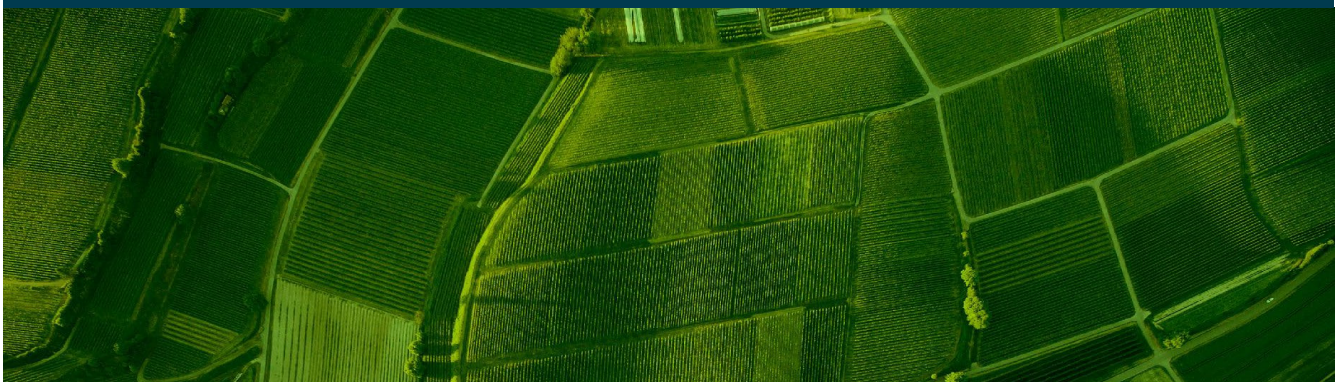
Practice Abstract No 37

Sustainable food packaging: Plastic alternatives



Description

The commitment to sustainability is increasingly evident in the food industry, paying particular attention to food packaging. In recent years, there has been a rapid increase in sustainable-packaging regulations, framed in the European Green Deal and in the Circular Economy action Plan, which is also accompanied by an increase in consumers' awareness to environmental issues.

On this path towards greater sustainability, the trends for the new food packaging materials appear to be:

- Use of 100% recycled and recyclable materials (compostable and biodegradable). Avoid the current single-use food packaging material.
- Reduction of materials: lighweighting, that is, reduction in weigh by optimizing/minimizing the thickness and density of materials, the volume of packaging, etc.
- Use of bio-based plastics that can be obtained from renewable and natural raw materials, mainly of vegetable origin such as corn or sugar cane (PLA, PBS, PHBV, PHA, etc).

However, although promising success in improving the barrier performance of bioplastics have been achieved, there are still some challenges towards practical packaging application and more efforts in improving their gas/water vapor barrier properties are needed.

- Use of paper or cardboard packaging, obtained from renewable origin (cellulose fibres). As well as in bioplastics, the performance of paper needs to be adjusted through surface treatments offering protection to gas and moisture permeability.

Author(s)

Eva Petri (CNTA)

Stakeholders

Food manufacturers, consumers, regulatory bodies

Country/Region

Europe

Keywords

Recyclable, Lightweighting, Bio-based

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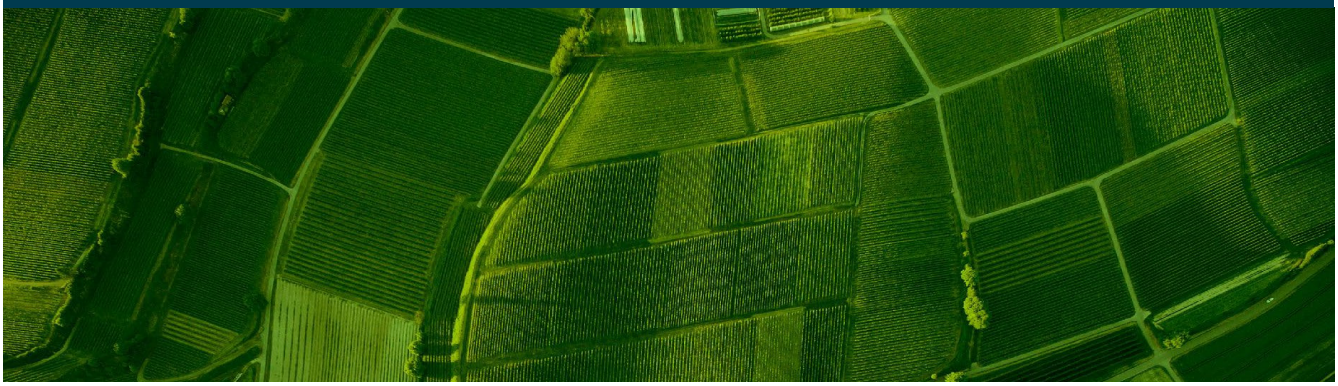

Description

Uno de los focos en los que la industria alimentaria está poniendo más atención es en el tema del envasado, concretamente en desarrollar packagings más sostenibles y circulares. En los últimos años se ha producido un rápido aumento de la normativa sobre envases sostenibles, enmarcada en el Pacto Verde Europeo y en el Plan de Acción de Economía Circular, que también va acompañada de un aumento de la concienciación de los consumidores sobre cuestiones medioambientales.

En este camino hacia una mayor sostenibilidad, las tendencias de los nuevos materiales de envasado alimentario parecen ser:

- Uso de materiales 100% reciclados y reciclables (compostables y biodegradables). Evitar el actual material de envasado de alimentos de un solo uso.
- Reducción de materiales: aligeramiento, es decir, reducción de peso al optimizar/minimizar el espesor y la densidad de los materiales, el volumen de los envases, etc.
- Uso de plásticos de base biológica que se pueden obtener a partir de materias primas renovables y naturales, principalmente de origen vegetal como el maíz o la caña de azúcar (PLA, PBS, PHBV, PHA, etc). Sin embargo, aunque se ha logrado resultados prometedores en la mejora del comportamiento barrera de los bioplásticos, todavía existen algunos desafíos para la aplicación práctica del envasado y se necesitan más esfuerzos para mejorar sus propiedades de barrera de gas/vapor de agua.
- Utilización de envases de papel o cartón, obtenidos de origen renovable (fibras de celulosa). Al igual que en los bioplásticos, los envases alimentarios de papel y/o carton deben de ser recubiertos o tratados superficialmente con objeto de ofrecer propiedades mejoradas a gases y humedad.

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CO-FRESH

About CO-FRESH

The CO-FRESH project aims to provide techniques, tools and insights on how to make agri-food value chains more environmentally sustainable, socio-economically balanced and economically competitive. The project pilots several agri-food value chain innovations to see how they, in combination, can improve environmental and socio-economic sustainability.

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