

# Crops for the Future



Paths out of Poverty

**“Crops for the Future”** supports, collects, synthesizes and promotes knowledge on neglected and underutilized species for the benefit of the poor and the environment.

In so doing, it aims to **enhance production and consumption** of neglected and underutilized species; to **increase income for producers** through better marketing and post-harvest treatments; to **improve nutritional status of society** through more diverse diets; and to **increase resilience to change and shocks** through improved and diversified production systems.

This booklet gives a handful of examples of what roles underutilized plants play in peoples' lives and livelihoods, inspired by presentations given at the recent International Symposium on Underutilized Plants for Food, Nutrition, Income and Sustainable Development.

# Superglue



Every April, Doña González and her family get up at dawn and walk into the nearby forest to collect the fruits of cachichín (*Oecopetalum mexicanum*). Their neighbours are also up early and the whole village of Pueblo Viejo feels the festive atmosphere.

The nutritious, slightly bitter nut is toasted and eaten by the people of the Sierra de Misantla as a snack or together with a main meal. It is also used to cure liver diseases. The 3-week harvesting season is an important social event in the village calendar and allows families to bond and celebrate.

With a price now triple that of green coffee beans, cachichín contributes substantially to household income and provides women extra cash – especially when coffee prices are low.

At the end of the season, Doña González packs a small parcel to send to her son who works in the USA. For him, like for many expatriate Mexicans from the Sierra de Misantla, the cachichín parcel from home not only contains a delicacy – it also helps quell homesickness.

Source: Lascourain, M., López, C. and Zamora, P. 2009. Production Chain of *Oecopetalum mexicanum* ("Cachichín"): A Tropical Fruit Tree from Mexico. *Acta Horticulturae* (in press).

# Shock Absorbers



Atimpoka Akologo is pounding baobab seeds to make porridge for lunch. For the last three months, she and her six children have only had one meal a day because most of last year's sorghum had been eaten during the funeral ceremonies for her husband earlier this year. And the next harvest is still another three months away.

But like other members of the Gruni tribe in north-eastern Ghana, Madam Akologo knows about the benefits of baobab (*Adansonia digitata*): she prepares young tender leaves as a vegetable, makes a pulp from dried fruit to mix into other food, and pounds the seeds for porridge. She keeps dried leaves, fruit and pulp for later use, but her children eat fresh fruit and pulp directly.

Young baobab leaves are rich in carotenoids (provitamin A), and the fresh seed pulp contains exceptionally high levels of vitamin C: 1-2 fruits are enough to satisfy one person's daily needs.

Whilst surveys have shown that this important resource is declining, research has already established protocols for raising baobab seedlings in nurseries, so the groundwork for tree planting programmes has been laid.

Source: Kranjac-Berteašević, G., Balma, Y.I. and Gandaa, B.Z. 2009. Securing Food in the Hungry Season: Role of the Baobab Tree. *Acta Horticulturae* (in press).

# Money Spinners



In the central market of Loja in southern Ecuador, customers crowd around crates with smooth-skinned 'Cumbe' cherimoya (*Annona cherimola*) sent from the Lima wholesale market in Peru. Today's price is 2 dollars per kg compared with 32 cents for the local fruits – yet, people are willing to buy.

Ana Jiménez, one of the shoppers, explains: "The local varieties are transported in gunny bags on bumpy roads and reach the market bruised and are often infested with fruit flies." But 'Cumbe', a common trademark developed by cherimoya producers around the village of Santo Toribio de Cumbe near Lima, goes through a rigorous grading process and reaches even far-away markets in perfect condition, thanks to the use of simple wooden packing crates.

The price a producer of 'Cumbe' cherimoyas can get is 17 times higher than what the producer in Loja might hope for. The secret to the good price is not the fruit alone – there are similarly sweet and easy to peel fruits available in Loja – but it comes all down to grading, handling, and having a name!

Source: Vanhove, W. and Van Damme, P. 2009. Marketing of Cherimoya in the Andes for the Benefit of the Rural Poor and as a Tool for Agrobiodiversity Conservation. *Acta Horticulturae* (in press).

