



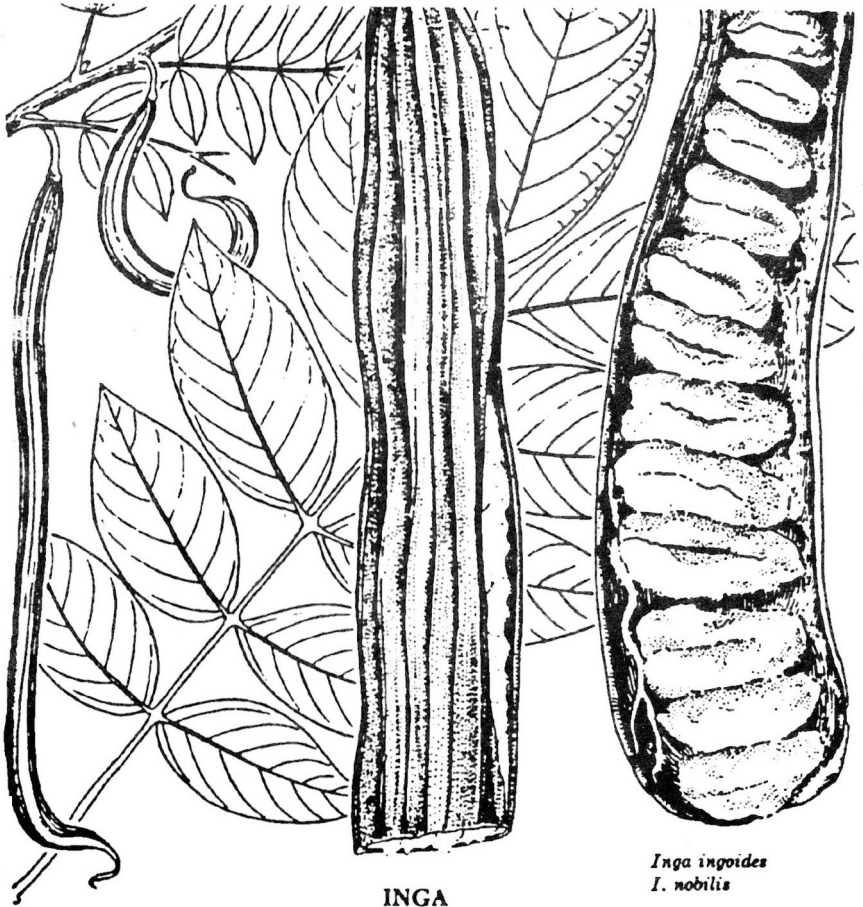
# Quandong

magazine of the  
West Australian Nut & Tree Crop Association (Inc)  
[www.AOI.com.au/wanataca](http://www.AOI.com.au/wanataca)

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INGA

*Inga ingoides*  
*I. nobilis*

(See: About the Cover, p. 2)

## NEXT MEETING: Tuesday August 18: 7.30 pm

At our next General Meeting, WANATCA Exec member Charles Peaty will be talking on:

### A Forester's Life — As Many Nuts as Trees

A tireless and innovative worker in establishing trees over huge areas of the State, Charles always has an entertaining and thought-provoking topic to present. Don't miss this!

A lively and important WANATCA event coming up on:

**Sunday September 12, 9.30-12.30:**

### WANATCA Bring & Buy/ Tree Crops Fair

Expected to be even bigger and better this year, make sure you're there!

*Full details on attached leaflets.*

*Visitors welcome. Queries to Tree Crops Centre, 9388 1965.*

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## *About the Cover*

The cover drawing of *Inga* is from *Tropical and Subtropical Fruits*, by B E Dahlgren. (Chicago Natural History Museum, 1947). See article page 20.

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[West Australian / 1999 Jun 23]

## Bureaucrats accused of blocking new tree crops

WA Government regulations on introduction of new plants have been blamed for hampering the establishment of new tree cropping industries.

Tree Crops Centre director David Noel said that the development of new fruit and nut crops could become more valuable than wheat production, but bureaucratic restrictions would prevent this happening.

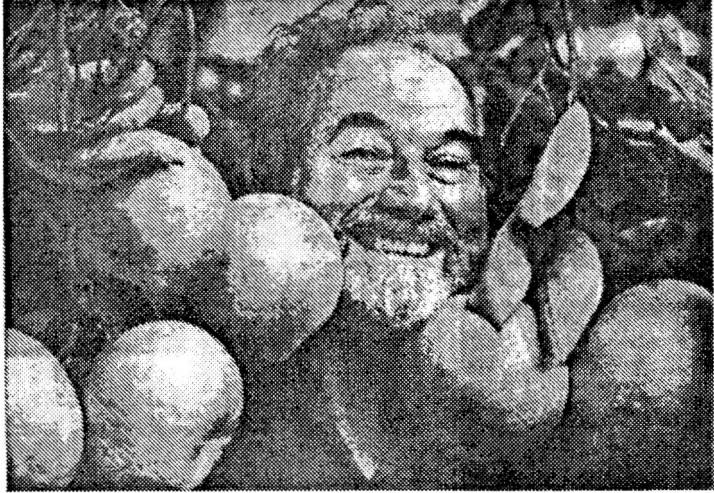
One plant rejected could have helped control soil salinity. "It is just too hard to get new plants into WA and innovation is being stifled," Mr Noel said.

Ten thousand plants were on either a permitted list or a prohibited list compiled by Agriculture WA and anyone wanting to import plants not listed faced an uphill battle.

The Tree Crops Centre is a private organisation set up about 15 years ago to promote the use of tree crops. Mr Noel is a tree crop consultant.

His advice on macadamia nuts has seen crops grown from Geraldton to Esperance.

Mr Noel said pecan and pistachio nuts and mangoes had shown potential.



David Noel with his pomelo tree. Picture: Guy Magowan

Almonds were neglected in WA but in California the crop was valued at \$2.5 billion a year. Growing conditions for almonds were better in WA than California.

Mr Noel, an industrial chemist who came from England and worked at the University of WA, said the Agriculture WA permitted list was harmful to the horticultural industry.

It had become too hard to import plants which were not on the permitted list. In a letter to the Primary Industry Minister Monty House, he described the list as an insidious example

### Quandong Links to ATCROS

Many of the articles, advertisements, and news items in Quandong refer to organizations and people who are listed in the Directory section of the ATCROS Web Site, which is at:

<http://www.AOI.com.au/atcros>

In this issue, items underlined in the text have Atcros reference numbers listed at the end of an article or elsewhere close by. This is so that readers can get more contact details.

ATCROS usually lists name, address, and phone numbers, also fax, e-mail, and web page details where available.

Quandong: Atcros ref. <A1466>.

of out-of-control bureaucracy which boded poorly for the long-term future of horticultural industries in WA.

"The situation is particularly bitter for someone working in the tree crops area and those wishing to grow a new fruit or nut crop which might conceivably form one of the new sunrise industries which the powers are supposed to encourage," Mr Noel said.

He questioned Agriculture WA's decision not to allow Ceylon Hill Cherry trees into WA. The trees are regarded as a weed in some parts of Hawaii but are sold in the eastern States.

Agriculture WA's executive director of agriculture protection Rob Delane said the cost of controlling weeds in Australia was conservatively put at \$3.5 billion a year and it was a problem that was taken seriously.

The majority of Australia's serious weeds had been introduced, mostly in good faith, in the past 200 years. The agency was keen to capitalise on opportunities presented by new crops but new plants had to be assessed carefully. "We do not want to import plants that might harm agriculture or the environment," Mr Delane said.

— *George Boylen*

## Official weed madness out of control

**Readers will be aware of our continuing battle against draconian new restrictions on importing seeds of potential tree crop species on the grounds that they may become weeds. Some of the factors in this are evident from the preceding *Quandong* article.**

Now we have evidence that officialdom has, frankly, just flipped its lid on the weeds issue. The Federal Government's environmental agency, Environment Australia, has recently issued booklets such as *Potential Environmental Weeds in Australia* and placed equivalent matter on its website at [www.environment.gov.au/library/pubs/publications.html](http://www.environment.gov.au/library/pubs/publications.html).

The Queensland government publication *Growsearch Australia* has an article on these sources, and reproduces a list headed '**Widespread Environmental Weeds in Australia**'. Is that OK?

Well, readers will be amazed to know that this list includes such species as **Neem, Paulownia, Loquat, and Cashew Nut**. Can anyone reading such a list doubt that some high official in the Government has lost the plot?

### Weeds and tree crops

There are some huge and sweeping claims about weeds being made by people in government, which seem to be beating-up a growing hysteria about anything which somebody, somewhere, wants to think of as a weed. For example, Senator Judith Troeth, who is Parliamentary Secretary to the (federal) Minister for Agriculture, has written

that "*The annual costs in Australia of control and lost production due to weeds are estimated at several billion dollars.... a conservative approach [to plant introductions] is necessary*".

Enough to frighten anyone, perhaps. But look at the picture again, particularly from the tree crop point of view:

- Even if the 'several billion dollars' was taken as an accurate reflection of the position (while in fact it would have to be based on many assumptions which might well be pretty weak), there is an implied suggestion that people's actions in the past were unwise, and that problems would not have arisen if tighter government controls had been in place.

