

Terminalia ferdinandiana Newsletter 1 March 2007

We are amazed at the number of people we hear about who are involved in the development of the *Terminalia ferdinandiana* industry across northern Australia. These include traditional owners, pickers, buyers, sellers, land councils, researchers, trainers and a whole range of government departments. Each group has a different objective for being involved in this industry so we have put this newsletter together to try and keep everyone informed about each others activities. In fact much of this newsletter is introducing some of the different groups as you may not know of each other. We are sending this newsletter to all those whom we know have an interest in the *T. ferdinandiana* industry, but would be happy to expand our emailing list – just send me contact information of others you think would like to be involved. This way we can all keep track of ideas that may help the industry's development. We are also happy for this newsletter to become a forum to discuss issues as they come up.

Contact details:

Julian Gorman
Research Associate
Livelihood and Policy Theme
School for Environmental Science
Institute of Advanced Studies
Charles Darwin University
Building 31, level 2, Room 31
julian.gorman@cdu.edu.au
Mob: 0428833974
Tel: (08) 8946 6732
Fax: (08) 8946 7720

**SCHOOL FOR
ENVIRONMENTAL
RESEARCH**



Terminalia ferdinandiana Newsletter 1

March 2007

Charles Darwin University

The ARC funding application that the Livelihood and Policy Theme (School for Environmental Research) put together (titled Linking product with place – the *Terminalia ferdinandiana* Industry) on behalf of a variety of stakeholders from across northern Australia is still in the review process. Some preliminary feedback was fairly positive but the final decision on the success of this proposal will not be known until May/June this year. We also expect news soon on another grant proposal we put in to look at taxonomy of the *Terminalia* group.

Kimberley TAFE

Kim Courtney is continuing with his horticultural training and support to various Aboriginal communities in growing a variety of native plants in the Kimberley area. Kimberley TAFE has had some progress in 2007 with Chris Ham announcing that NOTPA have agreed to fund TAFE \$100,000 to continue work promoting food gardens on communities. This includes cultivated plantations of traditional plants, especially gubinge (*T. ferdinandiana*) which is currently showing promising commercial potential. NOTPA is particularly keen to support the establishment of more plantations on remote communities. Kimberley TAFE has also had great encouragement from the new district manager of the Department of Environment and Conservation (formerly CALM) regarding the establishment of the '12 Mile' block as a venue for training and research in developing cultivation models of traditional plants...once again especially gubinge.

The importance of maintaining and developing the connection with this research

initiative at CDU involving gubinge has been emphasised during recent discussions and those at Kimberley TAFE are hoping that these activities in WA will be part of a big picture that includes the CDU School of Environmental Studies.

Shamrock Gardens (Best Natural Foods)

Elke Radcliffe is working with Indigenous people from the region south of Broome to develop boutique lines in gubinge (*T. ferdinandiana*) as well as assist local people supply the national market for the fruit. She writes:

“The harvest in our region has slowed due to the wet season but will pick up again as soon as the tracks are passable once more. Trees are continuing to flower and bear heavily. The local licence holders, Jimmy and Kathy Edgar, have returned to town and awaiting our verdict as to when they can come back to harvest. One of their pickers has been staying with us since the beginning of the season and he goes out and checks every few days. When all is clear again, the next group of pickers, will descend onto the Shamrock Gardens camp again.

The fruit already harvested has gone mostly to Coradji, with Best Natural Foods receiving the seconds for further processing. Since our business is still very much in its infancy, we have been very busy producing samples of our products and distributing them everywhere. Feedback received has been unanimously positive and we believe we have a sound market for our gubinge products.

Terminalia ferdinandiana Newsletter 1

March 2007

We currently make gubinge jam, gubinge & mango jam, gubinge & chilli sauce, and a variety of gubinge pickles, both sweet and savoury. We are also trialling a range of alcoholic products in conjunction with the Hoochery in Kununurra.

In a few months we aim to establish a gubinge orchard since the wild harvest can damage the bush. Pickers in 4-wheel-drive vehicles sometimes leave deep ruts in the Pindan, which can lead to soil erosion. The orchard will be managed by Best Natural together with a number of local Aboriginal families. Our idea is to set everything up, employing and training locals in orchard management. We'd also like to do some more research into *Terminalia ferdinandiana* since we have come across a few interesting questions, e.g.. do seedlings grow true to the parent plant? why do the trees all flower and fruit at such different times? why are some plants woolly and others smooth leaved? is the red gubinge an aberration or a cross between another *Terminalia* and the *T. ferdinandiana*?"

