

Organics Recycling in Australia

Industry Statistics 2008



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Section 1 About this report

1.1 Objectives

The national industry survey was initiated in 2003 by the Recycled Organics Unit to contribute to the process of industry formation and development. The objectives of the national industry survey are:

- To establish and maintain contact details for organics reprocessing enterprises across Australia.
- To collect quality data in consistent format from each jurisdiction that provides a tool for reporting; and for identifications of trends, opportunities and risks for both industry and Government.
- To quantify the nature and scale of the industry on a nationally aggregated basis to support industry engagement with the Australian Government.
- To identify and track industry issues and priorities to inform industry development programs.
- To avoid over-surveying of the industry by conducting and publishing a single national survey each year that meets the needs of both industry and government.

1.2 How to cite the report

This publication should be cited in the following manner:

Recycled Organics Unit (2008). Organics Recycling in Australia: Industry Statistics 2008. Report prepared for Compost Australia by the Recycled Organics Unit. Internet publication www.compostaustralia.com.au

1.3 Acknowledgement

The Recycled Organics Unit (ROU) thanks the following agencies for providing contributory funding for implementation of this project:

- Western Australian Department of Environment and Conservation
- Department of Environment and Climate Change NSW
- Zero Waste South Australia
- Queensland Environmental Protection Agency

The national response rate for the 2008 industry survey as directly conducted by the ROU is 97%. The ROU thanks the organics recycling industry for once again supporting the implementation of the national survey.

Section 2 Significant developments

2.1 South Australia

2.1.1 SA number and type of facilities

The total number of organics recycling facilities involved in the 2008 financial year survey remained stable at 32 facilities, the same as 2007. Aerobic windrow composting (hot composting) remains the overwhelmingly dominant method for reprocessing all manner of materials, including garden vegetation and highly putrescible materials such as grease trap and organic sludges; food organics (elsewhere food waste); manures and other agricultural residuals.

2.1.2 SA quantities of organic material received and processed

The total quantity of compostable organic materials reprocessed into beneficial recycled organics products has remained virtually unchanged from the previous year, with a total of 627,980 tonnes of raw materials processed in 2008 compared to 627,808 tonnes of raw materials processed in 2007. The variations for most types of raw material are largely insignificant when compared to the total quantity of all the raw materials being processed.

Notable developments:

- Reported quantities of garden organics diversion from the waste stream for reprocessing into beneficial recycled organics products **decreased** by around 7,500 tonnes (-3.5%) to a total of 202,397 tonnes over the 2008 financial year.
- Reported quantities of forestry residuals diversion from the waste stream for reprocessing into beneficial recycled organics products **increased** by around 6,000 tonnes (+2.7%) for barks and sawdust to a combined total of 222,168 tonnes over the 2008 financial year from 216,345 tonnes over 2007.
- Reported quantities of oils, grease trap, sludges diverted from the waste stream for reprocessing into beneficial recycled organics products **increased** by around 11,000 tonnes (+44%) to a total of 36,571 tonnes over the 2008 financial year. This is a continuing trend from the previous financial year where there was a 42% increase reported.
- Reported quantities of manure diversion from the waste stream for reprocessing into beneficial recycled organics products **decreased** by around 16,000 tonnes (-23%) to a total of 52,553 tonnes over the 2008 financial year.

2.1.3 SA quantities and type of recycled organic product sold

Reported sales figures appear to confirm the value of the *Compost for Soils* program undertaken in South Australia. It may also indicate a continuing trend turning around the priorities of the intensive horticulture sector

with a significant shift away from soil conditioners to mulches and towards the production and sale of both quality mulches and cheaper raw mulch products. The increased sale of mulches which are effective in retaining limited soil moisture and increasing water use efficiency may be a market response to prolonged water shortages for both urban parks and gardens and for commercial horticulture; and to further significant reduction in water allocations for intensive horticulture. This momentum is reflected in the change in the expressed priorities of the industry.

Notable developments:

- Reported sales of soil conditioner products has **decreased** significantly again from 233,159 m³ in 2006 to 144,021 m³ in 2007 to 85,684 m³ in 2008, representing a decrease of ~ 40% over 2007 and ~ 45% over 2008 for soil conditioner products sold.
- Reported sales of mulch products have **increased** significantly from 704,552 m³ in 2006 to 860,557 m³ in 2007 to 1,023,301 m³ in 2008. This represents an increase of ~ 22% over 2007 and ~19% over 2008 for all mulches sold. The product mix for this quantity of mulch sales over the 2008 financial year is characterised by a significant 103% increase (of ~ 105,000 m³) in the quantity of higher quality, higher price composted mulch sold, and a 7% increase (of ~ 50,000 m³) in the quantity of lower price raw mulch sold.
- Reported sales of potting mixes **increased** (by ~ 15%) from ~ 153,000 m³ to a total of ~ 177,000 m³ over the 2008 financial year.
- Reported sales of composted manure **increased** (by 51%) from ~ 59,000 m³ to a total of just over ~ 89,000 m³ over the 2008 financial year.

2.1.4 SA inventories

Total inventories represent the combined quantity of raw materials, materials being processed, and stockpiles of finished product on-site at the end of the financial year. There is little value in attempting to distinguish between these categories as materials in process will be held back or pushed through to final product to meet sales orders. There was a strong drive in the conduct of the 2006 and 2007 surveys to clarify the question asked in relation to inventories via reduced complexity of subcategories, and to press the industry for a more accurate response. The current year survey continues this emphasis, and for the first time since the industry has been surveyed in South Australia the total inventories have decreased.