- Suppose the statement had been "*The annual costs in Australia of control and lost production due to bad weather are estimated at several billion dollars*" — would not this be just as believable, but without any implication of blame or suggestion that the government should take over?

- Even accepting a high negative impact of weeds in cropping, this really only applies to field crops. No tree species introduced as a tree crop has become a significant weed in WA, unless you start

defining things like loquats and cashews as weeds.

- Australia has a fairly settled agriculture, not greatly different to the agricultures of other comparable world regions. Are we any worse off (or better off) for weeds than those areas? Could we really have avoided weed problems by government control, or have we made species act as weeds through our own environmental practices, here and elsewhere?

- Even if this could have been achieved in the past, it wasn't. A rare new tree, presumably rare because it requires very specific conditions for growth, just is not going to leap out of an orchard setting and take over the State. Tree crop introductions often take years of care and experimentation to become successful.

### **The dead hand of government and the apple fiasco**

Governments love to have 'control', and assume it is their public duty to get as much of it as possible, for the public good. Past events throw much doubt on these assumptions.

Older WA readers with good memories may remember the matter of apple control. Younger readers will find it hard to credit the facts.

The facts are these: in the 1960s, and perhaps later, the WA Government had laws which controlled the sizes of apples which might be sold, and the dates at which different varieties of different sizes might be sold.

Each year the Government published a list which gave the dates and sizes for the coming season. For example, the list might state that 'Yates' apples of diameter of 2 inches or over might be sold from March 30 of that year. 'Granny Smith' apples of diameter two-and-a-quarter inches might be sold from April 15, those of diameter two-and-a-half inches from April 30, and so on.

All this was done on the grounds of 'maintaining standards for the good of the reputation of the State' or some such. This was domestic sales; export sales were also subject to stringent regulations, often different to the domestic rules.

Over the years, the perception that perhaps the Government Did Not Know Best on all occasions permeated into the public consciousness, and the

novel idea of letting market forces have the say, of 'de-regulation', began to come in. Slowly, and as yet incompletely, the dead hand of government began to be withdrawn.

### **Let my people go**

In the late 1980s I was present at a meeting of export fruit growers with government representatives, including two ministers of the government, which discussed export control standards. The export growers made it clear that their most fervent wish was that the Government would get right out of forcing growers to meet the standards that the Government thought appropriate, and let the growers instead do their best to meet the standards that their various overseas customers demanded. Only then could they respond successfully to these differing demands, and let their industries prosper.

Perhaps somewhat miffed, the Government did draw back. Chaos did not ensue.

### **Praise the algorithm**

Back now to now. The WA government's weed classification scheme is simplistic; it assigns a number to each of various points of a plant species' characteristics, adds the numbers up, and sees whether they total greater or less than 6 (or maybe some other number). This number determines whether the plant is a weed or not.

The fate of future plant introductions, and perhaps of future plant industries, rests on this feeble algorithm, nurtured within government. The assumption that such a government algorithm 'knows better' than all the years of experience of growers in the field is appalling arrogance and goes right against the ethos of deregulation and minimum government interference.

The noted thinker Jakob Bronowski, in his seminal book 'The Ascent of Man', gave his opinion that the ascent of man would continue into the future, but not with current 'western' civilizations. The reason, he said, was that these civilizations had lost their nerve. They were trading innovation and experiment for caution and safety. You can be too careful!

— *David Noel*

(steps down from soapbox).

## WA olive industry gathers strength

*Every week there seems to be a new indication that WA is on the way to building a world-class olive industry, one that will form a significant income source for the State.*

Articles reproduced below show how European interests are getting involved, and how local wine producers are diversifying to add olives as a second string to their bow. These producers have the advantage of significant marketing expertise.

In other events, floats and prospectuses for local olive oil production seem to have been taken up enthusiastically. While such ventures have not always been successful in the past, hopefully the level of local olive expertise will keep these on an even keel. WANATCA members were some of the first to make commitments to this new industry, and there are good prospects for their faith to be well justified.

— David Noel

[Countryman / 1999 Jul 15]

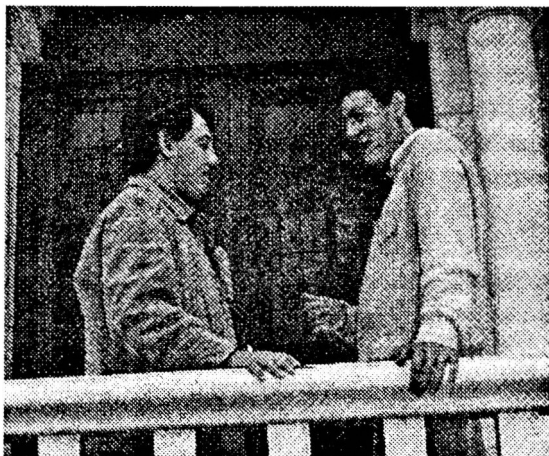
### WA ideal for olive growing: expert

One of Italy's leading olive experts believes there is no reason why olives cannot be successfully grown in WA.

Dr Maurizio Lambardi, head of the Italian National Research Council said Australia was in an ideal location for the production of olives.

It had the land, water and climatic conditions necessary for quality olive production.

The significant increase in olive oil consumption throughout the world meant there were many new markets for producers to tap into.



Spanish guest speaker Joan Tous i Marti, left, discusses olive growing in his country with Italian expert Maurizio Lambardi.

“The current worldwide expansion of olive cultivation, as a consequence of the considerable rise in olive oil consumption in several countries in Asia, the Americas and Oceania, is causing the introduction and spread of olive cultivation in new and large areas outside the Mediterranean basin,” Dr Lambardi said.

“It is foreseeable that, when the new orchards in Argentina, South Africa, Australia and New Zealand are in full production, the olive oil market will be able to count on new quality products coming from these areas.

“In this picture, Italian production, even if quantitatively insufficient, can confirm its position of leadership by producing top-quality, highly-priced oils for international markets requiring products with superior chemical and organoleptic characteristics.”

Dr Lambardi said Italian producers needed

to take steps to confirm the strategic role olives played in Italian agriculture.

He said olive cultivation in Italy was very complex both when considered over national territory as a whole and with reference to individual regions where the olive was cultivated.

This was due mostly to the diverse climatic conditions and the topographic complexity of the traditional areas where the species had spread.

Dr Lambardi said as much as 80 per cent of the area in which olives were grown was defined as agriculturally difficult. About 70 per cent was hilly and 10 per cent mountainous.

"As a consequence, in general, the olive areas are difficult to adapt to more extensive use of machinery for harvesting and pruning," he said.

Dr Lambardi said Australian producers entering the industry now were fortunate because they could do things correctly the first time and draw on international experience.

— *Valma Ozich*

[Countryman / 1999 Jul 8]

## Olive experts seek developers

**One of Italy's leading olive oil makers believes there is a big future in Australia.**

In Perth last month, members of De Masi Agricoltura, of Calabria, Italy, were seeking suitable olive growing land in WA.

But senior members of the company were at pains to stress they were also interested in joint ventures

and the exchange of information about olive growing with WA producers.

The company was also noted for its superior olive oil production machinery and was keen to have the fledgling WA industry adopt its equipment.

Company president Nino Masi said he was very serious in his attempts to enter the WA olive market.

Mr De Masi also reiterated his company's strong desire to cooperate with the local industry for the betterment of both.

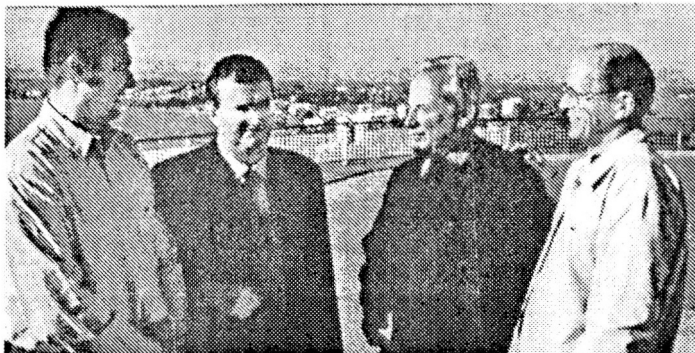
He believed WA had a very promising future for olive production but stressed it was important to get things right the first time.

And that was how De Masi Agricoltura could help.

De Masi Agricoltura had extensive experience in the establishment of olive groves including irrigation, planting and process milling.

They also manufactured a full range of machinery for all aspects of olive pickling, bottling, irrigation installation, pruning management and general processing.

So highly regarded was the company that in 1997 De Masi received a technical



*De Masi Agricoltura representatives Nino De Masi and Demetrio Malara, of Italy, and Rocco Frezza, of WA, discuss sharing information with Australian Olive Association president Ian Rowe*

innovation award for its self-propelled olive harvester at the Bologna Fair in Italy.

But as Mr De Masi said, marketing of the final product was critical and that was something his company could assist with.

"Because we are based in Italy we are able to help WA growers enter the Italian and European market with their product," he said.

"But it is important that the producer realises that only quality oil will be accepted by the market."

He said that just a few months ago the company bought a 700 hectare property near Bendigo, Victoria, where it was about to start planting olives.

Australian Olive Association president Ian Rowe said it was encouraging to all growers to have industry leaders like the De Masi group visit WA.

