

# Marula Literature

**Southern African Marula Oil Producers' Network - SAMOPN**  
**Representing Producers in Botswana, Namibia, South Africa and Zimbabwe**  
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Aganga, A.A., Mosase, K.W., 2001. Tannin content, nutritive value and dry matter digestibility of <i>Lonchocarpus capassa</i> , <i>Zizyphus mucronata</i> , <i>Sclerocarya birrea</i> , <i>Kirkia acuminata</i> and <i>Rhus lancea</i> seeds. <i>Animal Feed Science and Technology</i> 91 (2001): 107-113.
Anderson, D.M.W., Bell, P.C., Gill, M.C.L., McDougall, F.J. and McNab, C.G.A. 1986. The Gum Exudates from <i>Chloroxylon swietenia</i> , <i>Sclerocarya caffra</i> , <i>Azadirachta indica</i> and <i>Moringa oleifera</i> . <i>Phytochemistry</i> , Vol. 25, No. 1, 247-249.
Arnold, T.H., Wells, M.J. & Wehmeyer, A.S. 1985. Khoisan food plants: taxa with potential for future economic exploitation. In: <i>Plants for arid lands</i> . Ed. Wickens, G.E., Goodin, J.R., & Field, D.V. Presented at International Conference on Economic Plants for Arid Lands, 23-27 July, 1984, Royal Botanical Gardens, Kew.
Ballschmeiter, H.M.B. & Torline, P. 1973. Marula has distinct commercial appeal. <i>Food Industries of South Africa</i> , September.
Belemtougri, R.G., Constantin, B., Cognard, C., Raymond, G., Sawadogo, L., 2001. Effects of <i>Sclerocarya birrea</i> (A. rich) hochst ( <i>anacardiaceae</i> ) leaf extracts on calcium signalling in cultured rat skeletal muscle cells. <i>Journal of Ethnopharmacology</i> 76 (2001) 247-252.
Bonifacio, E., Santonio, S., Zanini, E., 2000. Soil properties required by some Southern Africa fruit trees as assessed by discriminant analysis. <i>Arid Soil Research and Rehabilitation</i> , 14: 253-263, 2000.
Botelle, A. (In preparation for 2001.) A History of Marula Use in North-central Namibia. Eudafano Women's Co-operative Ltd. and CRIAA SA-DC.
Burger, A.E.C., de Villiers, J.B.M., & du Plessis, L.M. 1987. Composition of the kernel oil and protein of the marula seed. <i>South African Journal of Science</i> , Vol. 83 November / December, 733 - 735.
Campbell, A., 1986. The use of wild food plants, and drought in Botswana. <i>Journal of Arid Environments</i> 11: 81-91.
Carr, W.R. 1957. Notes on Some Southern Rhodesian Indigenous Fruits, With Particular Reference to Their Ascorbic Acid Content. <i>Food Research</i> , 22: 590 – 596.
Cherfas, J., 1989. Nuts to the desert. <i>New Scientist</i> , 19 August 1989: 44-47.
Chivero, E.T., Mutukumira, A.N., Zvauya R., 2001. Partial purification and characterisation of a xylanase enzyme produced by a micro-organism isolated from selected indigenous fruits of Zimbabwe. <i>Food Chemistry</i> 72 (2001) 179-185.
Connock, A. & E., (Perfumery & Costmetics) Ltd. Material Safety Data Sheet for Sweet Almond Oil properties. CRIAA SA-DC and Leatherhead Food Research Association (LFRA). (In preparation). Properties of Marula Oil.
CRIAA SA-DC, Namibia. 1997 – 2001. Trial Marula Oil Production (TMOP) Project, Namibia. Unpublished data.
Dzerefos, C.M., Witkowski, E.T.F., Shackleton, C.M., 1998. Seedling survival, post-harvest recovery and growth rates of the woodrose-producing mistletoe <i>Erianthemum dregei</i> (Loranthaceae) on <i>Sclerocarya birrea</i> . <i>S. Afr. J. Bot.</i> 64(5): 303-307. (Abstract only)
Eloff, J.N., 2001. Antibacterial activity of Marula ( <i>Sclerocarya birrea</i> ) (A. rich.) (Hochst. Subsp. <i>caffra</i> (Sond.) Kokwaro) ( <i>Anacardiaceae</i> ) bark and leaves. <i>Journal of Ethnopharmacology</i> 76 (2001) 305-308.
Engelger, C. & Wehmeyer, A.S. 1970. Fatty Acid Composition of Oils of Some Seeds of Wild Plants. <i>Journal of Agriculture and Food Chemistry</i> , Vol. 18, No. 1 (Jan / Feb).
Eromosele, I.C. & Eromosele, C.O. & Kuzhkuzha, D.M. 1991. Evaluation of mineral elements and ascorbic acid contents in fruits of some wild plants. <i>Plant Foods for Human Nutrition</i> , 41, 151-154. (Also mentions baobab, duplicate copy filed in Baobab Literature file.)
Eromosele, I.C. & Eromosele, C.O. 1993. Studies on the chemical composition and physico-chemical properties of seeds of some wild plants. <i>Plant Foods for Human Nutrition</i> , 43, 251–258.
Fatope, M.O., Ibrahim, H. and Takeda, Y. 1993. Screening of Higher Plants Reputed as Pesticides Using the Brine Shrimp Lethality Assay. <i>International Journal of Pharmacognosy</i> , 31:4, 250-254.
Fox, F.W. & Norwood Young, M.E. 1982. Food from the veld. South African Institute for Medical Research, Johannesburg.
Gadaga, T.H., Mutukumira, A.N., Narvus, J.A., Feresu, S.B., 1999. A review of traditional fermented foods and beverages of Zimbabwe. <i>International Journal of Food Microbiology</i> 53: 1-11.
Galvez Peralta, J., Zarzuelo, A., Busson, R., Cobbaert, C., de Witte, P., 1992. (–)-Epicatchin-3-galloyl ester: A secretagogue compound from the bark of <i>Sclerocarya birrea</i> . <i>Planta Medica</i> 58: 174-175.
Galvez, J., Crespo, M.E., Zarzuelo, A., de Witte, P. & Spiessens, C. 1993. Pharmacological Activity of a Procyanidin Isolated from <i>Sclerocarya birrea</i> Bark: Antidiarrhoeal Activity on Isolated Guinea-pig Ileum. <i>Phytotherapy Research</i> , Vol 7, 25-28.

