An information bulletin on Non-Wood Forest Products

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EDITORIAL

A new *year, a* new *look! Mr Jan Heino, the new Assistant-Director General of the Forestry Department has written the editorial of the restyled* Non-Wood News.

I am fully aware of the social, cultural and economic importance of non-wood forest products (NWFPs) in the lives of many people – both in my own country, Finland, and worldwide. Over the years, I have been impressed by how *Non-Wood News* has managed to capture this importance, as well as the diversity of NWFP actors, in its many articles, features and reader contributions.

I also fully recognize the need for further protection and promotion of traditional forest related knowledge (TFRK), which is closely linked with the cultural and intellectual heritage of indigenous people and other forest dwellers. Their practices can form a significant part of sustainable forest management. It is imperative to ensure that they receive benefits from the use of this knowledge and that technologies drawing from traditional forest-related knowledge clearly acknowledge the origins of this knowledge. Many recommendations on this topic exist internationally, but their implementation has remained inadequate. Promotion of TFRK needs to be better incorporated in national forest programmes as well as in forest management planning at the local level.

This restyled *Non-Wood News* is one of the outcomes of the auto-evaluation exercise that took place in 2005 and is a direct response to the readers who commented on its format and legibility. We hope that you like it and would welcome your comments on this "face-lift".

In another response, which requested more information more often, we are also increasing the frequency of *Non-Wood News* to every six months.

Yet another outcome of reader participation is that we now have a regular section covering non-profit and non-governmental organizations. We invite NGOs and non-profit organizations that are involved with any aspect of NWFPs (including indigenous knowledge, biodiversity, environment and gender issues) to submit information on their organization and the NWFP activities/projects they implement.

However, we would like to stress that behind the new-look *Non-Wood News* is the usual wealth of information from the world of NWFPs. The Special Features section covers two different aspects of NWFPs: a specific product (bamboo) and a developing market (cosmetics and beauty care). As you will see from the articles, bamboo is versatile: it can be transformed, for example, into textiles, charcoal, vinegar, green plastic or paper and can also be used as a food source, a deodorant, an innovative building material and to fuel power stations.

Reports indicate that natural cosmetics and beauty care are a huge global market, with forecasts indicating an annual growth of 9 percent through 2008. The Special Feature on "Forest cosmetics: NWFP use in the beauty industry" builds on

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NON-WOOD NEWS

is compiled and coordinated by Tina Etherington, Forest Products Service of the FAO Forest Products and Industry Division. For this issue, editing support was provided by Sandra Rivero; language editing by Roberta Mitchell, Josiane Bonomi and Deliana Fanego; design, graphics and desktop publishing by Claudia Tonini.

***Non-Wood News* is open to contributions by readers. Contributions are welcomed in English, French and Spanish and may be edited to fit the appropriate size and focus of the bulletin.**
If you have any material that could be included in the next issue of *Non-Wood News* for the benefit of other readers, kindly send it, before 31 March 2007, to:
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CONTENTS

this and includes information industry interest and marketing strategies (consumers are being drawn to natural products and thus their content is emphasized). Usually considered a predominantly female market, it is now also increasingly becoming an important market for men too. However, as can be seen from the articles on shea butter in Africa and thanakha in Myanmar, many societies have always used and benefited from natural cosmetics. In this issue you will find other examples of traditional knowledge, such as using the secretions of a poisonous tree frog in Brazil and the use by the traditional healers in India of allelopathic knowledge.

Non-Wood News readers are indeed very active and participatory and, as the new head of the Forestry Department, it is very gratifying to learn that so many e-mails and letters are received from you. As we have shown with the new look, increased frequency and greater coverage of traditional knowledge and NGOs, we genuinely take your opinions into consideration and try to act upon them.

I would particularly like to thank the many people who have contributed to this issue; we greatly appreciate your interest and views. I believe that this very active reader participation provides a unique networking opportunity and is a great strength of *Non-Wood News*.

Non-wood forest products (NWFPs) are goods of biological origin other than wood, derived from forests, other wooded land and trees outside forests. Non-timber forest products (NTFPs), another term frequently used to cover this vast array of animal and plant products, also includes small wood and fuelwood. However, these two terms are used synonymously throughout this bulletin. Other terms, such as "minor", "secondary" or "speciality" forest products, are sometimes used to keep original names and/or titles.

