



AID-FOR-TRADE: CASE STORY

WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)

A TREE AND TRADITIONAL KNOWLEDGE: A RECIPE FOR DEVELOPMENT

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Country: Namibia

Name: Eudafano Women's Cooperative

Type: Co-operative, Non governmental/Non profit Organization

Industry: Personal Products

Object of protection: Inventions, Traditional Knowledge

Instrument of protection: Patents

Focus: Commercialization, Partnerships, Research and Development

Author: WIPO/IP Advantage Database



The Marula Tree (Photo: Leandro Neumann Ciuffo)

1. Background

Found throughout southern Africa, the marula tree (*sclerocary birrea*) has been used by humans for thousands of years, with archeological findings placing uses as early as 9000 BC. About the size of a plum with a leathery skin that is butter yellow when ripe, the fruit of the marula tree has a scented juicy white flesh that clings to a hard brown kernel. Inside the kernel are two or three seeds that are so rich in oil that a simple squeeze of the hand can release a significant amount. The flavor of marula fruit has been compared to a cocktail of guava, lychee, apple and pineapple, and harvest traditionally takes place between February and June. Marula is not only popular with humans, but also with animals; elephants have been known to travel many kilometers just to get a taste of the fruit.

Rich in protein and high in vitamin C, the fruit and nuts of the marula tree have allowed people to make permanent settlements throughout southern Africa. It has also been used as the base for some of the most popular alcoholic beverages in the region for generations. Traditionally harvested almost exclusively by women, marula is also extremely rich in linoleic fatty acid, antioxidants and oleic acid, which are essential for the preservation of healthy human skin. Oils derived from marula are easily absorbed into the skin and naturally soften, nourish and revitalize it, which makes marula oils ideal for topical application. Being ten times more resistant to oxidation than olive oil, it is one of the most stable natural oils in the world. Because of its exceptional chemical stability, marula oil is an ideal ingredient for use in many cosmetic products. Additionally, the nutritious properties of marula make it an ideal ingredient for fortified foods and other health care products.

2. Traditional Knowledge

Marula trees are revered in Namibian culture, and with over 60% of Namibia's population living in rural areas, the marula tree continues to play an important role as a source of food and income. Women there have long prized marula for its remarkable qualities and have used it in a variety of ways for generations. A brew made from the bark has been traditionally administered as a cleansing ritual prior to marriage, and Namibian women have been using marula wood to make kitchen utensils for thousands of years. The most important part of the marula tree is the oil, as it can be used as a meat preserve, skin moisturizer and an ingredient for popular foods such as jam and alcoholic beverages. For generations women in rural Namibian communities have been using traditional techniques to produce marula oil for their families and to sell in their communities on an informal scale.

The traditional knowledge rural Namibian communities possess of marula and its use plays a vital role in their livelihood. Namibian women continue to use techniques to harvest and process marula that have been passed down to them for generations. Thousands of years ago, women would dry marula kernels in the hot Namibian sun and then crack them open to extract the oil, and the overall technique has not changed that much since then. To this day, similar tools to are used to crack open the marula kernels and access the oil-rich seeds.

Because the marula tree has been so important to the rural Namibian population for so long, their knowledge of the palatability of the fruit and which specific trees yield the best and largest fruit cannot be understated. In the 1980s, Israeli researchers were some of the first to study the use of indigenous marula trees, and the selection and classification by local people of desirable marula traits has been well documented.

3. Commercialization

The only major commercialization of it in modern times outside local communities has traditionally been for the distilling of Amarula Cream, a popular South African alcoholic drink sold by the South African Distell Group (Distell). Most commercialization of marula in Namibia was very ad hoc, with women in households recognizing an opportunity to earn extra income by selling marula products, especially marula-based beer. These efforts were informal, local, highly seasonal and supplementary to other livelihood activities.

