What are the Key Priority Areas of Agrifood Systems Transformation? A Farmers' Participatory Study

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Introduction

As the Food and Agriculture Organization of the United Nations (FAO) calls for a transformation of agrifood systems as a part of their global agenda to promote the Sustainable Development Goals (SDGs), agriculturists must tackle equitable food and humanitarian solutions from the ground up (FAO, n.d.). Therefore, efforts to appropriately transform agrifood systems must involve collaborative investments between farmers and ranchers alongside researchers, practitioners, and other stakeholders (Abera et al., 2024). However, although farmers are the primary drivers of agrifood systems transformation, they are often excluded from co-creating the research and policy agendas that shape these global shifts (Brunori et al., 2024). As agricultural development researchers and practitioners begin contributing to the sustainable transformation of agrifood systems, questions arise regarding the priority areas for such transformation and who should participate to ensure an effective and responsive process (Aguilar & Paulino, 2025; Conti et al., 2024). Given the existing participatory gap between agenda setters, researchers, and farmers, this study applied community-engaged research principles to identify priority areas for transforming agrifood systems from the perspective of farmers.

Conceptual Framework

We used the *Framework for Transforming Food Systems* proposed by Woodhill (2023), which offers comprehensive theorical lenses for understanding the transformation process in agrifood systems. In this framework, Woodhill (2023) highlights the need for food systems to shift to achieve the SDGs, which aim to meet the growing food production demands, and combat environmental degradation. The framework details the elements of the agrifood system which need transformation, including outcomes in issues such as food security, socio-economic development, and environmental sustainability in agricultural production. Furthermore, it proposes how agrifood system transformation occurs at multiple system levels in activities such as consumption, commercialization, the switch to more sustainable and environmentally friendly production practices, and the emergence of new innovations and technologies. Researchers applied this framework to further analyze the "why," "what," and "how" of agrifood systems research and its evolving priorities (Woodhill, 2023, p. 1).

Methodology

Replicating the study by Ingram et al. (2021), this community-engaged project implemented an iterative data collection process. We followed a multi-step, systematic approach to gather data, inviting seventy-two farmers from rural El Salvador to complete a paper-based questionnaire. Most participants were male (n = 58) and held a high school diploma (n = 44). Although vegetables and corn were their primary agricultural products, just under half (n = 38) reported having additional sources of income outside of agriculture. The questionnaire included demographic questions and a single open-ended question asking respondents to list up to ten key research and practice priorities (in question format) for agrifood systems transformation over the next five years. The collected responses were analyzed using an inductive thematic analysis, through which questions were grouped into thematic clusters. These themes were then shared with farmers (n = 58), who were asked to rank their priority. Subsequently, three discussion sessions were conducted to further explore and unpack farmers' rankings and the most frequently mentioned questions within each theme (Sutherland et al., 2011). Trustworthiness was

ensured through continuous member checking, reflective memoing by the research team, and the triangulation of data sources, including the original questions, discussion transcripts, and observation notes (Creswell, 2007).

Results/Findings

A total of 376 questions were initially recorded. After revisions, questions that were unclear or not phrased in question format were removed, resulting in a refined list of 234. This list was further reduced to 129 questions due to repetition or high similarity. The remaining questions were grouped into nine thematic areas prioritized by farmers: (1) environment and sustainability (n = 22), (2) productivity (n = 12), (3) economy and finances (n = 11), (4) technical assistance and support (n = 23), (5) supply chain (n = 17), (6) social and cultural shifts (n = 16), (7) workforce (n = 9), (8) innovation and technology (n = 16), and (9) governance and regulation (n = 3).

Analysis of the rankings and the proposed questions revealed a growing concern among farmers regarding environmental and sustainability issues, especially those related to local climatic conditions. A consistent and pressing need for support and technical assistance emerged across all aspects of farmers' roles within the food system. One farmer reflected, *"*Agriculture is not the same anymore, as it used to be 25 years ago when I started working on it by myself… there is so much that I don't know and that I would like to get adequate help on.*"* Farmers also identified transformation priorities spanning activities, resources, and stakeholders throughout the agrifood supply chain. In contrast, governance and regulatory issues were not considered priorities, likely due to farmers' perceptions of insufficient interest or support from local and national governments.

Conclusions, Implications, & Recommendations

Agrifood systems transformation is a complex, multisectoral, and interdisciplinary process that requires the active involvement of industry, academia, government, and most importantly, farmers, who lead day-to-day productive activities. Farmers in this study demonstrated a clear awareness of their critical role in driving agrifood systems transformation. Our findings underscore the need to expand farmer participation in shaping research agendas, policy development, and funding initiatives aimed at improving or sustaining agrifood systems (Landaverde et al., 2021; Landaverde et al., 2023).

The priorities identified in this study offer valuable guidance for agricultural stakeholders planning and implementing transformative efforts. Aligned with previous recommendations (Landaverde et al., 2021; Landaverde et al., 2023), increasing farmer involvement in initiative planning and execution is likely to enhance overall success. Our findings aim to serve as a road map for stakeholders seeking to foster an informed and responsive transformation of agrifood systems. While the results may have potential transferability to similar settings, we advocate for a place-based approach when addressing agrifood system challenges. Results from this study underscore the need for social scientists, especially in agricultural education and communications, to seek grassroots and participatory input when coordinating solutions and decision-making efforts for stakeholders, farmers, and more. Finally, future research should examine the priorities of other agrifood system stakeholders and address potential misalignments, thereby enabling collective action that supports sustainable development and improvement.

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