Northern Land Council (Caring for Country Unit)

The NLC's Caring for Country Unit believes innovative enterprise based on native wildlife production has the potential to contribute to sustainable local economies on Aboriginal land, where there may be few other alternatives. Recent studies undertaken by Charles Darwin University have identified a number of potential species with developed markets, one of which that is considered highly feasible is the development of the *T. ferdinandiana*, industry. Aboriginal people

own large tracts of land across the Northern Territory and have an opportunity to contribute to this industry through wild harvest and if appropriate, other methods of production.

A number of Indigenous ranger groups in the NLC region are undertaking a trial harvest to determine the economic, social and cultural viability of wild harvesting *T. ferdinandiana*. The Thamarrurr rangers at Wadeye, Asyrikarrak Kirim rangers at Peppimenarti, Adjumarrarl Rangers at Gunbalanya and Djelk rangers at Maningrida have been working with the NLC to plan for participation in this industry. The groups have submitted their harvesting permit applications, met with the buyers of the fruit and are all ready to commence plum picking as soon as the fruit ripens.

Kakadu Wild Harvest (KWH) Pty Ltd

David Boehme and Karen Sheldon (KWH) will contribute to the evolving plum industry through various aspects of research and development in 2007. They have supplied wild harvested fruit to the industry for a number of years.

Work is being done to develop a local processing opportunity for the fruit. Currently, fruit is being used in industries where there is a preference for organically certified fruit. There being substantial benefits of organically certified fruit both for the user and the producer.

KWH has a Rural Industry Development Corporation funded project which also involves the Northern Territory Government Crops and Horticulture division. The research will eventually encompass tree

Terminalia ferdinandiana Newsletter 1

March 2007

management including; irrigation, pruning, and nutrient conditions compliant to organic production. This will also support and ensure that future remote orchard development does not expose areas to dangerous chemicals.

Kakadu Wild Harvest is committed to building relationships and commercial enterprise opportunities with Aboriginal communities in the Northern.

Indigenous Harvest Australia Co-operative (IHA) Limited

IHA is an Indigenous owned co-operative based in Broome focused on the marketing and value adding of gubinge fruit (*Terminalia ferdinandiana*). The Co-operative was incorporated in December 2006 following an initial feasibility study and business plan overseen by a development team made up on interested Indigenous harvesters from the region.

The plan, undertaken by Peter Dougan of Holistic Rural Development, set out a strategy through which Indigenous people in the region could formalise their involvement in the harvesting of gubinge and other bush foods. In particular, the Co-operative is focused on generating long term and sustainable economic benefits for the region from the harvesting of gubinge.

Membership of the Co-operative is currently made up of 5 Indigenous family groups from the West Kimberley region who have purchased shares in and supply fruit to the Co-operative. As demand for the plum grows, the Co-operative intends to expand its shareholder base. Chairperson of Indigenous Harvest

Australia, Pat Mamanyjun Torres, has a strong vision for the Co-operative: "The Co-operative provides the opportunity to local family groups to create a viable commercial enterprise based on their Indigenous knowledge of bush tucker and plants as well as traditional land management strategies".

Indigenous Harvest Australia recently entered into a three-year supply agreement with Indigenous Australian Foods and, through them, Robins Foods, a leading Australian manufacturer of native food products. In addition to its wholesale sales, the Co-operative has recently started producing and marketing a small range of jams through a number of Broome tourism outlets.

The Co-operative is seeking to expand its customer base and to develop and wholesale a partially processed product in the coming year. IHA may be contacted through Pat Torres (Chairperson) on 0427 580 296 or Peter Dougan (Executive Officer) on 0429 919 007 or hrd@westnet.com.au. Postal address is PO Box 1381 Broome WA 6725.



Photo: Chairperson of IHA, Pat Torres (left) and Director Val Sibosado with Gubinge that has been harvested for Robins Foods.

Terminalia ferdinandiana Newsletter 1

March 2007

Coradji Pty Ltd

Coradji is an Australian owned company formed around 10 years ago by three old friends who had worked previously together in one of Australia's major health companies. Coradji purchases and processes a native plum that grows prolifically in Western Australia and the Northern Territory. This plum is known by various names such as Arangal, Gabiny/Gubinge/Kabinyn, Madoorr, Manmohban, Mi-marl-arl and Murunga.

