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***Thaumatococcus daniellii* — A Natural Sweetener from the Rain Forest Zone in West Africa with Potential for Income Generation in Small-Scale Farming**

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Abstract

The sweet prayers plant (*Thaumatococcus daniellii*) BENN. BENTH. is widely found in tropical rain forests of West Africa. Local uses are versatile, ranging from cultivation as fetish plant in Gabon to collecting leaves from its natural habitat for wrapping and boiling food in Ghana and Nigeria. The most exiting use of *T. daniellii*, however, is its use as sweetener or taste modifier. The aril of the fruit contains thaumatins, a mixture of extremely sweet proteins. For that reason, *T. daniellii* is traditionally used for sweetening bread and flavouring palm wine. Since the mid-90s, it is used as sweetener and flavour enhancer by the food and confectionary industry in many countries, substituting synthetic sweeteners. Presently, fruits are extracted from the natural habitat and sold to buying companies. The way how the fruits are collected, is often not sustainable. Furthermore, fruit damage leads to irregular supply which is not attractive for the food industry. Integrating *T. daniellii* in cropping systems or plantations seems to be a promising way to lessen these shortcomings, contributing to both income generation and diversification of crop production by small farmers. Knowledge on cultivation of *T. daniellii*, however, is not available. This study aimed at collecting basic information on current uses, botany, ecological requirements of *T. daniellii* and its potential for future cultivation. Therefore, interviews with key informants and a field trial were carried out in the Western Region of Ghana in 2002. The evaluation of the questionnaires improved the understanding of production conditions and contributed to identify possible production and adaptation constraints. The field experiment produced information on light requirements of *T. daniellii* for field establishment and growth during early growth stages.

Keywords: Biodiversity, Ghana, income generation, new crops, plant genetic resources, rain forest zone, sweet prayers plant