



Quandong

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West Australian Nut & Tree Crop Association (Inc)
www.AOI.com.au/wanataca

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The Custard Apple or Atemoyer (*Aemone aemone*) (See: About the Cover, p. 2)

NEXT MEETING:

Something different again for the next General Meeting (no meeting!):

As we are still regrouping after the (highly successful) Acotanc-2001 Conference, the meeting originally scheduled for May 15 will not be held.

The next general meeting, on August 14, should see us back on schedule.

At the last meeting, Robert Van Aurich of Aquaponics showed us an amazing range of large fruiting trees and other plants grown by hydroponic methods, including lush bananas, custard apples, papayas, casimiroas, and conventional temperate fruit crops, all laden with fruit.

The highlight was a purple mangosteen with two bunches of fruit. This is regarded as a true tropical, and it was very impressive to see one fruiting in Perth.

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About the Cover

The cover drawing shows the Custard Apple or Atemoyer, *Annona atemoyer*, from *Edible Fruits and Nuts* (Prosea Handbook 2). An article about this fruit, actually a hybrid between the tropical sweetsop (*A. reticulata*) and the temperate cherimoya (*A. cherimola*), appears on page 18 of the current issue of *Quandong*.

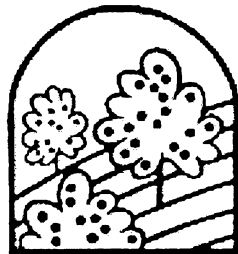
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[News Release / 2001 May 1]

Acotanc Conference a “great success”

The Acotanc-2001 Conference staged in Perth on April 13-19 this year has been judged a “great success”.

Officially the 9th Australasian Conference on Tree and Nut Crops, the event was the latest in the series and was hosted by WANATCA, the West Australian Nut & Tree Crop Association. The Acotanc Conferences are currently held every three years in sites around Australasia — the 8th was in Nelson, New Zealand and was hosted by the New Zealand Tree Crops Association. WANATCA hosted the first Acotanc, in Perth in 1982, and has waited 19 years for the second staging in WA.



Each Acotanc is staged by a local group or groups, and the emphasis of each is dependent on the groups involved. Acotanc-2001 was ambitious in its scope, looking not only at individual tree crops, but also far beyond to rational land use factors such as sustainability and plant evolution, and to problems such as salinity.

Papers and talks were presented over 5 days. The first three days were devoted to around 32 specific mini-conferences (‘MiniAcs’) run concurrently, covering particular crops such as figs, pecans, and chestnuts, groups such as Australian native plant foods and medicinals, tropical fruits and unusual temperate fruits, timbers and non-timber forest products, and topics such as water use and salinity control with trees.

The last two days were Plenary sessions on broader aspects of tree crops — feeding the future world population, world tree crops

under saline and arid conditions, how Earth Expansion gave us our tree resources, climate changes and tree crops, the rhizosphere (root zone) and tree crops, the international nut trade, and other vital topics.

“We did wonder at times if we had bitten off more than we could chew”, said Conference Coordinator David Noel, who in everyday life is Director of the Tree Crops Centre in Subiaco. “But at the end of the Day 5, there was a great feeling of euphoria and satisfaction all round. We received many compliments on the content and running of the conference, and we were thanked by numerous people for going to the effort of staging it”.

“I have to admit, though, it was a bit like the swan-on-water situation”, he said. “If it looked calm and serene on top, there was frantic paddling and action underneath. It was

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>.

atremendous team effort, and the Conference's success was a real pleasure boost for all those who worked so hard on it".

Mr Noel said compliments and thanks were due all round, but special mention had to be made of the Conference Manager, Monica Durcan of Landcare Promotions, who worked well beyond the call of duty; Conference Treasurer Wayne Geddes, who managed all the money, and will be reporting on the finances when he returns from South America (only kidding); Charles Peaty, offering sage advice all the way along; Pat Scott for helping with the website work when deadline pressures were becoming extreme; Yvonne Pantino and all her colleagues from the Permaculture Association, called upon in the last few weeks before and during the conference, and who made sure the necessary things actually happened on time; and last but not least, Conference Chairman Stanley Parkinson, a wonderful people person, who held the whole thing together.

According to Mr Noel, Acotanc-2001 had been a major event in his life. The Conference had included many innovations in its content, organization, and structure. Some of these moves were frankly untested and risky, but luckily enough most of them had worked out well. The worst organizational problem, which was totally unforeseen, had been the stranding of two speakers in Sydney due to the Ansett Airlines groundings just before the conference.

Mr Noel said the conference held many personal highlights for him:

- *The number of first-class overseas speakers, including those from Chile, South Africa, India, Philippines, and Spain, and from Georgia, Oregon, and California in the USA;*
- *The gratifying extent of local expertise,*

both in WA and elsewhere in Australasia, which could be found when lines of enquiry were pursued;

- *The world-wide area from which delegates came, including a team of six people from Bhutan, and others from Britain, tropical Africa, and all the world's continents except Antarctica;*

- *The wonderful opportunities for personal interchange and networking thrown up by the coming-together of all these groups;*

- *The success of the approach of working substantially through the Acotanc website and e-mail facilities in conference publicity, registration, organization, and building up the speaker base;*

- *The impact of the on-line video interview with Prof. Alex McCalla at the University of California Davis, on 'Feeding the Future World Population', recorded only a few days before the actual conference;*

- *James Maxlow's presentation on "How Earth Expansion Gave Us our Tree Resources", a new and fascinating insight into how events in the geological past have impacted upon present situations;*

- *Success of the 'MiniAc' approach, described by one participant as "brilliant";*

- *The substantial financial help from the Federal Government's Horticulture Research and Development Corporation (now Horticulture Australia), and the good feeling of being able to claim that their investment paid off;*

- *The praise for the informal approach adopted for the conference and the associated bush dance and barbecue;*

- *The masterly summing-up and review of the conference by Dr Rob Fletcher of University of Queensland's Gatton College, and the announcement that Gatton expected to host the next Acotanc in mid-2004, in*

conjunction with a New Crops conference.

Mr Noel quoted from the Conference brochure, "We want those attending to go away with the feeling that they have been genuinely privileged to witness material which is new, vital, interesting, insightful and scientifically sound, and set to have a great positive influence on the future well-being of the planet". He thought that when participants looked back on the conference and its outcomes in future years, they might accept that Acotanc had gone a good way towards achieving this aim. And, according to many participants, it had been fun too!

He said that the personal benefits gained by the participants was not the end of it, work was now beginning to convert the conference material for publication on the Acotanc website, at www.AOI.com.au/acotanc. This conversion, under the oversight of Pat Scott, would extend the benefits of the conference to the community at large. ¥

THANK-YOU COMMENTS

As well as the verbal comments, we received several written ones. Here are a couple:

Just a short congratulatory note for running such a wonderful event, I feel very fortunate that you permitted me to be part of it. Thanks for organising and putting on such a worthwhile event.