This all changed in 1999, when CRIAA SA-DC, a Namibian non-governmental organization (NGO), had the idea of producing marula oil of a higher quality and in larger volumes so that it could be sold as an export product for the cosmetic industry. Women of north central Namibian villages joined forces with the NGO and with the help of the Namibian government established the Eudafano Women's Cooperative (EWC) to market marula products for local and export markets. By 2008 EWC boasted membership of over 5,000 women in 22 groups producing marula oil from wild trees. As of 2010, EWC is the second largest producer of marula products in southern Africa. Tapping into their traditional knowledge of harvesting and processing the hard nuts of the marula tree, rural Namibian women can now produce marula products at the household level but reach an international market.

Commercialization of marula through this new initiative has involved a number of steps. The first requirement is education; every woman joining the cooperative must first become familiar with matters of hygiene, storage, packing, and bookkeeping. The second step is harvesting. Armed with new knowledge, the women combine it with their traditional knowledge to harvest marula fruit from the best wild trees and deliver the kernels and seeds to a processing factory in the capital of Windhoek. In the final step, the oils and juices are then extracted through a combination of hand and machine processing at a factory in Ondangwa, the heart of the marula growing region. The resulting marula products harvested and made by the EWC are sold to companies such as The Body Shop, Marula Natural Products of South Africa (Marula Natural), and Distell.

4. Partnerships

In the mid 1990s, The Body Shop, one of the world's largest cosmetic companies, was looking to diversify its product range to include a wider variety of natural and organic products. The company also wanted to take part in the fair trade certification initiative, which sets international standards and fair prices for products coming from developing countries. In 2000, EWC became the exclusive provider of marula oil to The Body Shop, which uses it in products such as lipsticks, foundations, blush and eye shadow. The Body Shop attests that marula is an amazing natural moisturizer and advertises marula's long history with Namibian culture and its modern day production through EWC. Marula has since become an important part of The Body Shop's natural product portfolio, with over 140 of the company's products and nearly all of its lipstick containing Namibian marula produced by the EWC.

As the popularity of natural products such as marula increased, rural producers throughout southern Africa realized that they needed to organize to protect their traditional knowledge and to stimulate economic growth through international commercialization. To that end, EWC became an early member of PhytoTrade Africa, a non-profit organization established in 2001 as the trade association of the natural products industry in southern Africa. PhytoTrade is a membership-based organization representing private sector businesses, development agencies, individuals and other interested parties in the southern African region. Its purpose is to alleviate poverty and protect biodiversity in the region by developing an industry that is not only economically successful but also ethical and sustainable. Through its membership in PhytoTrade, EWC is able to receive fair prices for the marula products it produces for international markets.

An important component of the partnership between EWC and PhytoTrade is the adherence to fair trade principles, which ensures that local producers are not taken advantage of and receive sufficient compensation for the use of their traditional knowledge. Because of this, new income opportunities have opened up for not only the women in EWC, but for nearly all local producers. The market opportunities brought through the combination of partnerships and fair trade have given local producers tangible development benefits like increased income, renewed their sense of pride and have built cohesion within communities. Because the success of the partnership has its roots in the traditional knowledge of rural communities, it has also helped to ensure that such knowledge continues to be passed on to younger generations who otherwise might have not been so interested.

5. Research and Development

The partnership with PhytoTrade led to increasing markets for marula, and as more companies took note of the potential marula harbored, new research and development (R&D) projects into the tree started to take shape. In 2005 Aldivia S.A. (Aldivia), a French company that specializes in producing natural and organic ingredients for cosmetic manufacturers, launched an R&D endeavor with PhytoTrade and the Southern African Natural Products Trade Association into using marula to develop a natural, environmentally friendly botanical ingredient for cosmetics. The result of the project was the innovation of a proprietary process – called “Ubuntu” – to manufacture cosmetics without any petrochemicals or solvents, leaving behind a limited carbon footprint. This innovation has been dubbed “green chemistry,” and the first resulting product to use the Ubuntu process was Maruline, a 100% natural marula oil with enhanced antioxidant properties.