Mr Rowe, from WA, said it was important to gather the right information when setting up an olive grove and that was just one way that the De Masi group could assist.

"Olives are very much the flavour of the month right now as many people view them as being liquid gold," Mr Rowe said.

"However, they can end up costing you a lot of money if you don't get things right initially.

"The knowledge that companies like the De Masi group can provide is invaluable," he said.

[Countryman Horticulture / 1999 Jul 1]

## Baldivis Estate adds a string to its bow

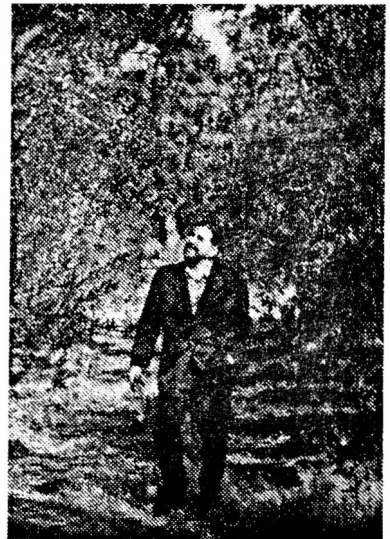
**Just as Baldivis Estate is synonymous with quality wine, the Kailis family believes it can do just as well with its new interest in olive oil.**

The combination of wine and olives was "made by the gods" according to estate general manager Mark Kailis.

"Man could not have created such a perfect combination—in terms of crop management and tasting," he said.

Alongside the 23 hectares of grape vines, Baldivis Estate already had 2000 olive trees in the ground with another 3000 waiting to be planted.

And typical of Baldivis Estate



Mark Kailis inspects the olive grove

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commitment, the company is investing \$300,000 in a new technologically advanced oil extraction machine, considered one of the best in the world, to ensure their quality philosophy is strongly adhered to.

New sheds and infrastructure were also to be established and it was envisaged the new plant would be up and running by this time next year. Mr Kailis said the machine used the 'cold press method' and he dismissed claims that it could never produce oil of the same quality as that extracted by traditional methods.

"People who claim that machines cannot produce the same high quality oil as that obtained by traditional methods are people who do not have the new machine," he said. "To begin with, the old mats can get rancid and they can get stinky and that character can get passed onto the olive oil."

But Mr Kailis stressed that the success of any olive oil started with the quality of the tree. Like with their wine production, Baldvis Estate was keen to have contract growers to supply olives to them. The only stipulation being commitment to quality.

"The growers supplying to us will end up having to be good friends of mine because we will be talking to each other a heck of a lot," Mr Kailis said.

"I come from the wine industry and sharing information is second nature. We have all grown up together in the wine industry and have very few secrets because we have all been developing research and development together. If we all talk about what our current problems are we will get over them faster."

Contracting growers made good economic sense for Baldvis Estate, he said, because the new machine was capable of processing five to six tonnes of olives an hour.

In other words, calculated on current



*Mark Kailis is impressed with the strong growth rate of this 18-month old UC13AC olive tree*

plantings, the machine would process the entire Baldvis Estate crop within six hours.

Mr Kailis said contract growers could either have their olives bought by Baldvis Estate or have oil made for them from their own product.

However, it was important to remember that olive oil production was no "get rich scheme".

"No agricultural project is ever a get rich scheme," he said.

"You need to do the research, prepare the ground correctly and maintain the crop."

Establishing a market was also crucial and that was an area in which Baldvis Estate could assist.

The estate already exported to Singapore and negotiations with other international destinations were now underway.

But the domestic market was also very attractive according to Mr Kailis who said

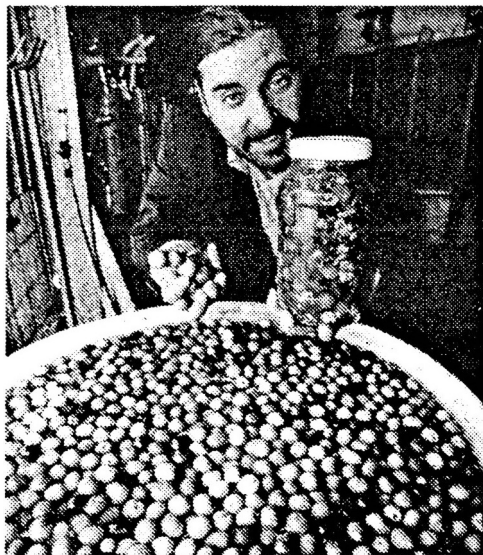
Australians used \$130 million worth of olive oil annually. Only nine per cent of that figure was supplied by Australian producers.

And Mr Kailis said he could only envisage that market expanding further as more people adopted a Mediterranean diet.

“The figures are almost doubling in each country that has not been a traditional olive oil consumer,” he said. “There are many reasons for this, including the health aspect of olive oil and of course its flavour.”

Mr Kailis dismissed a canola oil which had the same polyphenyl characteristics as olive oil as simply no comparison.

“You can genetically alter things until the cows come home but olive oil has been around for something like 6000 years unaltered,” he said. “And today it is still as good as it was back then.”



*Mark Kailis says varieties like these 'WA Mission' and 'UC13AC' ensure his olives are renowned for taste*

## Where are we at with WA fruits and nuts?

On the Atcros website, <[www.AOI.com.au/atcros](http://www.AOI.com.au/atcros)>, Table M lists main factors and varieties involved in growing traditional fruit and nut crops in the southern region of Western Australia.

Following is a narrative summary of the position with these tree crops. It is intended in the future to add this summary to WANATCA's own website, <[www.AOI.com.au/wanataca](http://www.AOI.com.au/wanataca)>, and cross-link it with the Atcros table. This situation allows easy updating of information, and comments and amendments which could improve these Web pages are very welcome.

— *Neville Shorter (9450 5606).*

### Hazelnut Varieties

Hazelbrook Nut Farm, Balingup WA  
(Members of WANATCA)  
PO Box 15, Subiaco WA 6008  
Phone 08-9388 1121 (after hours).

### QUICK SUMMARIES

**Almonds:** Grow extremely well in most locations, usually requiring some watering in summer. Vulnerable to bird damage and “shothole” leafspot disease. Respond to good nutrition.

**Apples:** A traditional fruit crop in the southwest of Western Australia. Preferred varieties have shown significant changes as have planting systems and cultural methods. Trees are planted at higher density and often in hedgerows. Regular summer irrigation and good nutrition are essential. Varieties rely on or benefit from cross pollination from a second variety.

**Apricots:** Planted widely but have never

gained major significance. Highly susceptible to Mediterranean fruit fly and "shothole" disease. Generally self fertile. Require moderate winter chilling.

**Avocados:** Avocados have emerged strongly from relative insignificance 20 years ago. They are adaptable to a wide range of soil conditions but not suited to cold locations. An adequate well designed watering system is essential as is sound nutrition.

**Cherries:** A neglected member of the fruit family. There is potential for more commercial and semi commercial plantings in locations where there is a high degree of winter chilling using preferred compatible varieties and adopting the modern hedgerow techniques. Wooden trellises are likely to be needed as is the provision of special netting for bird protection.

**Chestnuts:** Have performed successfully in preferred locations throughout the southwest notably Karragullen, Roleystone, Balingup and Manjimup. Trees have normal requirements for irrigation and nutrition. A major problem is the high degree of susceptibility to the jarrah dieback disease, *Phytophthora cinnamomi*.(pc)

**Feijoas:** Grow well in most locations but highly susceptible to Mediterranean fruit fly. Not widely favoured.

**Figs:** Highly adaptable trees therefore suited to most locations and soil conditions. Require minimal management except for fruit fly control which must be rigorous.

**Grapes (Dried):** Our climate is ideal for drying currant and sultana grapes. A once viable currant drying industry in the Swan Valley and Chittering districts no longer exists. Sultana drying was never commercially practised in Western Australia.

**Grapes (table):** The southwest of WA

has the perfect climate for the production of quality table grapes. Vines are among the most hardy of all fruit crops and adapted to a wide range of locations and soil conditions. Over the last 20 years, new improved varieties have been released. Two notable examples are Italia and Red Globe. Leaf diseases and birds are the main problems.

**Grapes (wine):** Wine grapes flourish in the southern region of Western Australia from the Swan Valley, first developed early this century, to the surge of planting in more recent times on coastal locations around Margaret River, Manjimup, Pemberton and as far south as Mt Barker and Denmark.

**Grapefruit:** Grapefruit have performed best on loamy soils near Perth and in the coastal region around Harvey further to the south where fruit quality has been excellent. Trees will also grow on sandy soils if irrigation and nutrition are optimal. Excellent quality grapefruit are produced in northerly located Carnarvon. The prominent variety is Marsh's Seedless. Thompson and Ruby are pink fleshed variations best suited to Carnarvon or other north west localities.

**Kiwifruit (Chinese gooseberry):** Have been grown with considerable success in selected locations in the foothills east of Perth. Kiwifruit have also been grown successfully

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in the Margaret River area.

**Kumquats:** Favoured for making marmalade, trees are also attractive ornamental specimens. Kumquats can grow well in most coastal and hill situations. Different varieties are available. Nagami produces oval fruits, Marumi round.