THE VERSATILE BAMBOO

Improved biological bamboo charcoal for wastewater treatment

Five biological bamboo charcoal dams were built on a 120-m-long offshoot and the high-density household wastewater flowing through them was purified into much cleaner water. After sampling and examination, the purified water satisfied all wastewater draining criteria. A year later, this demonstration site for purifying wastewater with improved biological bamboo charcoal dams is still functioning well.

Improved biological bamboo charcoal has a very strong absorption capacity. Experiments showed that when the surface temperature of bamboo charcoal reaches 700°C, it has a pore structure and its specific surface area is maximized: the specific surface area of 1 of bamboo charcoal equals that of a football field. This characteristic makes the charcoal an excellent absorbing material.

Because of its outstanding absorption capacity, experiments have been carried out on the filtering function of bamboo charcoal in purifying wastewater. However, a vital shortcoming has been discovered: as a result of the special interior space structure of the charcoal, the various pollutants fill up the spaces over time;

EXPERIMENTS ON IMPROVED BIOLOGICAL BAMBOO CHARCOAL

Combine ten genera (more than 80 species) of three main fungus groups: photosynthetic bacterium, lactobacillus and microzyme loaded into the pore carrier of special bamboo charcoal, hybrid the oxygen and anti-oxygen microbe through fermentation; different microbes live on the pollutant as "food", so as to maintain the metabolism. In this way, the improved biological bamboo charcoal functions together with the various microbes during the water purification process to decompose the pollutant into water and CO_2 through complicated absorbing and biological processes. Based on this theory, the water purification treatment through improved biological bamboo charcoal technology was invented.

consequently its absorbing ability, which is its function in purifying water, is gradually lost.

According to the total daily amount of wastewater to be treated, up to US$2 million will be needed to establish a wastewater treatment factory with a capacity of 10 000 tonnes/day and with a matching control system on rainwater and wastewater. The plant will occupy a large area of land and running costs will be heavy. In contrast, the establishment of an improved biological bamboo charcoal wastewater treatment system with the same daily treatment capacity of 10 000 tonnes would only cost $50 000. Furthermore, it would cost merely $5 000 to run the system for one year, with all the water treated meeting national criteria.

This technology is extremely suitable for application on rivers in both cities and rural areas.

Since most farmers in rural areas are relatively dispersed, the bamboo charcoal facility should be set up at the end of rivers and canals, so that it does not affect water use and transportation.

Daily production of wastewater in rural areas is 4 000–6 000 tonnes/day and therefore the bamboo charcoal water treatment system for this capacity could cost less than $20 000, with yearly maintenance and running costs of less than $3 000. Only one person, who could even work part time, is needed to manage the system.

The treatment system is extremely durable as shown by the demonstration system which was set up to last for about one year and still works well, with all treated water meeting national standards. The system will last even longer in rural areas since wastewater there is less polluted.

The improved biological bamboo charcoal needs to be changed every two years, at a cost of about $10 000, which should be acceptable for rural areas.

OTHER USES OF BAMBOO CHARCOAL

As a deodorant and preservative

Refrigerators are used to store almost all kinds of food. Yet, although well designed, they are not able to exclude various odours because of the circulation of cold air. If bamboo charcoal or its modified product is used in a refrigerator, these odours can be excluded through absorption action. At the same time, because of bamboo charcoal's ability to adjust humidity, the preservative period of vegetables and fruit can be extended. Bamboo charcoal can also be reused once it has been washed and dried.

In adjusting humidity

Because bamboo charcoal is activated under conditions of very little oxygen and high temperature, it contains almost no water and has many pores, which makes it highly effective in adjusting humidity. When the surrounding humidity overtakes that of bamboo charcoal, the charcoal can absorb the moisture from the air. Moreover, when the surrounding humidity becomes lower than that of bamboo charcoal, the charcoal can emit moisture to maintain a dynamic equilibrium. Consequently, bamboo charcoal is also used in manufacturing different health care products to regulate people's microsurroundings. It is often laid under indoor flooring or placed behind wallboards.

Villages can also charge farms that benefit from the system on a yearly basis. After solving the problems of site selection, establishment and maintenance costs, this technology can be extended throughout rural areas. For some areas with better conditions, a wetland can be added to the end of the system to improve the quality of the purified water still further. (*Contributed by:* Fu Jinhe Ph.D., Programme Officer and Coordinator of IUFRO 5th November 2005 Bamboo and Rattan, International Network for Bamboo and Rattan (INBAR), 8 Fu Tong Dong Da Jie, Wang Jing Area, Chao Yang District, Beijing 100102-86, China. Fax: +86-10-6470 2166; e-mail: jfu@inbar.int; http://www.inbar.int)

Bamboo leading the way in textile innovations

Value-added performance fabrics are the latest trend in textiles. Jonäno™, a division of Sami Designs LLC, is concentrating on one particular area of study in high-technology fabrics: a new generation of antimicrobial and antibacterial textiles. This technology incorporates built-in abilities to fight harmful microbes that cause odour and can lead to infection.