- Reported inventories appear to have **decreased** from just over 1,000,000 m³ to a total of 875,640 m³ over the 2008 financial year. This represents a reported decrease of just under 125,000 m³ or ~ 12.5%.
- It would appear that whilst the total quantity of input materials remained steady, a significant increase in sales has occurred, explaining the reported reduction in stockpiles to meet an increase in demand.

2.1.5 SA industry issues and priorities

The key issues expressed by the industry are listed below in order of priority, with comparison to expressed priorities from the previous two survey years.

Table. Expressed recycled organics industry priorities in South Australia.

Rank	Prioritised issues 2008	Prioritised issues 2007	Prioritised issues 2006
1.	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy
2.	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Unaffordable new demands from regulators forcing exit from industry
3.	Raw materials contamination	Raw materials contamination	Viable product price is unaffordable for customers/ key markets
4.	Inadequate / not enforced regulation of competing products	Impact of urban water restrictions	Raw materials contamination
5.	Research & development / inadequate compost performance data	Development of new products/markets (particularly agriculture)	Downward pressure on prices/quality from increasing supply (oversupply)

This year, as in 2007, issues that place downward pressure on prices and that increase production costs are grouped together as these issues are key to the commercial profitability, indeed viability of the industry. The issues are still reported separately, but when aggregated, clearly the two standout issues remain: firstly commercial viability issues that arise from structural government integrated market issues; and secondly inconsistent and unnecessarily costly site regulation is reported as the highest priority issue. Whilst inconsistent and unnecessarily costly site regulation is overwhelmingly reported as the single highest priority issue, the clear expressed current need is for:

- Financial incentives and technical assistance (new product development) for the establishment of new markets.
- Resolving the market affordability barriers via government financial incentives, increased gate fees, and reduced operating costs (arising from management of raw material contamination and unnecessary regulatory compliance costs).
- “Level playing field” issues are reported on the highest priority list in 2008 for the first time, whereby competing products are not subject to equivalent regulatory requirements, and/or where such regulations as exist are not policed; and whereby non-commercial organics processing operations are reported to be distorting resource recovery markets. These issues relate to government intervention to establish a coherent and viable framework for the resource recovery sector, and the incentives to drive commercially viable resource recovery.
- Research & development / inadequate compost performance data has been elevated to a top 5 priority issue for the industry, which is an understandable shift towards the “how to best meet grower needs” now that sales volumes to production horticulture have increased.

2.2 Western Australia

2.2.1 WA number and type of facilities

The total number of organics recycling facilities involved in the survey increased from 26 facilities in 2007 to 27 facilities in 2008. An additional anaerobic facility was being commissioned during the survey period, with data expected to be included in subsequent surveys. Whilst aerobic windrow composting (hot composting) remains the dominant method for reprocessing all manner of materials, the industry in WA is characterised by a significant diversity of organics processing technologies.

2.2.2 WA quantities of organic material received and processed

The total quantity of compostable organic materials reprocessed into beneficial recycled organics products has **increased** by around 10.2%, with a total of 597,841 tonnes of raw materials processed in 2008 compared to 542,342 tonnes of raw materials processed in 2007.

Notable developments:

- Reported quantities of garden organics diversion from the waste stream for reprocessing into beneficial recycled organics products have slightly **increased** by ~ 2,000 tonnes to a total of 178,563 tonnes over the 2008 financial year.
- Reported quantities of wood/timber/sawdust (from commercial/industrial sources) diversion from the waste stream for reprocessing into beneficial recycled organics products have **decreased** by 20% (~ 4,000 tonnes) to a total of 16,721 tonnes over the 2008 financial year.
- Reported quantities of forestry residuals (sawdust and barks) for reprocessing into beneficial recycled organics products have **increased** by a combined total of ~ 24,000 tonnes (10,000 and 14,000 tonnes respectively) to a total of 145,717 tonnes (~ 23,300 and 122,400 tonnes respectively) over the 2008 financial year.
- Reported quantities of oils, grease trap and organic sludges diverted from the waste stream for reprocessing into beneficial recycled organics products have **increased** by 7,550 tonnes (+36%) to a total of 28,250 tonnes over the 2008 financial year.
- Reported quantities of MSW (organics fraction only) diversion from the waste stream for reprocessing into beneficial recycled organics products have **increased** by 15,546 tonnes to a total of 98,650 tonnes over the 2008 financial year.

2.2.3 WA quantities and type of recycled organic product sold

There is a clear trend in WA of a sharp decline in sales of higher quality composted mulches to lower quality pasteurised mulches and a significant decline in sales of raw mulch. This is offset by corresponding growth in sales of the higher quality composted soil conditioners and potting mix products.

This is characterised by:

- Reported a significant **decrease** in sales of composted mulch by ~ 102,000 m³ to a total of 171,059 m³ over the 2008 financial year and the corresponding **increase** in reported sales of composted soil conditioner, ~ 60,000 m³ to a total of just under 302,000 m³ over the 2008 financial year. As well as a shift to the lower quality product of pasteurised mulch **increasing** in reported sales by ~ 38,000 m³ to a total of 56,670 m³ over 2008.
- Reported sales of raw mulch **decreased** significantly by 41% (~ 134,000 m³) to a total of 194,546 m³ over 2008. This decrease represents a reversal of the trend experienced over 2007 when a 42% increase was reported on the previous year, positioning raw mulch sales over 2008 at similar levels to sales in 2006.
- Reported sales of manures (composted and raw) **increased** considerably by 34,000 m³ to a combined total of 44,000 m³ over the 2008 financial year. As opposed to the trend for raw mulches this also represents a reversal of the trend experienced over 2007 for manure sales positioning increasing manure sales over 2008 at similar levels to sales in 2006.
- Reported sales of manufactured soils remained stable, increasing by ~ 2,000 m³ to a total of just under 170,000 m³ over the 2008 financial year.