**Lemons:** Trees will perform where other types of citrus struggle. Adaptable to a wide range of locations and soil conditions but still respond to fertiliser application and selective trace element treatments. Eureka is the principle variety.

**Loquats:** Another hardy tree fruit crop adaptable to a wide range of locations and soil conditions. Require only a minimum of special attention or soil preparation. Vulnerable to the Mediterranean fruit fly.

**Macadamia Nuts:** Cropping potential has been underrated. Adaptable to a wide range of locations and soil conditions performing well at Carnarvon or as far south as Pemberton. Their banksia like Proteaceae leaf makes trees resilient to hot summer conditions. Regular irrigation and good nutrition is essential. Trees can reach a large size but can be progressively trimmed.

**Mandarins, Tangelos and Tangors:** Mandarins are prized citrus fruits requiring good growing conditions. Close attention to nutrition and irrigation is essential. Trees may require special trace element treatment. Varieties with different maturing times are available. Mandarin hybrids are also referred to as Tangeloes and Tangors. Tangeloes are mandarin/grapefruit hybrids. Varieties are Minncela (pear shaped), Orlando (high juice content) and San Jacinta. Management is as for mandarins. Tangors are mandarin/orange hybrids. Best known examples are Ellendale, Kara and Honey Murcot.

**Mangoes:** Tropical to subtropical trees which are adaptable to the cooler conditions of the south west of Western Australia. Untrimmed trees will reach a height of around 7 metres under good growing conditions. The main variety is Kensington Pride. Trees require close attention to nutrition and irrigation. A thorough fruit fly schedule is essential.

**Mulberries (White and Black):** Grow and crop well under reasonable management. The white mulberry has the shinier leaves and berries. The black mulberry is a much underrated tree as the berries are strongly flavoured and make an excellent fresh fruit dessert, eg mulberry pie, stewed and served chilled or even made into ice blocks. There would seem to be no valid reason why trees could not be close planted and with summer pruning formed into an easy to pick hedgerow.

**Nashis (Asian Pears):** Related to the European pear but of Chinese and Japanese origin. Nashis have their own appeal. Fruits are crisp and juicy, making them quite pleasant to munch on and ideal for salads (main course and dessert). Can be grown as free standing trees or trained on a trellis.

**Nectarines:** There is an ever increasing range of nectarine varieties. Many new introductions have come into Western Australia in recent years. The original nectarine was a variation of the peach. Until 20 years ago, our selection was very limited. Of the wide range now available most are yellow fleshed. There are two main groups. Firstly, there is the early maturing varieties generally with a low winter chilling requiring. These ripen from early November to early January. Most have originated from Florida, USA. They will grow in localities with mild winter temperatures. Secondly there are a range of premium varieties developed from

## 'BRING & BUY' MEETING OFFERS CHANCE OF RARE TREES

*Once again, WANATCA has organized another 'Bring & Buy / Tree Crops Fair' event, at which members and others can buy and sell all sorts of useful plants, including some real rarities not available anywhere else in WA.*

*This year's event is in the CARPARK of the CAPTAIN STIRLING HOTEL, Stirling Highway, NEDLANDS. Make a note of the date:*

**9.30 AM - 12.30 PM, SUNDAY,  
SEPTEMBER 12, 1999**

*This event is open to all buyers and sellers, including commercial nurseries involved with fruit and nut trees, and especially sister organizations. This year Men of the Trees will have their own sales stand and we would welcome others.*

*Bookings for sellers will cost \$5, no*

*charge to buyers. Many thanks to Stanley Parkinson for taking on the organization of this event.*

*To book your space, please contact Stanley on 9386 2518 (or e-mail: sparkinson@hotmail.com), or leave a message with the Tree Crops Centre.*

*Many thanks to the management of the Captain Stirling Hotel for their generosity in allowing us to use their site. The Hotel offers a fine range of meals and other refreshments — just the way to top off a great morning!*

later maturing varieties. Most originate from California, USA and have standard requirements for winter chilling. Do not require cross pollination.

**Olives:** An ancient Mediterranean crop, the trees being valued ornamentally and the fruits highly sought after for oil extraction and pickling. Trees are hardy and adaptable. They are also pest and disease resistant. Soft brown scale can occur but is controlled with white oil sprays. Trees benefit from irrigation. Moderate fertiliser use is suggested. Dual purpose varieties are popular, including Manzanillo, Mission, Verdale and Kalamata.

**Oranges:** Mediterranean fruits suited to locations from as far north as Carnarvon to Harvey, Capel and Donnybrook in the south. The two main types are Navels and Valencias. The main variety is Washington Navel. The fruiting season of the navel is mainly winter. Fruits peel easily and readily break in to

segments. There are minor variations. The Valencia is a summer cropper. The fruit is juicy and sweet although there are some seeds. The original sweet orange is well known in Europe but not so well known in Australia. Has a very high juice content. Joppa and Jaffa are variations. Oranges are not suited to colder localities as fruit quality is affected.

**Passionfruit:** Often a popular selection in the home garden, passionfruit benefits from a protected but sunny position, and adequate nutrition and watering. The main variety has

### Honeybee Pollination Increases crop yields

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been the black passion fruit which can be grown from seed but has also been raised as grafted vines ("Nelly Kelly"). However the benefits of grafted vines became clouded by virus diseases. Disease resistant stocks are now available as are new scion selections.

**Peaches:** Like nectarines some new improved varieties are now available. also as with nectarines there are early low chill varieties and later moderately chilled varieties. Most are yellow fleshed cling stone or semi cling stone. Peaches do not require cross pollination.

**Pears:** Traditional tree fruit crop requiring good growing conditions and colder locations. Pears are now being commercially planted at high density in hedgerows and quite often on trellises. Require cross pollination.

**Pecan Nuts:** Originally from Southern USA, pecan trees are well suited to the south west region of Western Australia given access to summer moisture either naturally or by irrigation. Pecan growing is a large scale industry in America. Trees unrestricted can eventually reach a height of 7 to 10 metres.

Can make excellent "avenue" or feature trees. A comprehensive range of varieties is available. Strongly recommended varieties are Mohawk, Wichita, Western Schley and Mahan.

**Pistachios:** Pistachios have been something of an enigma in the southwest and central wheat belt areas of Western Australia. However promising results are now coming to notice. Varieties suited to local conditions have been released, the most notable being Sirora. Matching male pollinator trees must be provided. Trees are ideally suited to our hot summer conditions. There must be adequate summer moisture either natural drainage or moderate irrigation.

**Plums (European):** Prunes are the best known examples, specific varieties being Black Diamond and President. European plums have not been generally successful in Western Australia due to their high winter chilling requirements. Require cross pollination.

**Plums (Japanese):** Many newer varieties are now available. There is now an excellent selection of choice mid to late season plums. Starting in late December, and following the earlier cherry plums, the first acknowledged variety is Santa Rosa. Other popular varieties to follow are Stirling, Laroda, Casselman, Simka, Friar and Black Amber. Close attention to nutrition, irrigation and disease and pest control is essential. Require cross pollination.

**Quince:** A member of the pomefruit family. Favoured for preserving.

**Tamarillos (Tree Tomato):** A subtropical plant from South America which grows as a small soft stemmed, evergreen bush. Sensitive to wind and frosts, they are best supported on a simple wire trellis. Tamarillos require regular watering and good nutrition.

**Walnuts:** Have grown and produced well in some Hills locations near Perth and in south west districts, notably Donnybrook, Balingup, Bridgetown and Manjimup. Walnuts prefer loamy soils and cold winters. Popular varieties have been Freshford Gem and Franquette. Newer Californian varieties are becoming available.

*[Ed: Many thanks to Neville Shorter for his valuable work on all these documents]*

**"The fruits of excessive caution are short-term complacency and long-term dismay"**

[Countryman Horticulture / 1999 Feb 4]

## Albany couple pin faith in vine with a passion

With four children and dreams of them all going on to tertiary education, Jenny and Danny O'Neil know the cost could be financially crippling.

Late last year the Albany couple planted 750 passionfruit vines which they hope will ensure financial security for their children through their years of study.

Mr and Mrs O'Neil decided on passionfruit after dismissing several other horticulture ventures which did not fit their list of criteria.

School teachers by profession — Mr O'Neil is a principal—they were looking for something that would supplement their incomes but not interfere with their full-time occupation.

They almost went down the path of being part-time strawberry growers but a visit to a local planting of less than one hectare which

required a staff of 40 just for picking duties soon convinced them to look for something else.

Ideally they wanted to keep any work force to a minimum and a crop that did not need to be picked exactly when ripe.

Passionfruit fitted the bill and the fact that WA imported 80-90 per cent of its passionfruit stock was an added bonus.

Despite many people telling them they should follow popular opinion and pursue a viticultural enterprise, the O'Neils were not deterred.

The owner of the Whitby Falls Nursery in Mundijong showed some faith in passionfruit



Albany school teachers Danny and Jenny O'Neil with books to study passionfruit growing

being grown in Albany, and with a little advice from him the O'Neils decided to bite the bullet and go with the crop.

An early problem was their research had revealed that they should plant in November, but as school teachers the timing could not have been worse.

"Anything involving fourth term is not good but we got through it," Mr O'Neil said.

