SPOTLIGHT ON UPCYCLED FOOD

The transformative potential of upcycled food in Asia's sustainability journey

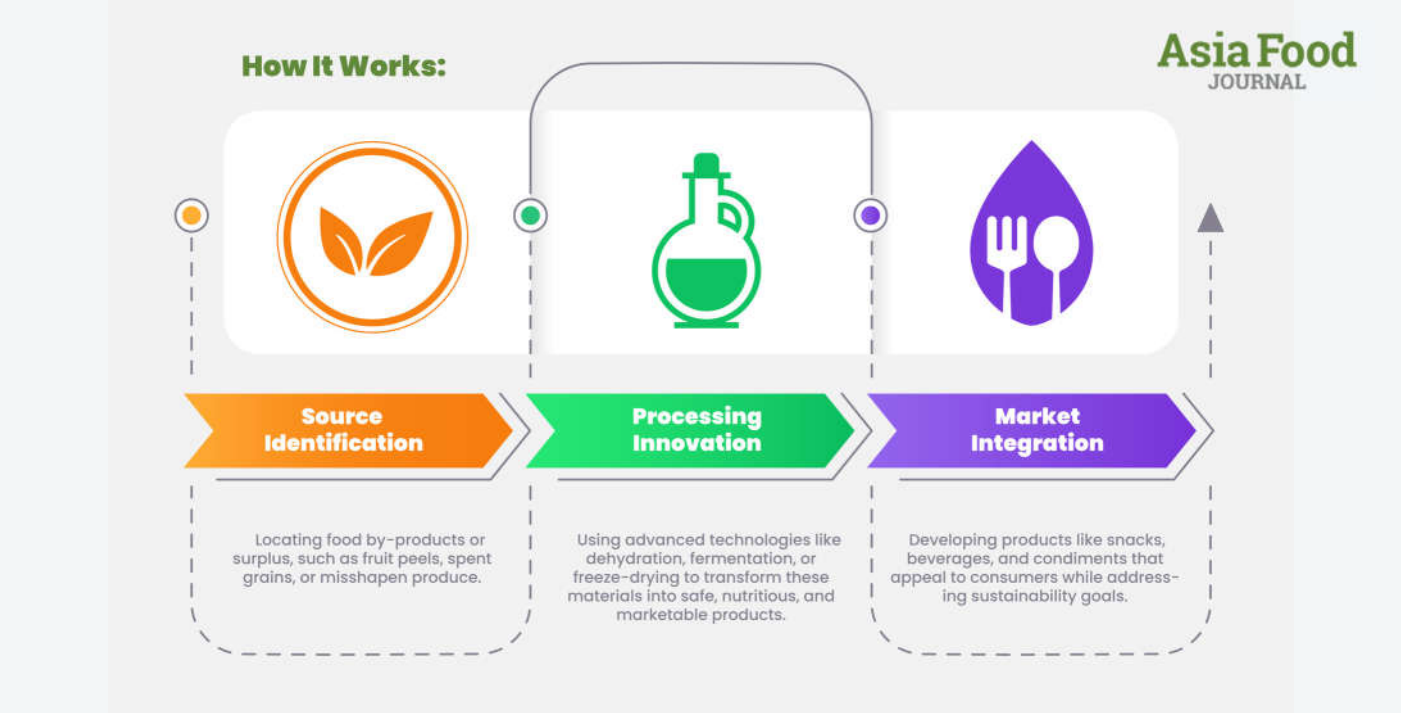
Asia, home to more than half the world's population, faces unique challenges in balancing its growing food demand with sustainability goals. Food waste—a staggering 931 million tons annually, according to UNEP—is a critical issue across the region, burdening ecosystems, economies, and societies. Amid this crisis, the upcycled food movement is emerging as a powerful solution, offering a pathway to reducing waste, conserving resources, and fostering innovation.

