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- Collaboration
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1. Introduction

The Centre for Organic & Resource Enterprises (CORE) fully supports the intentions of the National Waste Policy (NWP) and is pleased to provide the following submission to the National Waste Policy discussion paper to make our contribution to enhancing the knowledge and understanding in our specialty area being marketing of products containing recycled organic materials (hereafter called “recycled organics products”). Recycled organic products can take their place in a competitive market with some short term but extensive policy and resource support. We congratulate the Minister and the Department of the Environment, Water, Heritage and the Arts for taking this much needed leadership.

Our input to the previous May 09 submission was provided through the Waste Management Association of Australia. It is acknowledged that recycled organics is included in the discussion paper but we are disappointed that considerable information appears to be absent regarding the state of market penetration, potential market applications, additional environment contributions and the potential multipliers to the economy and society inherent in the utilisation of this valuable resource that can reduce waste to landfill up to 50% and reduce a substantial amount of atmospheric emissions. Consequently we are submitting the following comments in our own right.

CORE is a national marketing network with members predominantly in the organics recycling industry and actively advocates through direct involvement and collaborations in the organic and biodynamic (farming) and stormwater sectors. For the past fifteen years CORE personnel have been researching markets for recycled organics products and developing and implementing market and product development programs in a wide range of markets within severely constrained resource circumstances. Since its inception, CORE has identified, developed and refined the market structure (Attachment 1) for products containing recycled organic materials. We define recycled organics as those diverted away from landfill, generally garden, food & timber materials but can also include biosolids and biomass materials from alternative waste treatment technologies. Some studies have identified up to ten times the volume of agriculturally produced recycled organics that are not included in this submission as they are normally not diverted from landfill.

2. Investment in recycled organic products market development

The discussion paper refers to a considerable investment that has made a significant difference to waste management in Australia and resulted in (inter alia) new domestic and international markets for materials and products recovered from waste. While this may be true for the dry recyclable fractions, unfortunately this statement is inaccurate in the case of markets for recycled organic materials. While investment is made in organic collection and processing infrastructure, recycling hasn't taken place until the materials have been beneficially utilised in markets. Insufficient investment in market demand creation for recycled organics products has led to major stockpile issues and severe market distortions which have negatively affected the viability of organic recyclers and are impeding the increased recovery of these materials.

The barrier is not market identification. CORE's market structure shown in Attachment 1 identifies 9 market segments with 35 target markets where recycled organics products can be competitively marketed. The barrier is market conversion to organic methods. While market profiles can vary from state to state, after fifteen years of intensive landfill diversion campaigns the Amenity sector accounts for over ninety per cent of product uptake and the market is substantially saturated. Intensive agriculture at approximately five per cent is the only other measurable sector. All other market sectors have been met with barriers or resistance.

The market structure identifies many markets within close geographical reach of major processing centres (supply) dispelling the commonly held belief that the only saviour is shipping products to long distance agricultural markets. While agriculture presents considerable demand potential and many productivity and environmental benefits, developing a diversity of markets will lead to a more stable market environment.

3. Supply and Demand Dynamics

Ever since large scale organic landfill waste diversion programs were introduced in the mid 90's the recycled organics industry has been in a "supply" lead environment. This has seen market prices stagnate and in some cases fall dramatically in an attempt to reduce stockpiling. This situation is exacerbated in stockpile capacity regulated facilities. This has resulted in minimal investment by participants in technology, market research and market development (CORE was initially established for this very reason). Some governments around Australia at times have provided seed funding but the funding levels have never been commensurate with the resources required to adequately address the issue.

There are no other manufacturing processes that would accept substantially more raw materials than they have markets for. This is a unique aspect of the organic recycling industry. The deflated pricing brought about by the excess of supply of product has shifted the cost burden back onto local government and the wider community (through increased waste management costs) as recyclers attempt to recover costs through higher processing fees. In a demand lead market environment higher prices would be achieved and the cost burden to local government and the wider community could be significantly reduced.

