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A systematic review of nutrition-sensitive agriculture research in ethiopia: implications for food systems transformation

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Abstract

Malnutrition remains a persistent public health challenge in Ethiopia despite the country's strong agricultural base and multiple policy efforts aimed at improving food and nutrition security. Nutrition-sensitive agriculture (NSA) has emerged as a key strategy to address this challenge by leveraging agriculture to improve dietary quality and nutritional outcomes through multiple pathways. This study systematically reviews NSA research conducted in Ethiopia between 2010 and 2025 to synthesize evidence, identify thematic trends, and highlight research and policy gaps. A systematic review guided by PRISMA protocols was conducted, yielding 62 eligible peer-reviewed studies. The analysis was framed using the agriculture–nutrition pathways, including food production, income generation, women's empowerment, and enabling environment. The findings reveal that the majority of studies (over 90 %) focus predominantly on the food production pathway, particularly livestock-based interventions such as poultry and dairy, which have shown positive effects on dietary diversity, child growth, and micronutrient intake. Integrated interventions combining agricultural production with nutrition education and behaviour change communication demonstrated stronger and more consistent improvements in nutrition outcomes. However, the review also identifies critical gaps. Research is geographically concentrated in highland regions, with limited representation from pastoral and lowland areas. Methodologically, most studies are cross-sectional, with relatively few experimental or longitudinal designs providing causal evidence. Additionally, pathways related to income, women's empowerment, and enabling environments remain underexplored. Only small proportions of the studies explicitly align with national policies or generate actionable policy-relevant evidence. The study underscores the need for more integrated, multi-sectoral NSA interventions and context-specific research that addresses diverse agro-ecological settings. Strengthening the link between research, policy, and practice is essential to scale up effective NSA strategies and accelerate progress toward improved nutrition outcomes in Ethiopia.

Keywords: Agriculture–nutrition pathways, dietary diversity, Ethiopia, nutrition-sensitive agriculture