

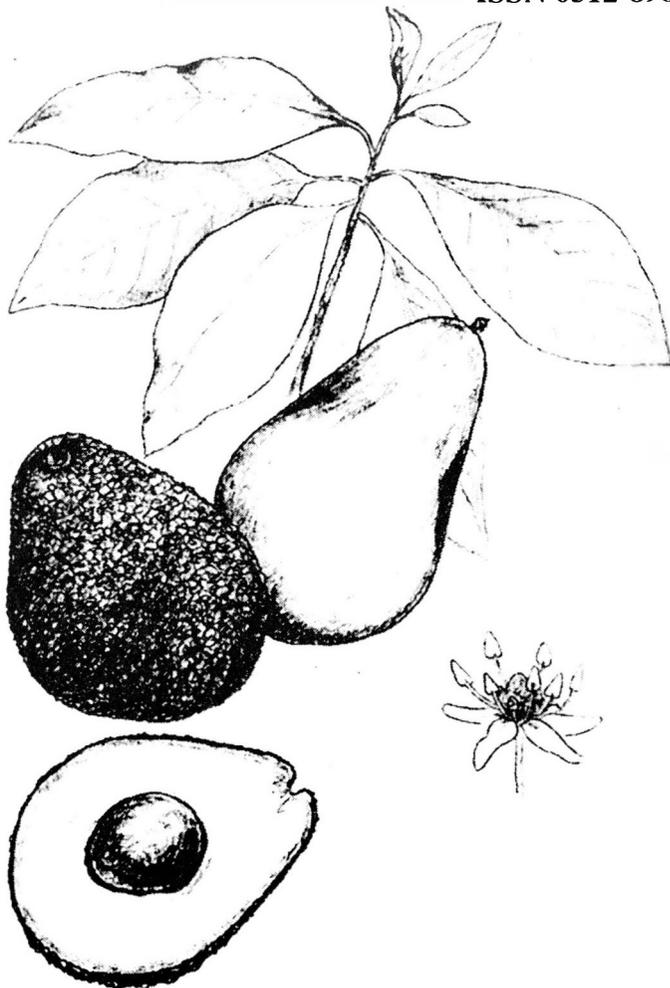


# Quandong

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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The Avocado (*Persea americana*) (See: About the Cover, p. 2)

Quandong • Fourth Quarter 2001 • Vol 27 No 4

## NEXT MEETING: Tuesday November 13, 2001: 7.30 pm IMPORTANT! IMPORTANT! IMPORTANT!

The next WANATCA meeting will feature a topic vital to the progress of sustainable land use and tree crops in Western Australia.

The speaker will be Professor **Phil Cocks**, Director of the new Cooperative Research Centre for Plant-Based Management of Dryland Salinity. His topic will be

### *The Perennialization of Agriculture*

The future is in YOUR hands. Come to this meeting with an open mind and learn. We want to see everybody there, from Agriculture WA, CALM, the Universities, TAFE Colleges, and especially all our sister organizations working with Tree Crops, Land Use, Permaculture, Organic Growing, and dryland Tree Planting. Be there!

*Full details on attached leaflet.*

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

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### *About the Cover*

The cover drawing shows the fruit, leaves, and flower of Avocado, *Persea americana*. See the series of articles in this issue of *Quandong*, starting on pages 5, 7, 8, 9, and 30.

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[West Australian / 2001 Oct 12; Sunday Times / 2001 Oct 21]

## Wine, avocados, politics, in the Washer

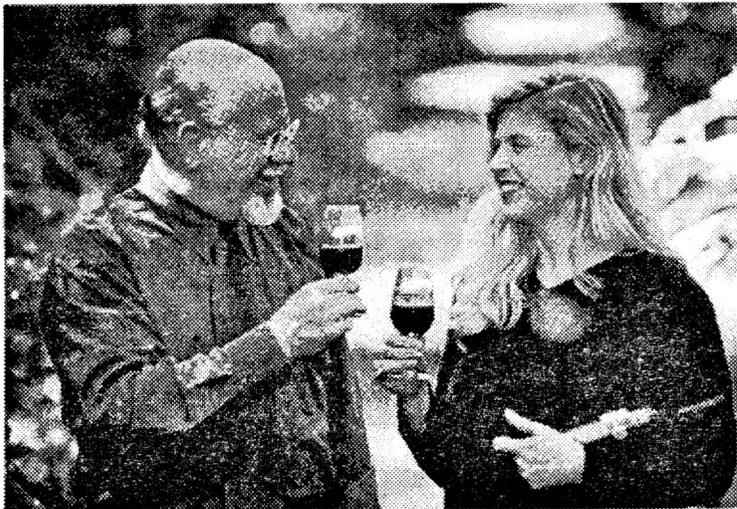
**The Washer family of Carabooda is in a state of excitement and it has little to do with the upcoming election. Mal Washer is the federal member for the Moore electorate and is busy handshaking at present, but not all the handshakes are to wish him well in the election.**

Nola Washer operates the avocado side of the family business, while daughter Elaine Darby is in charge of wine. Andrew Spencer-Wright is the principal winemaker.

The family winery, Aquila, has just recorded its greatest industry success — and one of the State's as well. Its 1999 Cabernet Sauvignon has won the trophy for the best

new world red wine at the 2001 Japan international wine challenge. It follows the success last year of Evans and Tate whose 1999 Margaret River shiraz was judged best red wine at the 17th London international wine awards.

Aquila is based at Carabooda north of Wanneroo. Its trophy was presented by Prince and Princess Takamado at a gala dinner at Tokyo's Hilton Hotel this week. The Aquila wine competed against 1400 entries from the United States, South Africa, New Zealand, Australia, Chile and Japan. Only seven trophies were awarded in the competition, with 4 per cent of entries gaining gold medals.



*Mal Washer and his daughter, Elaine Darby, at Aquila Estate, Carabooda*

### 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>.

Andrew Spencer-Wright said the Japan competition was the world's third biggest. The winning wine was made from a combination of Margaret River and Boyup Brook fruit.

Aquila's first production year was 1993, when principal Elaine Darby, then Elaine Washer, bought 30 tonnes of fruit to make wine in a corner of the family packing shed, part of their avocado operation run by her mother, Nola. A year later her purchases had extended to 98 tonnes.

By 2001, it had reached 350 tonnes, from contract growers at Margaret River and the Blackwood Valley. The first crop from their

small vineyard at Carabooda was harvested in 2000— five tonnes of Chardonnay. Three years ago at the Japan competition the 1996 Aquila cabernet won a gold medal.

Mrs Darby is a University of WA graduate with a double major in biochemistry and microbiology and has a genetic engineering honours degree from Murdoch University.

"This feels like a coming of age for Aquila," she said.

[The Washers were among the founding members of WANATCA and hold one of the most long-standing memberships].

## WANATCA Yearbook for 2001 released

At the same time as this issue of Quandong, subscribers will be receiving the latest issue of the highly-regarded WANATCA Yearbook. This publication goes all over the world, and is incorporated into national libraries in the USA and Britain, among others.

For those casual readers picking up this magazine, here are the contents of this Yearbook. We welcome new subscribers to WANATCA, who can be assured of a flow of interesting information from our publications.

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## WA avocado industry poised for major leap

Everything looks good for a major growth step in WA's young avocado industry.

The industry had its real start here in the later 1970s, when the first commercial groves were planted around Perth.

Although the avocado is native to Mexico and other parts of Central America, the modern industry had its main development in California. In our region, New Zealand was among the first to move to commercial production, although smaller test plantings and backyard trees had existed over much of tropical and east coast Australia well before that.

In WA, also, isolated trees (mostly seedlings) had been in existence for many years. One well-known one which produced well was in central Perth, opposite Parliament House. Another tree which went on to become selected and named (the 'Locatori') was grown from a seed in Waratah Avenue, Nedlands. As of this writing, this tree still exists.

So when the commercial plantings started in WA, pioneer growers such as David Sword (now deceased) were able to draw on expertise and varieties from around the world. A big number of varieties were planted here, such as Fuerte, a pear-shaped green variety with good cold tolerance, and Hass, a rounder nobbly-skinned variety which became almost black when ripe.

In the early days, growers were concerned about achieving good pollination, as avocados are subject to an unusual flowering pattern (see article below), and the conventional wisdom was that varieties from two groups, A and B, would need to be planted together for cross-pollination.

In the event, in WA and elsewhere, the Hass variety proved to be both sufficiently

self-fertile to crop alone and to be popular with consumers. It is now the major variety grown in the southwest of the State.

### The move south

Some varieties of avocado can be grown right up into the tropics, and in WA they were planted commercially as far north as Carnarvon. The trees are of subtropical origin and without much frost tolerance. So it was something of a surprise when the industry moved south, to the south-coastal area around Pemberton. In retrospect, it can be seen that conditions there were not too dissimilar to those in successful New Zealand avocado areas.

### New Zealand now

New Zealand is in fact currently experiencing an avocado boom. In the May 2001 issue of the NZ publication 'The Orchardist', Rosalie Smith has an article entitled 'Huge growth for avocado industry'. Among the facts in the article it is mentioned that sixty per cent of the avocado trees in the ground in NZ are less than five years old — indicating a rapid growth in the industry.

