PLANT FACT SHEET

Canarium schweinfurthii Engl.

GENUS *Canarium* **FAMILY** Burseraceae

COMMON NAMES Incense tree, African canarium, African elemi

EDIBLE PARTS AND USES

Edible parts: Nuts, Seed, fruit, Seeds - oil

The fruit is eaten after being lightly boiled and sprinkled with a little salt. They are left to soak for 2-3 days to soften. It is also roasted or fried.
The seeds are sometimes eaten cooked.
The seeds are a source of oil used as a substitute for shea butter.

DESCRIPTION

A tall tree. It grows 30-45 m tall. It loses its leaves during the year. The trunk is often straight and without branches for 30 m. The bark is grey and rough. It flakes off in pieces 30 cm by 10 cm. The crown of the tree is flat and with many branches. In young trees the branches are in rings at right angles to the trunk and curved upwards. The young branches have red-brown hairs. Roots above the ground can spread for 10 m. When the bark is cut the resin smells of incense. The leaves are compound and up to 50 cm long. The leaf stalk is 5 cm long and flattened on the top surface. There are 8-12 or more pairs of leaflets and one leaflet at the end. These are 15 cm long by 4 cm wide. They are elongated and the tip is pointed. The flowers occur in dense branched flower sprays. These can be 30 cm long. The flowers have 3 petals. The flower stalks have red brown hairs. The fruit is purplish and 4 cm by 2 cm. It is soft and smooth. The shell of the seed is long and triangular shaped. It splits evenly to release 3 seeds.

HABITAT

It is a tropical plant. It grows in the lowlands. It grows in forest and along the edges of rivers. It grows from sea level to 1,000 m above sea level. It grows in areas with rainfall of 900-1,400 mm per year.

PRODUCTION

Cultivation

Trees are grown from seeds. Many grow naturally. For collecting seeds, the fruit which fall and collected and the fleshy layer rotted off then the hard seed cases collected. These are put in hot water which is allowed to cool and soak for 24 hours. They are then sown directly where they are to grow. Seed can be stored for a long time. Plants can be budded.

Harvesting and Seed Production

Plants are slow growing. Fruit production is seasonal. In Tanzania fruiting occurs between August and December. The dry inner stone can be stored to 2 years. Fruit are collected after they fall or by climbing and shaking the tree.

NOTES

There are 80-95 Canarium species.

REFERENCES

Abbiw, D.K., 1990, Useful Plants of Ghana. West African uses of wild and cultivated plants. Intermediate Technology Publications and the Royal Botanic Gardens, Kew. p 46

Abayeh, O. J., Abdulrazaq, A. K., Olaogun, R.. 1999, Quality characteristics of Canarium schweinfurthii Engl. Oil. Plant Foods Human Nutrition 54(1), pp. 43-47.

Agbo, N.G., Kouamé, C.O. and Simard, R.E., 1992, Canarium schweinfurthii Engl. Chemical composition of the fruit pulp, Journal of the American Oil Chemist' Society. 69 (4): pp. 317-319.

Agea, J. G., et al 2011, Wild and Semi-wild Food Plants of Bunyoro-Kitara Kingdom of Uganda: etc. Environmental Research Journal 5(2) 74-86

Awodoyin, R.O., Olubode, O.S., Ogbu, J.U., Balogun, R.B., Nwawuisi, J.U. and Orji, K.O., 2015, Indigenous Fruit Trees of Tropical Africa: Status, Opportunity for Development and Biodiversity Management. Agricultural Sciences, 6, 31-41

Bircher, A. G. & Bircher, W. H., 2000, Encyclopedia of Fruit Trees and Edible Flowering Plants in Egypt and the Subtropics. AUC Press. p 79

Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 1. Kew.

Busson, 1965,

Chapman, J. D. & Chapman, H. M., 2001, The Forest Flora of Taraba and Andamawa States, Nigeria. WWF & University of Canterbury. p 169

Codjia, J. T. C., et al, 2003, Diversity and local valorisation of vegetal edible products in Benin. Cahiers Agricultures 12:1-12

Dalziel, J. M., 1937, The Useful plants of west tropical Africa. Crown Agents for the Colonies London.

