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Potentials of Traditional African Oil Trees for Improving Food Security

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Abstract

Food oil of good quality is important for health and food security. Women in rural Africa traditionally extract oil from the seeds of numerous native trees, but the potentials are far from fully realised. During two projects, QUALITREE and TREEFOOD, we investigated ethnobotanical knowledge in Mali and Burkina Faso, analysed physiochemical properties of oils from over 30 different native tree species and made a complete literature review of native tree oils from West Africa. Local knowledge about oil production is often good, but in most cases confined to smaller local areas or specific ethnic groups. Screening of oils from native species revealed very good potentials for ameliorated use and production. Examples of highly interesting species are *Adansonia digitata*, *Afzelia africana, Balanites aegyptiaca, Carapa procera*, *Khaya senegalensis*, *Lannea microcarpa, Lophira lanceolata* and *Pentadesma butyracea*. The literature review showed that a few species (mainly *Elaeis guineensis* and *Vitellaria paradoxa*) are highly investigated, but for most species, there are few good data about oil properties and ethnobotanical potential. Many published oil analyses from the region are covered with great uncertainty or are directly faulty. There is an extraordinary potential for improving health, food security and economic development in poor communities via increased and improved oil production. Marketing interests of oil includes both local and international markets. However, in many cases tree planting or nature protection in collaboration with local communities are needed to ensure sufficient and continuous oil supplies. Such activities can improve the local biodiversity as an additional advantage of oil production.

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