# Baking industry embraces AI and sustainability at IBA 2025 with innovative cocoa alternatives



If ever there was a testament to the booming state of the baking industry, the IBA event in Düsseldorf offered an emphatic showcase, drawing in more than 49,000 visitors from 149 countries. This impressive turnout underlines the immense interest in the latest innovations and opportunities burgeoning within the baking sector. Across the sprawling seven halls of the exhibition, attendees witnessed a remarkable array of equipment ranging from full-scale bread plants to giant mixers, all aimed at improving efficiency. The apparent focus on automation reflects ongoing challenges in the industry, particularly due to rising labour costs and the difficulties in recruitment.

Sustainability emerged as another pivotal theme throughout IBA. Companies are increasingly spotlighting solutions aimed at reducing waste, extending product shelf life, and enhancing energy efficiency. As consumers grow more environmentally conscious, brands are keen to align their practices with these values, pushing for greener alternatives in their product lines.

Among the exciting innovations were numerous cocoa replacements, a trend gaining momentum not merely in response to fluctuating cocoa prices but as part of a broader sustainability initiative. For instance, ChoViva presented a ‘chocolatey taste experience’ crafted from sunflower seeds, sustainable plant-based fats, and other ingredients. Notably, this product is positioned as a sustainable alternative rather than a mere substitute, promising significant reductions in water usage and carbon emissions. Such innovations reflect a growing industry trend that embraces sustainability as a core value rather than an afterthought.

In its pursuit of sustainability, Agrain showcased a cocoa replacement derived from brewers' spent grain, suggesting a blend of malt and cocoa husks to supplement rather than fully replace cocoa in pastries. This innovation illustrates a shift towards utilising by-products that might otherwise go to waste, integrating a circular economy model into baking.

The role of artificial intelligence in transforming processes was another highlight of IBA. Advanced technologies are beginning to permeate the baking industry, underscoring a wider trend across various sectors. Debag's introduction of an assistance system has the potential to markedly reduce user error and enhance product consistency across multiple sites. With a staggering 50% of baking processes affected by such errors, the integration of AI can be revolutionary; systems now in play can automatically adjust oven settings based on the diagnostics of the baked goods being prepared.

Further reinforcing the AI trend, Aiperia presented an innovative in-store bakery cabinet capable of analysing stock dynamics in real-time. By aligning inventory management with sales data, the system aims to optimise production schedules, thus maximizing sales opportunities and minimizing waste. The increasing integration of technology to enhance operational efficiency is indicative of a sector keen to evolve alongside changing consumer demands.

While 94% of consumers express concerns over the cost of living, insights shared by Eric Bell, president of the American Bakers Association, reveal a nuanced picture of consumer spending behaviours. The landscape shows a marked fragmentation in spending — while some consumers pull back on dining out, others are willing to indulge in premium bakery items. This is particularly resonant in the UK, where similar trends are observed.

Dawn Foods' global market research highlights that nearly 80% of consumers purchase baked goods for social gatherings, cultivating nostalgic connections through flavours reminiscent of their childhood. As part of the response to these shifting consumer behaviours, bakers have the opportunity to blend classic recipes with innovative twists, an approach that can elevate ordinary baked goods into affordable luxuries.

Furthermore, amidst forthcoming UK HFSS regulations, the focus on health in baked goods remained significant at IBA. Innovations such as SugarCut — a sugar replacement claimed to maintain the quality and characteristics of traditional sugar while ushering in lower sugar content — illustrate the industry's commitment to reformulating recipes to meet health-conscious demands discreetly. Suppliers aim for subtle modification rather than a complete overhaul of consumer perceptions, allowing for healthier options that do not compromise on taste.

As the baking industry navigates these dynamic trends, encompassing sustainability, innovative technologies, and evolving consumer preferences, it is clear that its future looks vibrant and full of potential. The ongoing transformations seen at IBA signal a responsive sector, ready to embrace change and cater to the needs of both bakers and consumers alike.