Smith says there have been 30 to 40 per cent annual increases in planted area: a total of 2,200 hectares has been planted, 500 during the past year. Avocado nurseries have orders for avocados to plant out a further 600 to 700 hectares this spring.

She also says the crop is escalating even faster than the planted area, for improved growing techniques have lifted average yields from four tonnes a hectare four years ago to 10 tonnes a hectare in the past season. This compares with average yields of 3.5-4.5 tonnes in Australia, four to five tonnes in Mexico and

South Africa and about 4.5 tonnes in California.

In the season just past New Zealand had its biggest crop ever at 2.45 million trays, of which 1.45 million were exported, up from total production of 1.6 million trays in the 1999-2000 season.

Smith also notes that the NZ Avocado Growers Association is its best to ensure that the industry infrastructure and organisation keep ahead of the needs of the burgeoning industry. Additional staff have been taken on and set up in an office in Central Tauranga. Under chief executive Jonathan Cutting, three technical specialists and two administrative staff are employed.

An NZ Avocado Nursery Association has been set up and its members have agreed to quality certification and the production of plants free of pests and diseases. Using Government funds, regional focus groups are being set up with the aim of further improving regional growing methods and increasing yields. Two gene blocks have been set up, one in Northland and one in the Bay of Plenty, and new cultivars have been imported.

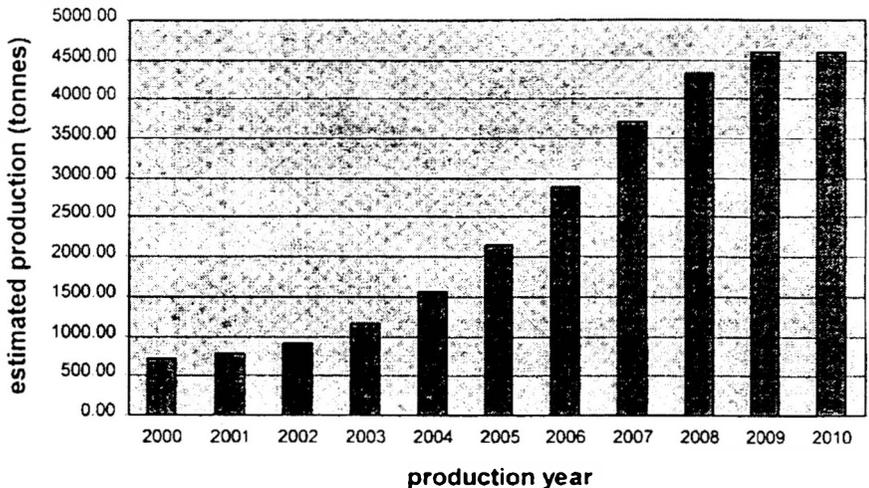
### Back in WA

Back here in WA, an Avocado Boom is also forecast. And this is not based on guesstimates, but on the results of solid data collected by Alec McCarthy of Agriculture WA and published in an HRDC-supported project, "Western Australian avocado industry survey — 2000".

This publication has all the historical, present, and future-projected data needed to round out the picture. Currently, the Pemberton area has the biggest part (60%) of the area planted to avocados (218 ha), Perth is next at 30% (110 ha), followed by up-and-coming Bunbury at 10% (38 ha). Carnarvon has faded away to a single hectare under avocados.

In production, Perth is still the leader at about 900 tonnes, because it has fewer of the young trees from recent plantings. But its yields per hectare, around 10-11 tonnes per year, are lower than for Pemberton and Bunbury, at 16-17 tonnes per year. McCarthy believes that with best growing practices, an avocado orchard in the south should be able to produce 20 t/ha.

Based on ages of trees already planted and



grower plans for future plantings, McCarthy predicts a huge surge in future production, especially from Pemberton. The figure shows almost an 8-fold increase, to 4500 tonnes, in the next 9 years.

To help new avocado growers, the WA Department of Agriculture has recently released an Avocado Starter Kit. This is reviewed below.

— *David Noel*

The Orchardist: <A1759>.

### REVIEW

***Avocado Starter Kit.*** Published by Agriculture Western Australia, 2001. Folder. Available from AgWest or from Granny Smith's Bookshop (see ad p. 31).

The release of this new kit, written by AgWest avocado specialist Alec McCarthy, reflects the growing interest in avocados locally. The Department have put brochures and leaflets about avocados in earlier years, but these were pitched almost at the backyard level. This kit is different, it is aimed at the newer commercial grower.

Although the 'Starter' tag applies, the kit contains all the essential material needed to orient the prospective grower. The main item is a 20-page bulletin "*Avocado Culture in Western Australia*". This is well-written, informative, succinct, and accurate. It briefly covers all the usual topics — climate, soils, flowering and pollination, varieties, rootstocks, propagation, reworking, orchard establishment, tree protection, irrigation, frost control, mulching, fertilizers, management, weeds, pests, diseases, yields, harvesting and marketing, and budgets.

In addition the Kit contains 7 short leaflets on avocados, covering useful publications



Bulletin No. 4484  
"AVOCADO CULTURE IN WESTERN AUSTRALIA"



## Avocado culture in Western Australia

available, commercial grower information, useful contacts, nursery suppliers, irrigation requirements, maturity testing, and the grading & packing code. Information is also included about the AVOMAN orchard management software and database developed in Queensland for the professional grower.

For anyone contemplating growing avocados commercially, this is a first-class introduction to the topic and should not be missed.

— *David Noel*



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## Avocado Oil - A new industry for Western Australia?

Interest is growing in the production of avocados as a source of high-quality edible oil. In New Zealand, two companies have been set up specifically to produce this oil, and one of these is opening a processing unit in Queensland.

Avocados yield a mild oil of high quality which is excellent for salad use. The oil is also very suitable for cooking purposes, as it has a high smoking temperature (when it begins to scorch) and is not usually strong enough to overpower other ingredients in the dishes.

In addition, the oil is highly valued for use in cosmetics and skin treatments, as it is absorbed readily without leaving a greasy residue.

However, the present production approach is to use second-grade or reject avocado fruits, in an effort to recover more return from crops intended principally for sale as fresh fruits. Even with reject fruit, the avocado oil produced

is regarded as relatively expensive and catering for a small niche market.

There may be more potential for a WA approach intended specifically for oil production. A look at the economics of this suggests an interesting situation.

The average yield for avocados Australia-wide is said to be only 4.5 tonnes per hectare per year. New Zealand claims an average of 10 t/ha. In WA, yields around Perth are about 13 t/ha, in the Pemberton area they are about 17 t/ha, and 20 t/ha is regarded as a very accessible target. The general indication is that areas with cooler summers and mild winters have the best yield prospects.

Typical achievable figures for olive oil production are around 12 t/ha yielding 20% oil. Oil content of avocados can be better than for olives, up to around 25%.

In practice the oil content varies dependent on variety and time of harvest, with the time of harvest being the most critical. For example for eating quality, Hass avocados are generally harvested when they reach about 16% oil content, but can be held on the tree for longer, attaining oil levels of about 25%, before starting to develop off flavours. Oil content up to 30% has been reported in some varieties but also as low as 10-12% in others.

Do the sums for an avocado yield of 20 t/ha and 25% oil, and you will find that the avocados produce more than twice as much oil as olives for each hectare planted.

Comparing avocado and olive production,

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it is fair to say that avocados would need more water applied than olives, but in a reasonably good rainfall area this might not be a major consideration.

Growing avocados specifically for oil would mean big savings in transport and sale and spoilage costs compared to the fresh fruit market. And varieties could be selected specifically for high oil-yield characteristics, rather than the possibly quite different characteristics needed for a marketable fresh fruit. For example, consumers regard avocado varieties which ripen green with less favour than ones which ripen black. For oil production, skin colour would be irrelevant.

Then there is the possibility of selecting avocado varieties with individual flavour characteristics, as happens with wine grapes and olive oils. All the mystique — and possibly high prices — of 'vintages', 'provenances', and 'labels' could then be applied. Maybe working with reject fruit is not the best approach!

— *David Noel*

[*HortResearch NZ: [www.hortnet.co.nz/news/99/n3464.htm](http://www.hortnet.co.nz/news/99/n3464.htm)*]

## Company Hopes Research Will Deliver The Good Oil On Avocado

December 1999 - A Tauranga company says it is working closely with scientists to perfect production of this country's first avocado oil.

Andrew Logan and his wife Judith formed Pukemapu Grove earlier this year to produce the oil, and have been working with scientist Roger Stanley of Hortresearch at the production plant near Katikati investigating ways of producing up to four different types of avocado oil.

"Ultimately we hope to produce three or four different oils specifically targeted at different markets," said Mr Logan. Although still working to perfect their process, the couple launched the green oil at the Ellerslie Flower Show.

"The biggest issue for us at first was trying to determine why nobody else in New Zealand had ever made avocado oil. We were surprised that such an opportunity should be available to urban professionals," said Mr Logan. They discovered making avocado oil was a high-tech business requiring specialist expertise which was not readily available.