The natural antibacterial properties of bamboo fabric come from an inherent quality of bamboo commonly called "bamboo kun". Bamboo does not require the use of pesticides because of this natural antifungal antibacterial agent. It is rarely attacked by pests or infected by pathogens. The same natural substance that protects bamboo growing in the field functions in the spun bamboo fibres.

Bamboo fibres are processed using a patented manufacturing technology of hydroalkalization. Processed without the addition of caustic additives, according to ISO 9000 and ISO 14000 principles, bamboo hypoallergenic fibres are the ideal alternative for individuals with sensitive skin.

A quantitative antibacterial capability test was performed by the China Industrial Testing Centre from 7 to11 July 2003. One hundred percent bamboo fabric was tested over a 24–hour incubation period with bacterial strain type *Staphylococcus aureus*. After the 24–hour period the numbers of live bacteria were counted in each sample. The results showed that 100 percent bamboo fabric exhibits a 99.8 percent antibacterial kill rate. (*Source:* PR.Com, 12 September 2006.)

Bamboo linen

Fast-growing bamboo makes unlikely but soft colourful linens and towels and manufacturers have discovered that bamboo cloth mixed with a dash of cotton is silky to the touch.

Bamboo is mature enough to harvest in three to five years and can be grown without fertilizers or pesticides. Manufacturers are almost as excited about the ecological benefits as they are about the soft sheets: finding a fibre as easily renewable as bamboo is a nice fit.

Towels and sheets have been made with a mix of either 70 percent bamboo, 30 percent cotton material or 65 percent bamboo to 35 percent cotton. One manufacturer praised the linen since "it really holds on to the colour", while another noticed that it "absorbs faster than cotton". (*Source: The Columbus Dispatch*, 5 March 2006.)

Bamboo fashion fabrics

Bamboo fashion fabrics have many exceptional qualities. They stay two degrees cooler than other fabrics and so provide cool comfort. They also have a natural wicking ability: they wick moisture away from the skin. The soft, breathable, knit fabrics also offer an antibacterial function, acting as a natural deodorant. Bamboo fabrics have been featured in several of Canadian fashion icon Linda Lundstrom's spring 2007 collection. (*Source:* Fibre2fashion.com, 19 August 2006.)

Bamboo power station

A northeastern Indian state, Mizoram, is set to make an environment-friendly power station that will run on bamboo. The state, it is claimed, will possibly be the first in the world to use bamboo for producing power.

The project coordinator said that this unique power station will use bamboo to generate electricity and that it would not only be cost-effective but also highly ecofriendly. He said the power generation formula from bamboo is simple: the harvested bamboo is dried and processed for feedstock to produce gas. (*Source:* All Headline News [United States], 29 July 2006.)

Bamboo shoots and paper mills

Bamboo shoots are becoming too costly to dish up in Bangladesh. In fact, bamboo, a valuable forest resource, is diminishing in the Chittagong Hill Tracts (CHT) through indiscriminate cutting of shoots and extraction on a massive scale (mainly in the rainy season despite a ban on extraction from June to September) for use as a vegetable. Bamboo shoots are a traditional favourite not only among the indigenous people but now also among Bangalees in the hills. Large quantities of the shoots are finding their way to hotels and restaurants in big cities such as Dhaka and Chittagong.

According to Agriculture Extension Department (AED) officials, during the monsoons at least Tk1.5 crore bamboo shoots are extracted from forests in the CHT, which could produce Tk15 crore bamboos if full grown.

The shoots are sold as vegetables in all the 230 markets in 25 *upazilas* (division districts) in the CHT. In Khagrachhari alone, there are over 100 of these markets where at least 10 000 kg bamboo shoots are sold each day at Tk10–12/kg.

According to the Khagrachhari AED Deputy Director, bamboo worth over Tk50 crore could be produced if the shoots were not used as vegetables. Consumption is increasing daily with the rise in population and some day, he said, the Karnaphuli paper mill will face a serious crisis in bamboo, its main raw material. (*Source: The Daily Star* [Bangladesh], 17 July 2006.)

Bamboo can grow 1.21 m in 24 hours and up to 30 m in two to three months. (*Source:* INBAR.)