David Kennett

<davidkennett@bigpond.com>

Thank you for introducing me to the ACOTANC conference. It proved a most interesting and enjoyable experience for my Easter. Congratulations on both pulling together and pulling off such a worthwhile event.

Michael Benfield

<greataustralian@Great-Australian.com>

[Sunday Times / 2001 Apr 29]

Chestnuts coming out of their shell

Chestnuts roasting on an open fire may be an enduring image of a European winter, but it's fast becoming a regular feature on Perth's autumn feasting calendar.

For Albert and Desiree Della Franca, growing chestnuts on their 6.6 ha grove at Karragullen is a passion.

Production of this curious yet delicious little nut is set to double in the next couple of years, with more producers coming online.

So it's time, says Albert, for a whole new generation of people to fall in love with the chestnut.



The delicious chestnut in its spiky 'burr'



Albert and Desiree Della Franca in their Karragullen grove

In Perth, traditional users of chestnuts have been European and Chinese immigrants, who have grown up with the nut's culinary potential.

Developing a new market would be the industry's challenge for the new millennium, he said.

Desiree said chestnuts had a natural affinity with chicken and risotto, but her family loved them thrown into the roast with the other vegetables.

She even loves to eat them raw, as she demonstrates as we wander through the peaceful grove. She skilfully prises out the

Chestnut facts

- Chestnuts are in season from March until July.

- With less than 3 per cent fat, they are a low-fat food. Most other nuts contain more than 50 per cent fat.

- Eat chestnuts as a snack, or add them to stir-fries, tossed through cooked pasta or as a replacement for nut higher in fat in cake or dessert recipes.

- Store chestnuts in a paper bag or perforated plastic bag in the crisper compartment of the fridge and use within three weeks of buying.

- Before cooking chestnuts cut a cross in the outer shell with a sharp knife or

cut of the rough end to prevent them exploding as they heat up.

- Pre-heat the oven to 200 C. Place chestnuts on baking tray and cook for about 20 to 25 minutes or until shells split.

- Remove outer shell and inner brown skin while chestnuts are still warm because they are difficult to peel when cold.

- If using chestnuts to puree, place in a pan of cold water, bring to boil, cover and simmer for 15 to 20 minutes or until flesh is tender.

- 1 kg of unshelled chestnuts yields about 700 g of shelled nuts.

crunchy, sweet kernels embedded in their shiny brown casing with a few swift turns of Albert's pocket knife.

The Della Francas believe processing is the future for the industry. Some people were turned off chestnuts because of the amount of preparation needed, so processing, which includes peeling, vacuum packing and even precooking, could be the answer.

Like many other primary producers, Albert and Desiree are looking for rain, which plays a key role in releasing the chestnuts from the husks that cocoon them as they develop and ripen.

"It doesn't matter how much we irrigate underneath — we still need rain to give the necessary weight to let them down," Albert said. "Just a short, sharp shower will do the trick."

The current season is on its last lap as the Della Francas wait for their trees to release the marrone variety of nuts. These are sweeter but more difficult to peel than the manjimup mahogany and brown early, though they are much loved by the Italian community.

Manjimup mahogany is the first to come on and is a high-quality, big nut, which is sold mainly through the Canning Vale markets. Brown early is a superb roasting, easy peeling nut.

At the end of the season, they will cull the oldest of the 1200 trees in the grove. Every second tree will be removed so that the 12-year-old trees will continue to expand their canopies.

Hazelnut Varieties

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

Eventually, these trees, which are related to oaks and just as huge, could reach the ripe old age of 200.

Albert said the oldest chestnut tree in WA was just down the road from his grove and was planted more than 100 years ago.

Albert and Desiree are not only primary producers these days. Their grove has also become a tourist destination for busloads of visitors, particularly those from South-East Asia, who wander between the rows of trees after tasting the freshly roasted nuts their hosts have prepared.

Albert has lived on the property all his life and believes there is no place like it in the world. He and Desiree say the grove is particularly beautiful on still, late summer evenings, when even the buzz of traffic from the nearby highway can't touch the peaceful atmosphere.

— *Sheree Leggerini*

¥

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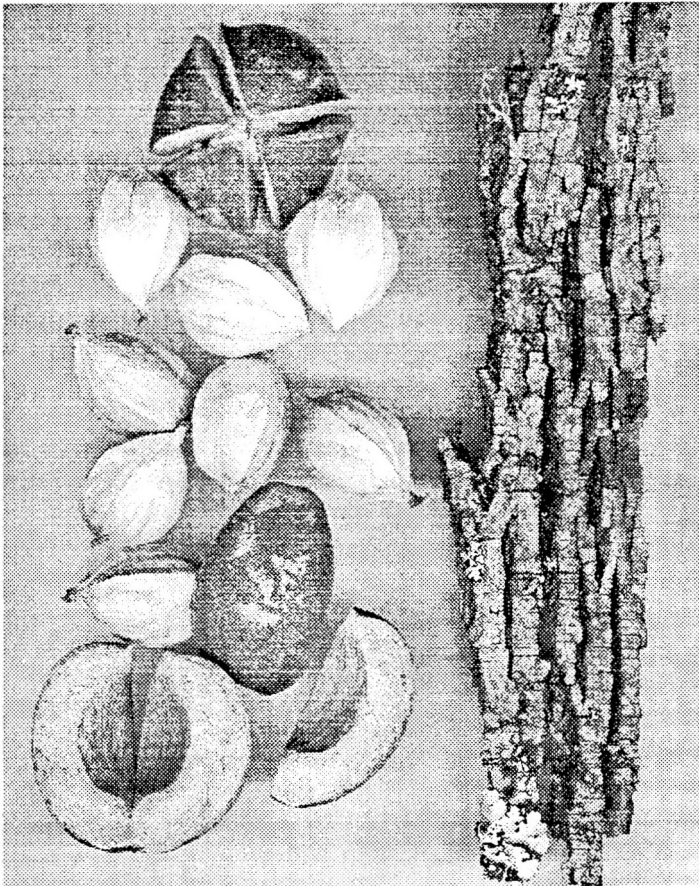
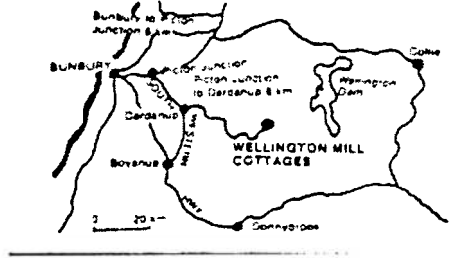
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PO Box 217 Margaret River 6285

Hickories in WA

If you don't count pecans (*Carya illinoensis*), trees of the Hickory Family are really rather uncommon in WA. I didn't know of any mature, fruiting stands until I was contacted by Bob Ingle.