4. Shift in Pricing Signals

The discussion paper is correct in suggesting clearer pricing signals are required along the supply chain. This is especially relevant for recycled organic markets. Market instruments should be introduced that provide incentives for markets to adopt recycled organic products in much the same way as incentives have been used for water recycling and energy efficient products. The discussion paper is right in suggesting that "government operation services and procurement requirements be adjusted to encourage local markets for recovered resources such as tyres, glass and concrete" but fails to mention recycled organic products.

This aspect of the NWP should be extended to include products such as composts, mulches, stormwater treatment and sediment and erosion control products that have high demand but have little adoption by government even though they have been demonstrated to be competitive in performance, quality and price. These products generally have engineering specifications and standards. The suggestion in the discussion paper to "develop a set of national technical specifications, allowing (and providing incentives) for recycled material in contract provisions, and product testing information" would facilitate this particular market and is fully supported with the inclusion of recycled organic products.

Recycled organics contain significant amounts of carbon. While the Carbon Pollution Reduction Scheme (CPRS) may "not have much effect" on dry recyclables it should effectively divert recycled organics from landfill disposal. The danger is that if there are insufficient markets to utilise the carbon then the carbon/emission reduction won't take place but rather be shifted to an organic "monofil".

This carbon content can also make a significant contribution to carbon restoration in the soil through "direct sequestration". A trading scheme for direct sequestration or the support of research into a measurement, monitoring and validation (MMV) system (e.g. carbon characterisation and turnover time of the stable carbon fractions in recycled organic products) could deliver a good price for the carbon even in the voluntary market. This is feasible and CORE is currently commissioned with a part finding contribution by the Rural Industries Research and Development Corporation to undertake such a study but has been unable to secure federal government funding support even through grant programs such as Care for Country. The success of market development for recycled organic products through the NWP will only be achieved through "whole of government, cross portfolio support including from DAFF and Dept of Water. The infrastructure initiatives announced by federal government can provide substantial markets for recycled organic products given the right policy settings being in place.

In "pursuing sustainability" recycled organics products in conjunction with a suitable production system (e.g. organic farming) can deliver nutrient and water efficiency, productivity increases, carbon sequestration, better soil structure, erosion control, eliminate chemical and nutrient runoff, treat stormwater and industrial water for reuse or permissible release. It is pleasing that the discussion paper supports some of these benefits but there is little support for this in the federal government agriculture portfolio despite repeated representations by the waste and organic farming sector peak bodies to the Minister and senior officers in the Department of Agriculture, Forestry and Fisheries. Very little grant funding has been provided to the organic sector and little if any R&D support

Levies are becoming a common and effective MBI to reduce waste to landfill and encourage a more viable recycling industry. NSW rewards local government reduction performance with a reimbursement of levies based on proven waste reduction based on waste audits. This approach can improve fundamental data on waste reduction but must have a consistent methodology across all states to be useful nationally.

Reimbursement of levies should also be applied to purchases of recycled products based on an audit system which would provide valuable market trend data to influence recycled product development and innovation.

5. Research, development and demonstration

Continuous improvement and progress in the recycled organic sector and organic farming sector have been severely hampered by the insignificant funding made available for research and development (R&D). While the non organic sectors continue to receive funding towards continuous improvement the organic sectors are almost completely neglected. As identified in the discussion paper there are obvious benefits arising from the use of organic methods including the use of organic based inputs. However, the practice of just shredding and composting kerbside “greenwaste” produces a low value, low nutrient product that doesn’t provide a value proposition that is attractive to farmers. This is a major barrier to demand.

R&D is desperately needed to develop value added products that provide a greater range of benefits to farmers such as carbon, nutrients, stabilising value etc. This value adding can add considerable value to “greewaste” carbon based products and help address the cost of transport through higher value products by shipping the nutrients, lime and carbon in one product. However these products must be tailored to address factors such as crop type, climate, soil type and production system.

