Fact bite #37

Plastic recycling

Food Packaging Forum

While plastic recycling can help to manage flows of used plastics, it faces challenges and limitations, especially considering the huge amounts of plastics produced annually. Key challenges to address include chemical contamination, incorrect sorting, and degradation of material properties during processing, especially in food packaging applications.

Food Packaging Forum

Mechanical recycling is not infinite. With the exception of PET, most types of plastic food packaging are currently only downcycled or not recycled at all, often due to the lack of waste collection and separation infrastructure, insufficient decontamination processes to ensure chemical safety, or unfavorable economics given the lower cost of virgin plastic.

Food Packaging Forum

Fact bite #37
Plastic recycling

There is too much plastic to be recycled. Of the seven billion tonnes of plastic waste generated globally by 2019, only 9% was recycled. 49% was instead landfilled, 22% was mismanaged, and 19% was incinerated. Scaling up recycling infrastructure enough to address the giant increases in plastic production forecasted in the coming decades is seen to be neither technically nor financially feasible.

Recycling can have its own impact. Studies have shown that, especially in developing countries, occupational health and safety are not always ensured within the plastic recycling industry. This is increasingly concerning due to the ever larger amounts of plastic sent to these countries for recycling.

Food Packaging Forum

Fact bite #37
Plastic recycling

While it sounds promising, advanced and chemical recycling has not been scalable. It has been shown that many of these novel recycling processes have high energy demands and generate their own sets of toxic waste that need to be specially managed. Their technical feasibility and economic viability has not been proven, and their environmental assessment is unclear. Excessive subsidies to scale it up is not being recommended.

Food Packaging Forum

Fact bite #37
Plastic recycling