Undeterred, and convinced the idea had potential, the Logans imported a stainless steel centrifugal press from the olive growing region of Tuscany in Italy and had it modified to their specifications. Pukemapu Grove was working with Aongatete Coolstores Ltd, one of the largest export avocado packhouses in the region, which had provided resources and advice to the new company. "The avocado crop is expected to double in size over the next three years and so it is considered very important new industries evolve to maximize that resource."

The Logans believed their avocado oil would find a place in the growing market for gourmet oils. "From nutritional and culinary perspectives, avocado oil offers a number of advantages. Apart from being good for you

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and great tasting, it parallels the very best extra virgin olive oils," Mr Logan said.

The light green oil was best used as a gourmet condiment oil to make dressings, dip bread in or to drizzle over pasta, vegetables or grilled food. The couple saw the oil offering new opportunities to skin care and cosmetic companies as it was ideal for creams, soaps, shampoos and sun products.

"I would really love to see someone make a Bay of Plenty sunscreen using our avocado oil," said Mr Logan. While keen to supply New Zealand's gourmet market, the Logans believed the biggest demand would come from overseas. Pukemapu would be aiming to export its pure, cold pressed oil.

[<http://www.hortnet.co.nz/news/2000/n3984.htm>]

## Growers Moving Towards Exports Of Avocado Oil

Auckland NZ 12/12/2000 - Two companies are confidently predicting that the launch of their separate brands of eating-quality avocado oil will boost the already burgeoning avocado sector and create a new industry in New Zealand.

Bay of Plenty-based Avocado Oil NZ unveiled its "The Grove Avocado Oil" at last year's Ellerslie Flower Show. General manager Andrew Logan is happy with the level of acceptance since, especially as the market has had to be educated about the new product.

The company is selling mainly through upmarket delicatessens here, and Mr Logan is delighted that it is about to export the first "token amount" to London's top-notch Fortnum and Mason.

"It hasn't required a hard sale programme but we are riding on the good work of the olive oil people," he says.

The links with olive oil are strong. Like Chris Nathan of Kerikeri-based Olivado NZ, which launched its Olivado Avocado Oil last month, Mr Logan is a budding olive grower who thought olive-pressing equipment was too expensive to be sitting idle most of the year. Working independently, the men investigated adapting equipment designed for olives to the avocados being grown in rapidly increasing amounts in their regions.

About 70 per cent of New Zealand's avocado crop is grown in the Bay of Plenty, and most of the rest in Northland. Plantings are also going ahead around Gisborne. With three-quarters of the trees yet to reach full production, the crop is expected to grow by up to 40 per cent a year for the next eight years, without including new plantings. This year's harvest of around 8,500 tonnes is forecast to have increased to 44,000 tonnes by 2010.

Mr Logan says adapting the olive-pressing equipment for avocados proved easy. "It was bizarre no-one had done it." But not only was cold-pressing avocados unique, so was producing a food oil.

Mr Nathan, a former chef, says avocado oil is relatively unknown around the world. "In other countries avocado oil is produced by chemical rendering of rotten fruit and it is used as a base product for cosmetics because of its high vitamin E content."

Extensive research turned up a couple of food oil products but none appeared to be of the quality associated with cold pressing and

## Honeybee Pollination Increases crop yields

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they had made little market impact. A Massey University student, Cecilia Requejo-Tapia, last year presented a thesis on avocado production which canvassed the prospects for oil from the fruit. She said the ratio of monounsaturated to saturated fatty acids and the ratio of polyunsaturated to saturated fatty acids found for the Far North and Te Puke regions compared favourably with those of the recommended olive oil.

Avocado oil, like olive oil, helped to lower cholesterol and could be regarded as a high-value product from a nutritional and commercial point of view, she said. Mr Nathan says avocado oil has the potential to become a popular food product because of its excellent health properties and smooth taste. It also has a high smoking point -- a measurement of the temperature at which it smokes or burns. Avocado oil's smoking point is 271 °C compared with 176.6 °C for olive oil.

[West Australian / 2001 May 9]

## Bush 'cure' for golden staph?

An antiseptic derived from Australian eucalyptus and tea tree oil has been hailed as a possible cure for golden staph infection.

A national medical congress was told yesterday that an ointment made from the oils had cured patients infected with methicillin-resistant staphylococcus aureus after surgery.

The bacterial infection — the scourge of modern hospitals and potentially lethal — has developed immunity to many traditional antibiotics and often forces the closure of entire wards.

It was last reported in WA in February when an outbreak at Royal Perth Hospital resulted in the isolation of 19 patients.

— Mark Mallabone

The two oils will be complementary, says Mr Nathan, whose company owns a 12 ha olive grove of more than 3000 trees. Olivado intends producing olive oil from next year. The company says it will create up to 18 new jobs and also expects a tourism spin-off from its Tuscan-style factory near Kerikeri, where there are also plans for a restaurant and shop.

Mr Logan's company is backed mainly by avocado growers. The additional local outlet for their fruit has been welcomed by the around 600 avocado growers nationwide, whose exports are expected to be worth \$20 million this year.

The editor of the industry publication Avo Seed, Rosalie Smith, says growers have been paid around \$12 a bushel crate for fruit that might otherwise have ended up on the local market. She says that is a good price, which helped to raise the quality of fruit in the local market.

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[Countryman, 19 April, 2001]

## WA ripe for tree crops

**The expansion of tree crop industries in WA provides clear environmental benefits and makes good economic sense.**

This observation formed the basis of the opening address to ACOTANC 2001 —the Australasian Conference on Tree and Nut Crops—by Agriculture Minister Kim Chance.

Mr Chance said while there were several tree crops being grown successfully in WA there were further opportunities being developed or requiring further development. "Some of these include almonds, pistachios, oil mallees, sandalwood and olives," he said.

"There is little recognition, for example, that worldwide almond exports are worth in excess of \$2 billion a year and we are on the doorstep of the fastest growing inshell almond market in the world. India is now importing \$200 million worth of inshell almonds per annum, most of which is supplied by California."

Mr Chance also highlighted the potential of the pistachio industry in WA, saying opportunities were available for the

development of clusters of small orchards in the Wheatbelt which would provide a means of achieving income diversification as well as environmental benefits. "Recent visitors from Iran, the worlds largest pistachio producer, have shown significant interest in the establishment of a processing plant in WA," he said.

The Minister also focused on moves to develop sandalwood production on cleared farmland to replace the huge quantities exported from the Wheatbelt early last century. "Significant research by various agencies has developed successful establishment techniques for sandalwood and host plantations, although the adoption rate by landholders has to date been slow," he said.

Mr Chance said tree crops had long been recognised as a way of revegetating large areas of land to ensure sustainability in a way that maintained and built on existing farm profitability.

"If we are to provide the impetus for revegetation we must do so by providing profitable new farming systems that better integrate traditional farming practices and new environmental solutions," he said.

[Countryman / 2001 September 27]

## Chance calls for growth

Agriculture Minister Kim Chance has urged WA horticulturalists to ensure they continue to respond to community trends and seek out new export markets.



*Agriculture Minister Kim Chance opens Karragullen horticultural field day*

Mr Chance chose the 19th Karragullen Horticultural Field Day as the venue to detail new developments in the rapidly growing industry and encourage cooperation at all levels.

The Minister pledged the ongoing support of the Department of Agriculture to work with growers and producers to help the industry improve its market focus, adapt varieties best suited to existing and new markets and improve their production methods.

Mr Chance said the horticulture industry was extremely diverse and in 2000-01 the industry exported \$196 million of produce, an increase of six per cent from 1 99900.

"In today's globalized environment, it is increasingly important to understand the differing needs of end consumers and overseas markets, to look for new global opportunities and adopt new production methods," he said.

"However, for this growth to be maintained, the industry continually needs to review how it operates and where changes need to be made."

Mr Chance outlined recent developments in the industry:

- The summer fruit industry's recent work to overcome problems experienced with the quality of the State's export plums in 1999-2000. This issue has now been resolved and a \$9 million export industry has been maintained.

- The apple industry's success in achieving increased exports to the UK and Europe and developing markets in the US and Asia. This has resulted in an increase in apple exports of \$5.5 million in the past five years.

- The table grape industry's use of cool storage to extend the supply period to 10 months of the year. This has led to an all time

record for table grape exports from 700 tonnes in 1999-00 to 1,120 last year.

- The vegetable industry's search for new market opportunities for domestic and export vegetables including seed potatoes, Japanese vegetables (burdock, daikon radish and shallots), and organic vegetables.

"Our horticultural industries have recognised the changing environment they operate in and worked to improve their end product," Mr Chance said.

"They should be commended for their efforts so far and encouraged and supported to ensure that we can offer quality products sought by lucrative markets."

The Minister said the State's major horticultural field day at Karragullen provided an important opportunity for nearly 3,000 stakeholders within the industry to share their knowledge, drive and vision for the future.