Products must be designed through R&D to address issues such as Phosphorous (P). P is a diminishing and finite resource. Some soils have P locked up and these soils can leech P into waterways causing eutrophication. Other soils have a P deficiency. The nutrient efficiency potential of carbon based products given, sufficient R&D support, could provide a valuable contribution to this issue. This is addition to the water efficiency and other benefits identified in the discussion paper.

Considerable robust R&D has been conducted into the use of a recycled organic based product range that can filter contaminants such as nutrients (ammonium, nitrate, phosphorous) metals (copper, lead, zinc) hydrocarbons and bacteria from run-off waters such as stormwater and industrial runoff. This product range known by the generic term “Enviromedia” achieves multiple environmental outcomes such as cleaner waterways and water harvesting and reuse. While the technology is scientifically proven and can be effectively used by governments at all levels, market penetration support through strategies such as demonstration projects is vital to realising success in this product category. Incentive programs such as those suggested in the discussion paper could also assist in driving demand. This is an urban based application that has high potential demand but generally doesn’t need long distance transport. Some applications are ready for implementation but some R&D may be needed to expand demand potential. Applications include filter strips for preventing nutrient runoff, bio filtration, erosion and sediment control.

6. Market Barriers

From our experience the barriers to markets are generally not technical but are perceptual. Resistance to the adoption of organic farming methods that use organic inputs and lack of adoption of the use of organic filters (Enviromedia) for stormwater treatment are two good examples. Where we have been able to adequately demonstrate particular recycled organic products they have proven to be competitive in performance, quality and price. There are many proven products and some that with some R&D could provide competitive products and in many cases achieve superior environmental outcomes. The barriers can be broken down with Market Based Instruments (MBI) such as incentives, demonstration projects, procurement policies, direct sequestration carbon valuation and grant based adoption programs.

7. Waste to Energy

Organic waste to energy or bio energy is included in the market profile and is considered part of the mix. It is suited to some organic waste stream fractions, particularly the mixed solid waste stream. However due to the multiplicity of economic, social and environmental benefits of other applications it should not be elevated above the many other applications in demand hierarchy considerations.

8. Economic Potential and Multipliers

It is estimated that around 25% of organic waste generated is currently diverted from landfill. The following table is based on this estimate.

Current	Potential
Industry turnover of around \$500M ¹	\$2 Billion
2,500 employed ²	10,000 employed

1. Based on average turnover is \$90/input tone at 5.4 million tonnes
2. Based on average employee numbers of 5 per 10,000 input tones at 535,000 tonnes of product

With the addition of multipliers for ancillary and downstream services the sector represents a considerable economic opportunity for Australia.

9. A Synchronised Approach

While the diversion of organics from landfill is fully supported by CORE, a synchronised approach is required so that supply does not continue to outstrip demand. The lead time for market development and product uptake is significantly underestimated throughout Australia. Therefore market planning should be carried out well in advance of any signals to waste managers that cause mass diversion of organics from landfill.

10. Marketing – No need to reinvent the wheel.

Over the years there have been many industry wide marketing programs developed and successfully implemented in various parts of Australia designed to increase demand for recycled organic products. It is important that the industry utilises and builds on the existing programs that have some existing recognition but have been retarded due to low resource allocation. Following in “Attachment 2” are the major programs implemented that can be expanded into new regions or re-run in previously targeted regions.

11. Pursuing sustainability—directions for change

CORE supports the discussion paper statement for “an agreed effective national approach to organics to harness opportunities for business including a transition to alternative uses for each major type of organic waste and the need for facilities to handle the different types of organics for a range of re-use purposes; the provision of agreed best practice, guidelines and standards for both organic waste input (separation and contaminant levels including hazardous materials) and organic end products such as soil conditioners and compost; and for waste to energy plants and methane to energy. Such an approach would allow fit-for-purpose arrangements that can be tailored to the circumstances and the location”.