Building with bamboo – design competition

Bamboo Technologies of Maui has launched the first International Design Competition for Structural Bamboo Buildings. Bamboo is the next green building evolution; the giant grass is a renewable, restorative and versatile building material. Structural bamboo has been certified for international building codes, the first time it has ever been code certified.

The 2006/2007 International Competition encourages architects to apply their creativity to the design of new buildings using this ancient building material. The winners will be announced in March 2007. (*Source: Canadian Architect*, 10 August 2006.)

FOR MORE INFORMATION, PLEASE VISIT: www.bamboocompetition.com *or* e-mail info@bamboocompetition.com

Bamboo planting can slow deforestation

Scientists may have found a way to slow deforestation. Fast-growing bamboo can quickly help replenish a forest stripped of timber.

Chin Ong, at the International Centre for Research in Agroforestry (ICRAF) in Nairobi, Kenya says that one promising substitute for wood is bamboo, a grass with a tree-like appearance. Some varieties grow more than 25 m tall and 20 cm thick.

Ong points out that bamboo can be grown all over the world and has advantages over timber. One advantage is

its speedy growth: bamboo can be harvested after three or four years and then every subsequent year because it is a grass, whereas a eucalyptus tree needs five to ten years before it can be harvested again. Another advantage is that bamboo has a very high water-use efficiency, which is double that of any tree species.

The plants could be an additional cash crop in areas where sugar cane and coffee are already established. Ong estimates that in the Lake Victoria region of Kenya, United Republic of Tanzania and Uganda, as many as 150 million people could benefit economically.

Plant biologist David Midmore of the Central Queensland University in Australia also points to bamboo's environmental benefits. "In Taiwan Province of China, bamboo is grown on the hillsides along the edge of the mountains and it is sustainably harvested for its shoots and for its timber. It is an environmentally friendly species because it is also preventing any erosion."

In addition to providing lumber and food, bamboo plants can clean the environment. Chin Ong is studying how bamboo groves could remove toxins from dirty waters. (*Source:* Voice of America, 29 August 2006.)

Vietnamese bamboo fences to enter Europe

A Vietnamese and a Danish company have joined forces to produce Danish-designed bamboo fences in Viet Nam to serve the significantly growing demand in northern Europe.

The Vietnamese partner, the Bac Ninh Company, makes handicrafts for foreign markets whereas Prodex, the Danish partner, develops, manufactures and markets a range of garden products in Europe. The cooperation, supported by the Danish Business-to-Business Programme, combines Bac Ninh's access to abundant bamboo raw materials and production facilities in northern Viet Nam with Prodex's design of durable bamboo fences, technical skills and access to the European market.

The strategic cooperation between the two partners will focus on quality, customization and an ability to make products from Vietnamese raw materials. (*Source:* ScandAsia.com, 30 May 2006.)

Bamboo plastic

Mitsubishi Motors Corp. announced that it has developed, with the Aichi Industrial Technology Institute, a new material to be used in the interior of its future vehicles. The material, which uses plant-based resins and bamboo fibres, is called "green plastic" and, because of its components, produces fewer CO_2 emissions and "volatile organic compounds".

Mitsubishi also points out that the use of bamboo, which grows much more quickly than timber, will lower the risk of depleting raw resources when mass-producing green plastic. (*Source:* Autoblog, 28 February 2006.)

Bamboo vinegar

Bamboo vinegar is a by-product of bamboo carbonization. It contains 80 percent water. When dehydrated, the vinegar consists of 80–200 components, or approximately 32 percent organic acid, 40 percent phenolic compound, 3 percent aldehyde, 5 percent alkone compound, 5 percent alcohol compound, and 4 percent ester compound among others.

Bamboo vinegar can be used as a soil fungicide, plant root growth promoter and deodorizer, or in the beauty industry (in soaps, cosmetics, bath lotions) and in health drinks, medicines, etc.

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Bamboo paper: centuries-old papermaking handwork faces extinction

A centuries-old tradition of making delicate rice paper for use in imperial courts is seeking state support amid climbing costs and declining production. "Unless the situation is remedied, our descendants will only be able to recall the past glory in museums," said Zhou Jiehua, head of the Cultural Heritage Bureau in Jiajiang County, southwest China's Sichuan Province.

The "glory" he refers to is a 1 000-year-old tradition of making handmade paper native to his county. Bamboo is used as the raw material to make fine grain paper that was once used during imperial examinations and is now used by 60 percent of China's painters and calligraphers.