The global upcycled food industry is on a robust growth trajectory. Valued at $54.5 billion in 2022, it is projected to reach $94.6 billion by 2032, growing at a compound annual growth rate (CAGR) of 5.7 percent. This growth reflects the increasing demand for sustainable food solutions, especially in regions like Asia, where innovative approaches to food security and waste management are crucial.

What is upcycled food? A sustainable innovation explained

Upcycled food is more than a buzzword. For those whose work revolves around food and sustainability, it's a solution at the intersection of environmental stewardship, innovation, and resource efficiency. It involves transforming food by-products, surplus, or imperfect ingredients that would otherwise go to waste into new, high-value products.

Unlike recycling, which often breaks materials down to their base components, upcycling preserves the integrity and value of the original ingredients, elevating their value in the process. This practice aligns with circular economy principles by keeping resources in use for as long as possible and reducing the environmental footprint of food production.



Upcycled foods in Asia: A fusion of tradition and innovation

Asia's cultural heritage of minimizing waste aligns seamlessly with the modern upcycled food movement. Combining traditional practices with technological advancements, the region offers innovative solutions to the food waste crisis.

Soy-based innovations

In Japan and China, soybean pulp (okara)—a by-product of soy milk and tofu production—is repurposed into cookies, crackers, and even plant-based protein powders. These products retain the high fiber and protein content of the original soybeans while reducing waste from soy processing.

Fruit peel transformations

In Indonesia and the Philippines, fruit peel waste is being converted into healthy beverages and bio-packaging materials. Mango peels, for instance, are rich in antioxidants and find use in nutrient-dense beverages.

Spent grain applications

Breweries in South Korea and Japan are repurposing spent grains from beer production into granola bars, crackers, and baking flour. These products not only minimize industrial food waste but also introduce unique flavors to the market.

Rice husk utilization

Rice husks, a by-product of Asia's rice mills, are being used to create gluten-free noodles and dietary fiber supplements, reducing agricultural waste and offering healthier food options.

The consumer perspective: Upcycled foods gaining acceptance

Consumer interest in upcycled foods is surging, driven by growing environmental awareness. According to reports, 99 percent of consumers recognize food waste as a significant issue, with 71 percent linking it to the climate crisis. Furthermore, 97 percent of shoppers view supermarkets that stock upcycled foods favorably, while 63 percent express a preference for dining at restaurants that prioritize waste reduction.

Benefits of upcycled food: Beyond waste reduction

Upcycled food offers multidimensional benefits, addressing some of Asia's most pressing challenges:

Reducing environmental impact

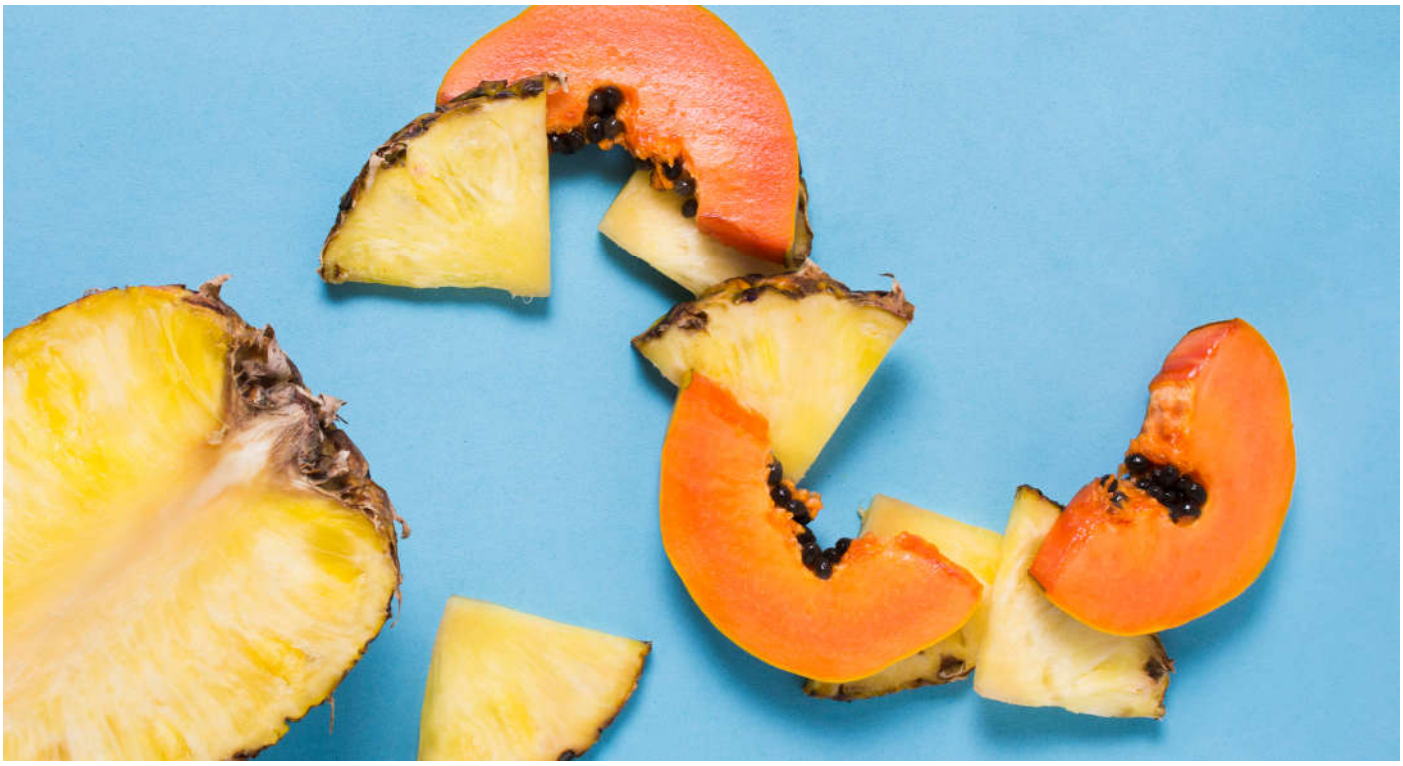
Upcycled food production diverts waste from landfills, reducing greenhouse gas emissions. By utilizing by-products like fruit peels or spent grains, it conserves resources such as water and energy, minimizing the environmental footprint of food production.

Supporting local economies

Farmers and food producers benefit by generating revenue from surplus or imperfect produce. For instance, small-scale farmers in India sell rejected fruits to manufacturers, who then create upcycled products such as juices and snacks.

Driving innovation

Upcycled food is spurring innovation across the food industry. From new culinary applications to sustainable packaging solutions, the movement is fostering creativity and sustainability.



Scaling upcycled food in Asia

Despite its potential, upcycled food faces several challenges in Asia:

- **Limited awareness:** Consumer education is crucial for widespread adoption.
- **Regulatory barriers:** Uniform standards are needed across countries to facilitate growth.
- **Technological gaps:** Many small enterprises lack access to advanced processing technologies.

However, the opportunities outweigh the obstacles. Governments, businesses, and NGOs are increasingly supporting initiatives to promote upcycled food, recognizing its role in achieving sustainability goals.

Towards a sustainable future

The upcycled food movement is transforming Asia's approach to sustainability, food security, and economic resilience. As the industry continues to grow—driven by consumer demand, technological advancements, and supportive policies—it holds the promise of a more sustainable, equitable, and innovative food system.

By embracing upcycled foods, Asia is not only tackling its food waste crisis but also setting a global example of how innovation can turn challenges into opportunities for a better future.

References:

- United Nations Environment Programme (UNEP)
- Global Market Insights
- National Center for Biotechnology Information (NCBI)
- Food and Agriculture Organization (FAO)
- Mattson 2021 Study on Food Waste