Summary of Conclusions

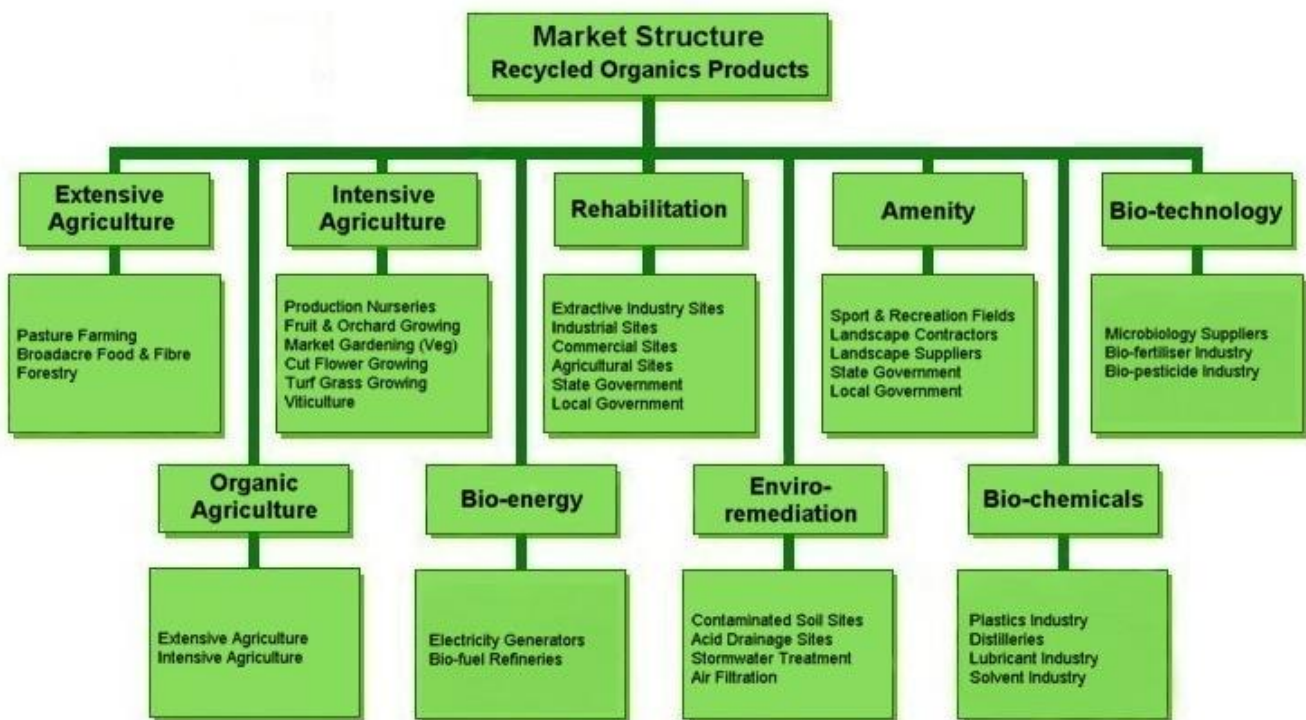
1. Recycled organic products can take their place in a competitive market with some short term but extensive policy and resource support.
2. Insufficient investment in market demand creation for recycled organics products has led to major stockpile issues and severe market distortions which have negatively affected the viability of organic recyclers and are impeding the increased recovery of these materials.
3. The organics industry has been in a “supply” lead environment.
4. In a demand lead market environment higher prices would be achieved and the cost burden to local government and the wider community could be significantly reduced.
5. The barrier is not market identification but conversion to organic methods.
6. There are many markets within close geographical reach of major processing centres.
7. If there are insufficient markets to utilise the carbon then the carbon/emission reduction won't take place but rather be shifted to an organic “monofil”.
8. The success of market development for recycled organic products through the NWP will only be achieved through “whole of government, cross portfolio support including from DAFF and Dept of Water.
9. The infrastructure initiatives announced by federal government can provide substantial markets for recycled organic products given the right policy settings being in place.
10. The practice of just shredding and composting kerbside “greenwaste” produces a low value, low nutrient product that doesn't provide a value proposition and is not attractive to farmers and is a major barrier to demand.
11. Barriers to markets are generally not technical (or feasibility) but are perceptual.
12. Where we have been able to adequately demonstrate particular recycled organic products they have proven to be competitive in performance, quality and price. There are many proven products and some that with some R&D could provide competitive products and in many cases achieve superior environmental outcomes.