2.2.4 WA inventories

Total inventories represent the combined quantity of raw materials, materials being processed, and stockpiles of finished product on-site at the end of the financial year. There is little value in attempting to distinguish between these categories as materials in process will be held back or pushed through to final product to meet sales orders. There was a strong drive in the conduct of the 2006 and 2007 surveys to clarify the question asked in relation to inventories via reduced complexity of subcategories, and to press the industry for a more accurate response. The current year survey continues this emphasis, identifying that inventories have changed significantly.

- Reported inventories appear to have **decreased** significantly to 490,410 m³ for the 2008 financial year, a decrease of ~ 33.5% on the 2007 financial year total of 737,106 m³.

2.2.5 WA industry issues and priorities

The key issues expressed by the industry are listed below in order of priority, with comparison to expressed priorities from the previous two survey years.

Table. Expressed recycled organics industry priorities in Western Australia.

Rank	Prioritised issues 2008	Prioritised issues 2007	Prioritised issues 2006
1.	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy
2.	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Inadequate / not enforced regulation of competing products
3.	Raw materials contamination	Inadequate / not enforced regulation of competing products	Need for financial incentives for Growers (e.g rebate)
4.	Development of new products/markets (particularly agriculture)	Raw materials contamination	Raw materials contamination
5.	Inadequate / not enforced regulation of competing products	Development of new products/markets (particularly agriculture)	Downward pressure on prices/quality from increasing supply (oversupply)

This year, as in 2007, issues that place downward pressure on prices and that increase production costs are grouped together as these issues are key to the commercial profitability, indeed viability of the industry. The issues are still reported separately, but when aggregated, clearly the two standout issues remain: firstly commercial viability issues that arise from structural government integrated market issues; and secondly inconsistent and unnecessarily costly site regulation is reported as the highest priority issue.

The priority issues reported in 2007 remain the same priority issues for 2008, only that the emphasis on raw materials contamination and the development of new products/markets (particularly agriculture) have increased in importance above “level playing field” issues.

“Level playing field” issues reported in 2006 & 2007 remain, whereby competing products are not subject to equivalent regulatory requirements, and/or where such regulations as exist are not policed; and whereby non-commercial organics processing operations are reported to be distorting resource recovery markets. These issues relate to government intervention to establish a coherent and viable framework for the resource recovery sector, and the incentives to drive commercially viable resource recovery.

2.3 New South Wales

2.3.1 NSW number and type of facilities

The total number of organics recycling facilities involved in the survey decreased from 45 facilities in 2007 to 42 facilities in 2008. Aerobic windrow composting (hot composting) remains the overwhelmingly dominant method for reprocessing all manner of materials, including garden vegetation and highly putrescible materials such as grease trap and organic sludges; food organics (elsewhere food waste); manures and other agricultural residuals.

2.3.2 NSW quantities of organic material received and processed

The total quantity of compostable organic materials reprocessed into beneficial recycled organics products has increased by around 2.3% (or 36,644 tonnes), with a total of 1,645,578 tonnes of raw materials processed in 2008 compared to 1,608,934 tonnes of raw materials processed in 2007.

Notable developments:

- Reported quantities of garden organics diversion from the waste stream for reprocessing into beneficial recycled organics products have **increased** by 2,791 tonnes to a total of 553,872 tonnes over the 2008 financial year.
- Reported quantities of food organics (food waste) for reprocessing into beneficial recycled organics products have notionally increased by 57,009 tonnes to a total of 105,929 tonnes over the 2008 financial year. Note however, that actual food organics diverted and processed has actually **decreased** by ~ 7,000 tonnes due to under reported quantities identified after the completion of the 2007 survey.
- Reported quantities of MSW (organics fraction only) diversion from the waste stream for reprocessing into beneficial recycled organics products have **decreased** by 15,429 tonnes to a total of 94,052 tonnes over the 2008 financial year.

2.3.3 NSW quantities and type of recycled organic product sold

Notable developments:

- **Increased** sales of composted soil conditioner from ~ 419,000 m³ to 484,000 m³ are reported, and an **increase** in sales of pasteurised soil conditioner from ~ 21,000 m³ to 56,000 m³, reflecting a net gain of ~ 100,000 m³ for soil conditioners over 2008.
- **Increased** sales of composted mulch from ~ 45,000 m³ to 55,000 m³ and **increased** sales of pasteurised mulch from ~ 15,000 m³ to ~ 98,000 m³ are reported, but a **decrease** in sales of raw mulch from ~ 109,000 m³ to ~ 62,000 m³, reflect a net gain of ~ 46,000 m³ over 2008.

- Reported sales of manufactured soils **decreased** from 388,171 m³ to a total 315,157 m³ over 2008. This decrease corresponds with an increase in composted soil conditioners.
- Reported sales of raw manure **increased** from ~ 66,000 m³ to a total ~ 124,000 m³ over the 2008 financial year.
- The reported quantity of methane generated for electricity production **increased** from 13.5 million to 15.3 million kWh over 2008. This increase reflects improved processing efficiencies in existing infrastructure rather than increased quantity of materials processed or additional infrastructure.
- Reported quantities of materials going to direct land application appear to show major increases from ~ 65,000 m³ to a total ~ 148,000 m³ over the 2008 financial year. However, this is misleading as reporting of full data, from practitioners of direct land application is confirmed for the first time in 2008, indicating the actual quantity applied to land has slightly **decreased**.
- Sales into new markets in production horticulture and agriculture remain at insignificant levels and are increasing at pace with other markets in almost all products.

