Organic wastes (ahem, resources!) - the new 'rockstars' of sustainability

words Jonathon Hannon, chairperson, Compost NZ

Globally there is a transformation in thinking about the life cycle implications of food production and processing organic waste as resources. We are also re-thinking how we manage soil carbon and nutrients, seeking emerging renewable energy opportunities and empowering communities and business to drive environmental sustainability. Recent headlines provide an indicator of the future trends which will impact New Zealand. But are we ready?

A new study by the United Nations Environment Programme[1] found that over half of the food produced globally is lost, wasted or discarded as a result of inefficiency in the human-managed food chain. Almost one-third of all food purchased in the United Kingdom every year is not eaten.

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In June 2009 as a scientific contribution to the European Commission's Integrated Product Policy framework, the Joint Research Centre[2] reported that meat and dairy products contribute on average 24 percent to the environmental impact of total final consumption in the European Union. Food management by households (avoidance of food wastage) was one of three main improvement options identified.

The Love Food - Hate Waste[3] programme run by the UK Waste Resource Action Programme (WRAP) is a leading example of a 'whole of lifecycle' approach to reduce the carbon footprint of food production via collaboration with the waste minimisation sector, who engage with householders over waste minimisation and recycling strategies.

The recent report by Ernst and Young, 'The Potential for Renewable Gas in the UK,' found that "if every person and business in the UK sorted and directed their waste to anaerobic digestion and gasification plants throughout the country, up to half of the country's domestic gas heating could be generated from manure, sewage, food waste and wood waste".

In 2009 the Resource Recovery Forum reported that in the UK 'waste leads £30bn energy revolution'. The article predicted the development of an entirely new industry of high-tech metabolising plants and digesters emerging to take of the place of landfill gas extraction schemes.

"The great advantage of the new technologies is that instead of waiting for 40 years for this stuff to release its calorific value, we can get it in a week," noted Andy Street, head of SLR, Britain's largest waste-energy consultancy. "When security of energy supply has become such an issue, it is sensible to get what we can out of waste.

"Waste isn't waste. It's a resource."

In a recent briefing paper for the Copenhagen round of negotiations for the International Food Policy Research Institute (IFPRI)[4], Professor Rattan Lal, an eminent soil scientist (and advocate of composting and 'biochar' as key elements of biological farming) noted "soil carbon sequestration is a win–win strategy. It mitigates climate change by offsetting anthropogenic emissions; improves the environment, especially the quality of natural waters; enhances soil quality; improves agronomic productivity; and advances food security". His research indicates that the technical potential of carbon sequestration in world soils may be two to three billion mt per year for the next 50 years. Thus, the potential of carbon sequestration in soils and vegetation together is equivalent to a draw-down of about 50 parts per million of atmospheric CO2 by 2100.

Recently UK supermarket chain TESCO announced that it had achieved its goal of '100 percent Zero Waste' a year ahead of its 2010 target. For Tesco's 2,315 UK stores (as

1 'Environmental food crisis: A crisis of waste' www.ens-newswire.com/ens/feb2009/2009-02-17-01.asp

2 ftp://ftp.jrc.es/pub/EURdoc/JRC46650.pdf

3 www.lovefoodhatewaste.com/about_food_waste

4 www.ifpri.org/2020/focus/focus16.asp

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What do organics recycling trends mean for New Zealand?

well as distribution centres and offices), 'business as usual' now involves one hundred percent diversion of what was half a million tonnes per annum of waste to landfill. Other UK supermarket chains, ASDA and Sainsburys, have similar goals and are said to be are locked in a 'green arms race'.

Rather than being considered a peripheral and unavoidable cost of agri-business, food waste is now recognised as the concentrated embodiment of life cycle environmental cost. This brand of EU generated life cycle reasoning - alongside the superlative achievements of retailers who are 'walking their environmental talk' - will see the expectation for 'real sustainability' resonate back up the supply chain to New Zealand's primary producers/exporters. Are we ready?

Readily accessible urban organic resources, already tagged with increasingly high disposal charges, are now recognised as opportunities to generate renewable energy within the communities where it can be utilised. The emergence of new organic recycling technologies will transform the already complex planning investment and compliance frameworks facing territorial local authorities in preparing their new generation waste minimisation plans. International research and experience is showing that the end products of quality-assured organic recycling processes are high value nutrient and soil carbon supplements.

Compost NZ, the sector group representing organic recycling in New Zealand has been asking 'what do these trends mean for New Zealand?' And what role can our sector play in supporting New Zealand communities and more broadly our economy in enhancing our international competitiveness and environmentally sustainability?

Based upon both concern at the limited progress made in addressing the organic waste targets of the New Zealand Waste Strategy 2002 and an excitement about the challenges which lie ahead, Compost NZ is committed to developing a new and ultimately more effective way forward.

Advancing the compost industry

Compost NZ will be facilitating a consultative workshop on Friday 16 October as part of the WasteMINZ conference. This workshop will be critical in developing a cohesive national organic recycling industry development programme. Everybody is welcome! Come prepared to shape the future of organic *resource* management in New Zealand!

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