Food and nutrition status of households with homegardens in the Nuba Mountains, Sudan

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Background
Sudan is one of the last developed countries and many people particularly in South Kordofan (see map) suffer from food insecurity. Food production from homegardens and wild collection are seen as key elements in strategies to overcome nutrient deficiencies. Food intake 24h-recalls were conducted and food samples were taken in four households in Sama (see map), to evaluate the status quo and the contribution of homegardens and wild collection during three seasons (June, October and December).

Characterization of households
Management: traditional, commercial (selling >50% of their homegarden harvest and using chemical fertilizer)
Importance: in a questionnaire households were asked if the homegarden is important for them.

Characteristics of the 4 homegardens:
- Commercial
- Commercial Important
- Traditional
- Traditional Important

Analysis of food samples
Methods: Samples of prepared food were taken, energy (bomb caloriometer), protein (DUMAS), iron and zinc (microwave pressure digestion and AAS) were analyzed in the laboratory.

Results: Values from the laboratory were higher than what was calculated from the recalls and databases (Figure 4), especially for foods with meat and fermented porridge.

Conclusions: The results of the 24h-recalls indicate a malnutrition of the people in the research area. But the people does not look like suffering from hunger, also the results of the laboratory suggest that the foods are more nutritious than calculated by means of the recalls and databases. Homegardens supply households with green-leafy vegetables and thus contribute to the vitamin A intake, as well as iron and zinc. Wild collection increases the vitamin C intake and the fruits, beans, mostl Christ’s thorn (Ziziphus spinus-christi) (L) Wild are available even after the rainy period. The impact of gardens and wild collection is less affected by the management than by the importance level. Homegardens can play a crucial role in securing food security, especially in the micronutrients of households. Homegardens should be promoted to strengthen their importance to the homegardens and thus their role in nutrition and income generation. Further research should focus on more reliable data for calculation of nutrient intake and for techniques for processing and preserving foods in a nutrient-protecting way.

References
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