2.3.4 NSW inventories

Total inventories represent the combined quantity of raw materials, materials being processed, and stockpiles of finished product on-site at the end of the financial year. There is little value in attempting to distinguish between these categories as materials in process will be held back or pushed through to final product to meet sales orders. There has been a strong drive in 2006 survey to clarify the question asked in relation to inventories via reduced complexity of subcategories, and to press the industry for a more accurate response. The current year survey continues this emphasis and for the first time since 2005 the total inventories in New South Wales have decreased by ~ 8.2%.

- Reported inventories have **decreased** from 714,206 m³ in 2006 to 655,435 m³ reported in 2008. Inventories appear to have declined by just under 59,000 m³ over 2008, but are still 31,000 higher than reported inventories over 2006.
- This figure still clearly under reports total inventories as significant and known stockpiles remains unreported.
- These figures reinforce expressed industry concerns over downward pressure on product pricing due to oversupply of product into established markets. These concerns are exacerbated by the continuation of known barriers to the establishment of markets in production horticulture / agriculture.

2.3.5 NSW industry issues and priorities

The key issues expressed by the industry are listed below in order of priority, with comparison to expressed priorities from the previous two survey years.

Table. Expressed recycled organics industry priorities in NSW.

Rank	Prioritised issues 2008	Prioritised issues 2007	Prioritised issues 2006
1.	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy
2.	Raw materials contamination	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Industry structural economics & [need for] government incentives / Need for financial incentives for Growers (e.g rebate)
3.	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Development of new products/markets (particularly agriculture)	Inadequate / not enforced regulation of competing products
4.	Development of new products/markets (particularly agriculture)	Research and development / inadequate compost performance data	Raw materials contamination
5.	Inadequate / not enforced regulation of competing products	Inadequate / not enforced regulation of competing products	Gate fees too low (metro areas)/ tender appraisal is price driven
6.	Research and development / inadequate compost performance data	Raw materials contamination	Viable product price is unaffordable for customers in key markets
7.	Product quality standards need revision	Compost product marketing and sales support	Development of new products/markets (particularly agriculture)

This year, issues that place downward pressure on prices and that increase production costs are grouped together as these issues are key to the commercial profitability, indeed viability of the industry. The issues are still reported separately, but when aggregated, clearly four standout issues remain: firstly commercial viability issues that arise from structural government integrated market issues; secondly raw materials contamination; thirdly, regulatory imposts and inconsistencies in relation to competing products; and fourthly, issues associated with constraints to the establishment of new markets are reported as the highest priority issue.

“Level playing field” issues reported in 2006 and 2007 remain, whereby competing products are not subject to equivalent regulatory requirements, and/or where such regulations as exist are not policed; and whereby non-commercial organics processing operations are reported to be distorting resource recovery markets. These issues relate to government intervention to establish a coherent and viable framework for the resource recovery sector, and the incentives to drive commercially viable resource recovery.

From the responses, we can see that processors are again increasingly concerned with issues relating to raw materials contamination which has risen to the second most important issue for 2008. It is not certain whether raw materials contamination is causing increased issues, or whether this reflects engagement and concern by the industry towards the current and ongoing AWT project and market concerns related to MSW composts.

The development of new products/markets (particularly agriculture) remains on the prioritised list of issues that are most important to survey respondents. It is significant that issues concerning agricultural markets have been at the forefront of industry development for as long as the survey has been conducted, where forums such as the annual recycled organics R&D Forum are. However, even though there has been an increased focus on the development of processes and products for the penetration of the agricultural markets, from responses to the 2008 financial year survey it is identified that the agricultural market is still insignificant and although not experiencing a decline as in 2007, the quantities of product sold from NSW into agricultural markets has not captured a greater market share.

An issue that has re-emerged on the high priority list of issues is the issue of product quality standards needing revision, as the process of implementing revision of the standards proceeds.

Otherwise, the substantive issues are structural and remain unchanged since the 2003 industry statement, and the initial 2004 NSW industry survey outcomes. These issues are Government related (ie. policy, regulation, financial incentives/disincentives) and can only be addressed by industry on a collectively and coherent basis working directly with government.

2.4 Queensland

2.4.1 Qld number and type of facilities

The total number of organics recycling facilities involved in the survey decreased by 2 from 40 facilities in 2007 to 38 facilities in 2008. Aerobic windrow composting (hot composting) remains the overwhelmingly dominant method for reprocessing all manner of materials, including garden vegetation and highly putrescible materials such as grease trap and organic sludges; manures and other agricultural residuals. The discreet shift, identified in the 2007 survey, of facilities previously reported as on-farm facilities to now being reported as licensed commercial facilities has continued in 2008.

2.4.2 Qld quantities of organic material received and processed

The reported total quantity of compostable organic materials reprocessed into beneficial recycled organics products has decreased by around 10 % (or 180,349 tonnes), with a total of 1,613,241 tonnes of raw materials processed in 2008 compared to 1,793,590 tonnes of raw materials reported to have been processed in 2007. However, the 2007 survey included data provided by the Queensland EPA on local government garden organics collections totalling 578,420 tonnes. This data was not available at the time of publishing the results of the 2008 survey. However, the garden organics quantities reported in 2007 by local government are incorporated into comments below. Better reporting and data that was collected after the publishing of the 2007 survey indicate significant increases in some types of raw material processed. These variations only serve to mask the modest real increases in the collection of raw materials from almost all category types.