"And as it turned out, the temperatures have been so low that we could have waited a little longer. As a consequence, there has not been a lot of growth."

The couple planted a variety developed by the Whitby Falls Nursery called Sunshine Special, which was specifically developed for WA conditions.

In Albany, passionfruit is expected to fruit from late April to early July—perfect for both the school teachers in terms of workload and in theory a time for good prices.

"Figures we have worked on are as low as 15¢ a piece of fruit and it is still viable for us at that level because we have another income,"

Mr O'Neil said.

"And if we get over the 25-30¢ a piece mark we will be very happy."

He said they had monitored the weekly prices of passionfruit through the pages of *Countryman* and *The West Australian*.

They expected their first passionfruit to be harvested next year, although they were surprised to see a couple of pieces of fruit on the vines already.

But they know being successful growers is a long way off.

And while they appear to have established the principles of growing passionfruit, there is still the marketing side of the venture to tackle.

"Just because many passionfruit growers market their product in a peach tray does not mean we have to do it that way," Mr O'Neil said.

"I am not the type of person to do something just because that is the traditional way to do it."

Whitby Falls Nursery: <A3256>

[*West Australian / 1999 May 3*]

## Who wants to buy bush tucker?

**Australia has abundant supplies of bush food but can it find a niche in a market which makes difficult demands?**

For thousands, perhaps tens of thousands of years, humans have been selecting their foods for taste, size and other qualities.

Early hunter gatherers, noting a certain bush near a certain stream had a bigger, sweeter berry than others, no doubt visited this tree first in their seasonal journeying.

Their endless travels from one food to the next was not haphazard and the trails they followed would have been littered with seed from their take-away meals.

Over a period of 40,000 years plus, the Aboriginal people would certainly have encouraged the spread of those plants they found which gave them better food.

We have become sophisticated at the process of selection and encouragement. But plants grown from seed are not always identical to the parent and we have had to look at other ways to replicate our chosen varieties.

Cuttings, cloning, grafting and even micro-grafting are now stock in trade in the food and



ornamental plant industries.

We like the blood plum we eat today to look and taste much like the one we ate yesterday. Distributors like uniformity of size and ripeness to aid transportation of goods.

Processors and cooks like identical levels of essential oils or sugars or pectin in the fruit they use to ensure their recipe works every time.

Most importantly, growers are quick to replicate naturally occurring "sports" they come across — oddities like an orange tree that fruits out of season or a seedless grape.

Australian bush foods are anachronisms in the food world. Apart from some major exceptions, "wild" plants have not been tampered with, selected, or even researched in any great degree.

Wild harvest is still a substantial component of the total bush-food crop and though the concept of native foods gathered in the wild is attractive, the reality has been massive swings in supply and relatively high prices,

reflecting the cost of this latter-day hunting-gathering.

Street harvest is an interesting adjunct to wild harvest. The riberry (*Syzygium luehmannii*) has been a popular street tree in many towns and cities and a good season, in a city such as Brisbane, can yield tonnes of this interesting fruit.

The trees themselves can be well formed and open branched or straggly and difficult. Some trees offer up the fruit in handy and easily harvested bunches, others distribute it in ones and twos throughout the plant.

The fruit can be big (the size of an elongated cherry) or pea-sized, light to dark pink and



*Bunya cones and nuts*

even red when ripe, and pear-shaped, round, egg-shaped or slender. Most interestingly, the riberry comes in both seeded and seedless versions, often on the same plant.

The bunya pine (*Araucaria bidwillii*) can deliver up to 20-30 kg of cones per tree — or almost none at all (as happened this year).

Variation in cone and nut size usually reflects the health of the tree rather than some genetic differentiation. But if I were to be growing them commercially, I would be scratching my head at the "nil harvest" this year.

In WA, sandalwoods are being grown for their timber and, in the case of *Santalum*

*spicatum*, a delicious nut.

Here again, substantial variation in yield and nut quality can be found from tree to tree. To make this a commercial crop, some form of selection would seem necessary.

There is also a growing interest in the native yams — many of which are nutritious and good to eat but rather small. The hunt is on for a bigger, hardier strain of wild yam.

Over the last few years, the industry has seen an increasing demand for the hardy little bush tomato (*Solanum centrale*) of the arid centre.

These interesting fruit (which dry on the bush) have more uniformity in size and taste than many other species but some seasons conditions are not right and the harvest is minimal.

In an established market, this can force prices up. In an emerging market such as bush foods, it can simply make buyers wary of the product and less likely to rely on supply in seasons to come.

Time and money is certainly being spent on a few bush food species. The well-known red quandong, warrigal greens, davidson plum, lemon scented myrtle, the finger lime, and



*Warrigal greens*

wattle seed are all the subject of trials and selection.

Hundreds of native Australian foods have potential. But if the industry is to gain the market's confidence, it certainly has to supply a reliable product which looks and tastes something like the product supplied the year before.

The down-side of this selection process is a reduction in genetic diversity. If someone were to find the "perfect" sandalwood tomorrow, that plant and its thousands of clones could become the industry standard.

Why would you plant a tree of unknown performance when you could plant a tree guaranteed to give you what the market wants?

There is no easy answer to this philosophical question. Though mother nature herself is the world's greatest selector, she thrives on diversity.

It is this very diversity which gives us those occasional "perfect" foods we then replicate. By locking production into the genes of one plant, we lose all chance of breeding an even more perfect plant.

We also lose nature's answer to pests (those plants with a natural resistance survive and thrive) and this can lead to chemical

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intervention to keep our perfect tree bearing.

Finally, there is an even more basic issue. Where is the line between bush food and commercial crop drawn?

Are hydroponically grown warrigal greens bush food? Are cloned quandongs? And what of the wild lime/ mandarin cross?

— *Sammy Ringer*

[Ed: Sammy is the Editor of Australian Bushfoods Magazine <A3075>, a must for anyone contemplating growing native Australian food plants].

[West Australian / 1999 Jun 22]

## Israelis invent trees that grow speedily

Israeli scientists said yesterday they had developed a revolutionary way to accelerate tree and plant growth by up to 50 per cent and possibly help restore depleted rainforests.

Armed with a "gene gun" and a Petri dish, scientists at a branch of the Hebrew University in the central Israeli town of Rehovot have been inserting a cellulose-binding gene known as CBD into plant cells.

CBD Technologies expects the technique to enter the commercial market within five years. But the company says public fears of genetically modified food could hamper marketing. The technology has been in use since the early 1990s in the textile and pharmaceutical fields. Results in the past year show treated trees sprout up faster and fatter.

The CBD gene being used was found by Israeli and American scientists in the 1980s, Israeli scientists said. "By introducing the gene into plants we have the ability to increase the rate of cellulose biosynthesis and growth of plants and consequently their biomass by up to 50 per cent," chief researcher Oded Shoseyov said.

Experimental forests have already been set up in Virginia in the United States. Tomatoes, corn and potatoes are still being tested in the laboratory. "The hard data we have are mostly on poplar trees — trees used for pulp and paper," Dr Shoseyov said. "We have indications that the gene will work also on other systems but that needs to be established."

CBD Technologies director-general Stanley Hirsch said he believed the technique could help fend off a potential worldwide food crisis in the next millennium. "The world population is projected to double within the next 30 years," Mr Hirsch said. "We need to introduce technologies that will allow us to produce enough food for the world to continue to survive."

CBD Technologies is a four-year old company backed by investors in Israel and the US. It has a US patent for the technique. ¥

## MACADAMIA TREES

Grafted, top quality trees from the Eastern States. Health-inspected by two state Agriculture Departments. More than 20 varieties available including all the top performing and newer varieties such as 816, 842, 849, A4, A16, A38, 781, 783, and Daddow etc.

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**Landcare Services** <A3259>

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PO Box 217 Margaret River 6285

[*The Fruit Gardener* (California Rare Fruit Growers) / 1999 May-Jun]

## The Ugni and the Inga

The Myrtaceae is a large group of diverse plants, including the eucalyptus, spices such as cloves and allspice, and many edibles like jaboticaba, guavas, and the many *Eugenia* and *Syzygium*. Such a large group ranges through many climate areas from the humid hot Amazon basin to the subtropical areas of Australia.

A member of the Myrtaceae family which should be in more gardens is the Ugni or Chilean guava (*Ugni molinae*). The plant is quite attractive with oval leaves, glossy green above, ranging from 12 to 25 cm in length. It is a hardy plant taking a couple degrees of cold below freezing.

Because of its small size and fibrous root system, the plant also makes an ideal container subject. When in bloom, the bush has numerous small white flowers much like those of the blueberry in size and shape. Fruits are 8 mm round berries turning reddish upon maturity.

From the flavor of the fruit and the appearance of the plant, one would hardly call this plant a "guava." Flesh has a crisp texture and a unique spicy flavor which was enjoyed by all who tried them. They are reported to make an excellent jam, but we never got that far they were all enjoyed fresh off the plant.