Zhou said that the traditional technique involves a 72-step process. "Only five of the 1 000 paper mills in the county are still strictly following these manual procedures – all the others have simplified the production process to cut costs and time."

Today, the industry employs some 7 500 people in Jiajiang County, about 60 percent of the local population, but a sharp decline compared with the 40 000 workers employed in the 1930s, said Zhou. The county has applied to include the technology in China's first group of intangible cultural heritage. (*Source:* People's Daily Online [China], 6 June 2006.)

FOREST COSMETICS: NWFP USE IN THE BEAUTY INDUSTRY

Scientists: man's vanity dates back to prehistoric times

Men are vain by nature. At least that is what scientists in Dublin, Ireland have ascertained after examining prehistoric bodies found in the peat bogs of the country. One of the bodies had Mohawk-style hair held in place by a gel substance. Further research found that the gel was made of plant oil and pine resin imported from southern France or Spain. This provides further proof that ancient Ireland traded with southern Europe even during prehistoric times. (*Source:* Komfie Manalo, All Headline News, 2 August 2006.)

Aboriginal knowledge and the beauty industry

The health and beauty industry is now beginning to harness the rich heritage of Aboriginal knowledge of native plants and healing. For more than 40 000 years, Aboriginal Australians have continued a shared tradition of cultural and sacred knowledge, known as the Dreamtime.

In recent years, elements of this indigenous culture – the rituals and use of native ingredients – have been used in the mainstream health and well-being sector.

Indigenous ingredients have found their way into skin care formulations, the first of which was the men's grooming range, VitaMan. The VitaMan founders, Glenn Kiddell and Clare Matthews, spent two years researching indigenous Australian ingredients. They wanted to adopt previously unused, unique Australian plant, herb and fruit extracts which had a history of

application by indigenous Australians. All the ingredients selected for use in VitaMan's formulations had to have scientific validation, as well as proven effectiveness in treating skin and hair problems. One such ingredient is grass lily extract.

Kiddell explains: "The Aborigines crushed the plant and rubbed the juice on sores, cuts, insect bites and sunburn, as it promoted rapid healing. Scientific studies show this extract increases rapid cell multiplication, hence quickening the skin's healing process."

Another star performer is quandong, or native peach, which features in VitaMan's new hair care range. The Aborigines used to crush up the seeds, mix them into a paste and then apply the paste to the hair to prevent damage caused by the harsh climate in the Australian outback. The oil from the seeds is high in essential fatty acids and provides the hair with high-quality protein both to nourish and strengthen it. (*Source:* Joanna Hall, *The Sunday Telegraph* [in news.com.au, 27 August 2006.]) (*Please also see under Australia in Country Compass, p. 36.*)

Thanakha, Myanmar's natural cosmetic

Women in Myanmar have used thanakha for centuries as a natural skin conditioner and facial cosmetic, which they believe keeps their complexions soft, well-textured and youthful. Despite the growing number of modern cosmetics on the market, thanakha continues to be used by large numbers of people who prefer traditional ways.

The cosmetic thanakha comes from the bark of the thanakha tree (*Limonia acidissima*), which grows in the dry zone of central and upper Myanmar, particularly in Mandalay and Magway divisions. However, one well-known variety of thanakha, called *shan khauk* by locals, is grown in the small southern Shan state town of Mauk Mei. Thanakha trees are perennials, and a tree must be at least 35 years old before it is considered mature enough to yield good-quality cuttings. Thanakha in its natural state is sold as small logs individually or in bundles but nowadays also as a paste or in powder form.

The traditional way of making thanakha is to grind the bark on a wet, circular stone, which forms a paste that can be applied to the skin as a sunscreen and cosmetic. The creamy paste is applied to the face in attractive designs, the most common form being a circular patch on each cheek, sometimes made stripey with the fingers, known as *thanaka bè gya*, or patterned in the shape of a leaf. It may also be applied from head to toe (*thanaka chi zoun gaung zoun*).

There are more than 20 companies that package thanakha in solid, liquid, paste and powder varieties. Of these, paste is the best-selling form. Taunggyi Mauk Mei thanakha paste, introduced on the market in 1991, is produced by the Libra Company Ltd. The paste, which is made from 97.2 percent pure natural bark of the thanakha plant bark from Mauk Mei, is sold in bottles or wrapped in thick paper. The other ingredients are glycerine (a beautifying oil), preservatives, lemon scent and citric elements. Unlike other thanakha products on the market, Libra adds a traditional herbal medicine with healing qualities for pimples and freckles.

The factory's high production and quality control standards have been approved by the Food and Drug Administration and the Standards, Productivity and Innovation Board of Singapore.