Notable developments:

- Reported quantities of garden organics diversion from the waste stream for reprocessing into beneficial recycled organics products have **increased** by 28,000 tonnes (+7.1%) to a total of 423,250 tonnes over the 2008 financial year. This result excludes the 578,420 tonnes from local government sources that were included in the 2007 financial year survey, but not provided at the time of publishing the 2008 survey results.
- Reported quantities of forestry residuals (sawdust and barks) for reprocessing into beneficial recycled organics products have **increased** by 26,245 tonnes (+52%) for sawdust to a total of 76,815 tonnes and by 45,500 tonnes (+64%) for barks to a total of 116,150 tonnes over the 2008 financial year. This is as a result of better reporting and does not necessarily represent large increases in raw material being processed.
- Reported quantities of oils, grease trap and organic sludges diverted from the waste stream for reprocessing into beneficial recycled organics products have **increased** by 18,232 tonnes (+20%) to a total of 107,822 tonnes over the 2008 financial year.

- Reported quantities of miscellaneous agricultural organics (including: sugar cane & sugar cane by-products; cotton trash; skudge; offal; and spent mushroom bedding) for reprocessing into beneficial recycled organics products have **increased** by 30,050 tonnes (+69%) to a total of 73,470 tonnes over the 2008 financial year.
- Reported quantities of other miscellaneous raw materials (including: ash; leachate; mill mud; and organic content of C&I waste) diverted from the waste stream for reprocessing into beneficial recycled organics products have **increased** by over 6,490 tonnes (+69%) to a total of 15,860 tonnes over the 2008 financial year.
- The miscellaneous agricultural organics and other miscellaneous raw materials categories are being pushed as raw mulches by the cane industry and associated entities, which have an influence on the recycled organics industry in Qld.

2.4.3 Qld quantities and type of recycled organic product sold

Industry reported significant increases in sales of recycled organics products across a range of product categories. Notable developments:

- **Increased** sales of composted soil conditioner from ~ 159,000 m³ to ~ 170,000 m³ (+6.7%) are reported, along with an **increase** in sales of pasteurised soil conditioner from 46,000 m³ to 49,100 m³ reflecting a net gain of ~ 14,000 m³ for reported sale of soil conditioners. Extensive agricultural markets now account for ~ 31% of composted soil conditioner sales in 2008, compared to ~ 10% in 2007.
- **Increased** sales of composted mulch from ~ 87,000 m³ to ~ 100,000 m³ (+15%) are reported over the 2008 financial year. Sales of raw mulch have reportedly **increased** from ~ 294,000 m³ to ~ 344,000 m³ (+17%) reflecting a net gain of ~ 63,000 m³ for mulches. These figures do not include products manufactured by local council that are derived from garden organics collections, with the exception of Hervey Bay Council and some other local councils with contracted services to private processors off-site.
- Reported sales of manufactured soils **increased** from 453,310 m³ to a total 605,759 m³ (+34%) over 2008. This increase of ~ 152,000 m³ represents a significant increase in reported sales but also includes ~ 35,000 m³ of sales unreported in the 2007 survey, representing continuous improvement in the accuracy in reporting for the 2008 financial year. Urban markets now account for ~ 55% of manufactured soils, up from ~ 41% in 2007, which was up from ~ 29% in 2006. There has been a major shift from rehabilitation to the intensive agriculture market with ~ 45% in 2008.
- Reported sales of potting mix **increased** from 49,091 m³ to a total 179,009 m³ over the 2008 financial year. Note however that this increase is overwhelmingly due to improved reporting rather than increased sales as 130,000 m³ of this total is due to under reported quantities identified after the completion of the 2007 survey. This more accurate figure results from continuous improvement in the accuracy in reporting for the 2008 financial year.

2.4.4 Qld inventories

Total inventories represent the combined quantity of raw materials, materials being processed, and stockpiles of finished product on-site at the end of the financial year. There is little value in attempting to distinguish between these categories as materials in process will be held back or pushed through to final product to meet sales orders. There has been a strong drive in 2006 & 2007 survey to clarify the question asked in relation to inventories via reduced complexity of subcategories, and to press the industry for a more accurate response. The current year survey continues this emphasis.

- Reported inventories appear to have **increased** from 917,325 m³ in 2006 to 1,112,425 m³ for the 2008 financial year, an increase of ~ 21.3%.

2.4.5 Qld industry issues and priorities

The key issues expressed by the industry are listed below in order of priority, with comparison to expressed priorities from the previous two survey years.

Table. Expressed recycled organics industry priorities in NSW.

Rank	Prioritised issues 2008	Prioritised issues 2007	Prioritised issues 2006
1.	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Factors placing downwards pressure on prices and increasing production costs (oversupply, competition from non-commercial facilities, fuel price, absence of incentives for growers)	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy
2.	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy	Increasing fuel price / transport costs
3.	Inadequate / not enforced regulation of competing products	Inadequate / not enforced regulation of competing products	Viable product price is unaffordable for customers in key markets
4.	Compost product marketing and sales support	Compost product marketing and sales support	Industry structural economics & [need for] government incentives / Need for financial incentives for Growers (e.g rebate)
5.	Raw materials contamination	Raw materials contamination	Inadequate / not enforced regulation of competing products

Priorities reported in 2008 remain unchanged from the previous year. This year, as in 2007, issues that place downward pressure on prices and that increase production costs are grouped together as these issues are key to the commercial profitability, indeed viability of the industry. The component issues are still reported separately, but when aggregated, clearly the two standout issues remain: firstly commercial viability issues that arise from structural and government integrated market issues; and secondly inconsistent and unnecessarily costly site regulation is reported as the highest priority issue. In fact, the priority issues reported in 2007 remain the same priority issues for 2008.

