

Review

Raphia palm wine: A sustainable forest product

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Abstract

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Raphia exploitation and utilization have yielded direct and immediate micro level benefits to economically disadvantaged rural communities in Nigeria. Raphia palm wine provides income to the tappers and marketers, and a source of raw material to dry gin producers besides its other uses. There is good evidence of the ability of smallholder farmers to be competitive in products such as Raphia palm wine production. Over the years, the level of the importance of Raphia palm wine as a resource to the rural communities was not fully appreciated. In order to tackle the problem of low exploitation and neglect of the RPW, the study attempted to examine the ability of Raphia palm wine production and sales to promote the income and sustainability of rural development in Nigeria.

Keywords: Raphia, palm, wine, sustainability, exploitation, income, production and competitive.

INTRODUCTION

People are dependent upon natural resources for meeting a large number of their basic necessities of life. The type of resources and utilization patterns, however, vary by ecological zone and socio-cultural area. Forest provides a wide range of benefits at the local, national and global levels. In the developing countries, 80 percent of the people use forest products for food and personal care (Anon, 2000). In Nigeria, Okafor et al. (1994) opined that food security of rural dwellers is improved by growing trees in the home gardens and on farms. They observed that Leaves, rattan, honey, sap and gums from the small scale industries are important sources of income for the rural communities. Raphia palm plays a very significant role in many developing countries due to the greater population concentration relying directly or indirectly on it. The contribution of Raphia palm therefore, to forestry sector in particular and rural household generally in most countries is significant, though it had been undervalued in the past. There is now a growing awareness of the contributions of Raphia palm to household economies, food security, national economies and conservation of biodiversity. Raphia palm as a forest Product provides food, medicines, fibres and cash income for rural households (Okafor et al., 1994). In Philippines, rattan gathering for sale to furniture makers is a major source of

income for half the people in an area where income and food supplies are insufficient to meet basic needs (FAO, 1989). Olawoye (1996) opined that rural households spend income realized from Raphia palm products to buy food to maintain their families. This provides a supplement to the economic status in the lives of the generality of the rural dwellers. Hence, dependence upon several combined and seasonal activities is the only way to ensure household food security.

Information on the markets, market prices and consumer demand for Raphia products all reveal the extent to which Raphia palm provide both widely desired products and income-earning potential. The increasing market for Raphia palm products is due largely to urban expansion (FAO, 2001). The urban demand for these products reflects their cultural importance. Throughout the West African region, the trade of Raphia palm products involve many people at different level: producers, village collectors, wholesalers, and retailers (Ajayi, 1979). The local markets for the collection and trade of these products indicate that there is widespread demand for them and many potential income earning opportunities for local producers. These markets seem to be relatively more stable than export commodity markets and can provide a steady source of income for the many

people involved in the production, retail and wholesale trade of *Raphia* products. These include: the roots (used for stopping inflammation of swollen body parts and treatment of abdominal pains), the trunk (for construction of local houses, pulp for paper manufacture and firewood), piassava, bamboo, raffia, broom, canes, cane chairs and roofing mat (all gotten from the *Raphia* leaves), palm wine, local gin and gasoline (from the *Raphia* inflorescence), and *Raphia* fruits from which plant growth regulators, fish poison, human food, *Raphia* oil (used for cooking and producing hair dressing oil, confectionery, candle and soap) are made. Cashman (1987) noted that women contributed significantly to their household income from activities such as *Raphia* palm oil processing, palm wine trade, processing and sales of the larvae of rhinoceros beetle (edible grub), soap and candle making, palm wine processing and sales.

Palm wine is especially valued for its cultural, social, and ritualistic properties (Janice, 2007). For instance, *Raphia* palm wine plays vital roles in many ceremonies in southern Nigeria. Guests at weddings, birth celebrations and funerals wakes are served with generous quantities of *Raphia* palm wine. As a token of regard and respect to the dead ancestors, many drinkers session in southern Nigeria begin with a small amount of palm wine spilled on the ground as a libation to appease the gods and dead ancestors. Apart from its high nutritive value (Jeffrey, 1978 and Janice, 2007), *Raphia* palm wine exhibits a wide range of biological and pharmacological characteristics such as anti-inflammatory, diuretic, laxative, antispasmodics, anti-hypertensive and anti-microbial. These characteristics are performed due to the chemical constituents comprising sugar, lipids, proteins, vitamins, minerals and phytochemicals. Akachuku (2001), Akinrele (1976) and Okwu and Fred (2008) also agreed that *Raphia* palm wine has medicinal values. They informed that it is rich in ascorbic acid especially when freshly tapped from the tree as well as has the ability to cure ailments such as measles, gout, high blood pressure and impotence. *Raphia* palm wine is probably the most diversely useful forest plant product of Nigeria (Okereke 1983; Akachuku 2001; Okwu and Fred, 2008). In Nigeria, Okafor (1980) and Okereke (1983) estimated that per capita income from *Raphia* palm wine trade equalled or exceeded Nigeria's per capital income, with production estimates of two million metric tonnes of palm wine reported in 1969. In Cameroon, *Raphia* palm wine provided employment for three quarters of the male population in some villages and monthly income of 20, 000-35, 000 CFA France (US\$71-124) for small producers (Falconer (1990); Perez, Ndoeye and Eyebe (1990). The World Health Organization refers to it as a traditional alcoholic beverage widely consumed by about two million people worldwide (WHO, 2004). The demand for palm wine in industrialized countries continues to increase and a significant proportion of this is met from developing countries (Olabiya et al., 2008). This is a good

evidence of the ability of smallholder farmers to be competitive in forest products. That is, opportunity exists in the production, processing and supply of this speciality product.