13. Due to the multiplicity of economic, social and environmental benefits of the various recycled organic products, organic waste to energy should not be elevated above the many other applications in demand hierarchy considerations.
14. Industry growth potential combined with the addition of multipliers for ancillary and downstream services in the recycled organic sector represents a considerable economic opportunity for Australia.
15. CORE supports the discussion paper statement for an agreed effective national approach to organics to harness opportunities for business including a transition to alternative uses for each major type of organic waste and the need for facilities to handle the different types of organics for a range of re-use purposes; the provision of agreed best practice, guidelines and standards for both organic waste input (separation and contaminant levels including hazardous materials) and organic end products such as soil conditioners and compost; and for waste to energy plants and methane to energy. Such an approach would allow fit-for-purpose arrangements that can be tailored to the circumstances and the location.

Recommendations

1. The NWP should recognise the additional information on recycled organics contained in this submission regarding the state of market penetration, potential market applications, additional environment contributions and the potential multipliers to the economy and society.
2. To create a more stable market environment, develop a diversity of markets to spread the risk and allow for seasonal variations in demand.
3. Market instruments should be introduced that provide incentives for markets to adopt recycled organic products in much the same way as incentives have been used for water recycling and energy efficient products.
4. The NWP should be extended to include products such as composts, mulches, stormwater treatment and sediment and erosion control products that have high demand but have little adoption by government even though they have been demonstrated to be competitive in performance, quality and price.
5. "Develop a set of national technical specifications, allowing (and providing incentives) for recycled material in contract provisions, and product testing information" would facilitate market demand and is fully supported with the inclusion of recycled organic products.
6. Introduce a trading scheme for "direct sequestration" or the support of research into a measurement, monitoring and validation (MMV) system (e.g. carbon characterisation and turnover time of the stable carbon fractions in recycled organic products) which could deliver a good price for the carbon even in the voluntary market.
7. Reimbursement of landfill levies should be applied to purchases of recycled products based on an audit system which would provide valuable market trend data to influence recycled product development and innovation.
8. Support desperately needed R&D to develop value added products that provide a greater range of benefits to farmers such as carbon, nutrients stabilising value etc. This value adding can add considerable value to "greewaste" carbon based products and help address the cost of transport through higher value products by shipping the nutrients, lime and carbon in one product. However these products must be tailored to address factors such as crop type, climate, soil type and production system.
9. Support products designed through R&D to address specific issues such as Phosphorous (P).
10. Support the recycled organic based technology that can filter contaminants such as nutrients (ammonium, nitrate, phosphorous) metals (copper, lead, zinc) hydrocarbon and bacteria from run-off waters from stormwater and industrial sites
 - i. scientifically proven and can be effectively used by governments at all levels,
 - ii. market penetration support through strategies such as demonstration projects, is vital to realising success in this product category.
11. Break down market barriers through Market Based Instruments (MBI) such as incentives, demonstration projects, procurement policies, direct sequestration carbon valuation and grant based adoption programs.
12. Ensure a synchronised approach to market development so that supply does not continue to outstrip demand.
13. Utilise and build on existing industry programs that have some existing recognition but have been retarded due to low resource allocation.