“Level playing field” issues reported in 2006 and 2007 remain, whereby competing products are not subject to equivalent regulatory requirements, and/or where such regulations as exist are not policed; and whereby non-

commercial organics processing operations are reported to be distorting resource recovery markets. These issues relate to government intervention to establish a coherent and viable framework for the resource recovery sector, and the incentives to drive commercially viable resource recovery.

Compost product marketing/sales support remains on the high priority list of issues for 2008 having emerged as an important issue in 2007 for the first time. Compost Australia held the inaugural marketing forum for the recycled organics industry in Canberra in 2007 which focused attention on this issue, highlighting the need for an all of industry approach to the issues of marketing and sales support.

2.5 Victoria

The survey of the Recycled Organics industry in Victoria is conducted directly by Sustainability Victoria. Victorian data for the 2007 – 08 financial year is not available at time of publication of this report.

Please refer to *Organics Recycling in Australia: Industry Statistics 2006* report for Victorian data from that year survey, available online from www.compostaustralia.com

2.6 Australian Capital Territory, Tasmania and Northern Territory

It is hoped that the ACT, NT and Tas will participate in the 2009 national industry survey. Please refer to *Organics Recycling in Australia: Industry Statistics 2006* report for ACT data from that year survey, available online from www.compostaustralia.com

Recommendations 2007-08

2.7 Recommendations for survey implementation

- Implementation of the survey must begin at the beginning of August, close to the end of financial year and prior to the busy spring sales period, the busiest period of the year for the industry. This is required both for the purpose of achieving superior data quality and for timeliness of reporting of results for use by industry and government for planning, and to satisfy the various state agencies that contribute funding for survey implementation.
- Any revisions to the survey must be specified at the end of the survey period to be implemented in the subsequent year survey. Consultation and negotiation on revisions directly prior to survey implementation serve only to further delay implementation into the busiest spring period, and the Christmas lead-up period, which is the worst possible period of the year for industry participation.
- The states and territories must be engaged in this project from end of January to ensure project authorisation/formalisation is achieved for timely survey implementation from end of July. Delays in formalisation of participation and funding from the various state agencies lead directly to client dissatisfaction in terms of timely availability of results. Late engagement of SA, and subsequent initiation of SA survey only after other participating states had been completed has resulted in an 8 week delay in the completion of this report in 2008.
- Survey of the industry in Victoria continues to be implemented directly via Sustainability Victoria. Victorian data is unavailable at time of completion of this report at beginning December 2009 and is not included in this report. Victorian data must be secured in a timely manner so as to enable inclusion in this report. As per previous year recommendations, data from Victoria must be provided in a manner that is compatible with national industry survey and reporting to enable incorporation.
- The opportunity for inclusion of the industry in ACT, Tasmania and Northern Territory to extend the survey scope to a truly national exercise, as per previous recommendations, and in spite of renewed effort in 2008, remains an opportunity to be realised.
- ROU and Compost Australia have developed an action plan for broadening the scope of the project to a truly national survey. This plan is intended for implementation in 2009.

Aggregated survey results 2007-08 financial year

Please refer to subsequent pages. Please note, ACT, Tasmania and NT have not been included in the 2008 survey; and Victorian data was not available at time of publication from Sustainability Victoria, as identified in sections 2.5 and 2.6 above:

COMPOST AUSTRALIA - ORGANICS INDUSTRY National Aggregate Survey 2007/08 Financial Year		National total	NSW total	WA total	SA total	QLD total
SECTION A - Organisation details						
2 Facility type	Total	No.				
On-farm operation		138	42	27	32	37
Council facility		28	4	2	9	13
Licensed commercial facility		5	2		2	1
Other ¹		99	31	25	20	23
		6	5		1	
	Response rate%	97	98	96	97	97
SECTION B: Raw materials received/processed						
3 Total quantity of raw materials processed	t	4,484,640	1,645,578	597,841	627,980	1,613,241
4 Types of raw materials processed						
Garden organics (green organics / garden vegetation)	t	1,358,082	553,872	178,563	202,397	423,250
Wood/timber/sawdust (from commercial/industrial sources)	t	140,721	71,021	16,721	19,219	33,760
Sawdust (from forestry residuals)	t	221,370	106,383	23,299	14,873	76,815
Barks (from forestry residuals)	t	593,382	147,519	122,418	207,295	116,150
Food organics (food waste)	t	124,023	105,929	6,798	5,796	5,500
Biosolids/grit/screenings	t	626,294	196,760	25,434	600	403,500
Oils, grease trap, sludges	t	193,403	20,760	28,250	36,571	107,822
Straw	t	17,267		7,350	9,917	
Manure	t	702,700	316,440	30,050	52,553	303,657
Animal bedding	t	18,000		10,400	7,100	500
Animal mortalities	t	10,177	6,452	3,500	150	75
Paunch	t	21,150	500	1,900	7,500	11,250
Other - Miscellaneous agricultural organics	t	98,277	1,600	10,548	12,659	73,470
Other - Paper pulp/sludge	t	58,757	7,000		50,050	1,707
Other - MSW (organic fraction)	t	232,627	94,052	98,650		39,925
Other - Biowaste	t	13,570	13,570			
Other - Miscellaneous	t	54,840	3,720	33,960	1,300	15,860