A couple of handfuls did make it onto the morning cereal and were a good substitute for blueberries. The plant



*Chilean guava (Ugni molinae)*

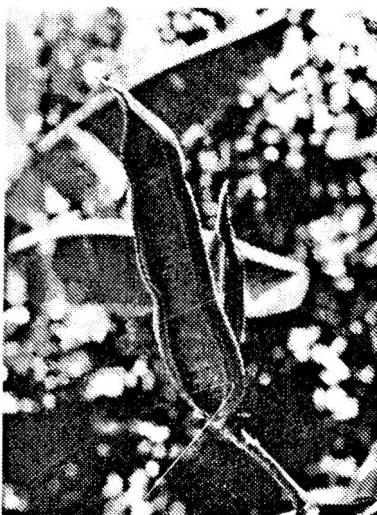
propagates well from cuttings, so better varieties can be cloned.

### Ice Cream Beans - the Inga Species

Inga trees are members of the Legume family and originate in South America. There are many species of Inga found in habitats ranging from the tropical, humid Amazon

lowlands to the Ecuadorean highlands. The fruits were known to the Incas and are eaten to this day by people residing in their range. The trees are fast growing and very ornamental, making excellent (and rapid) shade trees.

I started seeds received from Ecuador about five years ago and one tree is now producing fruit. It is about 3.5 m tall and its canopy extends about 4.5 m in width. I don't have a positive identification on this



*Immature Inga pod before filling out*

plant so I refer to it as the Highlands Inga. Flowers are on 7 cm stems growing up from the branches. Several flowers bloom from one of these stems, and with their long white stamens are similar to those seen in another Legume, the mimosa. Anywhere from one to three or four pods form on the spike after the flowers.

Interestingly, the pods lengthened but remained very thin in the center. I began to wonder if they would ever fill out or if they were infertile. When they reached about 25 or 30 cm (in this particular species) the pods begin to swell and fill out. Some literature states that they are infertile alone and need a pollinator. Only one tree had flowered but produced many fruits, so at least in this case infertility was not a problem.

The next question was: when the heck do you pick these pods?? There was no mention of this in anything I had read.

The fruits were anywhere from 7 to 17 cm long. Opening one of the most plump pods, I was surprised to see that the seeds had already germinated and roots were spreading through the white pulp! Next I tried a pod that had filled out, but did not look like it was about to blow open. The pulp appeared as glistening white cotton candy (sort of) and the seed had not yet germinated. The pulp had an "airy" texture, was juicy and had an agreeable sweet flavor.

There are a large number of different species of Inga with differences in fruit. Another Inga produced a single pod this year- I only found it when it had fallen to the ground and the pulp was desiccated. This one was at least 30 cm long. I have seen photos of fruit at least two to three times this size. One tree I have heard of growing in Ecuador produces an orange-fleshed fruit. A plant

from seeds of Guatemalan origin seems more sensitive to cold than the one from Ecuadorian highlands. Other species for which I have been able to obtain seed include *I. mortoniana*, *I. spectabilis* and *I. ilta*. I'm always looking for additional species to add to the collection.

There is still much more to be learned about this interesting and attractive tree. One thing is how different species will grow and fruit in this area. Another question I have is: Since this tree is in the Legume family, does it add nitrogen or other elements to the soil which would benefit other plants?

Clearly, getting a plant to grow is only the beginning of our Spirit of Experimentation.

— Ben Poirier

[These are two extracts from Ben's article, entitled "Keep on Trying: A Few Success Stories". He also covered the Roselle. A few Ugnis and Ingas will be on sale at the Bring & Buy].

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[West Australian / 1999 Jul 22]

## Cocoa plan for Kimberley

**Multinational giant Cadbury-Schweppes is leading a \$2 million drive to grow cocoa in the Kimberley and other parts of tropical Australia.**

Concerned about the long-term security of cocoa supplies from traditional growing areas in Asia, Cadbury-Schweppes has joined forces with the Canberra-based Rural Industries Research & Development Corporation and State-based agricultural agencies to research Australia's cocoa potential. Kununurra, Darwin and north Queensland will host the first test sites in the program.

The research is expected to take three years. According to the RIRDC, Australia imports 40,000 tonnes of processed cocoa.

—Mark Pownall

## Acotanc-2001 swings into action

### Theme: Tree Crops — Essential for the Earth

The Tree Crop event of the generation is coming up in Perth in 2001, with the staging of Acotanc-2001, the Ninth Australasian Conference on Tree and Nut Crops.

Acotanc had its birthplace in Perth, when in 1982 WANATCA had the help of many other Australasian organizations in setting up and running the First Conference — “Tree Crops, the Third Component”.

Acotanc-1982 was a watershed in the development of tree crops locally, with its theme for the third component of productive land use, previously much neglected compared to field crops and stock raising — ‘wheat and sheep’.

Now Tree Crop industries are starting to come of age, and Acotanc-2001 is likely to

mark another watershed. With the theme of “Tree Crops: Essential for The Earth” this wide-ranging event will have as a central thread the superiority of tree-based crops in environmental as well as economic matters.

An event such as this is also likely to provide a boost for the Association as a whole. The Conference will be open to everybody, not just members, but is an ideal way to increase membership.

#### Some details to date:

**Dates.** Start April 13 (Good Friday), 2001. Finish April 20.

**Site.** Kingswood College, University of WA, Nedlands. Overflow to general University facilities, other colleges, hotels.

**Supervision and Accommodation.** Leonie Farrow, Conference Manager, Kingswood.

<farrow@kingswood.uwa.ed.au>.

**Ad Hoc Committee.** David Noel, Stanley Parkinson, Chris Johnson, David McCormick.

#### Program.

a) Apr 13-15. **MiniAcs.** 0.5 to 3-day Mini-Conferences on specialist topics, to be organized, as far as possible, with existing specialist groups (Australian Macadamia Society, Carobs Australia, Olive Growers, Australian Quandong Industry Association, Subtropical Farm Forestry Association, Hazelnut Growers.....).

b) Monday Apr 16. Official opening, plenary sessions.

c) Tuesday Apr 17. Plenary sessions. Defend Poster Display.

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### Capuli Cherry Plants

(*Prunus salicifolia*)

Seedlings \$6-10 (30-60 cm)

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(Small plants in milk cartons — recommended for transplanting)

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### Avon Valley Tree Crops <A3128>

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or phone

John, Linda Price: 08-9497 2302

Bill Napier: 9399 6683

d) April 18-20. Field and Demonstration visits.

**Speakers.** Prominent general experts to be attracted from major world regions, able to participate in several MiniAcs — USA, China, New Zealand, Chile, Israel, Philippines, Brazil, Brunei ....

**Proceedings and Posters.** Everything to be put up on the Internet.

**Trade Exhibition, Funding, Support.** Support and sponsorship to be sought from commercial firms (some exhibitors), and application to be made to Federal Government's Horticultural Research & Development Corporation (HRDC).

## Quandong planting progressing

WANATCA member Mark Alberd is expanding his planting of quandongs at York, 100 km east of Perth.

He already has 100 plants, some of which are doing well, others not so well. On order from a Victorian nursery are another 200 grafted quandongs, which should be planted in June or July.

Mark is interested in how others are doing with this native West Australian fruit (and nut). He can be contacted on 08-9337 7702.

### Do we have your e-mail address?

We are now sending out advance notices of WANATCA events via e-mail to WA members who have given us their e-mail address.

If you have not been informed of the Charles Peaty meeting or the Bring & Buy by e-mail, it is because we do not have a correct e-mail address for you.

Notify us of your e-mail by sending to:  
[wanatca@AOI.com.au](mailto:wanatca@AOI.com.au)

## Title and Theme: *Tree Crops: Essential for The Earth*

### Summary

Traditional paper fliers on the Conference will be sent out with the next issue of *Quandong* and mailed to other prospective attenders. In the next few weeks, information will also be sent out via e-mail (where we have e-mail addresses). Anyone on e-mail who would like to be kept informed on developments should send a blank e-mail with 'Acotanc Inform' in the subject field to: [acotanc@AOI.com.au](mailto:acotanc@AOI.com.au). New information will be progressively added to the Acotanc website at [www.AOI.com.au/acotanc](http://www.AOI.com.au/acotanc).

## Get set for the Bring & Buy

*WANATCA will be holding its Bring & Buy meeting in September at the CAPTAIN STIRLING HOTEL carpark on Stirling Highway, Nedlands*

The date is Sunday, September 12, 9.30 am - 12.30 pm. There are more details in this issue of

Quandong, but:

## You Still Have Time

**to get going on potting up or producing your extra nut, fruit, or other tree crop plants which you can make available.**

This is the opportunity to make some money and at the same time raise the number of crop trees planted locally. Commercial sales are welcome too.

*Queries to Tree Crops Centre,  
08-9388 1965.*

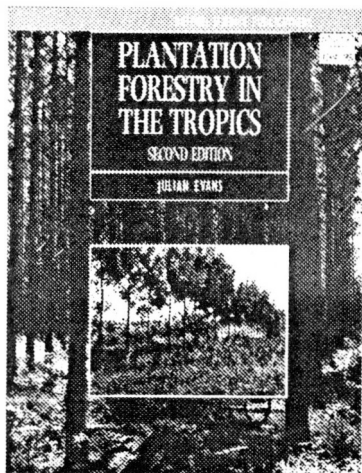
## Notes on New Books

by David Noël

**PLANTATION FORESTRY IN THE TROPICS: Tree planting for industrial, social, environmental, and agroforestry purposes.** Julian Evans. Oxford Science Publications, USA, 1996. 403p. Paperback.

