

*Discussion paper of European Bioplastics*

# CRITERIA FOR SWITCHING PRODUCTS TO CERTIFIED COMPOSTABLE PLASTICS

European Bioplastics welcomes the European Commission's initiative regarding a study on the 'Relevance of biodegradable and compostable plastics in a circular economy'. The corresponding stakeholder consultation and workshops aim to define criteria for when a plastic product should preferentially be made from certified compostable plastics.

This paper offers considerations on criteria as well as example products made from compostable plastics.

## **Managing bio-waste efficiently is key to establish a circular economy**

In order to ensure that compostable plastics can deliver the optimal contribution to realising a circular economy in Europe it is important to acknowledge that they are not a general solution but a specific technology for specific products that can foremost help to efficiently manage the biggest fraction of the municipal waste stream: bio-waste. Industrially compostable plastics can help to separately collect organic waste, divert larger volumes of bio-waste to organic recycling and to reduce conventional plastic contamination in the bio-bin ultimately reducing microplastics in compost. Consequently, corresponding criteria and target products need to be defined.

## **Criteria for when plastic products should be made of compostable plastics**

Plastic products should be produced from compostable plastics if the following criteria apply:

1. Contamination with food waste;
2. Likely to end up in the organic waste collection and unlikely to be effectively mechanically recycled in the plastic recycling stream;

3. Potential to reduce non-biodegradable plastics contamination of bio-waste collection;
4. No efficient re-design possible in order to move to reusable solutions.

These criteria clarify, that all applications need a differentiated consideration concerning their best recycling option. In the graphic (end of the paper) we illustrate with some exemplary applications their ability to be recycled but also their appearance in the composting stream.

The products covered by these criteria would in addition need to fulfil the criteria of EN 13432 for industrially compostable plastics (criteria regarding impact on bio-waste).

## **Examples for compostable plastic products**

The criteria given above lead to the following list of example products:

1. Bio-waste bag
2. Very thin plastic bags / fruit and vegetable bags
3. Tea bags
4. Coffee capsule, coffee pads, coffee filters
5. Fruit stickers
6. Cling-film (and/in combination with) stickers/labels for fresh produce<sup>2</sup>
7. Paper towels (wet-strength paper)
8. Catering items such as cups, trays, plates, cutlery<sup>3, 4</sup>
9. Multi-material flexible packaging for perishable food

<sup>1</sup> This would consequently also lead to a reduction of microplastics in organic fertiliser and would reduce the leakage of conventional plastics into soil across the EU.

<sup>2</sup> A cling film is often used for the placement of the fruit sticker and labels. Currently, it is either made of polyethylene or polyvinylchloride, which can contaminate the organic waste stream. In addition, PVC also harms incineration and is rarely recycled mechanically. Due to its very good properties in shelf-life extension of fresh food (similar to PVC), avoidance of organic waste contamination and no harm to other waste streams, we consider cling film to be a good example for recommendable replacement of conventional plastics with certified compostable alternatives.

<sup>3</sup> Only in closed-loop systems (provision of goods and waste management is guaranteed) if multi-use options are not feasible.

<sup>4</sup> Flexible, semi-rigid and rigid packaging: Most of the products for which the criteria are relevant are flexible packaging applications (additional flexible products not defined as packaging such as fruit stickers). In some cases of closed loop systems also compostable plastic catering items (semi-rigid) could increase waste management efficiency. The market for compostable rigid packaging is very limited to negligible, as rigid packaging will potentially develop into the "reuse, refund system etc." - direction.

For the identified products that fulfil the four criteria a step-by-step switch of non-degradable plastic products contaminating bio-waste to compostable plastic products is recommended while Member States build up separate collection of bio-waste and organic recycling facilities as demanded by the Waste Framework Directive by 2023.<sup>5</sup>

A step-by-step approach also will facilitate information of municipalities, waste managers and composters (bio-waste value chain) as well as the education of consumers across Europe so that they can gain experience on compostable plastics and the benefits.