He congratulated the Hills Orchard Improvement Group for continuing to drive the field day for 19 years and making it the inspiration behind the establishment of a range of other similar events. ¥

## **Acotanc Papers released**

*In the run-up to the Acotanc-2001 Conference which WANATCA hosted in March this year, we promised to work on the papers and talks presented and convert as many as possible for display on the Web.*

*Through the hard work of Pat Scott, some 30 papers have already been converted, including on such interesting topics as the Blue Honeysuckle Fruit, researched by Maxine Thompson. All these can be accessed at the Web address: [www.AOI.com.au/acotanc/Papers](http://www.AOI.com.au/acotanc/Papers). Go for it!*

[Countryman, 19 April, 2001]

## Pistachios — future hopes lie down under

**Bruce Rock farmer Mike Buegge has long held a strong belief in looking outside the straight and narrow to ensure viability.**

A conventional wheat and sheep grower in an area known for its groundwater reserves and consequent salinity problems, Mr Buegge has been looking for ways of using the vast resources that exist below the sandplain. "I have been told that I have Sydney Harbour beneath the farm which is ironic when you think that all we ever really need here is water," he said.

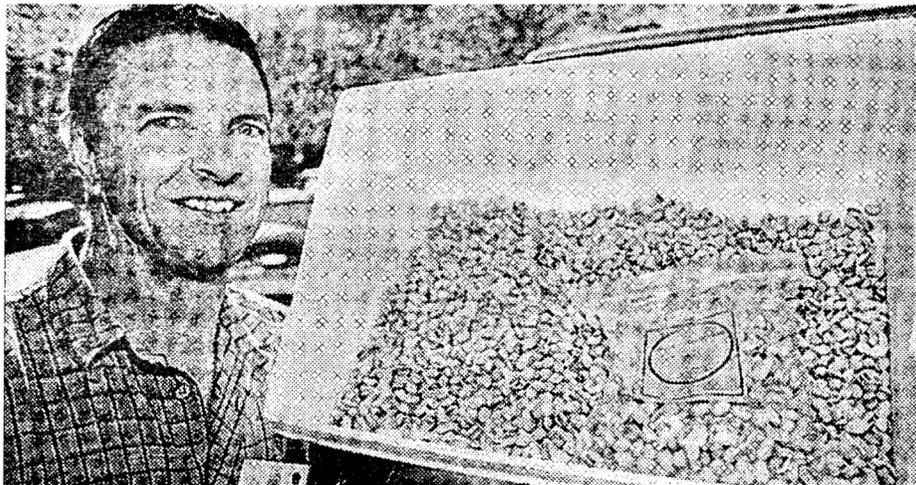
Mr Buegge began growing tree crops 12 years ago with a planting of pistachios grown under dryland conditions with the nuts being hand harvested. A few trees are irrigated and the difference in production between the dryland and irrigated stands have highlighted the need to develop a reliable source of irrigation water to take pistachio production to the next level commercially.

This has highlighted the need to establish some form of desalination plant to provide a

reliable source of irrigable water. Because pistachio trees have relatively high tolerance to salt also means desalinated water could be mixed with the saline groundwater.

Extensive plantings of tree crops already exist on the Buegge property with oil mallee, *Banksia prionotes*, tagasaste and *Acacia saligna* and while they have their place in dryland production it is the potential of irrigated tree food crops that is driving Mr Buegges research.

The knowledge of the vast reserves of water under the property have meant all new production is planned to utilise the subterranean reserves. The latest project is growing out rainbow trout in unique 2 m deep ponds that are 200 m long by 15 m wide. Mr Buegge said the ponds provided enough water area and depth to keep the trout sufficiently cool while making it easy to harvest.



*Bruce Rock farmer Mike Buegge with pistachios grown under dryland conditions*

While most growers in the eastern Wheatbelt are waiting for rain so they can start up tractors and get the crop in the ground, the Buegges are also waiting for the temperature to fall so they can begin another seeding program—seeding the ponds with trout fingerlings.

— *Paul Jarvis*

[*Australian Olive Grower / 2001 Sep*]

## Five Hour Olives - a recipe

**If you have olives and you cannot be bothered to process them in soaking solutions, then try this method. You can be eating the olives within five hours of picking them off the tree!**

The process is simple. Pick black-ripe olives off the tree - check to make sure the flesh is purple. Wash the olives under the tap.

Layer the olives on shallow trays then place in an oven at around 50°C for about five hours. Test the bitterness after three hours. The process can be sped up by pricking the olives.

Most black-ripe olives can be processed this way. If you want a range of sizes and flavours, try UC 13A6, Kalamata and Pendolino. The flavours obtained have bouquets of sweetness - dried prunes and raisins with a slight bitterness. The olives can be eaten immediately.

To get a salt taste, soak the olives in brine for one hour, drain off excess liquid, then oven dry. For a sweeter olive, instead of brine soak the olives in a sugar solution or why not try both? Once dried, the olives will keep without refrigeration or they can be put into extra virgin olive oil. If you want to make tapenade and you have no pickled olives, then use these. Happy eating.

- *Stan Kailis*

## Pistachio Seminar & Workshop

Northam (Muresk and Hayes Plantation & Nursery)  
Friday March 8, 2002. Full Day Seminar.

### Wheatbelt Landholders & Communities:

- Are you thinking of diversifying?
- Considering trees which have useful products?
- Are Pistachios for you?
- Will they fit your water situation?

### Come to this Event:

- To see an established plantation & nursery.
- To hear how pistachio farming, processing, and marketing is already happening in Australia.
- To hear from the people who are doing it.

### Major speakers:

- Christopher Joyce of Australian Pioneer Pistachios — the Australian and International Scene.
- Bert Hayes — a leading WA pistachio grower.
- John Duff — Agricultural and Natural Resource Management consultant.

### Register your interest now to ensure you are kept informed:

- Fax to WANATCA on 08-9388 1852
- Email to: [pistachioseminar@AOI.com.au](mailto:pistachioseminar@AOI.com.au)
- Mail to WANATCA, PO Box 565 Subiaco WA 6008
- Phone to Tree Crops Centre on 08-9388 1965
- Call in to Tree Crops Centre, 208 Nicholson Road, Subiaco
- Website: [www.AOI.com.au/pistachioseminar](http://www.AOI.com.au/pistachioseminar)

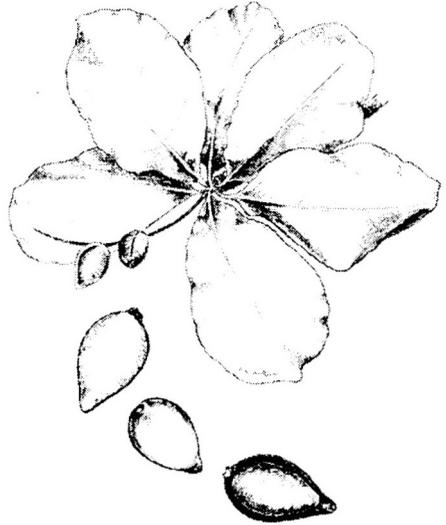
# Notes on New Books

by David Noël

**TROPICAL FOOD GARDENS: A guide to growing fruit, herbs & vegetables in tropical & subtropical climates.** By *Leonie Norrington*. Published by Bloomings Books, Melbourne, 2001. 160p. Pb. \$28.00 from Granny Smith (see ad p.31).

This delightful new book written by a Darwin gardener will be warmly welcomed by the backyard grower who is interested in less usual fruits, vegetables, herbs, and other garden produce.

The book is chatty and interesting, with many anecdotes about the author's 20-year experiences with the plant world. Although her site is within the true tropics, the big majority of the plants she describes can be

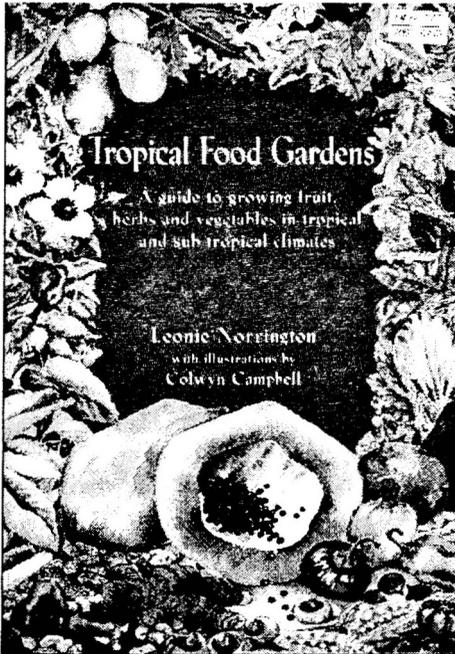


*The Billygoat Plum, Terminalia ferdinandiana. Individual flowers are only 4 mm in size, fruit is green*

grown quite well in subtropical areas such as Perth.

In the fruit section, practical information is given on over 30 familiar and less familiar fruits. These include Abiu, Avocado, Barbados Cherry, Black Sapote, Brazilian Cherry, Carambola, Cashew, Coconut, Coffee, Granadilla, Guava, Inga (Ice-cream Bean), Jackfruit, Mango, Mangosteen, Passionfruit, Papaya, Rambutan, Soursop, Rollinia, Star Apple, and Syzygiums (Jambo, Water Apple etc).

All these are from outside Australia and may be described in other fruit books. What is especially useful are the native fruits included —Billygoat Plum (*Terminalia ferdinandiana*), Green Plum (*Buchanania obovata*), native Figs (*Ficus* spp.), and Peanut Tree (*Sterculia quadrifida* - grows well in Perth). The author has grown all these, and she also describes her friend Di's 'Bush Tucker Forest', with many more species, grown in swirling confusion.