Bob runs Wellington Mill Cottages, a rural retreat in the magnificent Ferguson Valley, inland from Bunbury. He contacted me in April with the news that in the grounds of the Cottages there were 9 good hickory trees, with at least 5 which had nuts approaching maturity. I was excited by this news and persuaded him to send me some of



the nuts when they were ready, and perhaps to write down a little of anything about their history which he could find (Bob took over in last year).

So I was delighted when samples of nuts, some in husk, a piece of bark, and a leaf arrived, together with an interesting letter (reproduced below). I was able to scan this material directly on a computer scanner to give the picture shown, in fact I was impressed with the quality of the colour image obtained.

From the samples I was able to identify the species as Shagbark Hickory, *Carya ovata*. This is a good eating nut and an excellent hickory timber tree, although as

Some of Bob Ingle's Shagbark Hickory nuts and bark

Dear David

Regarding our conversation about the Hickory trees that growing here, the information I have is based on the history of the settlement. That I have gained by quizzing visitors that have lived here or had some contact with people that had something to do with the early days here.

The first saw mill was established around 1895 by the Bunbury Jarrah Company at a site about 4 km south of here and operated until the 1960s when a series of bushfires eventually destroyed the mill — it was never rebuilt. The settlement here was started about 1925 with 3 cottages (for Manager, Foreman and Timekeeper/Storeman). By 1927 there were 7 cottages and a small hall that was a school and community centre. The task of this group was to manage the forest for the then Department of Forests (selection of trees, road works, dam building etc), and above all, collection of revenue for the State.

The Hickory and Elm trees where planted sometime around the 1930s, as far as I can find out, as a supply of wood for axe and shovel handles, with the longer elm trunks for levers for log rollers and shovels etc. The origin of the seed/seedlings is not known.

My observations of the cycle of the hickory is that in August the trees are in full leaf (light green), by September a long tassel (100 - 150 mm) flower forms at the tips of new growth and remains for 3 to 5 weeks. During this time there is a fall of pollen and petals? from the flowers (bees very active).

Following the fall of the blossoms there were several new plants came up in the areas of deep leaf mulch, but the kangaroos ate them before I could pot any of them up. The next stage was the formation of the fruit, again where there had been a blossom tassel — first as a green round nut about 12 mm in diameter, these appeared in late November and grew to about 25 - 30 mm by February.

Immature fruit started to drop in early March, and by early April the best of the fruit started to fall. In the last few weeks, with the start of the cold nights, the leaf coverage has turned to autumn colours and the remaining mature fruit has dropped. Interestingly the fruit has started to open on the tree before it falls so that when it hits the ground the nut comes free of the outer casing. This nut is as per the samples I have sent you and are about twice the size of the earlier falls.

I have enclosed samples of the nuts and some part opened ones. The leaves may not stand the postage as they are brittle but the bark sample should be all right.

I have enclosed a map of our location and you most welcome to view the trees at anytime.

— Bob Ingle, Wellington Park Cottages, RMB 276, Wellington Mill WA 6236. Phone/fax 08-9728 3043. Email robss@bigpond.com.

with most hickories the shell is a good deal thicker than that of a pecan.

In the 1999 WANATCA Yearbook, we reproduced an excellent world summary of hickories, written by Martin Crawford of the Agrorestry Research Trust <A2769>, in the UK. Following are some extracts from *Seeds of Woody Plants in the United States* (USDA Forest Service, Agriculture Handbook 450, 1989); this also has data on germination.

— David Noel

CARYA (Hickory)

by F. T. Bonner and L. C. Maisenhelder

Growth habit, occurrence, and use.—

Of the dozen or so species of hickories native to the United States, eight are valuable for timber and food for wildlife (table 1). All are deciduous trees. *Carya illinoensis* and its many horticultural varieties and hybrids are widely

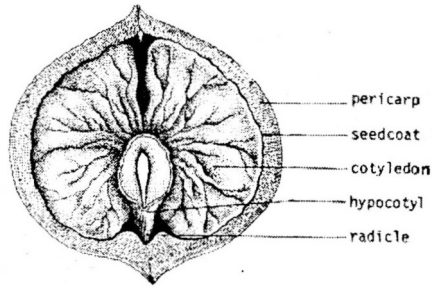


Fig. 2, Shagbark hickory, *Carya ovata*

cultivated for the nuts in large plantations in the South and Southwest. *C. laciniosa* and *C. ovata* have also been planted for nut production.

Flowering and fruiting.—Hickories are monoecious and flower in the spring. The staminate catkins develop from axils of leaves of the previous season or from inner scales of

the terminal buds at the base of the current growth. The pistillate flowers appear in short spikes on peduncles terminating in shoots of the current year. *Carya* fruits are ovoid, globose, or pear-shaped nuts enclosed in husks developed from the floral involucre (fig. 1).

Husks are green prior to maturity; they turn brown to brownish black as they ripen. The husks become dry at maturity and split away from the nut into four valves along sutures. Those of *C. tomentosa*, *C. myristicaeformis*, *C. ovata*, *C. laciniosa*, and

Table 1: *Carya*: nomenclature

Scientific names and synonyms

C. aquatica (Michx. f.) Nutt.

Hicoria aquatica (Michx. f.) Britt.

C. cordiformis (Wangenh.) K. Koch

Hicoria cordiformis (Wangenh.) Britt.

C. glabra (Mill.) Sweet

Hicoria glabra (Mill.) Britt.

C. ovalis (Wangenh.) Sarg.

C. illinoensis (Wangenh.) K. Koch

Hicoria pecan (Marsh.) Britt.

C. pecan (Marsh.) Engl. & Graebn.

C. laciniosa (Michx. f.) Loud.

Hicoria laciniosa (Michx. f.) Sarg.

C. myristicaeformis (Michx. f.) Nutt.

Hicoria myristicaeformis (Michx. f.) Britt.

Britt.

C. ovata (Mill.) K. Koch

Hicoria ovata (Mill.) Britt.

C. tomentosa Nutt.

Hicoria alba (L.) Britt.

C. alba (Mill.) K. Koch

Common names

water hickory, bitter pecan, swamp hickory.

bitternut hickory, bitternut, swamp hickory, pignut.

pignut hickory, oval pignut hickory, pignut, red hickory.

pecan, sweet pecan

shellbark hickory, bigleaf shagbark hickory, big shellbark, kingnut, bottom shellbark.

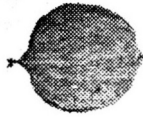
nutmeg hickory, bitter water hickory, swamp hickory.

shagbark hickory, scalybark hickory, southern shagbark hickory.

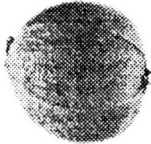
mockernut hickory, bullnut, white hickory, whiteheart hickory, hognut, mockernut.