# Health Food



Loyara and his friends at Fakéna Primary School in Burkina Faso have a new project. The teacher has explained that they should note down any fruits eaten by themselves, their parents, brothers and sisters. They also learned that they needed to note down the amount: pieces, spoonfuls or plates.

The project lasted for 3 quarters of the year: October to December, January to March and April to June, and the kids collected data every other week.

At the end of the project the class met with Dr Niéyidouba Lamien of Burkina Faso's Agricultural Research Centre who explained their findings to them. He explained that sunsun (*Diospyros mespiliformis*), tomonon (*Ziziphus mauritiana*) and seguene (*Balanites aegyptiaca*) were the most eaten fruits, but he also said that Loyara and his family did not eat enough for a healthy diet.

As indigenous fruit trees have become scarce and it takes a long time to harvest the fruits, Dr Lamien proposes an initiative to promote the integration of local fruit species into existing farming systems.

Source: Lamien, N., Lingani-Coulibaly, P. and Traore-Gue, J. 2009. Importance of Local Fruits Consumption in Diet Balance in Burkina Faso, West Africa. Acta Horticulturae (in press).

# Shopping Malls



Madan-ne has the shopping list in his head: a rain coat, shampoo, rope, scourers and cigarettes. But unlike city dwellers, the man from the Kalanguya tribe is not going into a shop to buy what he needs, but he treks through the forests of Ifugao on the northern Philippine island of Luzon.

There he will find pangdan (*Freycinetia multiflora*), a climber whose roots his wife will wash, dry and pound to extract fibres which she will then sow together to make a traditional hunting coat. For shampoo, Madan-ne's family uses an extract of kitwagan (*Molineria capitulata*), and the fibres of huka (*Wickstroemia ovata*), pounded repeatedly and soaked in water to make them soft, will provide the finest ropes. The sandpapery leaves of *Ficus benguetensis* make excellent scouring pads which Madan-ne's wife will use to clean the wooden food bowls. So, this is the shopping done—apart from the cigarettes. For this, a few leaves of pedped (*Glochidion philippicum*) will do.

On this trip, Madan-ne has taken his son, so that the youngster will learn to use the wealth of his environment. Sadly, fewer and fewer people on Luzon island have this traditional knowledge and if left undocumented, it will soon be lost.

Source: Balangood, T.D. and Balangood, A.K. 2009. Underutilized Plant Resources in Tinoc, Ifugao, Cordillera Administrative Region, Luzon Island, Philippines. *Acta Horticulturae* (in press).

# Exercise Tools



Yumiko Paul is a nurse in Micronesia, where in the past 60 years incidence of obesity has risen to a staggering 80% in some age groups. She knows how hard it is to convince people to exercise against overweight. But another – less sweaty – way to lose weight is to change one’s eating habits.

To address this, Yumiko and local food educators of the Island Food Community of Pohnpei, have developed delicious recipes which encourage eating a more diverse diet, based on orange and yellow-fleshed varieties of giant swamp taro, (*Cyrtosperma merkusii*), banana (*Musa spp.*), pandanus (*Pandanus tectorius*) and other local species.

Yumiko explains that foods like these, that are rich in carotenoids, help protect against ailments like cancer, heart disease and diabetes, all linked to overweight. The IFCP has concentrated particularly on popularizing the local “Karat” banana which just 10 years ago was not to be found in the local market.

Now, thanks to IFCP’s engagement, “Karat” has not only been elevated to “Pohnpei State Banana”, it appears on postal stamps and phone cards and is sung about in local songs. As a result, it is now once again widely available in the markets and Micronesians are re-discovering the enjoyment of eating this healthy local food.

Source: Engleberger, L. and Lorenz, A. 2009. Let's Go Local Initiative in Pohnpei, Micronesia for Promoting Underutilized Crops. Acta Horticulturae (in press).



The source for all stories is:

Jaenicke, H., Ganry, J., Hoeschle-Zeledon, I. and Kahane, R. (Eds.) 2009. Proceedings of the International Symposium on Underutilized Plants for Food, Nutrition, Income and Sustainable Development. Arusha, Tanzania, 3-7 March 2008. *Acta Horticulturae*. ISHS, Leuven, Belgium. 736 pp. (in press).

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