All done with an implied permaculture, organic overview, integrating chooks, water, and soil management with the fruits, vegetables, and herbs.

and some lovely colour-wash drawings. A fine production from Bloomings. Highly recommended for the adventurous grower, a wealth of interest at an attractive price.

¥

There are good line drawings throughout

[Countryman Horticulture, 6 September, 2001]

## WA fruit growers get sweet advantage

**The biggest change to fruit production in the Perth Hills in the last few decades is only just beginning to make it's mark. In the future, forward thinking horticulturists in WA will change their management practices, to ensure their produce meets a taste-test that can add dollars to their business. The source of the revolution is a high-tech taste tester that can test fruit sweetness in a range of produce.**

Jenny Mercer, of Canning Vale wholesale agent Mercer Mooney, said acquiring the brand new technology in November last year meant the end for consumers of the fruit quality lottery which was the current state of play. She said the technology, costing more than \$1 million so far for three units, provided a guarantee of sweetness.

Involved is a spectrometer which straddles a conveyor belt in the fruit and melon grading process, sending a measured amount of light to the product. From the light reflected, the internal properties can be determined. Called Near InfraRed Spectroscopy (NIRS), the technology enables growers to produce fruit that makes the grade under a guarantee of sweetness, or "G Sweet". The system is still being tested but several trial export shipments have already been made.

Ms Mercer said the system would guarantee growers a premium return but would cost exporters and consumers more. An average 1kg punnet of peaches or nectarines under the process would cost \$4.99, \$1 more than a punnet costs now.

Ms Mercer said to the company's knowledge, it was the first to have the technology available for melons, stone fruit and apples on the international and domestic scene. "We believe it will open new doors for WA growers and finally give consumers real choice," she said. "People have become tired of poor quality fruit that is highly variable and often does not meet their expectations."



*Jenny Mercer and father John Mercer with a sweetness-guaranteed melon*

Ms Mercer said she was excited for WA growers because they had a chance to be the first in the marketplace with guaranteed fruit sweetness. "Growers have the chance to use the information coming from our work here to boost their taste quality so they are the first in the market place when this takes off in six to 12 months," she said.

Fabian Carniel, director of exporter Carter and Spencer International, agrees. "We intend to be out of the starting blocks before competing countries realise they want to be in the race " he said.

"This NIR technology is able to select premium fruit with those features which capture those niche markets with higher returning dollars. "By combining the new technology and traditional exports it is our aim to increase the overall net return to our growers:"

In Kununurra, Bluey and Kirsten Stoldt have been using a similar machine to grade guaranteed sweetness melons since the beginning of the year. Mrs Stoldt, of Bluey's Outback Farm, said the new grader gave their melons "an incredible market edge".

¥

## Vale Margaret Peaty

**It is with sorrow that we record that Margaret Peaty, wife of WANATCA Exec member Charles Peaty, passed away on Sunday, October 14 from heart problems.**

**Margaret was such a jolly, humorous, bustling, and helpful person, always willing to muck in with WANATCA activities such as sending out magazines and giving her thoughts on projects underway. In earlier days, she and Charles were the driving force behind setting up the local Men of The Trees group.**

**She will be sorely missed by us all, and our thoughts and good wishes go out to Charles at this difficult time.**

*[New Scientist / 2001 July 21]*

## Measuring the ripeness of fruit

**The appearance of many fruit can give little, if any, indication as to its degree of ripeness. So for the customer the usual test is to give it a squeeze, the softer the riper. For a more precise measurement of ripeness the fruit has to be cut open for sugar content to be chemically determined.**

But now a remarkable, accidental, discovery by researchers in Portugal is that the skin of some important fruits, like apple and kiwifruit, will glow, when they are ripe, under the radiation from a laser. The discoverer was a physicist, an expert in fluorescence, the study of how some things when illuminated by one wavelength of light reflect it in a

different colour.

### Fluorescence from apple

One day, just for fun, he put an apple into the laser light emitted by his apparatus. He was astonished to see the apple glowing with fluorescence. Tests showed that the gases emitted by a ripening fruit were reacting to the laser light. This was mysterious because gases

of this type do not normally fluoresce. A possible explanation was that the skin of the fruit played a part by only allowing molecules of gas which were in a special excited state to get through. These excited molecules glowed in the laser light.

Further tests showed that other kinds of fruit, including kiwifruit and lemons, showed a similar effect. It was also found that the degree of ripeness, as well as the age of the fruit, could be measured from the intensity of the fluorescence. So now there is speculation that this technique could have industrial

applications. Particularly for fruits that are commonly stored for a long time when it is important to determine how their ripeness is progressing.

But the ideas do not stop there. It is even considered that it may be possible to devise a miniature apparatus that the average shopper could carry with them. Then they could scan the fruit on display and be able to assess the ripeness of what is on offer, without having to touch it.

- Colin Little

[Countryman Horticulture / 2001 Oct 4]

## Shaker does it gently

**A vibrating olive and nut harvester from Italy attracted attention at the Karragullen Field Day where it made its second public appearance.**

WA olive growers typically harvest by hand because most trees in the fledgling industry are too young for mechanical harvesters. But the Verdegiglio tree harvester's more gentle vibrating action is credited with being suitable for trees with a trunk as small as 5 cm. The Italian harvester is widely used in olive groves in Portugal, but until now has not been available in Australia.

WA company McIntosh and Sons is the sole distributor of the harvester in Australia and first released the machine in August at a meeting of the Moore River Olive Association in Gingin.

The harvester works by clamping the tree trunk using a telescopic mechanical arm that can move in many directions to give a firm hold. Once clamped firmly the machine vibrates at varying intensity depending on the size of the tree. The vibrations shake ripe olives from the tree which are caught in an



*Ian Symington, left, and Michael Wright, of McIntosh and Son, in front of the new Verdegiglio vibrating olive harvester*

umbrella-like catch mat that encompasses the base of the tree. The harvested olives can then be tipped into a waiting bin.

McIntosh sales manager-Michael Wright said the harvester could be fitted to any loader of more than 70 horsepower. Mr Wright said the harvester would sell for about \$92,000.

[Countryman / 2001 Sep 27]

## Medfly eradication possible at a cost

**A report on the costs and benefits of eradicating Mediterranean fruit fly, known commonly as Medfly from WA has found that eradication is technically possible.**

It found the cost of eradicating Medfly from WA would be \$70 million, which would require the State's fruit industries to expand by 18 per cent for the benefits of eradication to exceed the costs.

The report, released at the WA Fruit Growers Association annual conference at Bunbury, was prepared by consultants from the Imperial College, UK, with assistance from University of WA economists and senior officers from the Department of Agriculture.

The cost benefit analysis took into account the current practice of growers using bait and cover sprays to control fruit fly and the potential future use of the sterile fly technique, trialed in Broome in 2000-2001. The consultants visited WA and had meetings with growers across the State who provided information on control costs and damage.

Department of Agriculture Bunbury regional economist Peter Eckersley said the report estimated that a six-year program would be required to eradicate Medfly using the sterile insect technique, releasing up to 100 million sterile male flies a week. "If a Medfly eradication program was to be initiated in WA, it would require a high level of community support and would build on the well-established sterile insect technology used overseas by implementing a phased program from the south of the State to the north, to maximise benefits to growers," he said.

"WA fruit growers would be the major beneficiaries of eradication but the whole community would benefit from the reduced use of pesticides against Medfly, the world's



*Dr Jo Pluske, of the University of WA, and Department of Agriculture Bunbury regional economist Peter Eckersley with the cost-benefit report*

worst fruit pest. Significant benefits could also occur in South Australia, where Medfly invasions from WA occur."

The report is now expected to be used by industry and governments in discussions about the best pathway for the future of Medfly control in Australia.

South Australia has shown an interest in a national approach to Medfly control, after several outbreaks in Adelaide last year. The WA Department of Agriculture will be supplying sterile Medfly to SA in coming months to assist with the eradication program.

Mr Eckersley said statewide eradication would only be likely if the benefits of eradicat-

ing Medfly increased significantly in the future. "Such a situation could eventuate if the pesticides used now to control Medfly were restricted and damage to crops increased markedly," he said. "Another catalyst would be a reduction in eradication costs flowing from greater adoption of sterile insect technology in major fruit producing countries".

"The use of sterile Medfly in this way is already being used successfully in South Africa and Europe and the technology will be investigated in trials in the State's South-West over the next year."

Mr Eckersley said the report noted that the use of sterile insects for suppression, rather than eradication, as a replacement for insecticide use, would be feasible in areas of

highly concentrated orchards, such as in the Perth Hills. "The technique has already been tested in the north, where a trial in Broome significantly suppressed the local Medfly population following the release of millions of sterile male fruit flies in an eight month period," he said.

Copies of the report can be obtained from the Agriculture Department's Bunbury office.

*[David Noel comments: Fruitfly eradication is vital for the progress of new fruit industries and opening of export markets. Contact Kim Chance, Minister of Agriculture, to encourage the placement of funds for this project. His phone number is 08-9213 6700.]*

[Countryman / 2001 Oct 4]

## New olive clone selected in WA

**WA olive breeder Olea Nurseries, of Waroona, has released a new olive clone derived from the Leccino variety.**

Olea claims the clone is 25 per cent more productive, yields bigger fruit, and tolerates wet and cold soils.