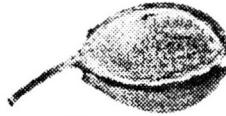
C. aquatica
water hickory



C. cordiformis
bitternut hickory



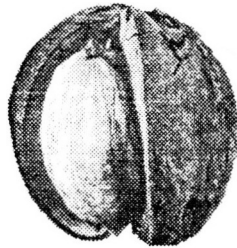
C. glabra
pignut hickory



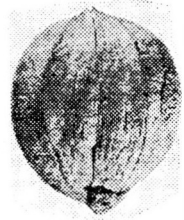
C. ovata
shagbark hickory



C. illinoensis
pecan



C. coccinea
shellbark hickory



C. ovata
shagbark hickory



C. tomentosa
mockernut hickory



C. illinoensis split to the base at maturity, usually releasing the nuts. Husks of *C. glabra*, *C. cordiformis*, and *C. aquatica* split only to the middle or slightly beyond and generally cling to the nuts. The nut is 4-celled at the base and 2-celled at the apex. The bulk of the edible embryonic plant is cotyledonary tissue (fig. 2).

(Table 2 is phenology of flowering and fruiting)

Collection, extraction, and storage.— Nuts can be collected from the ground after natural seedfall or after shaking the trees or flailing the limbs. Persistent husks may be removed by hand, by trampling, or by running

the fruits through a corn sheller. *C. ovata* and *C. laciniosa* trees have been known to produce 1.5- 2 and 2-3 bushels of nuts respectively. Good crops of all species are produced at intervals of 1 to 3 years (table 3). Some typical yield data are in table 4. Nuts stored for 3 to 5 years should be in closed containers at 41° F. and 90 percent relative humidity. Storage for only one winter before spring planting can be achieved with stratification.

Pregermination treatments.—Hickories exhibit embryo dormancy, which can be overcome stratification in a moist medium at 33° to 40° F. for 30 to 150 days (table 5). Naked stratification in plastic bags is suitable for most species. Seeds in storage for a year or more may require only 30 to 60 days stratification. If cold storage facilities are not available, pit stratification with about 2 feet of compost, leaf, or soil cover to prevent freezing will suffice. Prior to the cold treatment, nuts

should be soaked in water at room temperature for 2-4 days with 1 -2 water changes per day.

Germination tests. —Adequate germination tests can be made on stratified nuts in flats of sand, peat, or soil or on thick layers of moist Kimpak, or similar material, at diurnally alternating temperatures of 68° to 86° F. Quick tests with tetrazolium salts can also be used with *Carya* species.

Nursery practice. —Either fall sowing with untreated seed or spring sowing with stratified seed may be used. Excellent results with fall sowing have been reported for *C. ovata*, but good mulching is necessary (5). Drilling in rows 8 to 12 inches apart with 6 to 8 nuts per linear foot is recommended: drilling depth should be 0.75-1.5 inches. Mulch should remain until germination is complete. Shading is generally not necessary, but *C. laciniosa* may profit from shade. Protection from rodents may be required for fall sowings.

[West Australian / 2001 Feb 8]

High-tech tester puts tastiest fruit on table

Technology is taking over one of man's tastiest jobs. High-tech gear is testing fruit sweetness in a range of products.

Jenny Mercer, of Canning Vale wholesale agent Mercer Mooney, says the move means the end for consumers of the fruit quality lottery. She said the New Zealand 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 G Sweet, it has tested honeydew and rockmelons since Christmas and has started on plums for export.

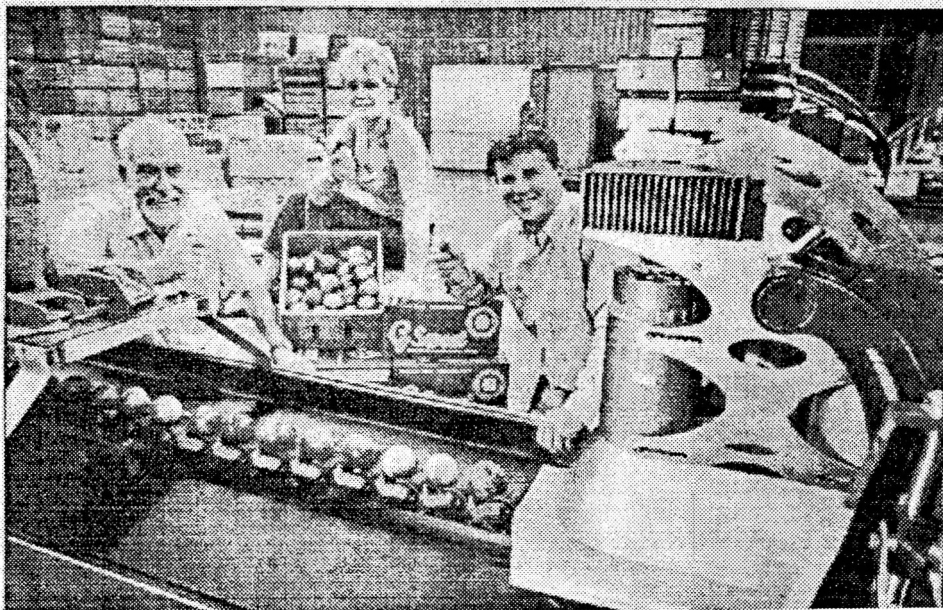
Ms Mercer said that to the company's knowledge, it was the first to have the technology available for melons, stone fruit and apples on the international and domestic scene.

Pistachio Nut Trees

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Sweet success: The testing gear gets approval at Strathspey fruit packhouse in Karragullen. From left, Kevin Edgar and Danielle Burgoyne, of the packhouse, and exporter Fabian Carniel. Picture: Nic Ellis

“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.”

Ms Mercer said that last year, another group used similar technology in Kununurra on melons.

She said the system would guarantee growers a premium return but would cost exporters and consumers more.

An average 1 kg punnet of peaches or nectarines that would be available later this month in shops under the process would cost \$4.99, \$1 more than a punnet costs now.

Fabian Carniel, director of exporter Carter and Spencer International, said the technology was a major breakthrough for fruit marketing.

“Being able to guarantee a level of sweetness will help cement sales,” he said.

— *Michael Zekulich*

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The Western Australian Flora - A Descriptive Catalogue

(Book review) by Grazyna Paczkowska and Alex R Chapman

(in Greening Australia's 'Leaflet', Autumn 2001)

This exciting new publication catalogues the diversity of the vascular flora occurring in Western Australia. The State contains about 3% of the world's flora with several areas of special interest. Endemism is extremely high in the South West with 80% of the taxa growing nowhere else in the world.

Every native and naturalised alien plant known to occur in the State is listed in this publication by family, genus and species, and accompanied by a brief description of its habit, height, flowering time and colour, habitat and distribution. Sub-species and varieties are included, as are new entities scientifically recognised but yet to be formally described. In total, this document describes 11,922 vascular plant taxa, as recorded in the information systems of the WA Herbarium on 20 January 2000.

