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Intersectional identities and maize trait preferences in kenya: toward inclusive crop breeding

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Abstract

Understanding farmers' preferences is essential for developing crop varieties that are widely adopted and beneficial, especially for marginalised groups such as women and low-income farmers. Breeding programmes increasingly recognise that men and women often prioritise different crop traits. However, many still overlook the importance of socio-economic diversity and how factors like wealth, age, or marital status intersect with gender to shape preferences. To address this gap, our study used an intersectional lens to analyse how gender and wealth influence maize trait preferences. We collected data from 250 farmers in Kenya, including women-headed households conducting on-farm maize trials. Using logistic regression models, we examined how gender and wealth influence trait prioritisation. Farmers identified grain yield, size, early maturity, grain colour, and resistance to diseases and pests (especially fall armyworm) as essential traits. Among farmers in the lower and middle wealth groups, men and women had similar preferences, particularly for yield-related traits. However, across the full sample, women were generally less likely than men to prioritise yield traits, though this gap narrowed as their wealth increased. Conversely, women were more likely than men to prefer the grain colour trait, but this preference decreased with greater wealth. These findings reveal that economic status significantly influences how gender affects trait preferences. Poor men and women often prioritise similar traits, suggesting shared challenges and needs. As women gain financial security, their preferences align with “male” priorities like high yield. To ensure that breeding programmes address the needs of all farmers, it is vital to consider gender alongside other intersecting factors. This intersectional lens can help breeders develop maize varieties that better reflect the realities of diverse farming households, ultimately improving food security and supporting equitable technology adoption.

Keywords: Gender, inclusive breeding, intersectionality, trait preferences, wealth

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