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DIET ADEQUACY OF MALE UGANDAN FARMERS

a cross-sectional case study in Kapchorwa District of Uganda

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Background

. Adequate nutrition is essential for good health, well-being as well as intellectual and productive capacity.



aims to discover in Malawi, Kenia and Uganda to what extend and how a more diverse farm-



- Eastern Uganda is the second most food insecure region and has the poorest dietary diversity of the country.
- . Data on women and especially men's diet adequacy are scarce.

Objective

. 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

Hypotheses

- . Improvements in farming systems based on ecologically oriented farming require extra physical efforts
- . Household dietary intake is too poor to meet the needs for the required physical activities in agriculture

Project area "Linking Agriculture and nutrition for healthy diets (HealthyLAND)"

Results

Age, energy balance and body mass index (BMI) of male farmers at baseline $(t_0 = 187, t_1 = 79 \text{ men})$:

	n	Mean ± SD	Min-Max
Age (years)	187	37 ± 10.2	19 - 70
Energy balance (kcal/d)	178	-583 ± 1093	-3260 - 2639
Energy intake (kcal/d)	185	2426 ± 853	607 - 5132
Total energy expenditure (TEE) (kcal/d)	180	2988 ± 645	1622 - 4878
Dietary diversity Score (IDDS) (min/max=0-10)	187	4.5 ± 1.2	2 - 7
Body Mass Index (kg/m ²)	183	21 ± 3	16 - 39
	n	Percent (%)	

Methods

- May-June 2016 (t₀): Agriculture-nutrition baseline
- . Tablet based interviews using structured questionnaires
- . Targeting 447 farm households with children < 5 years (two-stage cluster sampling)



Photos (from left to right): Small-scale farm households in Kapchorwa District with their harvest, field with maize (staple) and during interview

- Anthropometric measurements
 - \rightarrow Body Mass Index (BMI)
- . 24-hour physical activity recall (paper based)

BMI group		27	14.0	
Underweight	(< 18.5 kg/m²)	27	14.8	
Normal	(18.5-24.9 kg/m ²)	13/	/4.9	
Overweight	(25-29.9 kg/m ²)	16	8.7	
Obese	$(\geq 30 \text{ kg/m}^2)$	3	1.6	

- . IDDS positively associated with school education level and energy intake (p < 0.01).
- . Mean IDDS below minimum of 5 food groups at both seasons: $t_0 = 4.4 (1.2)$ and $t_1 = 4.5 (1.3) (p=0.397)$
- Seasonal differences occurred in the consumption of
 - pulses: 49 % versus 67% (*p*=0.054)
 - "other fruits": 33 % versus 20% (*p*=0.021)

Conclusion

- . More than 50% of farmers do not reach the minimum dietary diversity required for a healthy diet which results most likely in micronutrient deficiencies.
- . Prevalence of underweight, overweight and obesity indi-

 \rightarrow total energy expenditure and energy balance

. Semi-quantitative 24-hour dietary recall (paper based)

- \rightarrow Individual Dietary Diversity Score (IDDS, 0-10)*
- \rightarrow energy and macronutrient intake
- August-September 2016 (t₁): Follow up on dietary intake with qualitative 24-hour dietary recall

cate increasing problem of double burden of malnutrition among farm households.

- . The majority of farmers (72 %) have an inadequate energy and nutrient supply.
- This limits the farmers' capacity to intensify their farming activities needed to improve nutrition security.

Project Team:



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* FAO, FANTA & USAID (2016) Minimum Dietary Diversity for Women (MDD-W) Available at: https://www.fantaproject.org/monitoring-and-evaluation/minimum-dietary-diversity-women-indicator-mddw

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