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Exploring Participatory Research Approaches in Agricultural Settings: Analyzing Pathways to Enhance Innovation in Production

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Abstract : Introduction: In the face of increasing demands for higher agricultural productivity with minimal environmental impact, participatory research approaches emerge as promising means to promote innovation. However, the complexities and ambiguities surrounding these approaches in both theory and practice present challenges. This Scoping Review seeks to bridge these gaps by mapping participatory approaches in agricultural contexts, analyzing their characteristics, and identifying indicators of success. Methods: Following PRISMA guidelines, we conducted a systematic Scoping Review, searching Scopus and Web of Science databases. Our review encompassed 34 projects from diverse geographical regions and farming contexts. Thematic analysis was employed to explore the types of innovation promoted and the categories of participants involved. Results: The identified innovation types encompass technological advancements, sustainable farming practices, and market integration, forming 5 main themes: climate change, cultivar, irrigation, pest and herbicide, and technical improvement. These themes represent critical areas where participatory research drives innovation to address pressing agricultural challenges. Participants were categorized as citizens, experts, NGOs, private companies, and public bodies. Understanding their roles is vital for designing effective participatory initiatives that embrace diverse stakeholders. The review also highlighted 27 theoretical frameworks underpinning participatory projects. Clearer guidelines and reporting standards are crucial for facilitating the comparison and synthesis of findings across studies, thereby enhancing the robustness of future participatory endeavors. Furthermore, we identified three main categories of barriers and facilitators: pragmatic/behavioral, emotional/relational, and cognitive. These insights underscore the significance of participant engagement and collaborative decision-making for project success beyond theoretical considerations. Regarding participation, projects were classified as contributory (5 cases), where stakeholders contributed insights; collaborative (10 cases), with active co-designing of solutions; and co-created (19 cases), featuring deep stakeholder involvement from ideation to implementation, resulting in joint ownership of outcomes. Such diverse participation modes highlight the adaptability of participatory approaches to varying agricultural contexts. Discussion: In conclusion, this Scoping Review demonstrates the potential of participatory research in driving transformative changes in farmers' practices, fostering sustainability and innovation in agriculture. Understanding the diverse landscape of participatory approaches, theoretical frameworks, and participant engagement strategies is essential for designing effective and context-specific interventions. Collaborative efforts among researchers, practitioners, and stakeholders are pivotal in harnessing the full potential of participatory approaches and driving positive change in agricultural settings worldwide. The identified themes of innovation and participation modes provide valuable insights for future research and targeted interventions in agricultural innovation.

Keywords : participatory research, co-creation, agricultural innovation, stakeholders' engagement
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