An olive breeder since 1957, Luigi Bazzani said the new clone, Minerva, had distinct advantages over other known clones of Leccino because it gave better machine yield and had more resistance to cold.

He said oil yield was 18-19 percent and had a light, fruttato and peppery taste.

The oleic acid content was 78 per cent and oil quality was considered superior to Leccino.

Oil produced in New Zealand from the clone had won approval by a Melbourne tasting panel.

## Step into Self-Sufficiency Dream

All the hard work done. 14 ac of biodiversity at Nannup. Abundant water - creek, 3 sml dams, 2 bores, 1 windmill, 40,000 gal tankage. Abundant young fruit - trickled. Citrus, bamboo, nut, olive etc. Treed up - sawn and fire wood. 3 br char house, comb stove, 12V solar (240 avail), solar + wood HWS, phone, schl bus, tourist route. Bunbury 1 hr, Perth 3 hrs. Suit - permie/ alternative/ greenie/ fruitarian/ hippy/ self-sufficiency/ survivalist/ organic fruit enterprise/ rural health retreat/ retiree/ MCS etc.

OR

Swap for similar in Hills, 1-5 ac, around \$178,000 ono. Info sheet avail.

**0438-919 553 or 9622 1448. Wade Lally.**

[The Olive Products Australia Newsletter / 2001 Jul]

## Olive leaf extract — a new olive health product for Australia

After years of intensive research and preparation, a new Australian company has launched an olive product offering a wide range of potential health benefits.

Olive Leaf Australia Pty Ltd, based near Esk in Queensland, has recently completed its Research and Development stage and moved into the commercial production and distribution of their concentrated olive leaf extract. Company Manager, Mr Paul Graham commented, "Although the company has only been developing our concentrated extract in recent years, the use of extracts from olive leaves for health purposes goes back several thousand years."

"The earliest known use of olive leaves for medicinal purposes was by the ancient Egyptians four thousand years ago. The ancient Greeks regularly boiled olive leaves in water and drank the mixture, and even today some Mediterranean families use olive leaves as a remedy for various ailments," he said.

In the following interview with The



Olive Leaf Australia's extract is made directly from fresh 'alive' leaves

Australian Olive Grower Journal, Paul shared some details about Olive Leaf Australia and its product.

*Paul, could you provide some company background, and some of the reasons behind the decision to produce Olive Leaf Extract?*

Olive Leaf Australia is located at Lakeview Olive Estate near Esk. Both Olive Leaf Australia and its distributor, Olive Products Australia, are 100% Australian owned and operated. Although the company is new, the behind-the-scenes research took place over several years. This included searching for relevant information from medical centres and universities throughout the world. Clinical trials involving olive leaf extracts were studied as well as large numbers of medical reports and testimonials.

A PhD researcher was employed full time to verify the evidence from the wealth of information that was found. Everything we discovered convinced us that the extract, produced properly, offered tremendous health benefits to Australians.

*What does olive leaf extract actually do?*

Olive leaf extract is used to reduce bacteria, parasites, fungi and viruses in our bodies. The result is a stronger immune system, with better health and more energy.

*Is producing olive leaf extract a complicated process?*

It takes a great deal of preparation and commitment to produce a quality, concentrated extract. As I mentioned earlier, our research into the product itself took place over several years. Once we decided to produce the extract we had to find a suitable property with appropriate climate, soil and water.

More than 200,000 olive trees were planted in special hedgerows, specifically for the harvesting of leaves. Meeting the stringent requirements of the Therapeutic Goods Administration was another step which took almost a year. The most difficult times were during the R&D of an effective method for extracting the key active ingredient, Oleuropein. It required a lot of patience and persistence and even times when failure seemed too close for comfort, but we are extremely happy with the results, and our clients are proving that the final product is everything we hoped it would be.

*Commercial olive leaf extracts have been available in Australia for some time now. What makes your extract special?*

Our extract is unique for a number of reasons. First, we grow our own selected olive trees on site. Unlike most extracts on the market, Olive Leaf Australia's Extract is made directly from fresh, 'alive' leaves, making the key ingredients easily bio-available [usable by the body]. It is not produced from dehydrated leaves or freeze-dried products.

Also, laboratory tests have shown that due to our proprietary techniques our extract is up to fourteen times stronger than other olive leaf extracts on the market. In fact, our extract was by far the strongest of any of the other extracts tested. There is also another 500ml bottle on the market that sells for over double the price of ours and yet we still include a \$5.95 book free.

As well as being very competitively priced, our extract contains 100% natural ingredients.

*Will you be buying leaf from outside sources?*

No, we don't believe so. We have researched the market very thoroughly and believe we already have enough leaf production for the entire Australian market and our first exports, which are already happening. The reason we have grown our own trees is because of our real concern for high quality extract production.

We want the leaf to be very healthy, properly selected, and extremely fresh. By growing our own we can accurately control the quality of our extract right from tree to bottle.

*Has your extract been tested on the Australian market?*

Yes. We've been conducting trials for well over a year. Our extract is used by a number of health professionals as well as by people from all walks of life. We've been delighted with the results and, more importantly, our customers have been delighted with the results. More and more people every day are enjoying a healthier life because of our olive leaf extract.

*Paul, how long does it take for the extract to work?*

Every person is different. Many people have reported an improvement in their particular health problem within days, but others have told us that it took several weeks to notice a significant improvement in health. We've received many testimonials from people who experienced almost immediate relief from a wide variety of persistent problems - from mouth ulcers to bowel problems - and we've also had letters from people who said that it took some time for the extract to alleviate or

cure their problem. Many people have reported tremendous increases in energy levels, but it usually took several weeks for the full effect to be felt.

We recommend that people try the product every day for 30 days. Many people who are prone to ongoing difficulties find initial relief from their symptoms in the first month, then increasing benefits from the continued use of our extract. By 'ongoing difficulties' I mean health problems such as asthma, high blood pressure, colds and flu, sunspots, ulcers or continual tiredness.

*Can your extract be used in other ways?*

Customers report very good results when the extract is applied externally to cold sores and other herpes related problems, cuts and sores, external ulcers, and often even moles and sunspots. It is also used as a tonic for pets and other animals.

*There are a lot of health supplements on the market, are you prepared to guarantee results?*

Yes, as an introductory offer, if a customer buys a bottle of our extract and takes it according to the suggested directions on the label for 30 days, and he or she does not notice an improvement in health or increased energy, then they simply need to return the empty bottle and we will refund the full purchase price immediately.

Contacts: Olive Products Australia Pty Ltd. Phone 07-5424 6771. Email: oliveleaf@hypermax.net.au. Website: www.olea.com.au

[For anyone interested, David Noel usually has a few bottles at the Tree Crops Centre available to callers at the recommended retail price of \$34.95].

*[Countryman Horticulture / 2001 Oct 4]*

## Macadamia nuts prove lucrative

**Ruth Green and her husband, Rodney, started growing macadamia trees on their Helena Valley block 14 years ago, after reading an article in the Countryman about local macadamia nurseryman Emanuel Hintz.**

The Greens' 600 macadamia trees are now the basis of a bustling small business, Greenacres Macadamias, and Ruth's homemade macadamia short breads, macadamia rumballs and roasted macadamias are sought throughout the nearby Swan Valley by businesses keen to promote local product.

Former macadamia tree seller Emanuel Hintz is still involved in the Greens' nut grove, but now, instead of selling them trees he is busy grafting productive varieties on to the Greens self-sown macadamia seedlings. Mrs Green said it was important for the fledgling WA macadamia industry to be based on trees

grown in WA that were proven to grow well in the WA climate. "We don't want trees coming in from Queensland bringing diseases such as nut borer and canker. "We are all heading towards organic production - we don't put any chemicals on our trees because we don't need to here in WA."

The Greens plan to start selling their grafted trees soon and intend that their small nursery business will complement their processing and small-scale value-adding business.

Mrs Green Processes their nuts on the property and bakes delicious macadamia biscuits, rumballs and other products at night

ready for sale at the weekends in fairs and fetes and to businesses such as Shirley Richardson's historic bed and breakfast cottage at Merrich Estate on West Swan Road in the Swan Valley.

Mrs Green said she wouldn't be surprised if more Western Australians, particularly those with small blocks, began to grow macadamias. "They grow so well here and they are an excellent long-term investment," she said. "They produce harvestable nuts from seven years up until at least 100 years." "We look at it as a future for our children, and in the meantime it's a great environment to bring up kids in."

Greenacres Macadamias: A3447.

[Countryman Horticulture / 2001 Oct 4]

## Growing new industry in South West WA

**Macadamia nuts are a small but growing horticultural product in WA.**

Margaret River grower Arthur Budge said a lot of people were starting to grow the nuts, particularly in the South-West. "Macadamias appeal to people looking to diversify but are worried about the potential oversupply of grapes and olives," he said. Mr Budge said traditional dairy farmers were starting to diversify into the nuts as a result of dairy diversification.