The botanical name is *Terminalia ferdinandiana* and common names include billygoat plum, green plum, bush plum and kakadu plum. The plum has a reputation as being the world's richest source of vitamin C. All the vitamin C used in vitamin C supplements is synthetically made. Only the bush plum has enough vitamin C to be made into a natural vitamin C supplement. However, vitamin C is notoriously unstable. Light and heat break it down very quickly, and the challenge for Coradji was to develop new methods of processing the fruit without destroying the vitamin C.

The first stage of the process is the collection of the ripe plums by local people around the Broome area and various locations in the Northern Territory. Immature fruit are not suitable, as there is very little flesh on the seed. Over-ripe fruit are also not suitable as the vitamin C content rapidly diminishes once the fruit becomes soft and mushy. Suitable fruit is taken by the pickers to a collection point where it is inspected, packed and frozen.

Then begins the long and tedious transport by freezer trucks, many thousands of miles to Sydney where it is placed in freezer storage until the next stage of processing begins.

Coradji has been granted a process patent for the method it has developed to process the plum. The plum is a "cling-stone" fruit, meaning the flesh is firmly anchored to the seed, so the fruits have to be broken up and processed to separate the flesh and skin from the seeds.

At the end of this stage of processing, a wet puree of the flesh and skin drops out from one end of the machine, and from the other end is the waste, the broken up seeds. This waste is discarded, and the puree is placed into specially sealed bags and re-frozen. The frozen puree is then sent down to Victoria for the drying stage. This can take up to two weeks as the drying is carefully monitored and does not involve heat. Then comes another long road journey as the dried puree is sent back to Sydney where it is further processed to a fine powder. Then testing is done on the powder which must comply to pharmaceutical standards.

Tests include moisture content, ash, particle size, vitamin C, various microbiological tests, and tests for impurities such as heavy metals and pesticides. If the batch of powder passes all the tests then it can be released and shipped to the end user – a manufacturer of dietary supplements who include the

Terminalia ferdinandiana Newsletter 1

March 2007

powdered bush plum in an antioxidant supplement.

We are often asked if there are other uses for the plum. No doubt there are, but at this stage Coradji is focussed on establishing a reliable supply from the Broome area and the Northern Territory. This involves some infrastructure such as freezer and chillers, packing rooms, sorting tables, standard boxes and plastic bags, and palleting facilities. We have also had discussions with Broome TAFE, Charles Darwin University, Southern Cross University, the Northern Land Council, the WA Dept of Conservation and Land Management and other similar bodies with a view to establishing a viable and ethical long-term industry. So far it has been a wonderful few years of establishing contacts with Indigenous groups and building relationships of trust.

Indigenous Australian Foods Ltd (IAF)

IAF is an Aboriginal controlled not-for-profit company limited by guarantee. It is a major link in the “grower/harvester to consumer” supply chain involving Robins Foods, Coles Supermarkets, and a range of other domestic and international food service and retail customers. IAF is the entity which purchases all raw and semi processed native products on behalf of the supply chain. It enables, and licenses, all “downstream” manufacturers, wholesalers and retailers in the supply chain to market the manufactured product range as “products of Aboriginal Australian enterprise”. It provides a vehicle for continuing development of native food plants for production within the chain.

Products from IAF are branded “Outback Spirit”. Coles supermarkets now stock Outback Spirit products or sku’s (stock keeping units) in all 600+ Coles stores around Australia. Product is also now stocked in some Woolworths stores. Equity holder in Robins Foods, Ward McKenzie Pty Ltd, provides distribution and merchandising support.

In recent months, IAF has entered into a three year supply agreement with the newly formed Indigenous Harvest Australia Cooperative Ltd (IHA), in Broome, Western Australia, for Kakadu plum/Billygoat plum (or Gubinge, as it is known in the Kimberley).

IAF is expecting to use about 4.5 tonnes of Kakadu plum product during the upcoming 2007/08 year for existing retail and food service demand, but this could be expanded with a couple of new products under development.

In other important IAF news, we are expecting to commence “first stage” dry processing of native foods at our Warrnambool based value adding centre from May 2007.