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## **ABA Position Paper on Compostable Packaging and Circular Economy**

The Australasian Bioplastics Association (ABA) is the peak Industry body for raw material suppliers, manufacturers, converters and distributors of bioplastic products and materials throughout Australia and New Zealand.

The ABA represents Members in the promotion of and advocacy for, Member's products and materials. The association works with government, organics recyclers (composters), industry groups, NGOs, brand owners and plastic converters to further the understanding and appropriate use of bioplastics.

Recent discussion has raised a question as to the value of compostable packaging and circular economy and whether compostable packaging brings value to these circular principles.

The ABA supports and is a signatory to the New Plastics Economy initiatives developed by the Ellen MacArthur Foundation. The initiative is widely supported by industry and governments in many jurisdictions in establishing and promoting Circular Economy principles. Certified compostable products contribute to a Circular Economy as part of the biological cycle.

Certified compostable bioplastics help facilitate the recycling of organic waste with microorganisms through composting and other microbial treatment, diverting many thousands of tonnes from landfill to the soil. The circular economy principles require plastics use to be reduced where possible and to be reused and ultimately recycled.

Certified compostable bioplastics can be recycled using microbial treatment such as composting or anaerobic digestion.

The ABA has developed a position paper with the Australian Organics Recycling Association (AORA), on the appropriate use of certified compostable products suitable for organics recycling, a copy is available from this link: <https://www.aora.org.au/sites/default/files/uploaded-content/website-content/180503-certified-compostable-plastics-position-joint-policy-statement.pdf>

Replacing a non-recyclable or non-recoverable single use plastic with a certified compostable alternative that is no more recoverable than the item it replaces is not the most appropriate use of resources. Consideration needs to be made on each potential substitution on merit and appropriate recovery availability, such as organics recycling infrastructure, including composting, anaerobic digestion and so forth.

Certified compostable packaging enables food waste diversion and in the future with all packaging to become recyclable, reusable or compostable by 2025, the demand for these certified compostable products will inevitably increase in appropriate applications, where recyclability or reusability is not possible for example, in food contact applications.

As regards the term “biodegradable” the ABA frowns on the use of this term without qualification as there is no Standard simply for “biodegradability”. Certification to a Standard such as AS 4736 or AS 5810 confirms that the inherent property of “biodegradability” and ultimate disintegration of the article exists.

Specifically to circularity, certified compostable packaging when processed in commercial or home composting evolves small amounts of CO<sub>2</sub> water and biomass (humus).

Certified compostable packaging contributes to the organics recycling process by bringing energy to the process and by leaving a percentage of biomass behind and of greater benefit certified compostable packaging plays a crucial role in source separation of food waste and reducing contamination of other non-compostable materials and contribute greatly in getting cleaner feedstock to the organics recycler or the home compost bin.

Heavily food soiled packaging is unlikely to be reused or recycled in that contaminated state and also most likely uneconomical. With composting the food waste is food for the microorganisms and diverts food waste from landfill where methane would be emitted over time.

Methane is only produced in anaerobic conditions. Commercial composting with forced aeration or frequent turning of windrows ensures that the process remains aerobic.

Certified compostable packaging can assist where appropriate in diverting this food waste from landfill helping to avoid negative environmental outcomes such as emissions of methane.

Food waste is responsible for 6% of global greenhouse gas emissions. Food packaging improves shelf life and therefore helps reduce the amount of food waste.

However, there is still a significant amount of unavoidable food waste that is still ending up in landfill and this is contributing to ~ 2% global greenhouse gas emissions.

Certified compostable packaging additionally helps to reduce CO<sub>2</sub> emissions of unavoidable food waste by diverting it from landfill to organic recycling.

The European Circular Bioeconomy Policy Initiative (ECBPI) published a report on “Linking the issues of soil health, climate change, waste management and the bioeconomy” in October 2021 and the key messages from this report are:

- Bio-waste (organic waste), soil and the bioeconomy are all connected.
- Improving the ways we manage bio-waste can simultaneously benefit soil productivity and reduce greenhouse gas emissions.
- Europe’s bioeconomy is central to the ways in which bio-waste and soil are managed.
- The bioeconomy provides significant benefits for Europe’s economy and environment and is an essential component of Europe’s aim of becoming carbon neutral by 2050.

In addition to describing the benefits of recycled organics, the ECBPI report states that composting an additional 50 million tonnes of bio-waste per annum could improve Europe's soils in the following ways:

- Producing 17 million tonnes of compost
- Adding 3 million tonnes of fresh organic matter to soil and Sequestering 1.8 million tonnes of CO<sub>2e</sub> which is equivalent to 374 wind turbines operating for a year.

The Australian Organics Recycling Association (AORA), the peak industry body for the organics recycling industry in Australia also published a report citing the benefits of compost and other recycled organics and quantified the following. In 2018-2019 the national organics recycling rate was 51.5% with food organics making up 7.2%.

- If the industry achieved an organics recycling rate of 90% this would
  - generate an additional AUD1.5 billion in sales to the current AUD 2.4 billion
  - Deliver an additional 3624 jobs to the current 4845 jobs
  - Eliminate an additional 2.8 million tonnes of greenhouse gas emissions to the current 3.8 million tonnes
  - Which is equivalent to 656,356 cars off the road on top of the current equivalent 876,663 cars and the planting of an additional 4.2 million trees on top of the current 5.7 million trees.

Degraded soils are in need of soil organic carbon and soil organic matter and organics recycling is a significant contributor to the economy and to improved environmental outcomes such as carbon sequestration and restoration of degraded soils by providing uncontaminated organic matter to the degraded agricultural soil.

Thus, recycling organic carbon that has been depleted in growing food and fibre back into the soil.

Assisting source separation and diversion of food waste from landfill to organics recycling is a critical matter for the world to address.

Various references are provided in the following page.

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## **References**

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