CRISPR Communication: A Scoping Review of Communication Strategies that Shape Consumer Perceptions of Gene Editing for Sustainable Agriculture

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Supported by the University Libraries Collaborative Research Grant

Project Purpose

The purpose of this scoping review is to identify and examine communication strategies used to influence consumer perceptions of gene-edited whole foods and to identify gaps in the literature related to real-world communication contexts.

This scoping review is the first study conducted as part of PI Jean Parrella's USDA Hatch Project.

Research Questions

Primary Research Question
What are the communication strategies that have been employed to influence consumer perceptions of gene-edited whole foods?

Secondary Research Questions
How do the communication strategies employed in shaping consumer perceptions of gene-edited whole foods align with real-world communication environments according to a systems framework?

What gaps exist in current research on communication strategies for gene-edited whole foods, particularly in terms of unexplored communication components and their relevance to real-world contexts?

Inclusion Criteria

1) Use a specified or described strategy to communicate about or market gene-editing technology of an edible plant or animal agricultural product.
2) Assess consumer perceptions (e.g., purchase intention, willingness to pay, attitudes, trust).
3) Include data from a country considered culturally Western, as defined by the Food and Agricultural Organization of the United Nations.
4) Focus on agricultural products classified as whole or minimally processed foods according to the NOVA framework.
5) Be published in a peer-reviewed journal.
6) Be available in English.
7) Have no publication year restriction.

Exclusion Criteria

1) Studies of related interventions such as public relations or education.
2) Studies that do not assess consumer perceptions.
3) Studies focused on hunted or foraged, rather than farmed, products.
4) Studies focused on highly processed or ultra-processed foods rather than the agricultural product itself.
5) Reviews and secondary analyses from the synthesis, although relevant studies will be retained for citation chasing.

Search Strategy Overview

Our search strategy was developed around four domains:

- Gene editing – Terms related to gene-editing technologies and processes
- Agricultural product – Edible plant- and animal-based agricultural products
- Information intervention – Communication, framing, messaging, and marketing strategies
- Consumer perception/behavior – Consumer attitudes, trust, perceptions, and behaviors

Additional features:

- Use of proximity operators and Boolean logic
- Extensive inclusion and exclusion term refinement
- Iterative testing to improve search precision and relevance

Progress & Next Steps

Progress

- Met bi-weekly over the past 18 months to iteratively develop and refine the search strategy
- Engaged Jessica Spence to support search strategy development

Next Steps

- Resume project meetings in June
- Work with Cozette to finalize the search strategy
- Begin database searching and screening procedures
- Submit and publish the scoping review protocol in *JBI Evidence Synthesis*

Thank you!

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