John and Ros Cory, of macadamia nursery Shelterbelter, at Gidgegannup, agree that the industry is starting to develop. They have been selling macadamia trees for 10 years and their annual field day attracts at least 100 people. "The domestic market is being



*Tamara Green, 8, and her mother Ruth, with 12-year-old macadamia trees*

developed but WA already sells to Japan, Germany and America," Mr Cory said. "Europe is a big target."

The industry is big enough to sustain local Baldvis-based processing firm, MacNuts, owned by Nick and Sindhu Dobre, but Mr Budge hopes an increase in macadamia plantings will enable a second processor to open in the Cowaramup region. Mr Cory said the investment made by the Dobrees 10 years ago in setting up Mac Nuts had been invaluable for the industry. But he offers a word of advice for those planning to plant macadamia trees: "The difference between success and failure is management."

Mr Cory said plants cost between \$20 and \$30 in the ground and a positive cash-flow was possible after eight years. "Macadamia trees offer flexibility because the window for picking nuts is wide and much of the labour involved can be done using small machines." Mature macadamia trees over 25 years of age yield 25 to 40 kilograms of nut-in-shell.

MacNuts pays growers the industry rate which is about \$2.40/kg.

¥

Shelterbelter: A1505; MacNuts: A3007.

[*Australian Nutgrower* / 2001 Jun-Aug]

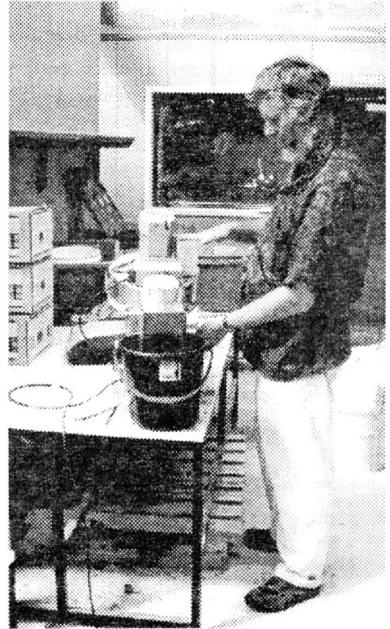
## Anyone want a mechanical chestnut sheller/peeler?

There are three models (of chestnut sheller/peelers) currently in existence. All work on basically the same principle as that of the original 'Little Ripper', the basic model capable of shelling about 50kg of whole chestnuts per hour.

Whole fresh chestnuts are fed in through a hole in the top. An electric motor beneath drives a cutting disk which mechanically removes the shell and some pellicle. A second electric motor controls rate of feed and throughput.

On the smaller 15-20 kg/hr 'Baby Ripper', this second motor is replaced by a hand-operated mechanism, suitable for smaller volume domestic use. On the larger 300 kg/hr 'Big Ripper' version (for packhouses), additional refinements of variable speed, automatic feed (via hopper and conveyor belt) and extraction fan-assisted separation of shelled nuts from wastes are added. The system of operation is purely mechanical (and patent-protected since 1997). No heat, flame or steam is used.

The nuts emerge still fresh and whole. On easy-to-peel US, Chinese, European and some Australian chestnut cultivars, the machines can remove both shell and pellicle together. On harder-to-peel Japanese and New Zealand



*David Klinac feeding the 'Little Ripper' chestnut sheller/peeler*

hybrid cultivars, pellicle removal is patchy.

Usually only the shell and part of the pellicle is removed requiring a second, separate, follow-on treatment if totally clean nuts are required. A standard mechanical potato-peeler (a rotating abrasive-lined drum with water flowing through) removes the pellicle by grinding it off producing a smooth Eastereggs type appearance (minus all surface detail). Controlled drying, freezing, cooking or microwaving can also be used to render the pellicle dry, loose and brittle, for easier

### **Pistachio Nut Trees**

*Big healthy trees in big 6-litre bags  
Grafted trees or rootstock only*

#### **W.A. Pistachios, Northam**

(Bert & Angie Hayes) • <A3114>

Phone/Fax 08-9622 9513

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PO Box 429, Northam WA 6401

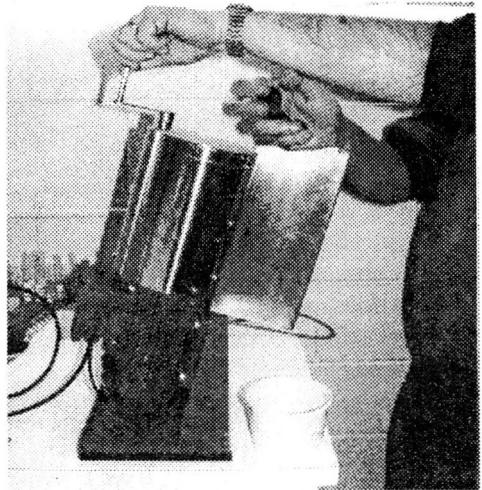
removal. Pressure or steam-exploding, or freeze-drying, are more exotic possible alternatives. We also have an experimental chemical removal process which reduces the pellicle to a wet tissue paper-like consistency and breaks its bonds to the kernel below. (We've also experimented with enzymes). Currently though, there hasn't been the demand or the funding to pursue these approaches further.

### Some history

It all started in the early 1990's with a New Zealand Chestnut Council (NZCC)/Chestnuts Exports NZ Ltd. (CENZ) (1993) requirement for some way of peeling NZ chestnuts. Samples had been sent overseas to put through European machines, but the results had been inconclusive. Early HortResearch experiments involved the engineers of the then 'Engineering Development Group' trying a range of different approaches from flame through freezing, pressure, decomposition and explosion.

None produced an acceptable peeled product, so they switched to a 2-part process, focusing first on shell removal, to be followed by a second separate pellicle removal stage. An early mechanical prototype to do this was built (and patented) in 1993, but apart from some limited use in processing nuts prior to chestnut soup production at the odd Mystery Creek field day, no further use was made of it. This was the time when fresh exports were still doing well and either freeze drying, crumbled/stuffing products or a secret new Hungarian process, were seen as fulfilling all NZ's requirements.

Further development work over the years has therefore been sporadic, depending on availability of funding: initially from NZCC and CENZ, and later by the Chestnut Company of NZ Ltd. - the Kiwi Chestnut Co-operative



*'Baby Ripper'*

Company and Bill Walker of EType Engineering Ltd.: all supported in turn by Technology NZ. It's been a low priority project

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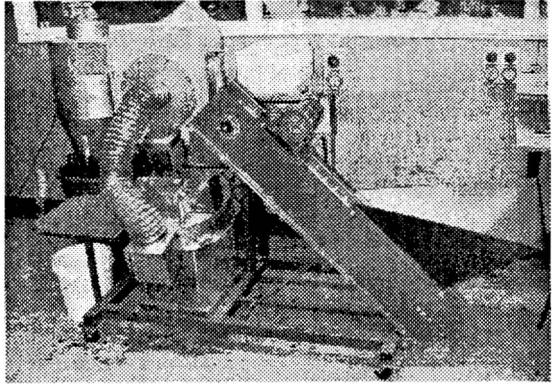
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for HortResearch (and one they have lost a lot of money on). Many thanks to Barry Stevenson, the designer, for keeping it alive (under the table, quite literally at times). There's still room for improvement and we'd like to do some more R & D work on it this coming season (funding allowing). Where to go next though, largely depends on whether there's any interest or demand out there for such a machine, from you the growers and most likely end-users....

- What sort of throughput do you need?
- Just shelled nuts or shelled and peeled as well? (i.e. both shell and pellicle removal)
- Do you need the surface kernel detail left intact?
- How much wastage and breakage is acceptable?
- How much would you be prepared to pay for such a machine?



*'Big Ripper'*

- How many machines would be likely to sell? (i.e. is it worth doing a production )
- Some feedback on this would be much appreciated and would greatly help decide the future of this project.

— *David Klinac*, HortResearch New Zealand <dklinac@hortresearch.co.nz>.

Australian Nutgrower: A1058.

[*Pomona (NAFEX) / Summer 2001*]

## Drying persimmons

There have been several good articles in Pomona about cooking with persimmons, but no mention of my favourite way to use these treats — that is to dry them. Around 20 years ago, I noticed my neighbours skilfully peeling and drying Hachyas. They showed me their unique method, which I find works every time.

My friends always preferred the large, pointed Hachya which is very astringent until soft, though I think the Fuyu persimmon which is flat and sweet while still firm would also work well. For drying, it is essential to pick the fruit while it's still very firm. Also, it must have the stem attached, preferably with a T-end so it will not slip off the string it's tied to.

The green calyx at the base of the stem should be trimmed as close to the stem as possible. The easiest way I found to do this was to bend the calyx toward the stem with my fingers; it is brittle and breaks away cleanly. The small part, still visible, will dry and shrink as the fruit does. The persimmon can be peeled with an ordinary potato peeler. This is easy if the fruit is hard, but any soft spots make it very difficult.

I usually hang the peeled fruit in strings of ten (it's easy to tally my total that way.) While a south-facing shed wall will suffice in a dry climate, I hang mine from the beams in my den where the wood stove hastens drying. This may look strange to visitors, but after a taste they quickly agree that two or three hundred beautiful persimmons make a very appropriate and festive holiday decoration.