The thanakha manufacturing process involves selecting the bark, then washing and steaming it to kill fungi, mould and bacteria. Machines are used to grind the bark, sand and other impurities are filtered out and excess water is removed. At the final stage, extra ingredients, such as scents and preservatives, are added to the paste.

The Yangon market for Taunggyi Mauk Mei thanakha is as big as the market in the rest of the country combined. This is because many young girls believe that packaged products contain chemicals that will harm their skin. Instead they prefer to use thanakha that they grind themselves.

Libra produces about 5 000 bottles a day in the summer peak season and about 3 500 at other times of the year. Although Taunggyi Mauk Mei has not been exported, the products are well known in China, Thailand and Malaysia through merchants who travel to these countries. (*Source: The Myanmar Times*, 12(221) and others.)

New beauty products contain sea buckthorn oil

Skin Revolution has launched a new line of skin care products containing sea buckthorn (*Hippophae rhamnoides*) oil, a natural anti-ageing ingredient. Historically proven to be an effective natural skin care remedy, sea buckthorn oil promotes tissue regeneration and also works as an antioxidant. Biological studies suggest that the restorative action of sea buckthorn oil may be a result of its high content of essential fatty acids, carotenes, vitamin E, flavonoids and phytosterols – all of which are important for the maintenance of healthy skin.

As people age, and particularly when they are stressed, these essential compounds are depleted. By applying products with sea buckthorn oil, the skin receives nutrients it may be missing. Tissue regeneration enhances the growth of healthy cells while the antioxidant properties help reverse the damaging effects of the sun. (*Source:* ClickPress, 20 June 2006.)

SEA BUCKTHORN OIL (*HIPPOPHAE RHAMNOIDES*)

The oil of the sea buckthorn berry has long been used in Asia for treating various skin conditions. Its effectiveness is based on a combination of lipophilic compounds, working synergistically to protect and regenerate stressed skin cells and other protecting organs. All these beneficial compounds are derived from the berry of the sea buckthorn bush, which originally grew in the harsh climate of the Himalayas but has now spread all over the world. (*Source:* Beauty-on-line [Italy].)

The scent of battle in Provence

In July, the beauty giant L'Oréal wrapped up its £652 million (US$1.2 billion), purchase of L'Occitane's longtime British rival, The Body Shop. The takeover has provoked shudders in the quirky market for natural cosmetics. Both L'Occitane and The Body Shop are 1970s-vintage companies. For years, they cultivated a market niche faced only by sedate competition.

But bigger players such as L'Oréal, the top-ranked cosmetics giant, have recognized the market's potential as demand for natural products increases, lifted by health concerns, according to the London-based market research group Euromonitor International. It forecast that the $3.9 billion global market for natural cosmetics would grow annually by 9 percent through 2008 to $5.8 billion, compared with a growth rate of 1 percent for conventional cosmetics and personal care.

In the shifting landscape of natural cosmetics, L'Occitane still occupies the higher ground, with its best-selling shea butter hand cream selling for €17.50 for 5 oz

(142 g). But its competitors, The Body Shop in Europe and Bath & Body Works are both trying to move upmarket by developing premium products for customers willing to pay more for little luxuries (a recent Body Shop product is made with wild babassu palms). The battle is not so much over price but quality.

IT FORECAST THAT THE $3.9 BILLION GLOBAL MARKET FOR NATURAL COSMETICS WOULD GROW ANNUALLY BY 9 PERCENT THROUGH 2008 TO $5.8 BILLION

For its part, L'Occitane, based in Provence (France), is going back to its roots, offering new lavender products that carry certification of natural and organic ingredients. But its top-selling product is not made from local home-grown ingredients, but rather from the nuts of the West African karite tree that yield a fat called shea butter. (*Source: International Herald Tribune*, 28 July 2006.)

Hunting for that fresh aroma

The Middle Eastern fragrance market has shown remarkable fortitude. Arabic perfumes incorporate natural floral and resin scents discovered thousands of years ago, and were a major part of the US$590 million in Gulf Cooperation Council (GCC) sales of perfume last year, according to International Cosmetic News-Middle East.

Last year the GCC fragrance market grew by 17 percent, led by sales in the United Arab Emirates and Saudi Arabia. Not one to be left behind, the Ajmal Perfumes company has begun creating new fragrances that straddle the worlds of East and West as tastes change. Ajmal's latest fragrances, Shadow (a man's classic cologne with a spicy Arabic enhancement) and Teyf (which includes the age-old Arabic ingredient, oudh) have been outstanding successes.

