turned windrow	<1%	<1%	6%	<1%	<1%
In-vessel composting	11%	14%	27%	13%	11%
Static pile with aeration	<1%	2%	12%	5%	7%
Table	5%	1%	N/A	N/A	N/A
Anaerobic digestion	<1%	0%	<1%	-	-
Thermophillic aerobic digestion	<1%	0%	N/A	N/A	N/A
Other	0%	<1%	0%	0%	0%
Not specified	5%	<1%	0%	0%	2%
Total	100%	100%	100%	100%	100%

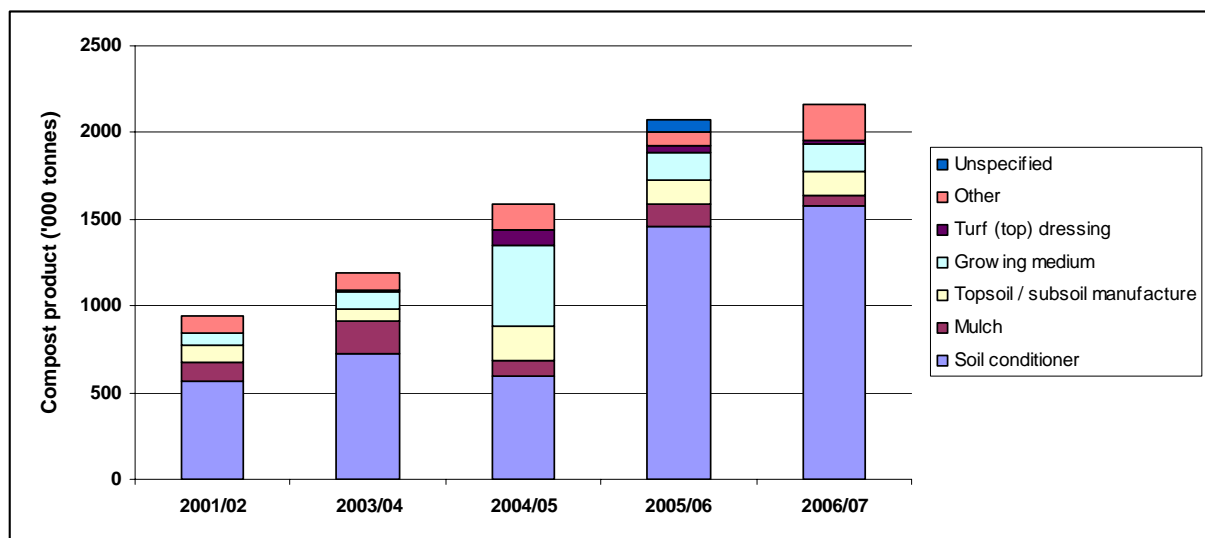
Next, we have looked at long term trends in the type of compost product generated by the industry over recent years. The most common product in 2006/07 was soil conditioner which accounted for 73% by weight of all compost products. The proportion of soil conditioner for the 2006/07 survey is very similar to the 71% estimated by the 2005/06 survey and fairly similar to the surveys in 2003/04 and 2001/02 which estimated a proportion of 60%. There is however a marked difference in the 2004/05 survey which measured the proportion of soil conditioner to be only 37%. In the light of a 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 soil conditioner if the 2004/05 estimates are discounted. There does however appear to be a decline in the quantity of mulch with the estimated total tonnes of mulch in 2006/07 being the lowest annual total in the five year period between 2001/02 and 2006/07.

Table 2: Quantity and proportion of compost products from source segregated feedstock manufactured in the UK, 2001/02 to 2006/07

Product	2006/07	2005/06	2004/05	2003/04	2001/02
	Estimated quantity ('000 tonnes)				
Soil conditioner	1,573	1,463	591	722	562
Mulch	64	127	98	188	117
Topsoil / subsoil manufacture	134	138	198	68	95
Growing medium	162	155	459	102	67

Turf (top) dressing	26	37	94	15	6
Other	208	88	150	94	99
Unspecified	-	67	-	-	-
Total	2,167	2,073	1,603	1,189	946
	Proportion (%)				
Soil conditioner	73%	71%	37%	60%	60%
Mulch	3%	6%	6%	16%	12%
Topsoil / subsoil manufacture	6%	7%	12%	6%	10%
Growing medium	7%	7%	29%	9%	7%
Turf (top) dressing	1%	2%	6%	1%	1%
Other	10%	4%	9%	8%	10%
Unspecified	-	3%	-	-	-
Total	100%	100%	100%	100%	100%

Figure 1: Quantity of compost products from source segregated feedstock manufactured in the UK, 2001/02 to 2006/07



The annual survey has traditionally focussed mainly on the processing of source segregated waste feedstock to produce a compost product. In the past two years a question has been introduced to cover the processing of mixed waste streams through mechanical biological treatment processes (MBT). This process tends to produce a lower value output that is harder to market than the compost product from source segregated feedstock. There were only thirteen responses to the survey from companies undertaking biological treatment of mixed waste and because of this small number, care should be taken in interpreting the data. However, as table 3 shows, it was estimated that approximately 138,300 tonnes of municipal and non-municipal waste was processed through MBT, the biodegradable component of which was approximately 122,800 tonnes. The majority of outputs from mixed waste biological treatment processes were either distributed with no charge, used on the site of production or other sites of the producer, or disposed or directly to landfill in 2006/07.

Table 3: Estimated quantity of mixed waste inputs to biological treatment in the UK, 2006/07 and 2005/06

	Estimated quantity 2006/07 (tonnes)	Estimated quantity 2005/06 (tonnes)

Input municipal mixed waste	77,510	105,100
Input non municipal mixed waste	60,763	1,600
Total input mixed waste	138,273	106,700
Biodegradable fraction of municipal waste	66,895	80,000
Biodegradable fraction of non municipal waste	55,916	1,600
Total biodegradable fraction of the mixed waste	122,811	81,600

Finally, a brief look ahead to the current survey shows two further questions that have been asked for the first time:

- ◆ In 2007/08 was this site operating under a waste management license or permit? (Or was it operating under exemption?)
- ◆ Indicate which products were made from feed stocks which contained food waste

Results from these and the other new questions described earlier will continue to shed an ever more informative light onto the workings of the increasingly important UK organics recycling industry. (68)