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## Assessment of fruit and vegetable consumption and its association with household malnutrition in Benin

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### Abstract

Dietary inadequacies especially low consumption of healthy and nutritious foods significantly contribute to malnutrition. This study assessed household fruits and vegetables (F&V) consumption and explored socio-demographic factors influencing intake across rural areas of Benin.

A cross-sectional survey was conducted in all the departments of Benin except Littoral, an urban region with the lowest malnutrition and food insecurity rates. A total of 927 households with precarious living conditions were selected, targeting those with women of reproductive age (15–49 years) and at least one child aged 0–59 months. Socio-economic data were collected, and a 24-hour dietary recall assessed F&V consumption. A generalised linear model identified factors influencing F&V consumption among these households.

Commonly consumed F&V species were *Solanum lycopersicum* (45%), *Capsicum annuum* (43%), and *Allium cepa* (22%). Neglected and underutilised species like *Adansonia digitata*, *Vitex doniana* leaves, *Corchorus olitorius* and *Parkia biglobosa* (pulp) were also consumed. Households consumed in average two different types of F&V daily ( $1.9 \pm 1.3$ ), with 85 % eating at least one. Vegetables (81 %) including leafy vegetables (57 %) were consumed more frequently than fruits (28 %). F&V Consumption varied across departments ( $p < 0.001$ ). Factors influencing consumption included area of residence, age, household size, and education, with higher education levels associated with increased fruit and vegetable intake ( $p = 0.005$ ).

These findings highlight the importance of promoting fruit and vegetable consumption, particularly neglected and underutilised species (NUS), to address micronutrient deficiencies and improve dietary quality. Strengthening food systems through targeted nutrition education and capacity building is essential to reduce malnutrition among vulnerable rural populations in Benin.

**Keywords:** Dietary Habits, fruits and vegetables consumption, malnutrition, West Africa

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