



Food & Technology **2023**



A Hartman Group Syndicated Research Report

Published: December 2022
Market Coverage: U.S. Market



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Food & Technology 2023

Food & Technology 2023 explores in-depth the spectrum of consumer awareness, attitudes, and beliefs related to technology in food and addresses how companies should engage and communicate with consumers about technological innovations that relate.

**Hartman Group Syndicated Report Published: December 2022 | Report length: 115 pages |
Market coverage: U.S. Market**

Grounded in primary quantitative and qualitative research, the report offers a comprehensive consumer-centered perspective on key topics, motivations, tensions and drivers associated with technological innovations in food.

What's Included?

- Executive summary
- General report (PowerPoint and PDF)
- Demographic data tables (Excel)

Explore the Report

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Methodology

- Integrated qualitative and quantitative methodologies.
- **Quantitative:** Online national survey October 24 – November 2, 2022, n=2,365 U.S. adults aged 18–76 (MOE $\pm 2.0\%$ at 95% confidence level). Respondents recruited as a nationally representative sample. Balanced by age, gender, division, income, race / ethnicity, and presence of children to match the 2022 Census Bureau Current Population Survey. Respondents were randomly assigned to provide feedback on 3 types of technologies, results for each were then weighted back to match the 2022 Census population.
- **Qualitative:** Digital Ethnographies: N=15 participants. Week-long immersive engagement via asynchronous virtual platform.
- **Qualitative:** Follow-up In-depth Interviews, N=9 participants. Hour-long interview focused on delving deeper into responses from the digital ethnography, including perceptions of tech, drivers and barriers to trial and adoption, and home tech usage.



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Executive Summary

Chapter One: The Landscape of Next-Generation FoodTech

FoodTech has already begun to shape consumers' food lives, both directly and indirectly.

Selected timeline of “FoodTech” (analysis)

Consumers and response to disruptive changes in food (analysis)

Consumer acceptance of scientific and technological innovations (analysis)

Consumer resistance to science and technology in food (charts, model)

Consumer attitudes toward agriculture, science, technology, and food (chart)

Sustainable lifestyle and early adoption of food and technology (chart)

Early adopters and beliefs about science and technology and the food system (chart)

Consumer orientations to food made in “the lab” (analysis)

Chapter Two: Consumer Perspectives on the Future of Food

Consumers evaluate novel food production methods through a set of interrelated, overlapping criteria that reflect deep-seated concerns about the impacts of science and technology on (and in) food.

Overview of scientific and technological innovations in food explored with consumers: Regenerative Agriculture, Vertical Agriculture, Plant-based, Genetic Engineering/GMOs, Artificial Intelligence, Nanotechnology, Fermentation (Biomass & Precision), Cellular Agriculture (Meat, Dairy, Seafood) (analysis)

Consumer evaluation of novel food production methods (model)

Consumer awareness and familiarity with FoodTech production methods (chart)

Consumers concern and willingness to try unfamiliar, tech-forward processes (chart)

Consumer tensions between beliefs about natural and processed (chart)

Consumer familiarity with GMOs and attitudes toward (chart)

Consumer concerns about risks and safety in FoodTech (analysis and chart)



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Chapter Two: Consumer Perspectives on the Future of Food (continued)

Drivers to purchase of products in FoodTech (charts and analysis)

Ethical consumption and perceived FoodTech benefits (analysis)

Sustainability, food security, animal welfare, pollution in relation to FoodTech (chart and analysis)

Animal welfare and FoodTech (chart and analysis)

Product experience and FoodTech (chart)

Consequences of FoodTech: personal health and safety, social and economic impacts (analysis)

Chapter Three: Deep Dive into Next-Generation FoodTech

A new set of associations is emerging around foods connected to “the lab” that speak to more nuanced perceptions of processing and acceptance of the potential of science and technology to improve the food system

Perceptions of FoodTech production methods (Regenerative Agriculture, Vertical Agriculture, Plant-based, Genetic Engineering/GMOs, Artificial Intelligence, Nanotechnology, Fermentation (Biomass & Precision), Cellular Agriculture (Meat, Dairy, Seafood) (analysis)

Packaging and information sought in FoodTech (chart and analysis)

Price and perceived cost of tech-forward foods (charts and analysis)

FoodTech focus: Regenerative agriculture – market size, consumer motivators, barriers

FoodTech focus: Hydroponic agriculture/Vertical farming – market size, consumer motivators, barriers

FoodTech focus: Plant-based – market size, consumer motivators, barriers

FoodTech focus: Fermentation – market size, consumer motivators, barriers

FoodTech focus: Bioengineering/GMOs – market size, consumer motivators, barriers

FoodTech focus: Cellular Agriculture – market size, consumer motivators, barriers

FoodTech focus: Nanotechnology – market size, consumer motivators, barriers

FoodTech focus: Artificial Intelligence – market size, consumer motivators, barriers



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Chapter Four: Tech in the Home

Consumers are much more optimistic about technology in and around their homes and communities than in their food.

Kitchen devices owned and use of smart devices (chart and analysis)

Value gained from kitchen devices (chart and analysis)

Interest in smart devices for the kitchen by age cohort (chart and analysis)

Information willing to share for benefits (chart and analysis)

Devices used to track or assist with health and wellness (chart and analysis)

Awareness and use of QR codes (chart and analysis)

Familiarity and interest in purchasing foods with NFT's (chart and analysis)

Chapter Five: Implications and Recommendations

Chapter Six: Appendix

FoodTech Process Definitions Shown to Consumers

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ABOUT THE HARTMAN GROUP

The Hartman Group is the premier food and beverage consultancy. Our mission is to translate consumer behavior and food culture into strategic growth opportunities for our clients.

Since 1989, The Hartman Group's anthropologists, social scientists and business analysts have been immersed in the study of American food and beverage culture, using ethnographic observation, quantitative tracking surveys and deep study of trends. What we have learned and continue to uncover allows us to upend many notions of our traditional American eating and drinking patterns, thereby identifying unique opportunities and winning strategies for our clients.

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