**Further steps**

The products described are only exemplary. Interesting applications are, as mentioned above, those, which are typically littered into the organic recycling and for which a consumer behaviour change cannot be expected. We therefore

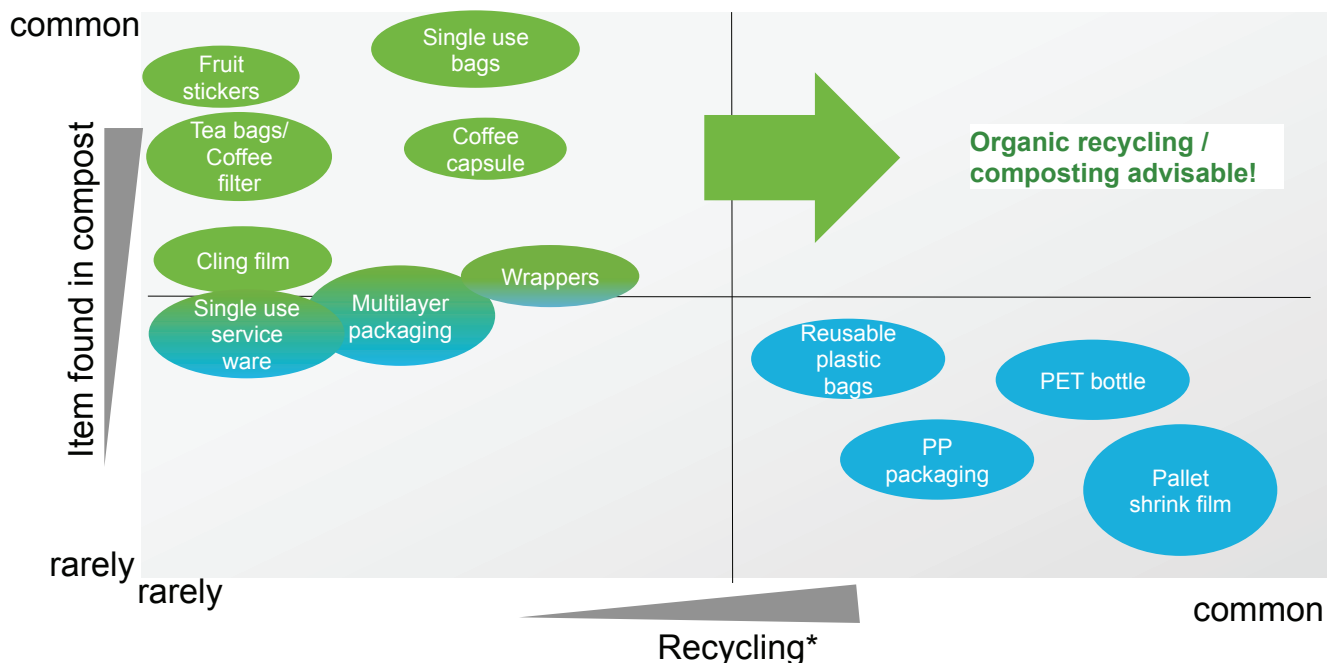
propose a study to identify the 10 most littered articles into the organic waste stream and create a detailed legislative proposal based on these findings.<sup>6</sup>

**In the short-term, however, EUBP recommends supporting the compostable plastic bio-waste bag EU wide as of now and to provide information on the technology and its specific role within a circular economy. Furthermore, until mid of 2020 fully compostable (plastic) alternatives for fruit labels, coffee capsules and tea bags should be promoted EU wide.**

**About European Bioplastics**

European Bioplastics is the association representing the interests of the bioplastics industry along the entire value chain in Europe. Its members produce, refine, and distribute bioplastics, i.e. plastics that are either bio-based, biodegradable, or both. More information is available on [www.european-bioplastics.org](http://www.european-bioplastics.org).

**Plastic items (examples only) & recycling options**



\*Defined in coherence with Waste Framework Directive and Packaging and Packaging Waste Directive as including organic, mechanic and chemical recycling.

<sup>5</sup> Article 22 of Directive 2018/851 amending Directive 2008/98/EC on waste requires Member States to ensure that, by 31 December 2023 bio-waste is either separated and recycled at source, or is collected separately and is not mixed with other types of waste. Member States may allow waste with similar biodegradability and compostability properties, which complies with relevant European standards or any equivalent national standards for packaging recoverable through composting and biodegradation, to be collected together with bio-waste.

<sup>6</sup> Known sources evaluating 'contamination levels' of compost with conventional, non-biodegradable plastics usually give a percentage of contamination contained in the final compost. The studies do not indicate which products are contaminating the bio-waste collection in the first place (beyond the obvious conventional plastic bags). Such a study should be undertaken in early 2020 and can serve as basis for a legislative proposal promoting compostable alternatives by end of 2020 (coinciding with a proposal to revise the Essential Requirements for packaging).