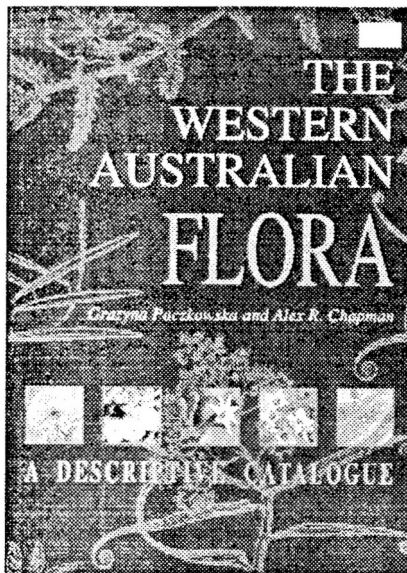
Pressures on this special flora are very real with some 2,000 taxa throughout the State being considered rare and threatened. The publishers hope that this volume will help to arrest this situation by giving the community

a better understanding of the flora.

Scientists, students, naturalists and flora enthusiasts will all find this a key reference work that can be used in the field as well as at the office, library or home. The catalogue links to Florabase, an electronic database, which can be accessed at <http://www.florabase.calm.wa.gov.au>.

This book is published jointly by the Wildflower Society of WA, WA Herbarium, CALM and the Botanic Gardens and Parks Authority. The 672 pages include 16 pages of colour and 6 colour plates with an introduction covering botanical history, floristics, classification and data management.

(Available from Granny Smith's Bookshop at \$45.00, see ad p.31).



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In 'Quandong' we try to give news of problems encountered with tree crops, as well as list successes. But the following account is a particularly sad one, with a thriving operation brought down by bureaucratic failure.

[Sunday Times / 2000 Nov 5]

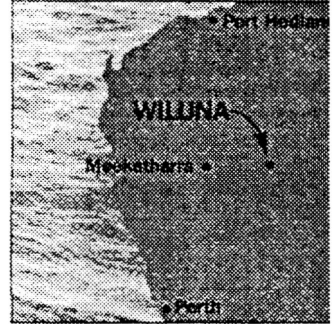
Desert dream a disaster

In 1994, reporter Gary Adshead visited a thriving fruit orchard in the desert near Wiluna. This week he returned to find hectares of dead orange trees, vandalised equipment and questions about where the money and the people behind the project have gone.

A massive horticulture project funded with millions of dollars of public money has been abandoned, leaving 20,000 fruit trees dead and expensive machinery rusting away.

The Desert Gold orange orchard was once a unique Aboriginal development sprouting like an oasis from the dusty, red earth near Wiluna.

Today, it looks like a ghost town. Rows of export-quality fruit, stand parched in the burning Murchison sun.



Richard Whittington walks between rows of dead orange trees. In the 90s they produced tonnes of export-quality fruit, now they stand parched in the burning Murchison sun.

Fraud squad detectives have been trying to trace the money and people behind the defunct project, while Wiluna Shire Council blames Government red tape for its demise.

"People have offered to put their own money into it to get it working again, but we can't get answers from the bureaucrats," shire president Richard Whittington said.

With no caretaker at the orchard, vandals and thieves have come and gone at will.

Cool room compressors, worth \$40,000 each, have been damaged badly. Several tractors have been either stolen or sold and eight buildings once used to

house orchard workers have been trashed.

"I've spoken to politicians who say they'll get to the bottom of this, but nothing happens," Mr Whittington said.

The Department of Land Administration owns the 140 ha on which the orchard stands. A spokesman told The Sunday Times that a "technical glitch" had stalled a new lease agreement. "It's in a hold-over period," DOLA's regional manager Henty Farrar said.

The department said it had been unable to contact the new Aboriginal lease holders, Kutkabubba Corporation, for more than a year. "Perhaps we have been more lenient than normal," Mr Farrar said. "We will be writing to the lessee soon asking them to show good cause why the lease shouldn't be taken off them."

For years, Desert Gold was heralded as a pioneering Aboriginal venture. Steered by New Zealand horticulturist Kevin Murphy, the orchard employed 30 people and produced more than 1000 tonnes of fruit a year.

With tourist buses stopping regularly at the unique orchard, Desert Gold became one of Wiluna's biggest assets. In 1996, Mr Murphy resigned over a pay dispute with Desert Gold's then owners, the Ngangganawilli community, the orchard slid into disarray and was abandoned 18 months ago.

Four years after leaving Desert Gold, Mr Murphy was too distressed to talk about the state of the orchard. "I was told not to return there because it would break my heart," he said.

When I toured Desert Gold six years-ago, it was an impressive sight.

Thousands of oranges rolled along the grading tables, cool rooms were stacked with a golden harvest, vehicles and people buzzed around the packing shed like worker bees.

This week, the only sound came from



The sign that once said it all . . . the Desert Gold orange orchard was a unique Aboriginal development, sprouting like an oasis from the dusty, red earth near Wiluna.

sheets of corrugated iron creaking in the desert wind.

The only thing that moved was a family of hawks that circled a water tower. The only sign of fruit were the husks of shrivelled oranges dangling from leafless, lifeless trees.

Earlier this year, DOLA inspected the rundown orchard after complaints about lack of action.

"It is very sad when you know it has thrived in the past," Mr Farrar said. "There's no shortage of water, there's no shortage of labour, there's no shortage of sunshine, so yes, it is sad."

One assessment puts the bill for getting the orchard up and running again at \$400,000, a figure far out of reach of the current leaseholders, Kutkabubba.

The Aboriginal and Torres Strait Islander Commission's Preston Thomas, commissioner for Wiluna, blamed a lack of management direction for the crisis. "It's despairing; it's a mess," he said.

When a split occurred in the Aboriginal groups running Desert Gold three years ago, ATSIC refused to put any more money into the project.

"People were running in different directions," Mr Thomas said. "We tried, with

one of the mines in the area, to set up a management structure, but it fell through and we walked away."

He confirmed the fraud squad had been brought in to investigate possible misappropriation of funds.

It's understood ATSIC wants the Kutkabubba people to give the lease to a larger Aboriginal corporation. "It needs a big cash injection," said Mr Thomas.

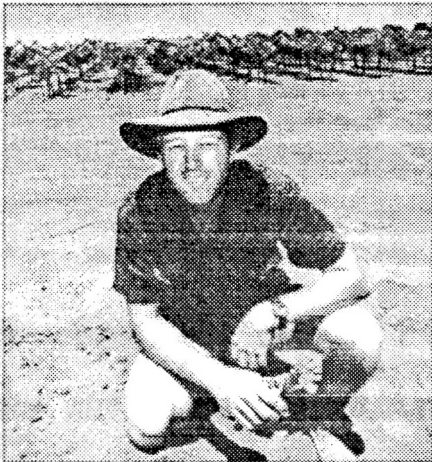
Wiluna ripe for the picking

If someone told you they saw grapevines in the desert, you might think they'd had too much sun.

