

PROMOTING SUSTAINABLE PROTEINS AND REDUCING FOOD WASTE

EVIDENCE FROM U.S. CONSUMER STUDIES

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BACKGROUND

The U.S. food system faces a dual challenge: food waste and excessive meat consumption. **Each year, more than 30% of U.S. food production goes unsold or uneaten**, releasing greenhouse gases, wasting land and water, and causing billions in economic losses. At the same time, meat-heavy diets drive some of the highest emissions and resource use in the global food system.

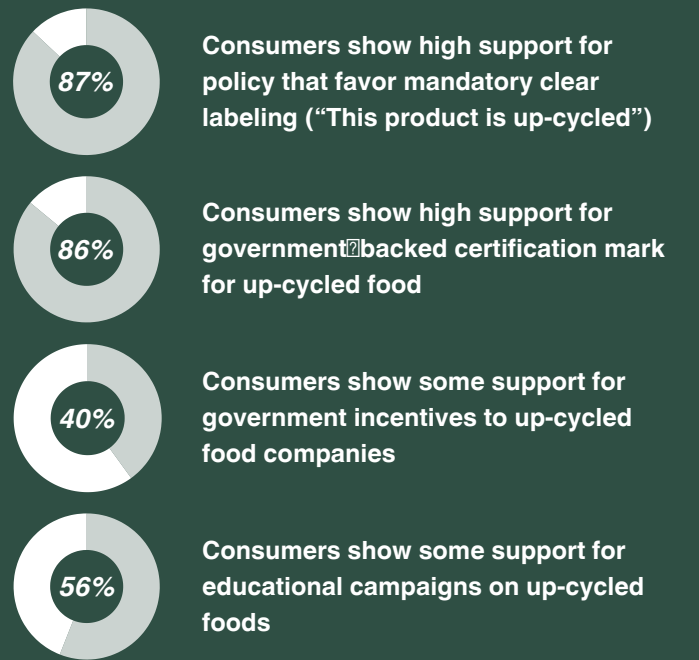
Upcycled foods, created from surplus ingredients, offer a powerful solution to food waste.

Alternative proteins such as plant-based, mycoprotein, fermentation-derived options and upcycled foods provide lower-carbon substitutes for conventional meat. Understanding how consumers respond to new products, policies, and communication strategies is essential.

STUDY 1: UPCYCLED FOOD

National survey (n = 701) measuring support for regulatory measures for upcycled foods

Assess U.S. consumer support for policies that encourage upcycled foods (products made from food byproducts that would otherwise go to waste).



INSIGHTS

Market Opportunities	snacks and baked goods are more appealing than novel items (e.g., plant-based meats)
Drivers of Support	positive taste perceptions, institutional trust (especially USDA), and consumer innovativeness

STUDY 2: SUSTAINABLE PROTEINS IN FAST-FOOD ENVIRONMENTS

We evaluate how scientific vs. narrative video messages influence U.S. fast-food consumers’ demand for plant-based, mycoprotein, and upcycled protein options. We used a Basket-Based Choice Experiment (BBCE) with 2,113 U.S. consumers. We built an experimental fast-food menu that included traditional meat items plus innovative protein alternatives. Random assignment to: Scientific video (expert, fact-based), Narrative video (consumer storytelling), or Control (no video).

KEY FINDINGS

Narrative video framing boosted demand for plant-based and upcycled items and unexpectedly increased meat burger selection. Scientific video framing encouraged more balanced orders and achieved the lowest average carbon footprint.

