

Beyond the plate: why food processing matters

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Editorial

Food processing is often unfairly cast as the villain of the modern diet, but it is the backbone of global food security. Without the ability to transform raw harvests into stable products, our modern civilization would quite literally run out of time and resources.

The primary triumph of food processing is waste reduction. Roughly one-third of all food produced globally is lost or wasted; processing techniques like canning, freezing, and drying act as a “pause button” on decay. This allows a seasonal surplus in one part of the world to feed a hungry population in another, months later. It stabilizes prices and ensures that nutrition isn’t dictated solely by the calendar.

Furthermore, processing is a critical line of defence for public health. Techniques such as pasteurization and high-pressure processing eliminate deadly pathogens like *E. coli* and *Salmonella*. Beyond safety, it allows for fortification—adding essential vitamins and minerals to staples like flour or milk—which has historically eradicated nutritional deficiencies on a mass scale. Responsible food processing is the bridge between a volatile farm and a reliable table. It is the silent engine that makes a healthy, consistent diet accessible to a growing planet.

In 2026, Halal food processing is no longer just about ritual; it is a global benchmark for safety, ethics, and transparency. As the industry scales to meet the needs of nearly two billion consumers, the focus has shifted from simple compliance to total supply chain integrity. The challenge today lies in complexity. With globalized sourcing, a single product can contain ingredients from five different continents. Traditional manual audits are no longer enough to guarantee “Halal-to-fork” authenticity. To maintain consumer trust, the industry must fully embrace blockchain and AI-driven tracking. These technologies provide an immutable digital audit trail, ensuring that every additive

and processing aid meets strict Shariah standards without human error.

Furthermore, Halal is increasingly synonymous with Tayyib (wholesomeness). A process cannot truly be Halal if it ignores animal welfare or environmental sustainability. Modern processing plants must lead the way in reducing waste and ensuring ethical treatment, proving that religious values and industrial efficiency are not mutually exclusive.

By merging ancient principles with cutting-edge technology, the Halal sector isn’t just feeding a population—it is setting a new gold standard for the global food industry.

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Conflicts of interest

The author declare there is no conflicts of interests.