But a few kilometres from the decaying Desert Gold orchard is a success story that proves Wiluna is ripe for horticultural development.

Gunbarrel Grapes streaks across 10 ha of land, producing tonnes of table grapes for the Australian market.

It is the dream of former sheep station manager Simon Thomas, who recognised the



Grape dream: Simon Thomas queries waste

value of an endless supply of sunshine and artesian water.

"It's been a major learning curve going from livestock to growing grapes, but we're starting to make progress," he said. The vineyard is lined with more than 2000 vines and new plantings aren't far away.

When Mr Thomas saw what had become of his nearest neighbour, Desert Gold, he wanted to stop the rot.

"First I thought there's no way I could afford to get it back in shape, but after a few days I made an approach to DOLA about the lease and heard nothing back," he said.

The 'Sunday Times' was told that up to seven people had shown an interest in taking over the lease. More than a year later the lease remains in limbo. "What a waste" Mr Thomas said.

DOLA regional manager Henty Farrar said he had encouraged interest in the orchard.

"I have encouraged people who have rung up with inquiries to lodge an interest with us so in the event that we do have to terminate the current lease those persons will be offered an opportunity to put a proposal," he said.

Another summer without water and locals say any proposal would come too late for Desert Gold.

¥

Who owns the land?

For most of human history, no one owned the land. Early tribal peoples (and today's indigenous ones) had the idea of a territory where they belonged, but they believed the Earth owned them.

- Brendan Conley

[Sunday Times / 2000 Dec 10]

Ugly — but oh, so sweet

Custard apples are those weird tropical fruits that once you have tasted you're hooked on for a lifetime. At least, that's been my experience.

The warty green fruits as large as grapefruit look anything but appealing and are full of black inedible seeds. But the taste is delicious.

The tropical custard apples, or atemoyas as they are more correctly known, are being successfully grown around Perth, and there are commercial plantings in Carnarvon and Gingin.

In our Mediterranean climate, it is possible to create a microclimate for an individual tree for a couple of the tree's early years.

Protection from hot, drying easterly winds by means of a shadecloth or hessian screen will prove helpful for a young tree. Maintaining a high level of humidity, especially when the tree is in flower, is perhaps the most challenging aspect. A fine-mist sprinkler in the canopy and a 10cm to 20cm layer of organic mulch to act as a moisture reservoir will create the right conditions.

Mature trees can withstand temperatures as low as -3° C, but a heavy frost can kill a young plant.

Varieties

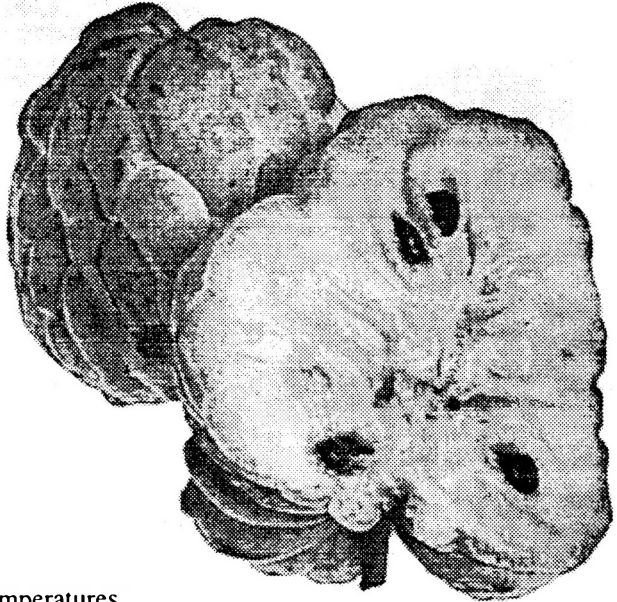
Trees grown from seed are slow to start bearing, and so variable in the quality of the fruit they are not a proposition for the serious grower. Grafted trees can produce in their second or third year from planting.

Currently two varieties dominate plantings. These are african pride and pink's

mammoth. I recommend african pride, which can crop in two to three years. It is a compact tree and more tolerant of cold.

Planting

Apart from trying to find a wind-sheltered spot, look to plant custard apples in a very sunny location even with some reflected heat from walls or fences.



I would always recommend using copious quantities of organic soil improvers such as well-rotted animal manure, peat or compost before planting.

During summer the plant does not want to completely dry out so it is a good idea to include the tree in your automatic watering program. Custard apples are like most tropicals — they like to follow the little-and-often school.

Balanced, complete fertilisers such as

Cresco Garden or Gro Plus Complete can be applied every month from September to March.

Pruning

Shaping young trees is important because they have a natural tendency to grow tall and thin. With pruning you can make the tree more open so that sunlight can penetrate into the centre to ripen fruit.

With a new tree, trim any branches that are longer than 60 - 70 cm. If you continue to tip prune any side growths that emerge to a similar length you will develop a bushy plant that can be further trained to form a wineglass

shape that is open in the centre.

Harvesting

Fruit can take up to six months to mature on the tree. The correct time to harvest is a bit tricky, so look at the colour of the skin between the main segments of the fruit. When this changes from green to cream the fruit is ready to be picked, but not eaten.

It is best to cut the fruit off using secateurs, and leaving a small stub of stem. Now all you need to do is place the tantalising fruit in a bowl in the kitchen and wait a few more days until it softens.

— Neville Passmore

Keeping up with Olive

WA is well served by the WA Olive Network Newsletter. Anyone involved with olives and who has an e-mail address should sign on for this free newsletter. Here are some extracts.

[WA Olive Network: Newsletter / 2001 May 2]

Another production by Stan Kailis -

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skailis@agric.uwa.edu.au

Department of Plant Sciences - The University of WA 35 Stirling Highway Nedlands 6009.

Two items from Chas Greenway at York: Harvest and Parrots.

"Just thought I would let you know the results of my first (mini) harvest. From 320 3-year old Manzanillo trees, I harvested 100 kilos. I would not have normally bothered with them as picking the fruit is very time

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consuming when they are sporadically distributed over the tree, however, a lady I know in the pickling business really needed them to fill an order, so we enjoyed a good few hours in the grove on a beautiful day. I had a sample of the olives tested for oil content and was surprised to learn that they yielded 18.3%, which is good considering that I would have left them a little longer before picking if I was going to crush them for oil.

Parrots remain a big problem around York and the wheatbelt. I believe there will be enough concern after a year or two for there to be a compelling reason to fund a scientific research project on how to deter these destructive pests. Most of my property is bush and this seems to provide other sources of "munchies" for them. (They don't eat them,

just bite them off the tree and drop them) . I would guess that I lost less than 10% to parrots. I am trying a number of deterrents but nothing sophisticated".