Furthermore, due to increase in population level, less agricultural land is available and ever growing number of people is turning to forest products to supplement their income. Trees and other products are being removed from the forest faster than they can grow thus, leading to a diminishing source of raw materials, soil erosion, reduction in agricultural yields and imbalance in the microclimate and resource depletion, which is the end-product of forest mismanagement. There is now a growing awareness of the contributions of *Raphia* palm to household economies, food security, national economies and conservation of biodiversity. (Okafor et al., 1994). In the developing countries, such as Nigeria, 80 percent of the people use forest products for food and personal care (Anon, 2000). In Nigeria, food security of rural dwellers is improved by growing *Raphia* palm trees amongst others in the home gardens and on farms. Leaves, rattan, palm wine, cane furniture from the small scale industries are important sources of income (Okafor et al., 1994). Most *Raphia* palm Products are sold locally or in regional markets (Anon, 2000; Mann and Wendl, 2009). In Cameroon, according to Anon (2000), sales of *Raphia* palm products were worth several million Euros and go beyond local market as market stalls in Douala and Yaounde are full of its products. The Thrust of this paper is to examine the contributions of *Raphia* palm wine as a sustainable forest product that contributes to Household Food Security and income in Nigeria.

Raphia Wine Production/Tapping

Palm wine tapping is a traditional occupation of many farmers living in the coastal region of West Africa, particularly in the Niger Delta region of the country (Ndom, 2003). Palm wine tapping has been practised for centuries in these regions and has been handed down from one generation to another. The *Raphia* palm is ready for tapping at the stage when the spear leaves become shorter and fan-like, indicating the initiation stage of the auxiliary inflorescence (Herrington, 1979; Otedoh, 1985; Turley, 1995 and Mann and Wendl, 2009). The tapper must be able to judge when the palm has reached this crucial stage for a successful tapping process. Tapping for wine is done twice a day, usually in the mornings and evenings. The yield of sap and the durations of tapping vary between and within species, from half a litre to seventy litres or more per day for a few months to four months after which the palm dies (Otedoh, 1978; Mann and Wendl, 2009). From a survey of farmers who engaged in *Raphia* wine tapping in Benin City, Adakaren and Eneh (2001) observed that a tree yielded an average of 10 litres of palm wine at each tapping

session or 20litres of palm wine daily, for an average of three months. From the above, a hectare of 245 cultivated *Raphia* palms could yield about 4900 litres of palm wine a day. That is, in 90 days (three months) of tapping, a hectare of *Raphia* palms will yield about 441,000 litres of palm wine. With this production figure, a farmer can improve his monthly income to ₦29, 400, 000 given that the present price of a litre of palm wine is 200 Naira per litre. The above figure seems very high, but Akinrele (1976) confirmed that the *Raphia* palm produces in excess of ten times as much as the oil palm (*Elaeis guineensis*). Other studies have also concurred to the high productivity of the *Raphia* palm sap production. Of interest is the record of Mann and Wendl (2009) of a yield of 870litres from a single *Raphia* tree in two months period from cutting to death. Thus, palm wine tapping is a business that can alleviate the poverty of rural farmers as well as provide employment to teeming number of rural dwellers. This is because palm wine is used virtually as food chiefly in regions where they are produced (Anon, 2000; Ndom, 2003). They are also inexpensive compared to fine wines (WHO 2004).

CONCLUSION

In summary, Forests and farm trees make significant direct contributions to food security of the rural population providing a vast array of food which supply essential nutrients especially at times when other food sources are unavailable (Olawoye, 1996). Palm wine as a beverages is an essential part of human diet because of its liquid content that is palatable and refreshing (Adakaren, 2014). The contributions of *Raphia* palm wine cannot be over emphasised when considering the roles it play in the nutrition, social, cultural and religious activities in Nigeria and West Africa. Historically, mankind has depended on non-wood resources for meeting basic needs of subsistence and trade (FAO, 1992). Although it is not clear when palm wine was first traded in West Africa, but Jones (1983) citing Dapper (1968) indicated that palm wine was an important product in the domestic economy of coastal Sierra Leone by the middle of the 17th century. Markets for palm wine on the Freetown Peninsula have existed at least since the 19th century with trade continuing during the recent civil war in Sierra Leone (1991-2001). Thousands of tonnes of *Raphia* palm wine are produced and traded yearly in Nigeria but the trades are not documented. Studies have also shown that *Raphia* palm wine trade is a lucrative business that has the capacity to alleviate poverty and improve on the financial and social wellbeing of rural dwellers.

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