Danforth, R.M., & Boren, P.D., 1997, Congo Native fruits. Twenty-five of the best. Privately published. p17

A. L. P. P. de Candolle & A. C. de Candolle, Monogr. phan. 4:145. 1883

Dongmo, P.M.J., Tchoumbougnang, F., Ndongson, B., Agwanande, W., Sandjon, B., Zollo, P.H.A and Menut, C., 2010, Chemical characterization, antiradical, antioxidant and anti-inflammatory potential of the essential oils of Canarium schweinfurthii and Aucoumea klaineana (Burseraceae) growing in Cameroon. Agric. Biol. J. N. Am 1(4): pp. 606-610

Ekoh, U. P. (2009): Nutritional, Anti-nutritional and Physio-chemical Composition of African Elemi Pulp, p.40.

Eromosele, L. C., Ida, M., and Eromosele, C. O., 2001, Nutritional evaluation of Canarium schweinfurthii Engl. Seeds. Journal of Tropical Agriculture 39, p. 193

Exell, A.W. et al, (Ed), 1963, Flora Zambesiaca Vol 2 Part 1 Crown Agents, London. p 283

Facciola, S., 1998, Cornucopia 2: a Source Book of Edible Plants. Kampong Publications, p 62

FAO, 1995, Edible Nuts. Non Wood Forest Products 5.

Focho, D. A., et al, 2009, Ethnobotanical survey of Trees in Fundong, Northwest Region, Cameroon. Journal of Ethnobiology and Ethnomedicine, 5:17

Fongnzossie Fedoung, E., et al, 2020, Wild edible plants and mushrooms of the Bamenda Highlands in Cameroon: ethnobotanical assessment and potentials for enhancing food security. Journal of Ethnobiology and Ethnomedicine 16:12

Food Composition Tables for use in Africa FAO http://www.fao.org/infoods/directory No. 1000

Fowler, D. G., 2007, Zambian Plants: Their Vernacular Names and Uses. Kew. p 15

Godfrey, J. et al, 2013, Harvesting, preparationand preservation of commonly consumed wild and semi-wild food plants in Bunyoro-Kitara Kingdom, Uganda. Int. J. Med. Arom. Plants. Vol.3 No.2 pp 262-282

Gohre, A., et al, 2016, Plants from disturbed savannah vegetation and their usage by Bakongo tribes in Uíge, Northern Angola. Journal of Ethnobiology and Ethnomedicine (2016) 12:42

Goode, P., 1989, Edible Plants of Uganda. FAO p 27

Hahn, K., et al, 2018, The use of wild plants for food: a national scale analysis for Burkina Faso (West Africa). FVSS FoodPlants Supplement

Hart. T. B. and Hart, J. A., 1986, The Ecological Basis of Hunter-Gatherer Subsistence in African Rain Forests: The Mbuti of eastern Zaire. Human Ecology. Vol. 14, No. 1. pp 29-55

Hoare A. L., 2007, The Use of Non-timber Forest Products in the Congo Basin. Constraints and Opportunities. Rainforest Foundation. p 39

Jardin, C., 1970, List of Foods Used In Africa, FAO Nutrition Information Document Series No 2.p 32, 123

Katende, A.B., Birnie, A & Tengnas B., 1995, Useful Trees and Shrubs for Uganda. Identification, Propagation and Management for Agricultural and Pastoral Communities. Technical handbook No 10. Regional Soil Conservation Unit, Nairobi, Kenya. p 154

Keay, R.W.J., 1989, Trees of Nigeria. Clarendon Press, Oxford. p 335

Koudou J., Abena A. A., Ngaissona P, and Bessière J. M., 2005, Chemical composition and pharmacological activity of essential oil of Canarium schweinfurthii Fitoterapia 76: pp. 700-702.

Kuhnlein, H. V., et al, 2009, Indigenous Peoples' food systems. FAO Rome p 261

Kunkel, G., Plants for Human Consumption.

Kunkel, G., 1965, The Trees of Liberia. German Forestry Mission Report No. 3 p 62

Latham, P., 2004, Useful Plants of Bas-Congo province. Salvation Army & DFID p 65

Lautenschläger, T., et al, 2018, First large-scale ethnobotanical survey in the province of Uíge, northern Angola. Journal of Ethnobiology and Ethnomedicine (2018) 14:51

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