Congratulations on the first harvest Chas. Looks like the Manzanillo will be OK for oil in WA after all. At least in York. The issue of Parrots seems to be a universal one. A pistachio grower I know is using a combination of electric hot wire over the top of each row in combination with a gas gun. He says that provided the hot wire is activated in a random manner and you use the gun sparingly it does keep the numbers down. Any other suggestions out there?

— *Harry Goff*, <colyton@iinet.com.au>. Phones 08-9332 0022, 0408 096 550.

[Sunday Times / 2001 Jan 14]

Hunting money trees

Don't call Perth-based biotechnology company BioProspect Ltd "plant pickers" — they're plant samplers.

And don't confuse them with some kooky, treehugging, environmental outfit — they are a professional organisation with the latest multimillion-dollar technology looking for the plant which could prove the basis for a major lifesaving drug.

BioProspect's business is the extraction and testing of small samples of material from biota taken in WA.

In layman's terms, they have a 20-year licence, issued by the Department of Conservation and Land Management, to sample every plant in the State.

When they sample plants, the material is frozen to -80 C in minutes, then sent to the company's extraction laboratory at the

Southern Cross University in NSW. A nuclear mass resonator breaks down the plant and separates compounds.

There are two million compounds in BioProspect's library, with a million more to be added in the next year.

BioProspect will list on the Australian Stock Exchange, this week. The company hopes to, become a world leader in its sphere. If BioProspect does succeed, it won't just be the company's shareholders who are the winners. The State Government will take 10 per cent of any of BioProspect's profits.

A new drug that makes it to the market would be worth millions of dollars to BioProspect, with 10 per cent going to the State.

"Is this a great deal for WA?" director Kevin Rumble said. "You better believe it.



Fronid friends: BioProspect director Kevin Rumble, left, and chief field scientist Matt Keally. Picture: Tom Ravis-Hermann

We are looking after every single West Australian."

The big pay day for BioProspect would be the development of a new drug from its plant compounds. But, with an average of just three major new drugs hitting the market each year, the big payout is slim.

For every 500,000 compounds that go through the system, three will emerge as a billion-dollar drug. BioProspect will earn royalties of between 3 and 6 per cent on any drugs that hit the market, but its fate does not rest on that one-in-a-million payday.

The company has plenty of lucrative revenue options. It is estimated that drug companies spent US\$26 billion on the development of pharmaceuticals last year.

The average cost of developing each new drug is more than \$300 million, and every time a drug company uses a compound from BioProspect's library for its testing purposes, it pays a fee— starting with \$100 to \$300 per

milligram for a compound for testing.

"If they want them deconvoluted, it could cost as much as \$100,000 per one milligram, depending on what phase of testing the drug company is at and if they want it exclusively," Mr Rumble said. "If they are at phase two clinical trials it could be \$1 million per one milligram."

There are more than 12,500 species of plants indigenous to WA and the South-West is one of the world's biota hot spots.

BioProspect director Greg Eaton said the area was richer than the Amazon.

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"A 5m square area in the Porongorups has more flowering species than a 6 sq km area of the Amazon," he said, adding that many of the plants had never been probed for drugs.

The issue of biopiracy is a thing of the past since a new protocol was signed by 194 countries in 1994.

Now, if drug companies try to patent a new drug they will be turned down if they cannot show clear pathways as to how the drug was developed and where the biota came from. This process was designed to stop pharmaceutical companies ripping off the world.

Recently a Japanese company had to pay the Sri Lankan Government millions of dollars after it was determined it had no rights to the compound used to develop a drug for diabetes.

"It's hard to set a law to stop biopiracy," Mr Rumble said. "But they can be scared off. If they (drug companies) spend \$500 million

developing a drug and then can't get a patent, they're going to be pretty upset."

Mr Eaton said the belief was that drug companies would do less of the exploration work and use companies such as BioProspect instead.

Another factor working in BioProspect's favour was the world's willingness to embrace natural drugs.

"If you can discover something that cures cancer, you can synthesise it," Mr Rumble said. "But people are demanding naturally occurring medicine, particularly in Europe.

"We now learn that inside all these synthesised chemicals there are residuals that can block up your kidney or liver. It means drug companies in the future are going to have a demand on them as to whether their drug is a naturally occurring compound."

— *Graham Mason*

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The list is growing and we are wanting to explore what suppliers are out there and willing to co-operate with us.

Of particular interest are desert lime and bush tomato seedlings.

We are only interested in suppliers who are able to supply more than on their word!!!

Thanks to anyone who can help us!

Regards

Aaron Edmonds, Calingiri-New Norcia
LCD <ronnie_edmonds@hotmail.com>

[Sunday Times / 2001 Feb 18]

A persimmon a day keeps the heart surgeon away

An apple a day may keep the doctor away but a persimmon a day could save you from a heart attack, scientists claim.

They say the reddish-coloured fruit that looks like a large tomato is great for reducing the risk of heart disease.

Researchers have carried out the first study of its health-giving qualities and comparing the results with those of other fruits, including apples. Their findings were published in the British Journal of Agricultural and Food Chemistry.

The persimmon, first cultivated in China thousands of years ago, seems to have more names than most other fruits.

In Latin it is *diospyros* and in English it was also called the date plum.

Then growers in Israel dubbed it the Sharon fruit— apparently to make it more attractive to customers.

The team from the Hebrew University in Jerusalem found persimmons contain

significantly higher concentrations of dietary fibre, minerals and phenolic compounds.

These are all vital in fighting atherosclerosis, a condition in which the arteries become blocked and can lead to heart disease, heart attacks and stroke.

A separate research project by the same team, also published in the same journal, showed that under laboratory conditions a diet rich in persimmons improved lipid metabolism—the way the body copes with fat.

Project leader Dr Shela Gorin-Stein, a medicinal chemist, said the fruit's high content of fibre, phenolics, minerals and trace elements made persimmons preferable for an anti-atherosclerotic diet.

They contain twice as much dietary fibre as apples and more of the major phenolics, or antioxidants, thought to ward off cancer and help prevent blood clots. The fruit had significantly higher levels of sodium, potassium, magnesium, calcium, iron and manganese. Apples had higher concentrations of copper and zinc.

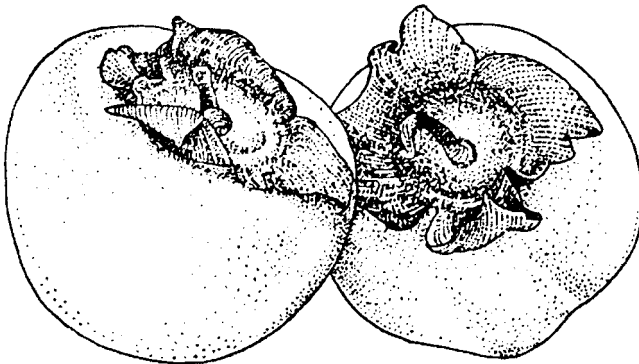
Dr Gorinstein said eating one medium-size persimmon a day was enough to help fight atherosclerosis.