## Marula Literature

Galvez, J., Zarzuelo, A., Crespo, M.E., Utrilla, M.P., Jiménez, J., Spiessens, C & de Witte, P. 1991. Antidiarrhoeic Activity of <i>Sclerocarya birrea</i> Extract and its Active Tannin Constituents in Rats. <i>Phytotherapy Research</i> , Vol. 5, 276–278.
Glew, R.H., VanderJagt, D.J., Lockett, C., Grivetti, L.E., Smith, G.C., Pastuszyn, A. and Millson, M. 1997. Amino Acid, Fatty Acid, and Mineral Composition of 24 Indigenous Plants of Burkina Faso. <i>Journal of Food Composition and Analysis</i> , 10, 205 – 217.
Gous, F., Weinert, I. A. G. & van Wyk, P. J. 1988. Selection and Processing of Marula Fruit ( <i>Sclerocarya birrea</i> subsp. <i>caffra</i> ). <i>Lebensm. - Wiss. u. - Technol.</i> , No. 21, 259 - 266.
Gumbo, D.J., Mukamuri, B.B., Muzondo, M.I., Scoones, I.C., 1990. Indigenous and exotic fruit trees: Why do people want to grow them? <i>Agroforestry for Sustainable Production: Economic Implications</i> . Commonwealth Science Council, Commonwealth Secretariat, 1990. F554. (Also mentions Baobab)
Gutman, F., Nerd, A., Mizrahi, Y., Bar-Zvi, D., Raveh, D., 1999. Application of random amplified polymorphic DNA markers for identification of marula genotypes. <i>HortScience</i> 34(7), December 1999: 12561258.
Holtzhausen, L.C., Swart, E., van Rensburg, R., 1990. Propagation of the marula ( <i>Sclerocarya birrea</i> Subsp. <i>caffra</i> ). <i>Acta Horticulturae</i> 275, Tropical and Subtropical Fruits: 323-329.
Houghton, C. 1999. <i>New Natural Oils and their Properties</i> . Anglia Oils Ltd. – Bulk Speciality Division.
Hutchings, A., Haxton Scott, A., Lewis, G. and Cunningham, A. 1996. <i>Zulu Medicinal Plants. An Inventory</i> . University of Natal Press, Pietermaritzburg in association with University of Zululand, Kwblangezwa and National Botanical Institute, Cape Town.
Jaenicke H., Thiong'o, M.K., 1999. Preliminary nutritional analysis of marula ( <i>Sclerocarya birrea</i> ) fruits from two Kenyan provenances. <i>Proceedings of the 2<sup>nd</sup> ISHS Conference on Fruit Production in the Tropics and subtropics</i> , Boon-Rottgen, Germany, 24-26 June 1999. <i>Acta Horticulturae</i> 2000, no 531, 245-249.
Junod, H.A. 1927 (2 <sup>nd</sup> Edition). <i>The life of a South African tribe</i> . Vol. 1 and 2. Attinger Freres, Neuchatel.
Krige, E.J. 1937. Note on the Phalaborwa and their morula complex. <i>Bantu Studies</i> , 11: 357 – 366.
Kubo, I. & Kinst-Hori, I. 1999. 2-Hydroxy-4-methoxybenzaldehyde: A Potent Tyrosinase Inhibitor from African Medicinal Plants. <i>Planta Medica</i> , 65, 19-22.
Leakey, R.R.B. 1999. Potential for novel food products from agroforestry trees: a review. <i>Food Chemistry</i> , 66, 1-14.
Lombard, C. 1997. Report on the Trial Marula Oil Production (TMOP) Project - 1st Phase Feasibility Study, August 1996 to March 1997, CRIAA SA - DC (Namibia), 9 April 1997.
Lombard, C., 1996. Women strike oil, but no riches yet. <i>Sister (Namibia)</i> 8(2), May-June 1996: 12-13.
Mhlongo, B.L. 1997. Development of must preparation procedures for commercial production of marula drinks. BSc Thesis, University of Swaziland, Luyengo.
Nerd, A., Aronson, J.A., Mizrahi, Y., 1994. Introduction and domestication of rare and wild fruit and nut trees for desert areas. <i>Yearbook – West Australian Nut and Tree Crops Association</i> , Vol 18: 42-53.
Ogbobe, O. 1992. Physico-chemical composition and characteristics of the seed and seed oil of <i>Sclerocarya birrea</i> . <i>Plant Foods for Human Nutrition</i> , 42, 201 – 206.
Palmer, E. & Pitman, N. 1972 – 1974. <i>Trees of southern Africa</i> . Balkema, Cape Town.
Pretorius, V., Rohwer, E., Rapp, A., Holtzhausen, L. C. & Mandery, H. 1985. Volatile Flavour Components of Marula Juice. <i>Z. Lebensm. Unter. - Forsch.</i> No. 181, 458 - 461.
Quin, P.J. 1959. Foods and feeding habits of the Pedi. Chapter VI – Edible wild fruits of the Pedi: 81-92, Witwatersrand University Press, Johannesburg.
Rodin, R. J. 1985. The Ethnobotany of the Kwanyama Ovambos. <i>Monographs in Systematik Botany</i> , Missouri Botanical Garden, Vol. 9, 36, 37 & 49.
Rügheimer, S. (In preparation for 2001) Marula Oil. M.Sc. Thesis. University of Namibia and Stellenbosch University.
Schäfer, G. & McGill, A. E. J. 1986. Flavour Profiling of Juice of the Marula ( <i>Sclerocarya birrea</i> subsp. <i>caffra</i> ) as an Index for Cultivar Selection. <i>Acta Horticulturae</i> 194, 215 - 222.
Shumba, E.M., Mushaka, A., Muchichwa, J., 1998. A survey of tree planting practices in the smallholder farming sector of Zimbabwe. <i>Southern African Forestry Journal</i> , no 182, July 1998: 67-74.
Smith, G.C., Clegg, M.S., Keen, C.L & Grivetti, L.E. 1996. Mineral values of selected plant foods common to southern Burkina Faso and to Niamey, Niger, West Africa. <i>International Journal of Food Science and Nutrition</i> , 47: 41-53.
Taylor, F.W. 1985. The potential for the commercialisation of indigenous plants in Botswana. In: <i>Plants for arid lands</i> . Ed. Wickens, G.E., Goodin, J.R., & Field, D.V. Presented at International Conference on Economic Plants for Arid Lands, 23-27 July, 1984, Royal Botanical Gardens, Kew.
Trovato, A., Kirjavainen, S., Galati, E.M. and Forestieri, A.M. 1995. Effects of <i>Sclerocarya birrea</i> Hochst. Extract on Some Metabolic Activities in the Rat. <i>Phytotherapy Research</i> , Vol 9, 591 – 593.
Von Teichman, I., 1982. Notes on the Distribution, Morphology, Importance and Uses of the Indigenous Anacardiaceae: 1. The Distribution and Morphology of <i>Sclerocarya birrea</i> (the Marula). <i>Trees in South Africa</i> , Oct.-Dec., 35-41.

