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“Bridging the gap between increasing knowledge and decreasing resources”

Household Food Security and Dietary Diversity in Different Agro-Ecological Zones of Western Kenya

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Abstract

Household food security is associated with improved overall dietary quality that promotes good health. The objective of this study was to assess the differences in household food security between different agro-ecological zones (AEZs) in Bondo and Teso districts in rural western Kenya.

The cross sectional nutrition survey was conducted in July/August 2012 targeting 293 randomly selected households with mothers/caregivers with children aged 6–23 months. The agro-ecological zones were all lower midland (LM) zones: humid LM1 (n=69), sub-humid LM2 (n=79), semi-humid LM3 (n=50), and transitional LM4 and semi-arid LM5 taken together (n=95) as only few participants from LM5 were integrated in the study. The AEZs were grouped into two zones: the dry zone included LM3 and LM4+LM5 (n=148) while the humid zone consisted of LM1 and LM2 (n=145). Semi-structured interviews assessed household socio-demographic characteristics. The household hunger scale was used to assess household hunger. The 24-hour recalls were used to document the household dietary intakes. A household wealth indicator (WI) and household hunger score (HHS) were compiled for the households. Household dietary diversity score (HDDS) were computed according to the FAO guidelines.

Overall 35 % and 3.4 % of the households experienced moderate and severe hunger respectively. Mann-Whitney test showed that the dry zones experienced less hunger compared to the humid zones ($p < 0.001$). Further HDDS values were higher in the dry zones compared to the humid zones ($p < 0.001$).

These findings show that food access was better in the drier semi-humid/transitional arid zones than the humid/sub-humid zones. This contradicts the common pattern of low food availability in the drier semi/transitional zones. There is need for further investigations taking into consideration other variables to understand why the HHS and HDDS were significantly higher in the drier zones compared to the more humid zones.

Keywords: Agro-ecological zones, dietary diversity score, food security, household hunger score, wealth index