Excellent manual on warm-climate tree plantings, a new direction in tree crops. Recommended. \*\$134.95

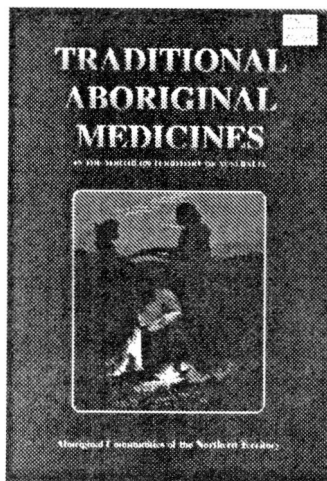
*Prior to the last couple of decades, tropical forests were regarded as a natural resource to be stripped and exploited. Now there is growing concern with (re)planting forests, creating sustainable timber resources, and avoiding erosion and the same ills as afflicted temperate forests.*



*This book, now in its second edition, is an admirable handbook for all concerned with building renewable warm-climate forest resources.*

**TRADITIONAL ABORIGINAL MEDICINES IN THE NORTHERN TERRITORY OF AUSTRALIA.** Published by the Conservation Commission of the Northern Territory of Australia, Darwin, 1993. 650p. Hardback. Tremendous sourcebook on medicinal plants of N. Australia, great line drawings, photos. Highly recommended. \*\$56.95.

*For some reason this first-class book has never attained the recognition it deserves. A scholarly and systematic production, with each species described in detail with excellent line drawings and many colour photos. Authorship is attributed to 'Aboriginal*



*Communities of the Northern Territory'.*

This book is worth the price for the botanical information alone. Australia, with its unique and distinctive flora, seems to be opening up now as one of the great medicine chests of the world, following the recent recognition of its native food resources.

Originally issued at more than twice the above prices, this title is not to be missed by anyone interested in plant medicines — it is unlikely to be available for very long.



**PERMACULTURE PLANTS: AGAVES & CACTI.** Jeff Nugent. Published by Sustainable Agriculture Research Institute, WA, 1999. 200p. Pb. \*\$25.00

Highly useful compilation of cacti (mostly) with fruits or edible parts, also agaves. Unique source of this hard-to-find material.



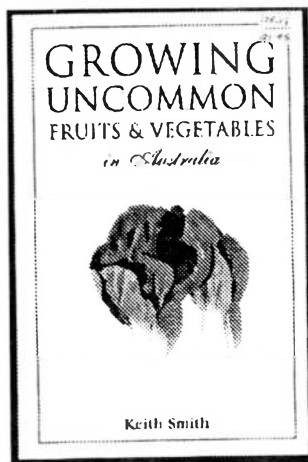
*Of the many books published about cacti, hardly any have paid much attention to their fruits and other edible products, till now.*

*This is a highly useful compilation, the first I have come across on the topic. It does open up a neglected but useful source of fruits able to grow in more arid areas. It appears thorough, with line drawings of most species, describing areas of origin and uses.*

*In spite of the title order, the agaves are a minor part of the book, and although these plants could form part of a permaculture approach, this is not basic to the topic.*

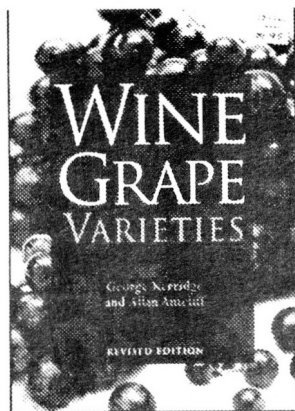
**GROWING UNCOMMON FRUITS & VEGETABLES IN AUSTRALIA.** Keith Smith (Aus, 1998). 164p. Pb. Useful vignettes on 150 less usual fruits and vegetables grown in Australia. \*\$21.95

*This is a mixed bag of material, much of which started life as articles in 'Earth Garden' magazine. While no species is covered in*



*great detail, this is a useful first reference to some of the less common species which can be grown here.*

**WINE GRAPE VARIETIES.** George Kerridge and Allan Antcliff. Published by CSIRO, 1999. 205p. Paperback. \*\$29.95



*The latest, and a very worthy, CSIRO publication on this topic. Covers about 90 varieties. Every wine grape grower will want to have a copy available for reference.*

*\*Prices at Granny Smith's Bookshop (see ad p. 31)*

## Update on WA figs

Alex Hart, WANATCA Fig Action Group leader, is getting ahead with his work on identifying fig varieties by their physical characteristics.

Alex is using the fig variety trial established at WANATCA's Tree Crop Gene Bank at Hillside Farm, Gosnells, for his working material. The Gene Bank now contains a total of 22 different fig varieties, and Alex has worked out a Key scheme by which they can be distinguished, as shown here.

Alex has asked for feedback from others who have knowledge of fig varieties to improve and expand this Key. So if you know of a good fig, run it through Alex's Key and see if it fits — if it doesn't, please let Alex know and he can expand the Key to include it. Alex can be contacted at 08-

9490 1324, or 71 Terence St Gosnells 6110.

### History of the 'Peter Good' fig

The fig variety now known as 'Peter Good' was selected in Perth some years ago by Peter, who was the Association's first President (back at the time when our group was called the West Australian Nutgrowing Society).

Peter is now better known as a prominent WA artist, and recently has depicted the fig

which we named after him in a number of paintings. I asked him for a little on the history of the fig, and his response follows.

— David Noel

*"The tree from which I got my cutting over 30 years ago was in a Federation house block in Mount Lawley [a Perth suburb] owned by a fellow TAFE [Tertiary & Further Education college] worker, Peter Kemeny. He died 10 or 15 years ago.*

*He said the tree was a seedling, I believe most likely from the '30s, and he used to bring*

#### KEY TO 22 FIG VARIETIES AT HILLSIDE FARM....(WANATCA.)

##### A. Yellow/ Green Fruit

- AA: Spoonbill Leaf: .....Pale green flesh, small seeds....."Tena"  
 .....Large seeds large figs very sweet....."Skoss No 5"  
 ..... Medium pink/red flesh, lge open osteole.....Skoss No2"  
 Large seeds, medium sized fruit.....Collins No5
- AA! Not Spoonbill Leaf.....  
 AAA.....Flesh shades of pink/red and ribbed skin  
 ..... sweet/bland taste....."Excel"  
 ..... sweet, large seeds yellow fruit.....Ex Nedlands  
 large ringed osteole, lge seeds yellow.Ex D.Hintz  
 .....large seeds open osteole good taste.....Collins No5  
 .....!grape style leaf....."Other" Williams
- AAA! Pale greenish flesh  
 AAAA1. Ribbed fruit, sweet large seeds...Calimyrna  
 AAAA2: Not ribbed small seeds....."Tena"  
 AAA2. Pale to mid red flesh, medium lge seed white  
 Flecks on skin of fruit.....Deanne
- AAA3: Honey coloured flesh, sweet large seeds.....Excel  
 .....pinkish tinge to flesh, open osteole sugary...Skoss No3  
 .....Skoss No 7  
 .....Collins No8  
 .....R/Rill No1  
 ..... small fruit RIBBED, pettate leaves, bland Skoss No1

##### B. PURPLE /RED BROWN FRUIT(Spoonbill Maple & Grape Leaves)

- BB.....Purple skin, lcearge fruit dark red flesh sweet juicy....."Good"  
 ..Spoonbill leaf large open osteole .....Ex D. Hintz  
 ..... (Bl. Genoa Type )  
 ..Grape leaf, weakly lobed leaves large figs....."Adam"
- BB!... Brown reddish skin  
 ..Grape leaf, bland taste large open osteole deep red flesh ..Collins No3  
 ..Maple leaf bland taste large seeds sweetish.....Skoss No 4.

Note : Leaf types Spoonbill

Maple

Grape-



me figs from the tree over several years.

*I asked him for a cutting because the fruit was so distinctively superior. This grew into a fairly prolific tree that produced extraordinarily good fruit, large red and delicious, and resistant to fruit fly.*

*Family and friends eagerly kept a check on when fruit was ripening. Cuttings were struck, and some young trees given away, one to you."*

— Peter Good

## Looking for the 'Compact' Stone Pine — reward offered!

Rob Furneaux of Kanangra Propagators is looking for propagation material of a compact, early-bearing stone pine (*Pinus pinea*) which is believed to have been selected in WA during the 1940s or thereabouts.

Stone Pines are the source of most of the Pine Nuts used in Lebanese and Greek dishes, although pine nuts from China (*Pinus koraensis*) are also found nowadays. Pine

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nuts have become one of the most expensive nuts, with retail prices up to \$50 per kilo, so there is a possible market opportunity here, especially if early-bearing varieties can be located.

I believe that I saw a row of these compact stone pines propagated in the nursery at Burnley Horticultural College, Melbourne, in 1984, so they may have spread outside WA. The variety name I cannot remember, it may have begun with 'W'.

Rob is offering a free fruit or nut tree of their choice to the first few people able to tell him of a standing tree or other source of propagation material of this compact stone pine. Contact Rob on phone/fax 02-4632 7297 or at PO Box 18B, Douglas Park NSW 2569.

