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## An Assessment of Household Dietary Diversity and Vegetable Consumption: Case Study of Smallholder Farmers in Yayu Biosphere Reserve, Ethiopia

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### Abstract

The household dietary diversity score (HDDS) has been increasingly used as indicator for economic ability of a household to access a variety of foods. For this paper 308 rural households in Yayu biosphere reserve, Ilu Ababora Zone, Oromia National Regional State, Ethiopia were interviewed. The data was collected in April/May 2016 prior to the implementation of NutriHAF Africa Project. The latter aims to integrate appropriate vegetables into multi-storey cropping systems to increase nutrition security, diversify and intensify agriculture and thus to reduce pressure on natural habitats in biodiversity hotspots. Following the FAO (2010) guideline for measuring household dietary diversity, respondents were asked to recall all foods eaten and beverages taken by the whole household on the previous day.

The results show a mean HDDS of 5.2 (SD=1.9). In addition, it was analyzed which food groups were predominately consumed at different levels of the scores and whether dietary diversity is correlated to the household economic status and meal frequency. While 60% of households had a medium HDDS of 4–6 food groups (N=186) about equal shares of households had either a low HDDS of  $\leq 3$  (N=58) or a high HDDS of 7–12 (N=64). The food groups mainly consumed by households with low HDDS were cereals, white tubers and roots, and legumes/nuts/seeds while only few consumed vegetables (5.2%) or fruits (3.4%). In contrast, most households with high HDDS consumed vegetables (95.3%) and fruits (85.9%) while those with medium HDDS only to some extent (vegetables 58.1%; fruits 17.2%). Dark green leafy vegetables were consumed by only 7.5% of all households. The respondents were also classified as poor, middle and high income based on their economic status. As expected, economically better off households were identified with higher meal frequency and higher HDDS while poorer households with low HDDS were identified to have fewer meal frequency.

In order to assess the change in the HDD situation and vegetable consumption one year after the intervention of the NutriHAF Africa project, including the introduction of new vegetable species, a second round survey in April 2017 took place and data will be included in the final analysis.

**Keywords:** Ethiopia, household dietary diversity, leafy vegetables, meal frequency

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