## Reference Map:

* Paragraph 1 – [[1]](https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article), [[5]](https://www.bakersjournal.com/iba-trade-fair-to-dive-deep-into-digital-products-and-systems-for-bakeries/)
* Paragraph 2 – [[1]](https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article), [[6]](https://www.sogoodmagazine.com/pastry-blog/pastry-events/from-toppings-natural-colorings-healthy-snacks-latest-baking-trends-iba-2025/)
* Paragraph 3 – [[2]](https://bakerpedia.com/the-top-bakery-trends-for-2025/), [[5]](https://www.bakersjournal.com/iba-trade-fair-to-dive-deep-into-digital-products-and-systems-for-bakeries/)
* Paragraph 4 – [[3]](https://www.confectionerynews.com/Article/2025/02/12/top-confectionery-trends-2025-ai-personalised-nutrition-sustainability/), [[6]](https://www.sogoodmagazine.com/pastry-blog/pastry-events/from-toppings-natural-colorings-healthy-snacks-latest-baking-trends-iba-2025/)
* Paragraph 5 – [[4]](https://www.foodnavigator.com/Article/2024/07/08/How-AI-is-transforming-the-confectionery-sector/), [[5]](https://www.bakersjournal.com/iba-trade-fair-to-dive-deep-into-digital-products-and-systems-for-bakeries/)
* Paragraph 6 – [[1]](https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article), [[2]](https://bakerpedia.com/the-top-bakery-trends-for-2025/)
* Paragraph 7 – [[1]](https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article), [[5]](https://www.bakersjournal.com/iba-trade-fair-to-dive-deep-into-digital-products-and-systems-for-bakeries/)
* Paragraph 8 – [[1]](https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article), [[6]](https://www.sogoodmagazine.com/pastry-blog/pastry-events/from-toppings-natural-colorings-healthy-snacks-latest-baking-trends-iba-2025/)

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## Bibliography

1. <https://bakeryinfo.co.uk/events/trends-from-iba-2025-smart-tech-and-innovative-ingredients-are-changing-bakery/704872.article> - Please view link - unable to able to access data
2. <https://bakerpedia.com/the-top-bakery-trends-for-2025/> - This article discusses the dynamic bakery industry trends for 2025, emphasizing health-conscious choices, sustainability, and flavor innovations. It highlights the rise of hybrid pastries, low and no-waste practices, the resurgence of heritage grains, artisanal aesthetics, miniature desserts, global flavor fusions, plant-based innovations, AI-driven personalization, and the use of hyper-local and sustainable ingredients. The piece encourages bakers to embrace these trends to meet evolving consumer preferences and market demands.
3. <https://www.confectionerynews.com/Article/2025/02/12/top-confectionery-trends-2025-ai-personalised-nutrition-sustainability/> - This article outlines the top technology trends shaping the confectionery sector in 2025, focusing on personalized nutrition, advancements in AI, and sustainability efforts. It discusses how companies like Mondelēz International are leveraging AI for personalized nutrition and how AI is being used to improve consumer experiences, product quality, and sustainability in the confectionery industry. The piece also highlights the importance of traceability and transparency in sourcing ingredients to meet new regulatory requirements.
4. <https://www.foodnavigator.com/Article/2024/07/08/How-AI-is-transforming-the-confectionery-sector/> - This article explores the transformative role of AI in the confectionery sector, highlighting its applications in taste innovation, climate change mitigation, and supply chain traceability. It discusses how AI is used to predict flavor trends, support regenerative agricultural practices, and enhance transparency in the cocoa supply chain. The piece also covers collaborations between confectionery brands and tech companies to develop new products and improve sustainability efforts.
5. <https://www.bakersjournal.com/iba-trade-fair-to-dive-deep-into-digital-products-and-systems-for-bakeries/> - This article previews the IBA trade fair's focus on digital products and systems for bakeries, emphasizing the role of artificial intelligence and modern software in improving production efficiency and customer service. It highlights the iba.DIGITALISATION AREA, where visitors can experience 'the bakery of the future,' showcasing digital solutions that optimize processes from recipe development to customer interaction. The piece also mentions exhibitors like AHA 360° and Shop-IQ presenting innovative bakery concepts.
6. <https://www.sogoodmagazine.com/pastry-blog/pastry-events/from-toppings-natural-colorings-healthy-snacks-latest-baking-trends-iba-2025/> - This article discusses the latest baking trends showcased at IBA 2025, focusing on natural colorings, healthy snacks, and innovative ingredients. It highlights the use of fermented sourdoughs, natural colorings in toppings, and the availability of healthy snack alternatives, including gluten-free and vegan options. The piece also mentions the iba.StartUp Area, iba.Digitalization Area, and Iba.Confectionery Tec Area, emphasizing the fair's commitment to innovation and entrepreneurship in the baking industry.
7. <https://bakingbiscuit.com/smart-technology-solutions-in-the-spotlight-at-iba-25/> - This article highlights the emphasis on digitalization and artificial intelligence at IBA 2025, focusing on smart technology solutions for bakeries. It discusses the iba.DIGITALISATION AREA, where visitors can experience 'the bakery of the future,' featuring digital systems that enhance efficiency, optimize processes, and improve customer and employee interactions. The piece also mentions exhibitors like AHA 360° and Shop-IQ presenting innovative bakery concepts and digital solutions.