



# From Transforming Crop Resilience to Food Waste: Key Sustainability Innovation Trends for Category Directors

Tightening regulations. Shifting consumer expectations. Climate-related disruption. Category Directors face mounting pressure to make their food and beverage operations more sustainable. But a wave of new technologies has the potential to transform how sustainability happens, from farming to manufacturing to the shopfloor.

## 1. Mushroom-based packaging instead of plastic?

New European regulations are forcing the food and beverage sector to prioritise sustainable packaging. This includes the upcoming Packaging and Packaging Waste Regulation, which will require that all packaging is recyclable by 2030.



In response, industry brands are finding ways to innovate. For instance, a world-leading wines and spirits producer is now producing recyclable paper-based drinks bottles. Other brands are using biodegradable and compostable packaging, such as seaweed-based films and mushroom packaging.

Clearly, Category Directors need to carefully vet supplier packaging to meet tightening regulations. But they can also accelerate progress by applying lessons from industry peers, collaborating with industry innovators, or even striking up partnerships with competitors.

## 2. AI analysis comes to the shopfloor

Over 58 million tonnes of food waste in the EU are generated each year.<sup>1</sup> It's a huge problem that AI can help tackle. To reduce overordering and waste on perishable goods, a major German grocery chain is using AI to automate both demand forecasting and dynamic pricing. When perishable items near their shelf life, the price drops to incentivise purchases.



Elsewhere, retailers are using AI to analyse stock levels, product quality, and anticipated demand across their stores. In turn, they can use these insights to inform more sustainable sourcing strategies and minimise unnecessary waste.

## 3. Genomics and precision farming could be the future

Cutting-edge technologies are ushering in a new era of sustainable production. For

instance, Genomics is being used to develop heat- or disease-resilient crops – a vital intervention as climate change increasingly impacts traditional, less hardy varieties.

New precision-breeding techniques are also being trialled to help reduce the carbon emissions of livestock. This process involves identifying and breeding animals that naturally produce less methane. However, consumer receptivity towards precision breeding is mixed, with more UK consumers viewing it as unacceptable (42%) than acceptable (26%).<sup>2</sup>

In such a complex space, Category Directors can get ahead by tracking the latest scientific developments, working with specialist product developers where possible, and monitoring consumer attitudes towards potentially divisive food production techniques.



## Keep Pace With Sustainable Innovation Trends

From plant-based packaging to AI demand forecasting, innovation in the sustainability space is moving fast. And that means forward-thinking Category Directors have an array of options to make progress on their ESG goals.

At Bord Bia, we can support your sustainable innovation efforts by helping you partner with Origin Green-verified members and sharing key takeaways from global insights projects that we commission and subscribe to. To find out more, including the sustainability innovations happening in the Irish supply base, get in touch today.

[Contact us](#)

