# PROMOTING SUSTAINABLE PROTEINS AND REDUCING FOOD WASTE



#### **EVIDENCE FROM U.S. CONSUMER STUDIES**

BY: Rachele De Cianni

#### 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 by@products that would otherwise go to waste).



Consumers show high support for policy that favor mandatory clear labeling ("This product is up-cycled")



Consumers show high support for government@backed certification mark for up-cycled food



Consumers show some support for government incentives to up-cycled food companies



Consumers show some support for educational campaigns on up-cycled foods

### **INSIGHTS**

Market Opportunities snacks and baked goods are more appealing than novel items (e.g., plantbased 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 plantbased and upcycled items and unexpectedly increased meat burger selection.

Scientific video framing encouraged more balanced orders and achieved the lowest average carbon footprint.



### CONCLUSION

**Communication matters:** Scientific messaging is more effective for lowering average order greenhouse gas emissions, even if narratives attract more attention. **Industry opportunities:** Expanding familiar plantbased offerings and pairing them with transparent messaging can tap into growing sustainability demand.