# AI tool cuts food waste by 87% in Nestlé trial, promising major UK industry shift



The trial of an innovative artificial intelligence tool across several UK food companies, including Nestlé, is set to transform the handling of edible food waste. The AI system, developed by Zest, has already demonstrated remarkable results, achieving an 87% reduction in food waste at one of Nestlé’s factories during its initial two-week trial. This significant decrease indicates the potential of AI to dramatically reshape waste management practices in the food industry.

According to the announcement from Nestlé, the pilot initiative could facilitate the redistribution of up to 700 tonnes of surplus food, equivalent to roughly 1.5 million meals. Additionally, this project is expected to prevent approximately 1,400 tonnes of CO2 emissions, leading to an estimated £14 million in cost savings across operations. The AI tool primarily targets edible food that is deemed unprofitable for sale, such as damaged products or those with short shelf lives—often referred to as "broken" items, including imperfect chocolate bars.

The opportunity for such technological innovations comes against the backdrop of alarming statistics: the UK wastes around 4.6 million tonnes of edible food each year, amounting to over 10 billion meals. This waste not only represents a significant loss of resources but also contributes to environmental degradation through unnecessary carbon emissions. Simon Millard, director of food at FareShare, highlighted that such technologies "would make a huge difference" in their efforts to redistribute food to a network of over 8,000 charities and community groups across the country.

The current pilot has gained further momentum through funding from Innovate UK’s BridgeAI scheme, which has allocated a match-funded grant of £1.9 million for AI projects. Esra Kasapoglu, director of AI and data economy at the agency, emphasised that the project could revolutionise food sourcing and distribution in the UK by enhancing sustainability while also lowering operational costs.

As the initiative progresses, there is potential for the Zest software to be rolled out across the broader food supply chain by March next year, enabling a subscription-based model that could further expand its impact. This aligns with a growing trend in the food industry, where companies increasingly seek AI-driven solutions to streamline operations and reduce waste. For instance, Walmart has successfully implemented AI in various facets of its operations, from demand forecasting to enhancing customer service, exemplifying the broader shift towards utilising technology in the struggle against food waste.

Furthermore, Nestlé is not only focused on cutting down food waste through AI initiatives but is also exploring other sustainable practices through new pilot projects, such as producing low-carbon fertiliser from cocoa shells. This trial at Nestlé’s York site aims to evaluate the potential benefits of using food byproducts in agriculture, thereby actively contributing to broader goals of reducing greenhouse gas emissions and supporting regenerative agricultural methods.

The intersection of AI technology and sustainability illustrated by these initiatives signifies a hopeful step toward addressing the persistent issue of food waste. By fostering intelligent systems that not only streamline operations but also encourage responsible food management, the food industry may significantly contribute to realistic environmental goals in the near future.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://www.theguardian.com/environment/2025/may/27/food-companies-edible-waste-charities-ai-tool-trial> - Please view link - unable to able to access data
2. <https://www.theguardian.com/environment/2025/may/27/food-companies-edible-waste-charities-ai-tool-trial> - An AI tool trialled by UK companies, including Nestlé, aims to redistribute millions of meals worth of wasted food. The tool has already achieved an 87% reduction in edible food waste at a Nestlé factory during its initial two-week trial. The pilot scheme could save up to 700 tonnes of surplus food, equivalent to 1.5 million meals, and prevent 1,400 tonnes of CO2 emissions, potentially saving £14 million in running costs. The technology identifies edible waste that is not profitable for manufacturers to sell, such as broken products or those nearing expiry. Developed by Zest, the software may expand across the food supply chain by March next year. A second pilot with Nestlé has been launched, funded by Innovate UK's £1.9 million BridgeAI grant, aiming to transform food sourcing and distribution in the UK by reducing waste, carbon emissions, and costs.
3. <https://www.lbbonline.com/news/hellmanns-uses-ai-to-mark-food-waste-action-week> - Hellmann's, in collaboration with Ogilvy UK and Google Cloud, launched the 'Meal Reveal' AI tool during Food Waste Action Week. This tool allows users to scan their fridge contents and receive recipe suggestions based on available ingredients, addressing the issue of 'fridge blindness' where consumers overlook existing food items. By utilising generative AI capabilities in Google Cloud's Vertex platform, 'Meal Reveal' aims to reduce household food waste by helping consumers make meals from what they already have, thereby promoting sustainability and reducing food waste.
4. <https://www.supplychaindigital.com/technology/how-ai-technology-can-tackle-the-food-waste-affair> - AI technologies are increasingly being adopted by food companies to tackle food waste. Walmart, for instance, employs AI for demand forecasting, customer service chatbots, and in-store associate tools like 'Ask Sam' to enhance operational efficiency. Nestlé has developed NesGPT, an AI tool that streamlines decision-making across departments, reducing product ideation time from six months to six weeks. These AI-driven solutions aim to optimise operations, reduce waste, and promote sustainability within the food industry.
5. <https://www.esgtoday.com/nestle-pilots-project-to-produce-low-carbon-fertilizer-from-food-waste-streams/> - Nestlé has initiated a pilot project in the UK to produce low-carbon fertiliser from cocoa shells, a byproduct of its confectionery operations. The two-year trial, conducted at a site in York, aims to assess the fertiliser's impact on crop production, soil health, and greenhouse gas emissions. If successful, the project could produce up to 7,000 tonnes of low-carbon fertiliser annually, representing about 25% of Nestlé UK's total fertiliser use for wheat. This initiative aligns with Nestlé's commitment to achieving net-zero greenhouse gas emissions by 2050 and supports regenerative agriculture practices.
6. <https://www.sustainabilitymag.com/articles/nestle-cargill-use-cocoa-shell-in-new-lowcarbon-fertiliser> - Nestlé UK & Ireland and Cargill have partnered to develop a low-carbon fertiliser using cocoa shells from Nestlé's confectionery site in York. The two-year trial aims to evaluate the fertiliser's performance on crop production, soil health, and greenhouse gas emissions reduction. If successful, up to 7,000 tonnes of low-carbon fertiliser could be produced annually, equating to approximately 25% of Nestlé UK's total fertiliser use for wheat. This project is a step towards a net-zero future, optimising natural resources and supporting regenerative agriculture.
7. <https://www.businessinsider.com/hotels-offices-kitchens-winnow-ai-tool-reduce-food-waste-costs-2024-7> - Hotels and offices are adopting AI-powered tools like Winnow to monitor and reduce food waste. Winnow's system uses a motion-sensor camera and scales to identify and record discarded food items, providing real-time data to chefs and managers. This information helps in adjusting portion sizes and menu offerings to minimise waste. For example, Hilton has used Winnow to reduce food waste at its breakfast buffets by serving smaller portions of items like croissants and fruit. The technology aims to cut costs and improve sustainability by reducing food waste in the hospitality industry.