Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

Role of Biodiversity in Improving Dietary Diversity and Quality of Complementary Foods for Infants and Young Children in Southern Benin

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Abstract

FoodAfrica is a research for development programme coordinated by MTT Agrifood Research Finland and financed by the Finish Government and CGIAR, aiming to improve food security in West and East Africa. Having started in 2012, different projects have been implemented in six African countries. In southern Benin, where almost a third of children are malnourished, a 6-year initiative examined ways in which local food sources could be better used to nourish infants and young children.

A cross-sectional survey was performed in two communes of the Mono Department, Southern Benin. Over 1,200 households were interviewed regarding food and nutrition security, dietary intakes of infants and young children (6–23 months), and agrobiodiversity (ABD). Based on this information, feeding practices were studied, dietary gaps identified and ABD contributions calculated. In addition, over 300 recipes for complementary foods were collected out of which 20 were optimised via linear programming by adding ingredients from locally available biodiversity. Out of these 20 recipes, five were field tested with mother/child pairs for acceptability. Culturally sensitive nutrition education materials such as videos, posters, a food calendar and a recipe booklet were developed promoting good feeding practices based on local food biodiversity.

The vast majority of the households (80 %) were classified as food insecure. The prevalence of the small children's minimum dietary diversity, minimum meal frequency and minimum acceptable diet accounted for 60 %, 71 % and 46 %, respectively. The ABD surveys documented 146 plant and 148 animal species known as food sources. However, only 47 food products were consumed. Local biodiverse foods contributed between 49 % (calcium) to 98 % (Vitamin A) of total micronutrient intakes. The timing for the introduction of complementary foods was in most cased (78 %) incorrect. The children's micronutrient adequacy correlated with the caregiver's education.

The results confirm the richness of local food biodiversity that can be used for food and nutrition security. The fact that micronutrient adequacy correlated with caregiver's education shows the potential of nutrition education for improved feeding practices. This research has helped to fill gaps in nutrition education materials both for caregivers as well as for community health workers and agricultural extension agents.

Keywords: Agrobiodiversity, Benin, complementary feeding, nutrition, nutrition education, nutrition education materials

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