## Marula Literature

Von Teichman, I., 1988. Notes on the ontogeny and structure of seed-coat of <i>Sclerocarya birrea</i> (Richard) Hochst. Subsp. <i>caffra</i> (Sonder) Kokwaro (Anacardiaceae). Botanical Journal of the Linnean Society 98: 153-158.
Von Teichman, I., Small, J.G.C., Robbertse, P.J., 1985. A preliminary study on the germination of <i>Sclerocarya birrea</i> subsp. <i>caffra</i> . S. Afr. J. Bot 52(2): 145-148.
Walker, N.J. 1989. Marula. African Wildlife, 43:6, 282 – 285 (Nov./Dec.)
Weinert, I.A.G., van Wyk, P.J., & Holtzhausen, L.C. 1990. Marula. In: Fruits of tropical and subtropical origin. Eds. S. Nagy, P.E. Shaw & W.F. Wardowski. Lake Alfred, Florida Science Source.
Yameogo, R.T.& Kassamba, B. 1999. Aspergillus flavus and aflatoxin on tropical seeds used for snacks: <i>Arachis hypogea</i> , <i>Balanites aegyptiaca</i> and <i>Sclerocarya birrea</i> . Tropical Science, 39, 46 – 49.
Zharare, P. & Dhlamini, N. 2000. Characterization of Marula ( <i>Sclerocarya caffra</i> ) Kernel Oil and Assessment of its potential use in Zimbabwe. Journal of Food Technology in Africa Volume 5 Number 4 (Oct. – Dec.).

Patents:

Patent Date	Patent No. & Patent title	Inventor & Applicant
22 May 1919	GB126742 New vegetable dyes	Robert Harbottle & Sigurd Sivertson