Attachment 1: Market Structure for Recycled Organic Products (Rochfort & Love, 2008)



Attachment 2 – Existing Market Demand Programs

Healthy Sustainable Gardens Program

Short Description

Healthy Sustainable Gardens (HSG) program is a market development and environmental awareness program that was formulated to help establish and develop end-use markets for recycled mulch and compost. The program operated previously states and has been responsible for the transformation of the supply outlets to stocking recycled organic products. Currently, in Victoria, the program is coordinated and managed by the Metropolitan Waste Management Group (MWMG) and the Centre for Organic & Resource Enterprises (CORE) and supported by industry stakeholders. This provides the gardening public easy access to the products by influencing outlets to stock the products as part of a mass marketing campaign through local media, council newsletters and the web.



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Healthy Parks, Ovals & Waterways Program

The Healthy Parks, Ovals & Waterways (HPO&W) program is targeted at the public sector and professional advisers (engineers, consultants and contractors). The Healthy Parks, Ovals and Waterways Program aims to assist the above by providing up to date information and examples of utilising products made from recycled materials, particularly recycled organics. Mulch, compost, organic top dressing, blend, organic garden soils, erosion control products, bio-remediation products and reactive filter media take part in these products.



Over the past few years there have been many new applications developed for these products that could be more cost effective, provide water efficiencies, conserve finite resources, meet EcoBuy requirements and provide councils with sustainable alternatives. Many of these applications are suitable for local government use such as: Parks & Gardens, Playing Fields, Erosion Control, Bio-Remediation products and Stormwater improvement.

The Healthy Parks, Ovals and Waterways Program commences with an information session for local government personnel involved procurement, design, engineering and open space. The information session will also include displays from quality accredited suppliers of relevant products.

During the information session participants will be provided with a form to register any upcoming projects they may be considering where the new application might be suitable. Five projects nominated will be selected to become demonstration sites that will be show cased and monitored for a six month period. Each site will have a case study developed so that the results can be show cased to other councils.



After the monitoring period a tour of all the sites will be conducted involving metropolitan councils followed by a wrap up session where each participant can discuss their project and the benefits they have witnessed. Councils that do not have their project show cased will still have the opportunity to work with suppliers should they proceed with their projects.

CORE launched this program in 2000 in NSW. It is currently running in conjunction with Metropolitan Waste Management Group in Victoria.

International Composting Awareness Week

Composting Awareness Week was established in Canada in 1995. In 2006, CORE initiated the event here in Australia.

International Composting Awareness Week (ICAW) represents a unique opportunity to promote composting and compost uses at all scales and to take advantage of the wide publicity generated by this event around the world. CORE is facilitating the event in collaboration with Compost Australia, the peak industry body for the organics processing and recycling industry in Australia. Together we are harnessing the support of the Australian and international communities to create a better environment for the enjoyment of all people, now and in the future.

WaterStars Program

The WaterStars Program targets the use of water saving and water treatment products containing recycled organics for the commercial and industrial sectors. The program is currently being operated in NSW with co-funding from the DECC and is engaging ten industry sectors.

The ten selected organisations include multi nationals (BOC Gases Ltd.), national outlets (Bunnings Hardware Stores), large landfill operators (SITA & WSN Environmental Solutions) and small to medium size businesses (Downes Wholesale Nursery). Following the implementation of demonstration installations with each participant, a proliferation program will be implemented across each industry sector that is represented in the program. Even in the early stages of the program calls are being fielded by other businesses in a number of sectors.

National Organic Week

National Organic Week (NOW) is 10 days of targeted media and locally-staged activities designed to increase awareness of the benefits of organic products and farming production systems and accelerate the uptake of these in the wider Australian community and environment.

For the second consecutive year, the Centre for Organic & Resource Enterprises (CORE) in collaboration with Biological Farmers of Australia (BFA) are hosting and promoting NOW to the Australian public. This event will be held between Friday October 16th and Sunday October 25th, 2009.

