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Beyond yield: Exploring gendered adoption pathways of plantain innovations in Ghana

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Abstract

Plantains play a central role in Ghanaian agriculture and diets, ranking among the country's most important staple foods. While cassava and yams dominate in volume, plantains hold a unique position as a daily food source and a key crop for local markets. Despite this significance, breeding programmes have remained limited, with a narrow focus on yield, fruit size, and pest tolerance, often overlooking farmers' preferences and the crop's cultural and nutritional relevance. Despite this significance, breeding programmes have remained limited, with a narrow focus on yield, and pest tolerance, often overlooking farmers' preferences.

Over the past decades, two key innovations were introduced in the Central Region of Ghana: high-yielding hybrid varieties and macro-propagation techniques aimed at reducing pest incidence.

This study investigates the adoption of these innovations, examining why some have endured while others have faded, and explores how gender dynamics have shaped the outcomes of the intervention.

Using qualitative methods, the research drew on expert interviews with farmers, extension officers, and institutional stakeholders; gender-disaggregated focus group discussions; in-depth interviews; and participatory rural appraisal tools (e.g., ranking of varietal attributes).

The study identifies specific traits—particularly poor taste, cooking quality, and low storability—as key reasons for low adoption. Locally, the hybrid plantains are often described as “the tasteless ones.” The availability of naturally produced suckers and the perceived low pest pressure also reduced the uptake of macro-propagation techniques.

Gender emerged as a crucial factor: women are primarily responsible for selling plantains and horticultural crops, while men tend to focus on cacao production. As such, low market acceptance of the hybrids disproportionately affects women. While both innovations continue to be promoted by development and research institutions, this study underscores the need for more participatory approaches in targeting innovation efforts.

The findings call for a reorientation of breeding programmes to move beyond quantitative traits and place greater emphasis on taste, culinary quality, and consumer preferences—factors that ultimately shape marketability and innovation uptake. Successful adoption of innovations depends on early-stage, gender-sensitive research that integrates local knowledge, intra-household dynamics, and equitable access to resources throughout both the design and implementation phases.

Keywords: Gender, hybrid varieties, innovation adoption, organoleptic qualities, participatory breeding