PLANT FACT SHEET

Vitellaria paradoxa C. F. Gaertn.

GENUS *Vitellaria* **FAMILY** Sapotaceae

COMMON NAMES Karite-nut, Shea, Shea-buttertree

EDIBLE PARTS AND USES

Edible parts: Fruit, Flowers, Nuts, Seeds, Seeds - oil, Vegetable

The very ripe fruit pulp is eaten raw when very ripe or is lightly cooked after removing the seed.
The roasted kernels are pounded and then ground to give an oily shea butter paste. This must be boiled then the oil skimmed off along with the impurities. Purified shea butter is edible and used in cooking. The fat is used in margarine.

DESCRIPTION

A deciduous tree. A compact tree which loses its leaves during the year. It grows to 15-25 m tall and has a spreading crown. The trunk is short and stout and can be 2 m across. The bark is corky. The bark is dark with cracks making it look like a crocodile skin. White latex come out when the bark is cut. The branches bend backwards almost to the ground when the leaves are wet. The leaves are oblong with wavy edges and clustered at the ends of branches. They are leathery and shiny. They are 10-25 cm long and 5-8 cm wide. The leaves are reddish when young. The flowers have both sexes and are produced in the dry season before the leaves. The flowers are white and clustered at the ends of shoots. They are about 1 cm long. They have a sweet smell. These are produced during the dry season when the tree has no leaves. The fruit are a flattened round shape and 4-5 cm across. The fruit stalk is 1-3 cm long. The fleshy layer is about 1 mm thick. When the fruit is green is exudes latex and the fruit turns brown when ripe. There can be one or up to 4 seeds which are shiny brown. The seeds have a white scar down the side. They have a white kernel and a fragile husk.

HABITAT

A tropical plant. It grows in the hot tropical lowland in areas with a low rainfall. It is common in drier parts of equatorial Africa. It occurs in savannah with a shallow water-table. It is most often between 500 and 1,000 m altitude. It grows in areas with an annual rainfall of 600-1,000 mm and a marked dry season of 6-8 months. It suits places with average temperatures of 24-30°C but can stand extremes of 21°C and 36°C. The minimum temperature should not be below 21°C and the maximum of 36°C. It does best on dry alluvial sandy soils which are rich in humus. It cannot tolerate areas which flood. It can re-grow after fire. It can grow in arid places. It occurs between latitudes 0-15°N. Mostly it grows between 500-1,000 m altitude.

PRODUCTION

Cultivation

Plants grow naturally in several areas in Africa. Plants are grown from seed. Seed germinates easily. Seeds produce a long tap root which makes transplanting difficult. It is best therefore to plant seeds where they are to grow. Fresh seed are sown 5 cm deep. Young plants cannot tolerate weeds or fire. A spacing of 8 m apart is suitable. 30-50 trees per hectare is a good final spacing. Fruit are harvested from the ground as soon as the fruit falls. The fleshy pulp rots and splits to expose the nut. Burying the fruit in a shallow pit for a few days quickens this process. The nuts are then dried for about 12 days in the sun.

Harvesting and Seed Production

Seedlings are slow growing at first but then slow growing. Trees start producing fruit are 12-15 years and take 30 years to mature. Yields of 15-20 kg of fruit per tree are average. Trees often only produce every second or third year. The fruit takes 4-6 months to ripen. About 50 kg of fresh nuts will give 12-20 kg of dry kernels which are required to yield 4 kg of shea butter. The fruit is collected as it falls. 15-20 kg of fresh fruit can be harvested from a tree. Higher yields are possible.

REFERENCES

Alyegba, S. S. et al, 2013, Ethnobotanical Survey of Edible Wild Plants in Tiv Communities of Benue State, Nigeria. Journal of Natural Sciences Research. Vol.3, No.7

Ambe, G., 2001, Les fruits sauvages comestibles des savanes guinéennes de Côte-d'Ivoire : état de la connaissance par une population locale, les Malinké. Biotechnol. Agron. Soc. Environ. 5(1), 43-48

Aniama, S. O., et al, 2016, Ethnobotanical documentaton of some plants among Igala people of Kogi State (Nigeria). The International Journal Of Engineering And Science (IJES). 5(4) pp 33-42

Asase, A. & Oteng-Yeboah, A. A., 2012, Plants used in Wechiau Community Hippotamus Sanctuary in Northwest Ghana. Ethnobotany research & Applications 10:605-618

Assogbadjo, A. E. et al, 2013, Specific Richness and Cultural Importance of Wild Edible Trees in Benin. Acta Hort. 979, ISHS 2013

Atato, A., et al, 2010, Diversity of Edible Wild Fruit Tree Species of Togo. Global Science Books.