COMPOST AUSTRALIA - ORGANICS INDUSTRY		National	NSW	WA	SA	QLD	
National Aggregate Survey 2007/08 Financial Year		total	total	total	total	total	
SECTION C: Recycled organics product types and quantities sold							
5 Total quantity of product sold, recycled organics content ² , market breakdown ^{3 6}							
<i>Composted soil conditioner</i>							
	Quantity product sold ³	m³	1,041,691	484,553	301,995	85,344	169,799
	Recycled organic content	%	96	96	96	98	94
	Intensive agriculture	m ³	134,515	40,323	22,784	44,198	27,210
	Extensive agriculture	m ³	137,129	27,592	55,982	305	53,250
	Urban amenity	m ³	724,133	396,867	201,693	36,584	88,989
	Rehabilitation	m ³	24,287	12,851	10,536		900
	Enviro-remediation	m ³	18,270	6,920	11,000		350
<i>Pasteurised soil conditioner</i>							
	Quantity product sold	m³	115,070	56,000	9,630	340	49,100
	Recycled organic content	%	96	100	100	100	83
	Intensive agriculture	m ³	500	500			
	Extensive agriculture	m ³	38,770	29,000			9,770
	Urban amenity	m ³	17,170	6,000	9,630	340	1,200
	Rehabilitation	m ³	68,630	30,500			38,130
	Enviro-remediation	m ³	0				
<i>Composted mulch</i>							
	Quantity product sold	m³	533,949	54,714	171,059	208,066	100,110
	Recycled organic content	%	100	100	100	100	100
	Intensive agriculture	m ³	148,111	8,293	18,452	96,366	25,000
	Extensive agriculture	m ³	2,930		2,500	430	
	Urban amenity	m ³	291,388	36,276	133,107	46,895	75,110
	Rehabilitation	m ³	19,645	10,145	9,500		
	Enviro-remediation	m ³	7,500		7,500		
<i>Pasteurised mulch</i>							
	Quantity product sold	m³	219,530	97,600	56,670	65,260	
	Recycled organic content	%	100	100	100	100	
	Intensive agriculture	m ³	6,225	700		5,525	
	Extensive agriculture	m ³	0				
	Urban amenity	m ³	115,046	3,641	51,670	59,735	
	Rehabilitation	m ³	93,959	93,959			
	Enviro-remediation	m ³	0				
<i>Raw mulch</i>							
	Quantity product sold	m³	1,350,775	61,738	194,546	749,975	344,516
	Recycled organic content	%	100	100	100	100	100
	Intensive agriculture	m ³	89,401	275	81,626		7,500
	Extensive agriculture	m ³	0				
	Urban amenity	m ³	650,111	60,200	102,920	149,975	337,016
	Rehabilitation	m ³	175	175			
	Enviro-remediation	m ³	0				
<i>Manufactured soil</i>							
	Quantity product sold	m³	1,125,516	315,157	169,650	34,950	605,759
	Total RO content in product	m ³	590,777	199,449	77,075	24,415	289,838
	Recycled organic content	%	20 - 100	30 - 85	45 - 50	20 - 100	30 - 80
	Intensive agriculture	m ³	270,350				270,350
	Urban amenity	m ³	848,366	308,357	169,650	34,950	335,409
	Rehabilitation	m ³	3,400	3,400			
	Enviro-remediation	m ³	3,400	3,400			
<i>Potting mixes</i>							
	Quantity product sold	m³	705,974	185,987	163,928	177,050	179,009
	Total RO content in product	m ³	547,933	118,507	102,470	158,700	168,256
	Recycled organic content	%	20 - 100	20 - 100	45 - 100	80 - 100	20 - 100
	Intensive agriculture	m ³	154,363	2,280	5,058	147,025	
	Urban amenity	m ³	451,611	183,707	158,870	30,025	79,009

COMPOST AUSTRALIA - ORGANICS INDUSTRY		National	NSW	WA	SA	QLD
National Aggregate Survey 2007/08 Financial Year		total	total	total	total	total
SECTION C: Recycled organics product types and quantities sold (continued)						
<i>Playground surfacing</i>						
	Quantity product sold	m ³	48,310	8,060	24,750	15,500
	Recycled organic content	%	100	100	100	100
	Urban amenity	m ³	48,310	8,060	24,750	15,500
<i>Biofuels/biogas (energy from methane)</i>						
	Quantity product sold	kWh	15,320,000	15,320,000		
<i>Biofuels/solid fuel</i>						
	Quantity product sold	m ³	1,500	1,500		
<i>Other - Composted products</i>						
	Quantity product sold	m ³	27,960	27,940		20
	Recycled organic content	%	48	90		100
	Intensive agriculture	m ³	7,710	7,700		10
	Extensive agriculture	m ³				
	Urban amenity	m ³	20,010	20,000		10
	Rehabilitation	m ³				
	Enviro-remediation	m ³				
<i>Other - Organic fertiliser</i>						
	Quantity product sold	t	2,200	1,400		800
	Recycled organic content	%	100	100		100
	Intensive agriculture	t	0			
	Extensive agriculture	t	0			
	Urban amenity	t	0			
	Rehabilitation	t				
	Enviro-remediation	t				
<i>Other - Composted manure</i>						
	Quantity product sold	m ³	701,883	264,500	45,250	89,093
	Recycled organic content	%	100	100	100	99
	Intensive agriculture	m ³	235,412	195,900	20,300	13,072
	Extensive agriculture	m ³	80,333		8,700	54,573
	Urban amenity	m ³	85,158	57,850	5,000	21,468
	Rehabilitation	m ³	10,500	10,500		
	Enviro-remediation	m ³	250	250		
<i>Other - Raw manure</i>						
	Quantity product sold	m ³	169,284	124,284	10,000	35,000
	Recycled organic content	%	75	100	100	100
	Intensive agriculture	m ³	105,435	88,135		17,300
	Extensive agriculture	m ³	23,849	7,149		16,700
	Urban amenity	m ³	13,000	3,000	10,000	
	Rehabilitation	m ³				
	Enviro-remediation	m ³				
<i>Other - Direct land application</i>						
	Quantity product sold	m ³	263,836	147,836		116,000
	Recycled organic content	%	43	71		14
	Food organics	m ³		56,916		
	Biosolids	m ³	184,230	68,230		116,000
	Other	m ³		19,690		
<i>Other - Aqueous compost extracts</i>						
	Quantity product sold	L	2,116,000	110,000	2,000,000	6,000
	Intensive agriculture	L	1,410,000	10,000	1,400,000	
	Extensive agriculture	L				
	Urban amenity	L	606,000			600,000
	Rehabilitation	L				
	Enviro-remediation	L				
SECTION D: Inventory on site						
6 Total all material/product on site 30-06-08 ⁴		m³	3,133,910	655,435	490,410	875,640
					1,112,425	