— David Noel

Kanangra Propagators: <A3092>

## We buy Macadamia Nuts

Macnuts WA would like to confirm that the 1999 price for N.I.S. (nut-in-shell) delivered to their Baldvis, Western Australia factory will be \$2.35 per kg at 10% moisture content and 33% kernel recovery, payable in 30 days.

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[Countryman / 1999 May 6]

## Jojoba gamble pays off for 'punter by nature'

Wagin jojoba grower and racehorse enthusiast Greg Ball says he is always looking for something new and different because he is a punter by nature.

A co-owner of 1997 Perth Cup winner Time Frame, the Wagin farmer said he was not one to adhere to conventional farming practices.

"I guess you're only here for a certain amount of time — life is fairly short," he said.

"I'm a dead opportunist and a punter by nature.

"If You're not out there looking you don't know what you'll run into."

Mr Ball, a third-generation farmer, said he had no preconceptions about farming when he took over the 4000 ha property at the age of 18 when his parents died.

His venture into jojoba was sparked five years ago.

At the time he was looking for a sustainable, deep-rooted perennial crop to grow on his farm, which also supports wife Glenys and 15-year-old son Ben.

The farm, which crops about 2000 ha and runs about 5000 sheep, had a severe salt problem and Mr Ball wanted to balance the water table.

Options he had investigated included growing North American catfish and seaweed — anything which could grow in salty water.

Then in 1994 Mr Ball attended a jojoba field day in NSW with friend Charles Piesse and was stunned by the prospects of the crop



*Female plants of the Wadi Wadi variety planted this month were produced from cuttings*

which promised up to \$ 15,000 /ha with minimal irrigation.

Jojoba, an oilseed crop which provides wax esters now used in cosmetics and lubricants, has a degree of salt tolerance but is susceptible to waterlogging.

After six months of his own research, Mr Ball was convinced to try the crop.

He was the first in WA to grow jojoba from cuttings, with a seeded plantation having already been established in Carnarvon.

Mr Ball, who is now considering growing grapes, said he was now one of six jojoba growers in WA, including Rob and Caroline Rex, of Arthur River, who planted the oilseed in February.

Mr Ball grows about 40 ha of jojoba of the Barinji and Wadi Wadi varieties and aims to increase the area to 100 ha in four years.

Recently he planted 8500 propagated cuttings, taking the total number of plants to about 37,000.

They are watered from a nearby dam containing water of about 300 ms/m salinity.

Mr Ball said although he initially planted Jojoba for landcare reasons, he now regarded it primarily as a commercial exercise.

But he said the crop was sustainable and the water table problem would not worsen.

Mr Ball said jojoba was labour intensive and problems had included controlling weeds. He has developed tree guards which he produces at a Perth factory and is considering marketing.

He has also carried out his own trials on chemicals to control weeds.

Mr Ball said it was also a major change going from broadacre management to looking at individual, perennial plants, but benefits included excellent returns.

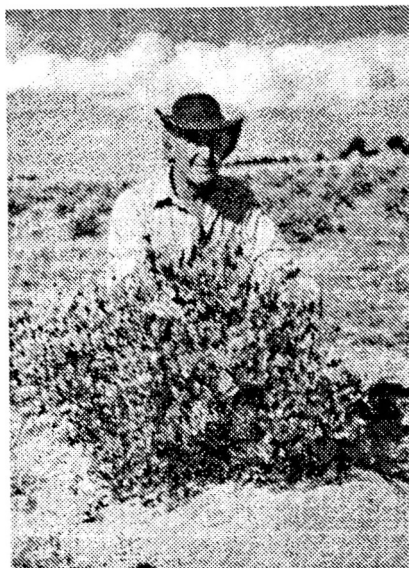
He said many farmers were discouraged from growing the oilseed because of high initial outlays — it costs about \$5000 /ha to plant jojoba.

But this was compensated by annual returns up to \$15,000 /ha.

Mr Ball said he had compared returns from wheat and jojoba and found wheat would need to yield 30 t/ha to be as profitable as the oilseed.

“We can get a far lower return from what we are expecting from our crop and still make a profit,” he said.

Mr Ball financed the production of the NiceNess jojoba harvester which was voted



*Greg Ball with a female jojoba plant of the Barinji variety which was planted in 1995*

the best new invention at the 1998 Woolorama. But the machine had since been abandoned because it proved too expensive to operate.

Mr Ball also clones and sells plants to other growers.

“We’re also looking to develop plantations for investors as well,” he said.

With seven other Australian jojoba growers he has been involved in the formation recently of a jojoba marketing company called Jojoba Australia.

Mr Ball is one of four directors of the company, whose aim is to develop a marketing strategy for the oilseed to cope with future increasing supply.

He said there were opportunities for value adding on-farm, and future possibilities included establishing a tourist attraction incorporating tours and product sales.

[The Australian Magazine / 1999 Jul 3]

## Bonanza for pistachio growers

What was a nutty 1980s idea to grow pistachios in Australia has turned into a bonanza.

Legend has it that young lovers in ancient Persia got their kicks going out to pistachio orchards on moonlit nights to hear the nuts crack open, which they do naturally as they ripen. We might not have come far from old pick-up lines like, "Hey babe, come up and see my orchard sometime", but those trees have — pistachio orchards can now be found as far from the Middle East as the Riverland of the NSW-Victoria border.

Originally, the trees grew wild in arid mountainous areas around Iran. They were so prized and so rare that the Queen of Sheba hoarded the entire Assyrian crop for her court. To this day, Iran is a major supplier of pistachios, joined in the 1960s by the Californians and only recently by Australian growers.

This last season really changed the arithmetic for the industry," says Chris Joyce, pistachio farmer and partner in the Australian Pioneer Pistachio Company, which handles 95 per cent of the Australian crop. "In 1983, yields of five tonnes per hectare were predicted. A couple of years ago I'd have told

you that was impossible. Now we're seeing it can be done. Critically, the younger trees are on their way to doing that, which can mean earnings of \$25,000 a hectare."

Joyce needs little encouragement to talk nuts. In 1983 he was a nut merchant looking for a rural investment when he read about CSIRO research into the potential of pistachios. Had we known 'what we were letting ourselves in for, we wouldn't have done it," he says, looking back to his first plantings in 1984, when he had expectations of commercial crops after seven years.

"My advice is: Don't be the first commercial grower of any new crop. There are idiosyncrasies with any crop and you have no way of knowing what they are going to be.

"Nevertheless, we have done it, we've got the yields. We've shown the potential for diversity, too. You can't keep planting grapes. Monocultures are not smart for a country; just look at wheat and wool."

Getting it right has meant this year's Australian pistachio harvest is double that of 1998. For the first year the local industry supplied half the domestic market's total consumption — currently 1500 tonnes, worth \$8 million. Not bad considering Australians consumed only 400 tonnes back in 1983, when Joyce and partner David Crawford set out separately to capture the market.

Part of the reason is the recognition of the health benefits of nuts. Studies conducted in the US and Britain have found people who consume nuts five times a week are 30-50 percent less likely to have heart disease.



Pistachios contain no cholesterol, and have plenty of healthy monounsaturated and polyunsaturated fats which help maintain so-called "good" (HDL) cholesterol levels in our blood.

Of course, it helps that pistachios satisfy the modern penchant for grazing throughout the day. Says Joyce: "A good pistachio should be easy to open, with a wide, happy split. The kernel should be a bright green. Most of all, it should taste like a pistachio, you should get lots of rich, nutty taste"

These days Joyce and the rest of the industry, which comprises about 30 growers, prefer to look forward rather than back. The pistachio trees around Robinvale and Mildura are bare right now, their leaves having dropped with the first big frost in April, right on cue.

After the cold winter they need, come spring the trees will flower and, after pollination by the male trees, the females will form small nuts. The hulls will expand until late December, when the shell hardens inside the hull. During the hot summer months, the kernel will swell until the nut matures in early March. Finally, the mature kernel will outgrow the hardened shell and split it. By then expectations for the 2000 harvest will be high, especially since the nuts have proved they're a money spinner. Even without protection from foreign competition, the future is looking bright for Australian pistachios. Bright green, that is.

— *Evan McHugh*

*The most useful service we  
can render a culture is to add a  
new plant to its agriculture*

— *Thomas Jefferson*

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## **CALENDAR OF FORTHCOMING EVENTS**

**Deadline for next issue: Oct 20**

1999

Aug 17 Tue **General Meeting (Charles Peaty - A Forester's Life: As Many Nuts as Trees)**

Aug 14 \*Boyup Brook Agroforestry Field Day

Aug 24-26 \*Dowerin Field Days

Aug 26-29 §Australian Olive Association Conference, Mandurah

Aug 28-29 §Australian Quandong Industry Association Conference, Port Augusta

Sep 3 Fri \*Karragullen Horticultural Field Day

Sep 12 Sun **WANATCA Bring & Buy/ Tree Crops Fair**

Nov 16 Tue **Annual General Meeting (Bill Davey)**

2001

Apr 13-20 **ACOTANC-2001 Conference, Perth**

\*General Meetings are held starting at 7.30pm. Venue: Theatre Room, Kings Park HQ, West Perth. These meetings usually include a current magazine display.

• Event with WANATCA participation; § For contact details refer to the Tree Crops Centre.

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