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Food and Nutrient Gaps of Smallholder Farming Households in Rural Northern Ghana

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Abstract

Food-based dietary guidelines (FBDGs) provide guidance to policy makers, the private sector and consumers to redesign food systems and to improve diets of vulnerable populations. As FBDGs are based on the actual dietary patterns and their costs, it is assumed that the recommended foods are available, affordable and acceptable. Using quantitative dietary intake data of young children in rural Ghana, we developed FBDGs and studied whether these are supported by the diversity and quantity of household's foods production. We found that 40 % of Ghanaian infants and young children were stunted and their nutrient intakes were far below the required amounts. The developed FBDGs for household level were on average not able to sufficiently cover the requirements for fat, calcium, iron, vitamin A, vitamin B12 and vitamin C. This implies that in case of adoption of these FBDGs the requirements for these nutrients will not be met. In addition, the household's nutrient needs and food needs (according to the developed FBDGs) were only marginally covered by their own food production. Over half the households had insufficient calcium, vitamin A, vitamin B12 and vitamin C to cover their needs. About 60 % of the households did not cover their required amounts of grains and legumes and none of vegetables. Further analysis of the food gaps at district and national level showed grain requirements were covered at both levels (267 % and 148 %, respectively); legume only at district level (268 %) but not at national level (52 %); and vegetable not at both levels (2 % and 49 %, respectively). Thus this study show that food availability does not support the adoption of FBDGs in rural northern Ghana. Diversifying crop production is often mentioned as a potential solution for increasing the diversity of foods available and thereby increasing dietary diversity of rural low and middle income country populations. We found that household's food production diversity was indeed positively related with household's food and nutrient coverage but not with the child's dietary diversity and nutrient adequacy. Our results suggest that the promotion of FBDGs through behaviour change communications activities alone is insufficient to lead to improvements in diets.

Keywords: Crop diversity, dietary adequacy, dietary diversity, food gap, food-based dietary guidelines, Ghana, nutrient gap, smallholder farm households

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