Originating from only five nations worldwide, oudh is oil produced by the agarwood tree after a parasitic fungus attacks it. The tree is harvested and boiled down to extract the precious oil, which can sell for up to Dh3 000 a tolla (11.3 g). Ajmal has patented the process of inoculating agarwood trees with the fungus, ensuring a safe and sustainable supply of oudh.

At the Ajmal factory, one room contains tanks holding priceless amounts of oudh coming from different sources: Indonesia, Assam – the region in India where the Ajmal family originated – and others.

THE MARKETING OF NATURAL PRODUCTS

The following quotes are taken from the promotional material of a variety of natural beauty products. It is interesting to see how the NWFP content is emphasized in the marketing of these products.

- "Products contain generous doses of cocoa butter and shea butter. Essential oils are also key" (bath products)
- "It is made up mostly of natural ingredients including purified water, beeswax, shea butter, evening primrose oil and algae extract" (sunscreen)
- "Medicinal plant extracts from eyebright, black tea leaves and neem soothe the area around the eyes. Natural rose and jojoba waxes protect lashes" (mascara)
- "products combine modern plant-derived ingredients with traditional botanical extracts, vitamins and pure essential oils" and "pure organic jojoba, shea butter and coconut oil" (hair care)
- "contains herbs collected from the forest" (cosmetics)
- "contains super moisturizing shea butter, soothing aloe oil, healing vitamin E and kukui nut oil" and "we have embraced the natural elements of the tropics by using sea salts, exotic oils and select plant extracts in our carefully formulated products" (body care)
- "made of a blend of jasmine sambuc oil, sandalwood and tuberose" and "comes from aloe vera extract and contains essential oils" (face care)
- "made with shea butter to help soothe cracked lips" (lip balm)
- "along with other plant extracts such as aloe vera, ginkgo biloba, shea butter" (beauty products)
- "containing plenty of natural ingredients like willow bark extract and shea butter" (men's skin care products)
- "utilizing natural sea buckthorn oil to nourish, revitalize and restore damaged or ageing skin" (skin care)
- "contains moringa seed" (night cream)
- "a blend of topaz crystals, shea butter, tea tree, bergamot and lemon oils" (foot care)

Ajmal has nearly 100 retail outlets and earned revenues of $125 million in 2005. (*Source: Gulf News* [United Arab Emirates], 2 September 2006.)

European sales of natural cosmetics surge

According to *The European Market for Natural Cosmetics*, a 2006 publication by Organic Monitor, natural cosmetic sales in Europe are increasing at a fast rate with revenues doubling every few years; the German and French natural cosmetics markets are the fastest growing in Europe. The report indicates that the market share is highest in countries such as Germany and Austria where natural cosmetics comprise about 4 percent of total cosmetic sales. However, the market share is approximately 2 percent in most other European countries. (*Source: The European Market for Natural Cosmetics*, Organic Monitor.)

L'Oréal buys organic cosmetics company Sanoflore

French cosmetic giants seem to have the conviction that natural and organic cosmetics will be an important source of growth and profits in the future. A few days after Clarins announced its agreement with Kibio for the joint development of a line of natural organic cosmetics, L'Oréal has announced its acquisition of Laboratoire Sanoflore, which pioneered the design, manufacture and marketing of certified organic cosmetics products 20 years ago in southeastern France.

Sanoflore handles all the stages in the aromatic and medicinal plant chain, from cultivation with partner farmers to the finished product. All Sanoflore cosmetics products are certified by ECOCERT and labelled as organic products. (*Source:* Beauty-on-line [Italy], 24 October 2006.)

More men now buying cosmetics

The marketplace now offers men their own beauty products and, according to a new *Glamour* magazine poll, men are using them.

Men account for 10 percent of cosmetic sales, according to the magazine's August issue, which also reports that 63 percent of 1 529 women polled said that their man buys and uses skin and hair products. (*Source:* Associated Press, 3 August 2006.)

Mushroom cosmetic line developed

The world's first mushroom cosmetic line has been developed at the Koltsovo Scientific Centre, Russian Federation. It took specialists from the Trinity Research and

Production Company several years of research to develop the line.

By stepping into the mushroom kingdom, scientists found a full spectrum of biologically active substances that the skin needs: proteins, carbohydrates, lipids, minerals, organic acids and a rich collection of vitamins, biotin and folic acid. (*Source:* Financial Information Service [Russian Federation], 14 February 2006.)