The fruit is usually dry by the end of December and the resulting treats make great gifts when packed in sealable plastic bags. If tender dried fruit is desired, the persimmons can be massaged or kneaded every few days. We don't bother with this added step and have had no complaints. It always seems < shame to see persimmons hanging on the trees late in winter. Often only the birds seem to know just what a treat they can be—but they are wonderful baked into cookies and breads or dried for snacks all winter

Try your hand at drying persimmons, I'm sure you will enjoy them as much as we do.

— **Paul Hilton**, 3000 Gray Squirrel Lane, Georgetown, CA 95634, USA.  
vhilton@innercite.com.

**Pomona:** A2814.

*[Countryman / 2001 Oct 11]*

## Sandalwood venture fires up

A new sandalwood contract with significant spinoffs for employment and value-adding in WA has been announced by Forests Minister Kim Chance.

The Forest Products Commission (FPC) has entered into a contract with WA company New Mountain, part of the Wescorp group, to use sandalwood powder as the primary ingredient in a new range of incense products.

Mr Chance said the main focus would be on the production of mosquito repellent sticks and, at full capacity, a new factory in Bibra Lake was expected to produce more than one million sticks a week.

The company estimates 50 new full time jobs will be created as a result of the contract which allows for 72 tonnes of sandalwood powder to be purchased in the first year and up 200 tonnes in the remaining years.

¥

## ESSENTIAL OILS WORKSHOPS

*Centre for Land Rehabilitation, The University of W A.*

**Thurlby Herb Farm, Walpole** - Saturday,  
10th November, 2001  
**Toodyay Lavender Estate, Toodyay** -  
Tuesday, 13th November, 2001

Come and see demonstrations of the steam distillation process, for extracting natural oils. Portable stills made by Beechworth Aromatherapy, VIC, will use Lavender, Pelargoniums and Native Peppermint. Jeff Allen from the National Herbalists Association will discuss plant selection and quality assurance. Chris Robinson (AgDept) will talk on a native oil product and John Day (Paperbark Co.) will discuss a local commercial still operation. (Toodyay session is slightly different)

Cost: \$175 (incl. GST) all meals and notes.  
**Contact: Sandra Maynard 08 9380 3827.**  
Email: [sandra.maynard@uwa.edu.au](mailto:sandra.maynard@uwa.edu.au)  
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## Splendour - a new patented WA nectarine variety

A new nectarine variety, called 'Splendour' has been selected by Les Sweeney of Collie. Plant variety rights registration has been obtained.

The nectarine produces a very large reddish-maroon fruit of excellent flavour. Mr Sweeney said that it was rated at 700 chill hours. In the Southwest, the fruit ripened in the early New Year. The fruit keeps well and has a small clingstone seed.

"The new variety was a chance mutation, rather than the product of a breeding programme", Mr Sweeney said. "It was lucky we noticed it and realised its potential".

The new variety will be marketed through ANFIC, (Australian Nurserymen's Fruit Improvement Co. Ltd). Les Sweeney can be contacted on 08-9732 2044.

ANFIC: A3143

attract bees and hoverflies. Pollination is usually good except during cool weather. Off-season blooms may appear during the year and often set fruit. Some cultivars bloom and set fruit in alternate years.

Most cultivars (short for cultivated variety) are genetically diverse and some are hybrids between different species. Hybrids are plants that are produced by crossing two very specific parent plants. Hybrids (often designated F1) often yield more fruit than either of their parent species or inbred lines.

However, this trick only works for a single generation. The genetic variation that they contain will segregate and recombine when they produce offspring. (People are also genetically different from each other and produce children that have a new combination of traits from their parents and other ancestors.) In plants, we say that these plants will not "come true from seed."

When the pollen and the egg cell of two different plants are combined, the genetic material is combined. The result is a seed which will produce a plant with a slightly different leaf colour, flower colour, leaf shape, height, cold tolerance, fruit size, taste, or a whole host of other characteristics. However, what you will get is still the same plant species.

Anyone can plant an avocado seed and grow an avocado tree. However, the odds of that seed/tree producing high quality fruit are astronomical. Most trees that grow from seeds produce fruit that is usually watery and tasteless. In other words, they revert to wild types. In nature, the number of offspring that a tree produces is a measure success.

Therefore, seed production (reproduction) is important. In cultivation, we only select plants that produce high quality fruit. Seedling trees rarely produce fruits as tasty as those from commercial trees. Commercial cultivars are not grown from seeds, they are grafted

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[From the Purdue New Crops listserver.  
newcrops-request@purdue.edu]

## Avocado flowering

The flowers of avocado (*Persea americana*) appear from January to March before the first seasonal growth.

The flowers are perfect (they have both male and female parts in the same flower), but are either receptive to pollen in the morning and shed pollen the following afternoon (type A), or are receptive to pollen in the afternoon, and shed pollen the following morning (type B). About 5% of flowers are defective in form and sterile.

Production is best with cross-pollination between type A and type B plants. The flowers

onto clonal rootstocks. In fact, anyone can "discover" and name a new cultivar. You can grow, name, patent, propagate, and try to sell any seedling.

However, for it to become a widely grown commercial cultivar, it must be outstanding and at least as good as or better than the best currently available commercial cultivars. It may be easier to win the lottery!

For more background, I suggest that you pick up a current genetics text.

— **Eldon R. Everhart**, Iowa State University Extension. 906, 6th Street, Harlan, IA 51537-1405. E-mail: Eldon Everhart <everhart@iastate.edu>.

## Get on the WANATCA Executive !!!!!

*The next meeting, on November 13, is the official Annual General Meeting for WANATCA. While the official parts of our meetings have been known to last all of 60 seconds, we do have them, to comply with the regulations.*

*At the AGM, we hold elections, if necessary, for membership of the Executive Committee. Committee members are elected from the membership for periods of two years, with half those elected retiring each year. At the first Executive Committee meeting of the new year, the President is elected for that year.*

*We're always keen to welcome new blood (not often spilt on the floor) to the Exec, and it's not bad fun usually. If you'd like to be in it, have a go and put your name forward.*

*Or ring Stanley Parkinson on 9386 2518 or David Noel on 9388 1965 for a chat about it.*

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K20A \* AVOCADO: Start Up Package - Leaflet Kit (WA, 2001). Kit of 10 invaluable leaflets on avocado from Ag Dept of WA. Recommended. \$8.00

1388C \* CAROB Tree - Ceratonia siliqua L. (1997) 91p. Sp. From the International Plant Genetic Resources Institute. Thorough review of the origins, properties, uses, ecology and agronomy of the carob. Recommended. \$22.00

1406E \* The ENCYCLOPEDIA of MEDICINAL PLANTS 2 ed. Chevallier (US, 2000). 336p. Hb. Beautifully produced, colourful treatment of over 550 key medicinal plants, incl. spices, with uses, cultivation, origin, scientific background. Highly recommended. \$100.00

1409M \* MEDICINAL PLANTS of BRUNELI Darussalam. (Brun, 2000). 173p. Pb. Unique data source. Special import. \$30.00

1404O \* OLIVELEAF EXTRACT: Nature's Antibiotic. Walker (USA, 1997). 223p. Pb. All about this natural plant medicine, by a medical doctor. \$23.00

1411T \* TROPICAL FOOD GARDENS: A guide to growing fruit, herbs & vegetables in tropical & subtropical climates. Norrington (Aus. 2001). 160p. Pb. First-class practical and informative guide from a Darwin gardener. Includes all the usual fruits (most OK for Perth) plus locals Peanut Tree, Billygoat Plum, Buchanania etc. Highly recommended. \$28.00

1384W \* The WESTERN AUSTRALIAN FLORA: A descriptive catalogue. Paczkowska. (WA, 2000). 656p. Pb. Massive, comprehensive description of every plant native to WA and where it grows. Highly recommended, an essential data source at a remarkably low price. \$45.00

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## ACTION GROUP LEADERS

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FIG: Alex Hart, 9490 1324 (71 Terence St Gosnells 6110)

JUJUBE: Phil Ciminata, 9328 5718 (36 View St North Perth 6006)

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POMEGRANATE: Julie Firth, 99381628 (Lot 12 David Rd Waggrakine 6530)

WALNUT: Graham Fellows, 97731346 (PO Box 217 Manjimup WA 6258)

## CALENDAR OF FORTHCOMING EVENTS

(See also [www.AOI.com.au/wanatca/Events](http://www.AOI.com.au/wanatca/Events))

**Deadline for next issue: Jan 20**

### 2001

Nov 13 Tue \* Annual General Meeting (Prof. Phil Cocks: The  
Perennialization of Agriculture)

### 2002

Jan 15 Tue Wanatca Executive Committee Meeting

Feb 26? Tue \* WANATCA General Meeting (?Chris Oliver - Mulching in  
fruit tree growing?)

Mar 8 Fri Wanatca Pistachio Seminar/ Workshop, Northam

May 14? Tue \* WANATCA General Meeting

Aug 13? Tue \* WANATCA General Meeting

Nov 12? Tue \* Annual General Meeting

\*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.

*Material originating in Quandong may be reprinted; acknowledgement of author and source requested.*

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<[www.AOI.com.au](http://www.AOI.com.au)>. Quandong Advertising Rates: Whole page, \$80; Half page, \$45;

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