Atato, A.,et al, 2011, Edible Wild Fruit Highly Consumed during Food Shortage Period in Togo: State of Knowledge and Conservation Status. Journal of Life Sciences 5 (2011) 1046-1057

Awas, T., 1997, A Study on the Ecology and Ethnobotany of Non-cultivated Food Plants and Wild Relatives of Cultivated crops in Gambella Region, Southwestern Ethiopia. Addis Ababa University. p 66 (As Butyrospermum paradoxum)

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

Batawila, K., et al, 2007, Diversite et gestion des legumes de cueillete au Togo. African Journal of Food, Agriculture, Nutrition and Development 7(3& 4): 68

Belem, B., et al, 2007, Use of Non Wood Forest Products by local people bordering the "Parc National Kaboré Tambi", Burkina Faso. The Journal of Transdisciplinary Environmental Studies vol. 6, no. 1 p 9

Belem, M., et al, 2017, Strategy of Conservation and Protection of Wild Edible Plants Diversity in Burkina Faso. ANADOLU 27 (2) 2017, 82-90

Bernholt, H. et al, 2009, Plant species richness and diversity in urban and peri-urban gardens of Niamey, Niger. Agroforestry Systems 77:159-179

Bircher, A. G. & Bircher, W. H., 2000, Encyclopedia of Fruit Trees and Edible Flowering Plants in Egypt and the Subtropics. AUC Press. p 70 (As Butyrospermum paradoxum subsp. parkii)

Bonou, A., et al, 2013, Valeur economique des Produits Forestiers Non Ligneux (PFNL) au Benin. Editions Universitaires Europeennes p 85

Brouk, B., 1975, Plants Consumed by Man. Academic Press, London. p 240 (As Butyrospermum paradoxum subsp. parkii)

Burkill, I.H., 1966, A Dictionary of the Economic Products of the Malay Peninsula. Ministry of Agriculture and Cooperatives, Kuala Lumpur, Malaysia. Vol 1 (A-H) p 388 (As Butyrospermum parkii)

Burkill, H. M., 1985, The useful plants of west tropical Africa, Vol. 5. Kew.

Busson, 1965,

Chapman, J. D. & Chapman, H. M., 2001, The Forest Flora of Taraba and Andamawa States, Nigeria. WWF & University of Canterbury. p 203

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.

Diarra, N. et al, 2016, Etude ethnobotanique des plantes alimentaires utilisées en période de soudure
dans les régions Sud du Mali. Int. J. Biol. Chem. Sci. 10(1): 184-197

Facciola, S., 1998, Cornucopia 2: a Source Book of Edible Plants. Kampong Publications, p 226 (As Butyrospermum paradoxum subsp. parkii)

FAO, 1988, Traditional Food Plants, FAO Food and Nutrition Paper 42. FAO Rome p 125 (As Butyrospermum paradoxum subsp. parkii)

Flowerdew, B., 2000, Complete Fruit Book. Kyle Cathie Ltd., London. p 245 (As Butyrospermum paradoxum subsp. parkii)

Food Composition Tables for use in Africa FAO http://www.fao.org/infoods/directory No. 1029 (As Butyrospermum paradoxum subsp. parkii)

Gaisberger, H., et al, 2017, Spatially explicit multi-threat assessment of food tree species in Burkina Faso: A fine-scale approach. PLoS ONE 12 (9): e0184457

Gallagher, D. E., 2010, Farming beyond the escarpment: Society, Environment, and Mobility in Precolonial Southeastern Burkina Faso. PhD University of Michigan.

Garba, A., Useful Plants in the Chad region of North-East Nigeria. p 116 (As Butyrospermum paradoxum)

Gilbert, T., et al, 2017, Diversity and local transformation of indigenous edible fruits in sahelian domain of Cameroon. Journal of Animal & Plant Sciences Vol. 26 (2): 5289-5300

Glew, R. H., et al, 1997, Amino Acid, Fatty Avid and Mineral Composition of 24 Indigenous Plants of Burkina Faso. Journal of Food Composition and Analysis 10, 205-217 (As Butyrospermum paradoxum)

Goode, P., 1989, Edible Plants of Uganda. FAO p 30 (As Butyrospermum paradoxum)

Goode, P., 1989, Edible Plants of Uganda. FAO p 37

Goode, P., 1989, Edible Plants of Uganda. FAO p 40

Full reference list (59 more) at https://www.echocommunity.org/en/resources/ed78dbce-d983-478c-9854-3f61fda51c1c

PROVIDED BY **Food Plants International**

French, B.R. & Maynard, A.R. Food Plants International Database. Food Plants International

LICENCE CC BY-NC-SA 3.0

ONLINE FACT SHEET https://www.echocommunity.org/en/resources/ed78dbce-d983-478c-9854-3f61fda51c1c