COMPOST AUSTRALIA - ORGANICS INDUSTRY		National	NSW	WA	SA	QLD
National Aggregate Survey 2007/08 Financial Year		total	total	total	total	total
SECTION E: Industry issues and priorities						
7 Industry issues, priorities						
<i>Higher value represents a higher priority for industry ^{7.5}</i>						
7.1	Industry structural economics & government incentives	51	21	18	6	6
7.2	Gate fees too low (metro areas)/ tender appraisal is price driven	36	18		15	3
7.3	Raw materials contamination	63	30	12	15	6
7.4	Site regulation and planning consent - inconsistent, unnecessarily costly, requirements don't support policy; Unaffordable new regulatory demands forcing exit from industry	84	24	21	21	18
7.5	Development of new products/markets (particularly agriculture)	45	24	12	3	6
7.6	Saturation of particular markets	12	6	3	3	
7.7	Govt interference in markets / direct govt interaction with customers	3	3			
7.8	Research and development / inadequate compost performance data	24	12		9	3
7.9	Product quality standards need revision	21	9	6		6
7.10	Technical support and training	6	3		3	
7.11	Viable product price is unaffordable for customers key markets	24	15			9
7.12	Industry organisation and communication	12	3	9		
7.13	R&D ignoring customer affordability	0				
7.14	Limited government purchasing / green purchasing	0				
7.15	Uncompetitive /non-commercial competition in service delivery from local govt facilities, driving price/quality down	12	3	9		
7.16	Major chains are price driven and will not pay for quality	6	6			
7.17	Industry branding ('waste')/ obsolete market perceptions	3				3
7.18	Limited transfer of research into practice	0				
7.19	Increasing fuel price/transport costs	54	12	6		36
7.20	Govt drive to force non-viable investment into high tech composting	0				
7.21	Food waste separation not supported / not financially viable	6	6			
7.22	Complaints from neighbours	0				
7.23	Financial incentives for Growers (e.g rebate)	27	6	6	6	9
7.24	Cheap sub-standard products marketed under same product name	0				
7.25	Financial and other govt support for waste to energy options	0				
7.26	Standard quality assurance procedures needed	9	3	3	3	
7.27	Mechanism required for recovering ecoservices value	6	6			
7.28	Compost product marketing and sales support	18	6		3	9
7.29	C&D waste dumped in to market	0				
7.30	No gate fee/levy in regional areas	0				
7.31	Downward pressure on prices/quality from increasing supply (oversupply)	15	6	6	3	
7.32	Inadequate / not enforced regulation of competing products	51	18	9	9	15
7.33	Water restrictions reducing demand (urban)	6	3		3	
7.34	Need application-specific product standards	3	3			
7.35	Product R&D not directed at commercial market demand creation	9	3	6		
7.36	Inadequate understanding of agricultural economics / risks	3	3			
7.37	Regulatory definition of "waste" and "beneficial use" restricts transition to sustainability	0				
7.38	Other - reductions in rural water allocations suppressing farm production & demand	3			3	

COMPOST AUSTRALIA - ORGANICS INDUSTRY		National	NSW	WA	SA	QLD
National Aggregate Survey 2007/08 Financial Year		total	total	total	total	total
SECTION F: Product quality standards						
8.1 Number of processors manufacturing certified product						
AS 4454 - Composts, soil conditioners, mulches		32	11	7	5	9
AS 3743 - Potting mixes		11	4	3	3	1
AS 4419 - Landscaping soils		16	5	3	1	7
Organic product standard - BFA, NASAA		21	6	4	5	6
Other - Biosolids guideline		3	1			2
Other - Compost Australia Leaf Mark		0				
Other		10	1	2	3	4
Footnotes						
1 Other types of facilities include: renderer of offal; direct land application; facilities of unknown license status; licensed on-site facility.						
2 Recycled organics refers to a range of products manufactured from a variety of compostable organic materials including: garden organics; food organics; residual wood and timber; biosolids; agricultural organics; and other organic materials.						
3 Note total may not equate to the sum of individual market segments as a small number of processors were not prepared to provide market breakdown.						
4 Note: figures provided are commonly "informed estimate" rather than formal quantitative survey.						
5 The green colour indicates most significant issues						
6 Product quantities reported in Section C may be sold to markets located outside the region						
7 Note: numerous issues collectively effect commercial viability, including 7.1, 7.2, 7.6, 7.11, 7.15, 7.19, 7.23, 7.29, 7.30, 7.31, 7.32						