Maruline is the world’s first active botanical ingredient developed through scientific collaboration between traditional resource users – the rural marula producers of Namibia represented by EWC and PhytoTrade – and a specialized international R&D company. Production of Maruline is based exclusively on the principles of fair trade and environmental sustainability. “It’s a win-win situation,” explains Cyril Lombard, Market Development Manager of PhytoTrade. “When consumers buy products containing Maruline, not only are they buying a quality product with properties they want, but

because of PhytoTrade Africa’s strategy of targeting benefits to primary producers, they can also be sure that they are making a meaningful contribution to the local livelihoods. By creating viable markets for marula in this way, local value is added, traditional culture is preserved, food security is enhanced, and we can be pretty sure that the marula trees will be conserved for generations to come.” Since its innovation, Maruline has garnered significant attention in the international market, and The Body Shop has incorporated it into many of its anti-ageing skin care products.

This R&D partnership is an excellent example of how traditional knowledge, modern science and collaborative commercial strategies can help alleviate poverty while also increasing public interest and participation in sustainable use of Africa’s biodiversity. Through linking rural producers with international companies, the owners of traditional knowledge such as the members of EWC have a chance to better economically benefit themselves and their communities, while helping to develop safe and natural products for worldwide markets.

6. Patents

In 2006, Aldivia filed a patent application for the process used to create Maruline with the international Patent Cooperation Treaty system. This patented process is co-owned by Aldivia and the primary African producers represented by the Southern African Natural Products Trade Association. This co-ownership represents a unique partnership that has set new standards for benefit-sharing between traditional knowledge holders and international companies.



International commercialization of marula helps bring education to Namibia’s children
(Photo: Marko Forsten)

7. Business Results

Since Namibian women organized to set up EWC and partner with PhytoTrade, interest in international markets for marula has skyrocketed. This has not only been beneficial to the companies selling marula products, but has also had a significant impact on local Namibian producers. Demand in 2008 shot up to twenty tons of oil worth over US \$20 million. Retail prices for cosmetics with marula sell for four times more than products without it, and marula has gone from a supplementary to primary source of income for many women in rural Namibian communities.

The success of marula oil has brought opportunities for new marula-based products to be commercialized for export. Traditional “ondjove” cooking oil made from marula is well-known and loved by communities in Namibia and, like marula oil, has been produced and traded informally for generations. EWC’s efforts to produce it for international markets took a big leap forward with the launch of a range of marula food oils at the Namibia Tourism Expo in Windhoek in June 2010. The product was well received, and sales of approximately sixty liters served to raise awareness for more marula food products.

With the development, intellectual property (IP) protection and commercialization of Maruline, the marula tree has become an even more important part in the lives of tens of thousands of rural producers, their families and communities. Before these changes, many women were extracting marula for personal use or to sell it locally. With access to new markets, by 2000 rural marula producers were receiving over US \$60,000 annually and by 2010 were receiving US \$2.35 per kilogram of marula. This is income that many women would otherwise not have received, and they are using it for positive development efforts such as paying to educate their children and helping to develop their communities. Naimi Ndevaetela, a participant in EWC from the start, sums up the good fortune that the cooperative has brought her: “I live alone, my husband has died. I receive 18 Namibian dollars per kilogram, which I use to pay for school fees, school uniforms and the children’s accommodation.”

8. Bridging the Divide with Partnerships and IP

One of the fastest growing sectors in the global skin care market is that of natural and organic cosmetics. Prompted by lifestyle decisions that increasingly reject synthetic and chemical ingredients in favor of natural alternatives, consumer demand for environmentally friendly products like marula has vast growth potential. Capitalizing on the organic nature of marula, companies such as Aldivia have worked with cooperatives and used IP to create a product with international reach. As the popularity of marula oil increases, IP can be used to further popularize it, expand its usage, and ensure greater income generation for the Namibian producers using traditional knowledge. Current and future IP strategies translate into economic benefits for cooperatives such as EWC, which increases access to education and healthcare, raises living standards and stimulates the development of rural communities.