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Improving household food security; the role of neglected and underutilised (NUS) species: case study in nkawie forest district

MARY ADU-SARPONG¹, EMMANUEL ADU-SARPONG²

¹*Timber Industry Development Division (TIDD) of Forestry Commission (FC), Ghana*

²*Forestry Commission, Ghana, Forest Business Planning, Ghana*

Abstract

Sustaining food sources in Ghana is critical as the country imports basic foods costing an average of US\$2.4 billion yearly. Promoting diverse food sources from neglected and underutilised species (NUS) such as Grains of Paradise (GoP), Black Pepper (BP), Thaumatococcus, etc. is crucial. The study aimed at identifying specific NUS available in the study area, assessing Agroforestry practices used in the integration of NUS in the local landscape; and ascertaining contributions of NUS to household income. Participatory Rural Appraisal (PRA) tool together with a semi-structured questionnaire were used to elicit information. Both quantitative and qualitative data sources were employed and information obtained was triangulated using Focus Group Discussion. 147 farmers who have previously been introduced to the cultivation of NUS-based Non-Timber Forest Products (NTFPs) were used. Data were analysed using Statistical Package for Social Science (SPSS) and Excel sheets.

The result indicates that 30 % of NTFP-based NUS comprising Wild yams, GoP, BP, Thaumatococcus, tiger nuts, and agushie were available throughout the seasons. 87 % of farmers earning less than GH 100.0 (USD 26) per week during the lean season while 88 % of farmers earn GH 100.0 to 150.00 (USD 26–39) per week in harvesting/peak season.

Agroforestry models such as Trees-on-farm (83 %), crop-over-trees systems (20 %), intercropping and alley cropping (60 %), modified Taungya (90 %), cocoa smart agriculture (100 %) and other (20 %) were been practised by the smallholder farmers.

The study revealed that the availability of NUS supports household income. The explicit contributions to the smallholder farmer indicate that proper NUS attention and management could supplement the food system. The study is recommending that FC should consider setting up Business models to look into out-grower schemes to explore the business potential of the BP, GoP, and Thaumatococcus businesses to improve farmers' medium-term incomes to support MTS tree farms management.

Keywords: Food system, neglected and underutilised species, non-timber forest products