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Diet Adequacy of Male Ugandan Farmers — a Cross-sectional Case Study in Kapchorwa District of Uganda

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Abstract

Background: Eastern Uganda is the second most food insecure region and has the poorest dietary diversity of the country. Data on men's diet adequacy are scarce. The objective of this study was to assess the diet composition, dietary diversity and energy balance as well as the nutritional status of male farmers in Kapchorwa District, Mid-Eastern Uganda.

Methods: An agriculture-nutrition baseline study was conducted in May-June 2016 (baseline, t0) and August-September 2016 (follow-up, t1) within the research project "Linking agriculture and nutrition for a healthy diet "HealthyLAND" in Kapchorwa District, Uganda. Structured interviews were conducted among randomly selected farm households with children below five years in Kapchorwa District. This study included 187 men (t0) and 79 men (t1), respectively. Intakes of energy and macronutrient intake as well as the Individual Dietary Diversity Score (IDDS) were calculated based on a semi-quantitative 24h-dietary-recall. Anthropometric measurements for calculating body mass index (BMI) and 24-hour physical activity recalls were included to estimate total energy expenditure and energy balance.

Results: At baseline, the mean farmers' BMI was 21.2 (SD=3.26), with 15 % classified as underweight, 75 % of normal weight, 8.7 % as overweight and 1.6 % as obese. The mean energy intake was 2426 $^{\text{kcal}}/_{\text{day}}$ (SD=853). The mean energy balance was negative, -583 kcal (SD=1093), with 72 % farmers having a higher energy expenditure than energy intake. The IDDS (mean (SD)) did not differ significantly between the two seasons during pre-harvest season during harvest season, (4.4 (1.2) and 4.5 (1.3), $p = 0.397$). Differences between seasons were found in the consumption of pulses (49 vs 67 %, $p = 0.054$) and "other fruits" (33 vs. 20 %, $p = 0.021$). The Anova showed that IDDS is significantly positively associated with school education level and energy intake ($p < 0.01$).

Conclusion: The findings confirm a poorly diversified diet that lacks an adequate energy and nutrient supply. This limits the farmers' capacity to intensify their farming activities needed to improve nutrition security.

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Keywords: Agrobiodiversity, dietary diversity, Energy balance, Kenya, Men