

# WPS Insights

November 2025



# WPS Insights

This month's WPS Insights brings together innovations reshaping packaging sustainability, from compostable trays made from potato waste to bio-based bags with recycled content to recyclable multilayer films. Together, they reflect an industry in transition driven by circular design and the practical need to align with global regulatory and climate goals.



# PeelPack's Potato Waste Trays Turn Food Waste into Packaging Value

Turning agri-waste into circular, compostable packaging

## Innovation Overview

- Italian-Swiss startup PeelPack AG developed compostable trays made from potato waste.
- It aims to reduce plastic use, close material cycles, and cut food and packaging waste.

## Material & Process

- Potato peels and waste are dried, crushed, and blended with natural binders.
- Formed via thermoforming into sturdy, compostable trays.
- Promotes circularity by using waste as a raw material.

## Applications & Market

- Pilot trials with **Tobi SeeObst** and cherry tomato producers in Switzerland.
- Trays available in 250g and 500g formats.
- Long-term target: major European retailers seeking plastic-free options.

## Regulatory & Market Drivers

- Aligns with **EU Packaging Regulation (PPWR)** effective by 2030.
- Reduces emissions, microplastics, and dependency on imported bioplastics.



## Lessons and Actionables

Potato-waste-based trays offer a practical, scalable solution for replacing single-use plastics, demonstrating how waste can converge to drive real circular impact.



# TotalEnergies Corbion Adds Recycled Content to Luminy PLA Bags

Extending circular design into packaging itself

## Overview

- TotalEnergies Corbion redesigned **Luminy PLA** (sugarcane-based bioplastic) bags with **30% post-industrial recycled (PIR) content** in the outer layer.
- Expands sustainability focus beyond the bioplastic product to its packaging.

## Environmental & Design Impact

- Reuses high-quality manufacturing scraps, reducing virgin material and emissions.
- Maintains the same barrier and protection levels while improving circularity.
- Strengthens the company's low-carbon, resource-efficient footprint.

## Strategic Alignment

- Reinforces TotalEnergies Corbion's broader sustainability roadmap, integrating circular design into bio-based production, logistics, and packaging systems.
- Expanding Luminy PLA distribution into **UAE** and **Saudi Arabia** to enhance market reach.



## Lessons and Actionables

Incorporating bio-based packaging demonstrates mature circular design thinking, turning internal waste streams into resources while reinforcing measurable environmental credibility.



## MSU Researchers Create Easier-to-Recycle Multilayer Plastics

New polyester-based films combine strength, barrier protection, and recyclability

### Overview

**Michigan State University's School of Packaging and College of Engineering with Pacific Northwest National Laboratory.**

**Funded by a \$1.7M U.S. Department of Energy grant.**

## Design and Composition

- Uses **80–100% polyester** layers for recycling compatibility.
- Configurations: PET/PGA-PBAT/PBAT and PET/EVOH/PET/PBS structures.
- Achieves oxygen permeability of **0.07 cc·mm/m<sup>2</sup>·24h** and water vapor permeability of **0.08 g·mm/m<sup>2</sup>·24h**.

## Recycling Pathways

- **Mechanical Recycling**  
Recycled film showed 11% higher tensile modulus and 105% greater impact strength than rPET.
- **Chemical Recycling**  
Methanolysis recovered ~99% pure monomers with yields of 63–71%, enabling food-grade reuse.

## Economic and Environmental Outlook

- EVOH-based films cost ~\$0.32/m<sup>2</sup>; PGA-based ~\$0.66/m<sup>2</sup> with biodegradability.
- Comparable to non-recyclable films but with lower environmental footprint.

## Lessons and Actionables

Designing multilayer films for recyclability delivers real circularity without sacrificing performance, a model for industry-academic collaboration.



# For inquiries & market intelligence:

[info@webpackagingsolutions.com](mailto:info@webpackagingsolutions.com)



11200 Westheimer Rd #505,  
Houston, TX 77042, United States



+1 832-341-1222



[info@webpackagingsolutions.com](mailto:info@webpackagingsolutions.com)