Shea butter's role in the cosmetic industry

African shea butter is fast becoming an essential ingredient in the American cosmetics industry since it is both rich in vitamin and a natural moisturizer and emollient. The United States imports more than 500 tonnes of shea butter annually from Africa for the cosmetic industry alone.

Shea butter is found in lip balms, shampoo, antiwrinkle creams and other products. Many large cosmetic companies include it in their product lines. It is processed from shea nuts grown and harvested in managed parklands in about 16 countries in sub-Saharan Africa, from Senegal to Uganda in East Africa. Shea nuts are a natural resource coming only from these regions.

The butter is obtained by processing the shea nuts using one of the following methods: *traditional*, which involves roasting, grinding, kneading, boiling and stirring (this method is highly labour intensive and is the one used by rural women producers); or *mechanical*, which involves mechanization and is more efficient and labour saving. It also uses chemicals such as hexane to give a better yield. The shea nuts, when well processed, yield 38–45 percent butter, depending on the production method.

Shea butter has a high percentage of unsaponifiables, which include chemicals with known bioactive healing properties, including a number of antioxidants such as tocopherols (vitamin E) and carotenoids (precursors to vitamin A). It has a healing fraction of 3–12 percent as compared with 1–3 percent in cocoa butter.

SHEA BUTTER

Natural shea butter is extracted from the nut of a fruit that grows only on the magnifolia tree in central and western Africa. The nuts are boiled and then sun dried for three to five days before they are roasted to complete dehydration. Afterwards, the shea butter is extracted by hand from the nuts. This long, arduous process provides what is commonly called "the most beneficial all-natural skin product today".

Shea butter is fast becoming one of the best-selling and most highly recommended ingredients used in skin care products. Dermatologists are starting to recommend it to their patients and many cosmetic companies in France and the United States are using it in their products.

Healing properties. Shea butter has a vast number of proven healing properties deriving from its physical makeup of vitamin E, vitamin A, cinnamic acid and other elements. These ingredients speed up the healing of wounds and improve scars. Shea butter is commonly used in the treatment of eczema, rashes, burns and severely dry skin.

Skin protection. Shea butter gives natural ultraviolet sun protection. Daily use on the face and body drastically reduces exposure to the sun, which in turn slows down the rate of ageing caused by external factors.

Skin moisturization. Shea butter leaves the skin smooth, supple and soft. It is rapidly becoming the top moisturizing agent used today. (*Source*: Wayne Kiltz, Market-Day.net [United States], 19 September 2006.)
(*Please also see pp. 40 and 55 for information on shea butter.*)

Shea butter has a wide array of commercial uses in cosmetic soaps, pharmaceuticals and tanning, to mention just a few, and its commercial importance has increased dramatically over the past six years. Traditionally, across West-East Africa, it has been used as an emollient and moisturizer to treat dry cracked skin, as a massage oil for colds and sore muscles, and for a host of minor skin problems.

Internationally, shea butter has become important for its therapeutic properties: it can act as a mild ultraviolet barrier, protecting skin from the sun; has regenerative and antiwrinkle properties; and can be used in bath, beauty and body care products such as soaps, creams and lotions. It also has a wide application in the pharmaceutical industry, such as in suppositories.

The growth rate of shea butter use in the United States market alone has been estimated at over 25 percent per year and continues to increase.

Its potential could parallel cocoa and any other cash produce in export earnings, especially in Ghana – hence the name "liquid gold" in some circles. (*Source: Daily Graphic* [Ghana], 5 July 2006.)

"Riches of the forest: for health, life and spirit in Africa"

UmMemezi bark: cosmetic use threatens native tree

The endangered UmMemezi tree grows wild in a small area of South Africa's Eastern Cape Province, where poor village women in particular harvest its bark to supply a growing national market. Young Xhosa women mix the powdered bark with a little water to make a pale, reddish-brown paste, which they apply to their faces to conceal blemishes, improve their complexion and lighten their skin. Xhosa people consider a lighter skin tone to be more attractive and have used various products as lightening agents.

The growing trade in traditional preparations based on plants such as UmMemezi (*Cassipourea flanaganii*) and a closely related species (*C. gerardii*), has seen the bark become available in herbal street markets and *amayeza* stores (chemists) throughout South Africa. However, the desire to be light-skinned is posing a threat to these species because of overharvesting to supply the urban demand. (*Source: Riches of the forest: for health, life and spirit in Africa*, eds C. Lopez and P. Shanley, 2004.)
(*Please also see* Non-Wood News *13 for more information on forest cosmetics.*) ♣