



Crop Production Diversity and Women Dietary Diversity in Rural Kenya

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Executive summary

Despite the commitments and efforts to fight all forms of malnutrition, malnutrition in Kenya persists. Using the Kenya Integrated Household Budget Survey 2005/06 (a nationally representative survey), we examine the linkages between diversity in crop production and dietary diversity of women in rural Kenya. The findings show that crop production diversity is low, with three crops being grown by households, on average. Second, we also find dietary diversity

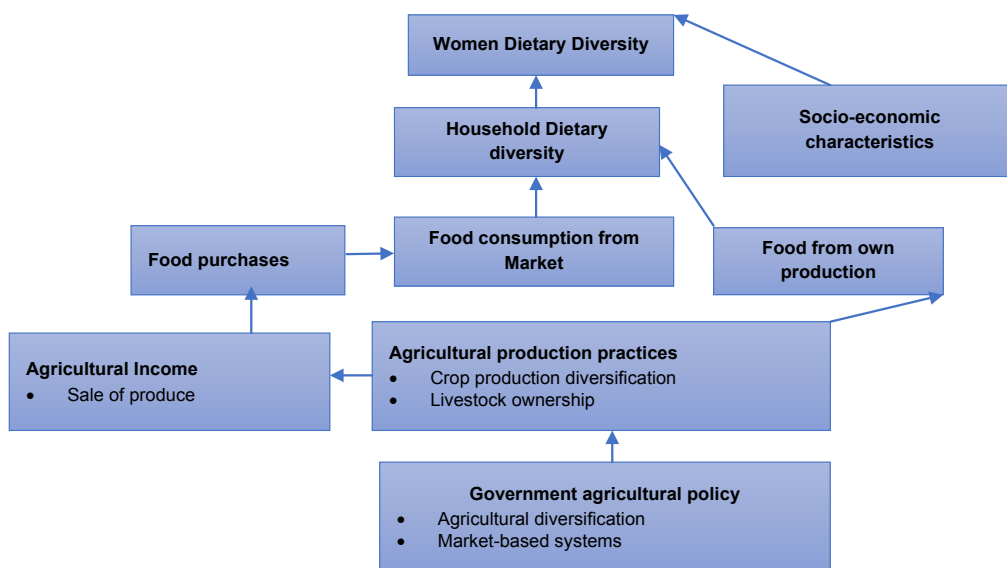
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to be low, with women's consumption bundle disproportionately lower than of the household. We find that in rural Kenya, women consume, on average, from four food groups in contrast with five food groups consumed by other household members. In terms of the linkages, we find that diversity in crop production correlates with rural women's dietary diversity positively, with the channels being through own-production and market access. Overall, these suggest that diversity in crop production leads to higher dietary diversity of women and thus calls for agricultural policies that encourage crop diversification. In addition, enhancing market infrastructure, particularly programmes linking farmers to the market, are promising strategies to improve women's nutrition and thus an imperative.

Introduction

The interlinkages between diversification in agricultural production and diversity of diets are well discussed in the literature, and several channels are identified. First, through consumption from own consumption, increased incomes and hence market access of nutritious diets reduced food prices emanating from the increased productivity of food crops, and more importantly through the empowerment of women in production and consumption decisions. Figure 1 illustrates the channels through which agricultural production influences dietary diversity.

Figure 1: Agriculture-nutrition-food security conceptual framework



Over the last two decades, the Kenyan government has adopted numerous policies to support a diversified agriculturally based system and access to nutritious diets. For instance, in 2001, it adopted the Poverty Reduction Strategy Paper and in 2003 it

adopted the Economic Recovery Strategy (ERS) for Wealth and Employment Creation in 2003, and the Strategy for Revitalizing Agriculture (SRA) in 2004. Also, the National Food Security and Nutrition Policy (FSNP) was adopted in 2008. These policies aimed at ensuring a diversified agricultural system while ensuring increased availability, accessibility, and affordability of nutritious diets.

The problem

Despite the adoption of agricultural policies that support agricultural diversification to ensure access to nutritious diets, both agricultural diversification and dietary diversity remains low. Similarly, malnutrition persists, and is disproportionately rampant among rural residents, especially women of reproductive age. For instance, according to the 2014 Kenya Demographic and Health Survey, the average mean body mass index (BMI) was 23.7kg/m², 9% are undernourished, 6% are moderately undernourished, and 3% severely malnourished. Similarly, the 2014 Kenya Demographic Health Survey also shows that young rural-based women are likely to be undernourished, and other dimensions such as level of education, regions, and wealth status vary.

The continued existence of malnutrition at higher levels remains a concern towards the attainment of the Sustainable Development Goals (SDGs). Thus, motivated by these observations, we interrogate the interrelationship between crop diversification and dietary diversity among women in rural Kenya. An understanding of the nexus between agricultural diversification, particularly crop-diversification and dietary diversity among women is critical given that women often play a significant role as they constitute 60-70 per cent of the agricultural labour force, yet their micro-nutrient intake remains low despite managing complex household decisions including production and consumption decisions.

Does crop production diversity matter for women diets?

Using a nationally representative household survey from Kenya, namely the Integrated Household Budget Survey (IHBS) conducted in 2005/06, we explore the effect of crop diversification on dietary diversity among women. The IHBS survey's sample framing is drawn from the National Sample Survey and Evaluation Programme (NASSEP) IV sampling frame, which is stratified by residence; county and rural and urban. The NASSEP frame is a household-based master sampling frame developed and maintained by the Kenya National Bureau of Statistics (KNBS). The frame was implemented using a multi-tiered structure, in which a set of 4 sub-samples were developed.

With a two-stage stratified sampling approach, in the first-stage 1,343 clusters were selected with equal probability within a district, and in the second stage 10 households were selected with equal probability in each cluster thus obtaining total sample size of 13,430 households. The Survey collected data on household characteristics, housing conditions, education, general health characteristics, nutrition, household income and credit, household transfers, agricultural production, among others.

We estimate the effect of crop diversification on women's dietary diversity based on a sub-sample of women of reproductive age between 15 years and 49 years using Poisson Generalized Linear Model (PGLM) with a negative binomial link and a Poisson family. The findings show that crop production diversity is low and on average households grow three crops. We also find that women's dietary diversity is low and, on average, four food groups are consumed while at the household level, the number of food groups consumed is five. Further, higher crop production diversity has a significant positive effect on women's dietary diversity, implying that rural smallholder farms in Kenya produce for own-consumption and therefore leading to improved diets among women. Looking at the intrahousehold food allocation dynamics, we find that higher household dietary diversity hurts women's diets, an indication of food allocations being skewed towards non-women members of the household. Lastly, the results show that market access is also crucial in improving women's diets. That is, the effect of distance to the nearest market on women's diet is positive albeit insignificant, implying that households in remoter regions have higher dietary diversity compared to those nearer to markets. Further, we find that market participation also has a positive effect on women's dietary diversity, and its effect the largest in contrast to the effect of crop diversity

Implications policy, and practice

The findings have important implications for policy and practice. First, crop diversity has the potential to improve women diet diversity, and thus there is a case for adoption and effective and well-coordinated implementation of nutrition-sensitive agricultural policies. Second, the role of market access is also vital in improving women's diets. This underscores the vital role of market access and participation, affecting diet diversity as such policies that support access to markets through better infrastructure and institutions and those that promote programmes linking farmers to the market are promising strategies to improve women's nutrition.

Further reading

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