Improving Household Food Security; The Role of Neglected and Underutilize Species (NUS), Case Study in Nkawie Forest District



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Introduction

- Ghana is a net importer of basic foods, with food imports costing an average of US\$2.4 billion per year (Ghanaian Minister of Finance, 2018). Major agricultural products imported include bulk commodities (rice and wheat) and consumer-ready food products.
- With expected 50 million population growth in 2050 (Population pyramid Ghana) food need will increase. Yet, contribution of the agricultural sector to the GDP has consistently declined in recent years. (Demographic and Health Survey Ghana (2018).
- This calls for sustainable food supply options to meet demand, hence promoting the neglected and underutilized species (NUS) timely.
- NUS has been disregarded in purpose-driven landscape management and restoration schemes despite their potential nutritional, economic, and environmental benefits.

Methods

- Participatory Rural Appraisal (PRA) for data collection;
- Both quantitative and qualitative data used.
- Semi-structured questionnaire distribution
- Triangulation with Focus Group Discussion
- Sample size;
 - 147 farmers who were previously introduced to NTFPs cultivation and mostly NUS species.
 - 114 NUS farmers with a hectare plot each
 - 33 Non-NUS farmers
- An example of NUS in forest management is Grains of Paradise (GoP), Black Pepper (BP), and Thuamatin species which serve as food/supplement but have not been given adequate attention for their contribution to food security

Objectives

- To identify specific NUS available to the locality.
- To assess the Agroforestry practices used in the integration of NUS in the local landscape.
- To ascertain the seasonal contribution to the farmer's household income.

Result



- Analyzed using Statistical Package for Social Science (SPSS) and Excel sheets
- Descriptive statistics was employed to tease out the relationships between and among variables

Result

Some available NUS at the study area

















Processed Grains of Paradise food supplement



Conclusion

•. The study has manifested NUS's unrealized potential to strengthen household food security, improve biodiversity conservation, and enhance ecosystem functioning.

Result

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Household income

- Lean season: 87% of farmers earn less than GHØ 100.00 (USD 26) per week
- Harvesting season: 88% of farmers earn GHØ 100.00 to 150.00 (USD) 26-39) per week.

Recommendations

- FC should consider setting up Business models to look into Out grower schemes to explore the business potential of NUS especially BP, GoP, and Thaumatin businesses to improve farmers' medium-term incomes to support MTS management.
- Forestry Commission should consider developing strategy/Policy to regulate the development, utilization, and marketing of NFPS.
- Forestry Commission should include NTFPs integration development in concessionaires' management and planning to encourage funding and development of NTFPs at the concession level.

•Integrating NUS in Land use options could also foster climate-resilient agriculture through crop diversification and securing crops that are adaptable to the prevailing local conditions.

•These increase the prospects of NUS to improve the household incomes of the smallholder farmer.

•The study outcome is expected to feed into designing incentive programs and market integration measures in the national restoration programs

Reference

- Mitchell J., Keane J, & Coles C. (2009) Trading Up: How a Value Chain Approach Can Benefit the Rural Poor. COPLA Global: Overseas Development Institute. 111 Westminster Bridge Road, London SE1 7JD, UK,
- Ghanaian Minister of Finance, 2018
- Demographic and Health Survey Ghana (2018).

- FC should develop central nurseries in communities with high capacity building to serve as site for farmer field school. In addition, a farmer in these communities should serve as a trainer to expand the improved NTFPs propagation concepts in the adjoining communities. This will help in the specialization and incorporation of best propagation practices.
- FC should consider setting up NTFPs certification just as timber certification to help develop market and traceability of the resources to meet the emerging high-value customer's demand and investment.



