



# A Mixed Methods Analysis of Nutrition-Sensitive Agriculture and Dietary Diversity among Smallholder Households in Burkina Faso's Central Plateau, 2002

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## Abstract

Nutrition-sensitive agriculture is promoted to improve dietary diversity and address malnutrition in sub-Saharan Africa. Smallholder farming households in Burkina Faso's Central Plateau experience chronic food insecurity and monotonous diets. The impact of nutrition-sensitive agriculture programmes in this specific context remains unclear. This study analysed the effect of nutrition-sensitive agriculture programmes on the dietary diversity of smallholder households in the Central Plateau. Its objectives were to quantify changes in household dietary diversity scores and to explore participant perceptions of programme benefits and constraints. A concurrent mixed methods design was employed. A structured survey measured household dietary diversity scores among a random sample of programme participants and a matched comparison group. In-depth interviews and focus group discussions were then conducted with a purposive sample of participants. Quantitative data were analysed using regression, and qualitative data via thematic analysis. Programme participation was associated with a modest but statistically significant increase in mean household dietary diversity scores. Qualitative findings highlighted improved access to vegetables and legumes. Persistent challenges included limited water access for home gardens and the prioritisation of cash crop sales over household consumption. Nutrition-sensitive agriculture programmes can improve dietary diversity in this setting, but the effect is moderated by structural and economic constraints. Benefits may be insufficient to fundamentally transform dietary patterns without addressing broader systemic barriers. Future interventions should integrate water, sanitation, and hygiene components and include explicit behaviour change communication to encourage household consumption of produced foods. Policy should support

smallholder access to irrigation and markets for diverse produce. nutrition-sensitive agriculture, dietary diversity, smallholder farmers, mixed methods, Burkina Faso, household dietary diversity score This study provides empirical evidence on the nuanced effects of nutrition-sensitive agriculture in a food-insecure region, combining quantitative impact assessment with qualitative insights into contextual barriers, thereby informing more effective programme design.

**Keywords:** *Mixed methods, Dietary diversity, Nutrition-sensitive agriculture, Smallholder farmers, Sub-Saharan Africa, Food security, Qualitative research*

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