

# Fruit consumption and production: habits, preferences and attitudes of rural households in Western Kenya

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## Introduction

Currently, fruit consumption in Eastern Africa is far below the recommended daily amount (RDA)<sup>1</sup> (400g of fruits and vegetables per person and day<sup>2</sup>) and has implications for micronutrient malnutrition while little is known about the patterns and determinants of fruit production, consumption and marketing.

This study, therefore, collected data about key trends in gender-disaggregated preferences, attitudes and decision-making processes of rural households for fruit consumption, production, and income generated from this activity.

## Methodology

- A cross-sectional survey was conducted with 370 households in July/August 2013 in five different agro-ecological zones (AEZ) along a transect of humidity in Western Kenya.
- Households were sampled randomly from household lists in 15 villages distributed evenly across the AEZ.
- Individual interviews were conducted with the women responsible for food and nutrition in the household. Semi-structured questionnaires were used to assess household socio-demographic characteristics and attitudes towards fruit consumption. Fruit intake and general food intake was surveyed using quantitative 24 hour recalls.
- A household wealth indicator (WI)<sup>2</sup> with a high score meaning high wealth was calculated.

## Results - consumption

- The number of times fruits were consumed per week differed significantly between women, their husbands and children (Friedman test;  $P < 0.001$ ) with the women consuming fruits less often (Figure 1). All household members, especially children, would like to consume more fruits (Figure 2).
- The number of times the respondent consumed fruits per week was significantly negatively correlated with her age ( $\tau = -0.145$ ;  $P < 0.001$ ) and slightly positively with the household's wealth index ( $\tau = 0.087$ ;  $P = 0.030$ ). Daily fruit consumption during the last 4 weeks was low (Figure 3).



Sweet granadilla/ *Passiflora ligularis*  
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Interview in a household in Bondo district  
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Sweet banana/ *Musa paradisiaca*  
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Oranges/ *Citrus sinensis* and avocados/ *Persea americana* on Wanga market  
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Avocado/ *Persea americana* in fruit  
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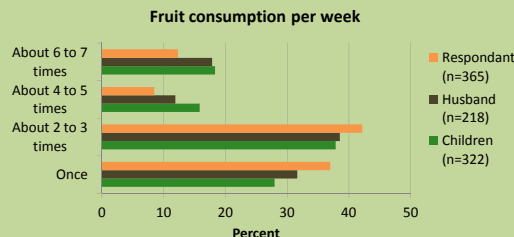


Figure 1: Number of times fruits are consumed per week by family members as perceived by the female respondent.



Figure 2: Percentage of family members who would like to consume more fruits

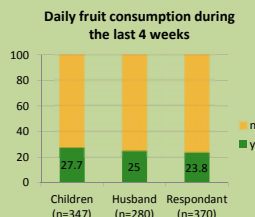


Figure 3: Percentage of family members consuming fruits daily during the last 4 weeks

- Less than 1/3 of participants consumed fruits during the last day (Figure 4) and the average amount of fruits consumed by women during the previous day was 54g, the amount of vegetables was 85g (Figure 5). Consequently, average consumption of fruits and vegetables was less than half of the WHO RDA of 400g per person and day. The amount of fruit intake was slightly significantly negatively correlated with women's age ( $\rho = -0.128$ ;  $P = 0.014$ ).
- In the previous 7 days, respondents had consumed mainly 6 different fruit species, namely sweet banana (52%), avocado (51%), orange (38%), guava (34%), mango (29%) and pawpaw (26%).

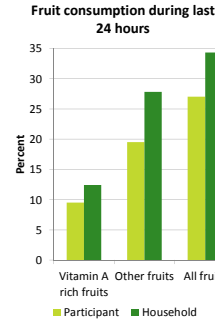


Figure 4: Percent of participants and households (n=370) who consumed fruits during the previous 24 hours

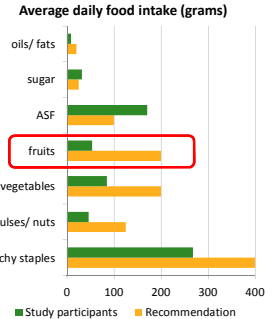


Figure 5: Average amount (g/day) of different food groups consumed by participating women (n=370) as compared to food-based dietary guidelines (FAO 1997; USDA 2005; DGE 2004)

## Results - production

- Of participating households, 80% grew fruits from which 55% used the fruits for own consumption only, 5% for income generation only, and 38% for both (Figure 6).
- The least amount of household food expenditure was spent on fruits (Figure 7).
- The most common fruits produced were sweet banana, papaya, avocado and mango with variations between the agro-ecological zones, while the most favourite fruits of household members were mango (25%), avocado (21%), orange (19%), sweet banana (16%) and pawpaw (5%).

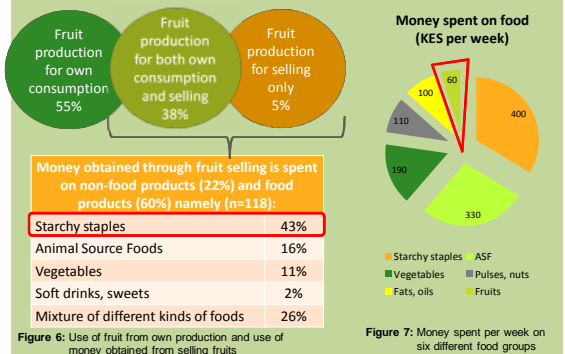


Figure 6: Use of fruit from own production and use of money obtained from selling fruits

Figure 7: Money spent per week on six different food groups

## Conclusions

- The recommended fruit consumption in Western Kenya is far below the RDA, even though the agro-climatic conditions are favourable to the production of a diversity of fruit species.
- Nearly half of participating households indicated the sale of fruits for income generation, prior to meeting their own household consumption. The income generated from the sale of fruits was mostly spent on starchy staples with less spent on nutritious foods. While through this the family might not go hungry, hidden hunger is still persisting.
- As a majority of participants would like to increase fruit consumption this should be seen as an incentive for increasing fruit production in Western Kenya.

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