But she stressed that other fruits also helped to guard against heart disease and urged people to include them in their diet as well.

Persimmons can be eaten hard or soft, with or without the brown spots that appear on the skin as it ripens.

Many people slice off the top and scoop out the pulp.

— James Chapman



[West Australian / 2000 May 10]

Shift is to organic produce

A growing taste for chemical-free produce has opened new opportunities for Australia's broadacre farmers and horticulturists. It is the fastest-growing food sector in several export markets.

Around 120 farmers in WA produce organic food but the number is tipped to rise with extra supermarket demand.

Agriculture WA's organic project development officer, Steven McCoy, said the value of the organic market would reach \$160 billion by 2006.

"World markets have been growing at more than 20 per cent a year for the past seven years," he said. They were valued at 523 billion in 1998.

Mr McCoy described organic farming as a

whole farm management system where biology and balanced soils were developed to give sustainable yields without chemicals or forced growth.

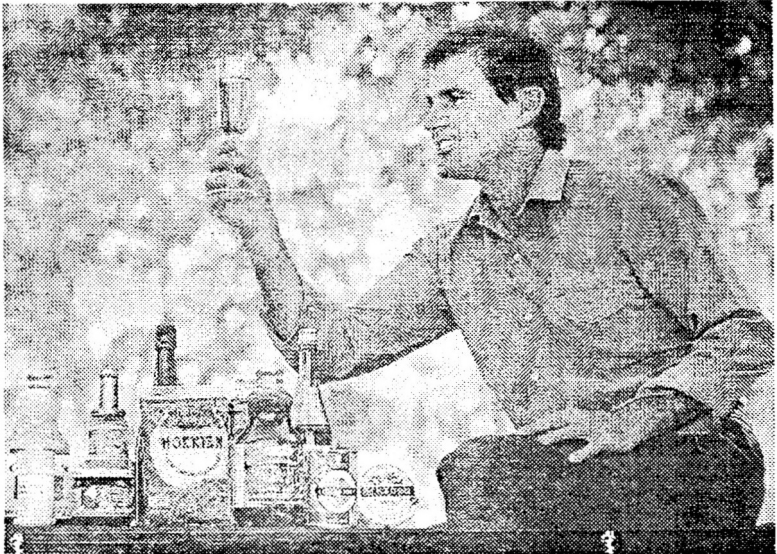
Between 30 and 40 broadacre farmers from Morawa to Esperance produced certified organic grain and meat. Mainstream farmers had shown greater interest in organic products when they were stocked by big supermarkets, not just specialty food outlets.

But the Australian market was relatively undeveloped and markets in the United States, Europe and Japan were the main outlets.

In WA, farmers grew organic grains as well as fruit and vegetables, and raised organic lamb. Organic WA honey was another product sold in the US, Japan, South-East Asia and Europe.

The range of organic fresh or processed food was enormous and consumers were paying a 20 per cent to 30 per cent premium.

— *George Boylen*



Growing market: Agriculture WA's Steven McCoy with some of the State's organically grown food. Picture: Trevor Collens

[West Australian / 2001 Jan 19]

\$42m to fight salt, find ore deposits

Money for research centres will see jobs spin-off

Fighting salinity and improving prospects of finding new ore deposits in WA will be the focus of two research centres announced by the Federal Government yesterday.

Researchers will get \$42.2 million over the next seven years with matching contributions from industry and participants in both cooperative research centres.

The Centre for Plant-based Management of Dryland Salinity, to be based at the University of WA will get \$22 million. and the Centre for Landscape Environments and Mineral Exploration, based at CSIRO's new Bentley facilities, will receive the rest of the money.

The Government won praise from industry and the scientific community after announcing a national \$325 million boost to research funding.

The Federation of Australian Scientific and Technological Societies hopes Prime Minister John Howard will approve more money when he releases the Government's innovation plan on January 29.

The State Government, through the Commerce and Trade Department's centres of excellence program, committed up to \$650,000 for each proposed WA centre to improve their chance of being selected.

There will also be WA participation in several of the other successful 17 interstate centres.

The cooperative centres' "clever country" program was introduced by the Labor government in 1990 to increase investment in

research and technology by government, university and industry partners.

The salinity centre, in which Agriculture WA and the Department of Conservation and Land Management are partners, will focus on Australia's biggest environmental problem through the use of profitable and perennial plant-based farming systems.

UWA acting vice-chancellor Alan Robson said the Government's decision to base the centre in WA recognised the extent of the salinity problem in Australia.

The mineral exploration centre will focus on the discovery of mineral deposits using airborne geophysical methods to peer into the top 100 m or more of the Earth's surface.

Australian Gold Council chief executive Greg Barns said the announcement recognised the critical importance of mining, particularly the gold mining industry.

But Opposition industry and technology spokeswoman Carmen Lawrence said the government was fudging the figures.

Dr Lawrence said that the coalition had cut funding for the CRC program when it came to office and the 2000-01 federal Budget estimates showed funding still fell short of the level in 1995-96.

Australian Democrats science spokeswoman Natasha Stott Despoja was also disappointed about the lack of new money in the announcement.

She said the announcement of \$325 million for 19 new CRCs over seven years had only maintained current levels of government support for the CRC program.

— Carmelo Amalfi

[Countryman / 2001 Apr 26]

Greens WA calls on government to reappraise tree crop policy

Greens WA South West MLC, Christine Sharp, used her address to the Australasian Conference on Tree and Nut Crops at UWA to call for Government m Australia to emulate their European counterparts, forming a clear policy on tree crops and farm forestry.

Dr Sharp said it was time that Government at both State and Federal level reappraised its values to ensure that the tree and nut industries were developed constructively.

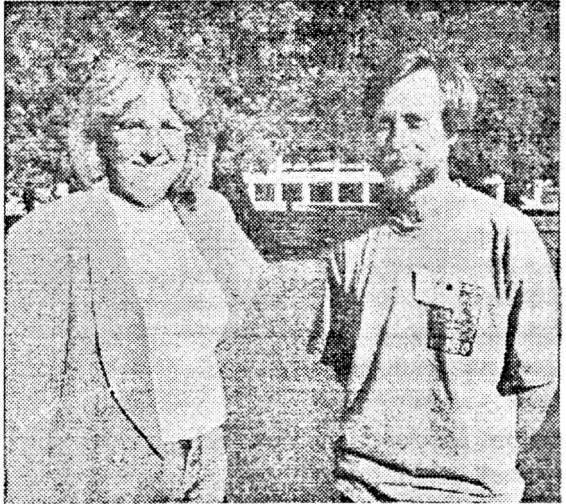
"The development of the Tasmanian Blue Gum industry in the South-West has highlighted the lack of a comprehensive Government policy on trees," she said.

"Taxation is a very blunt policy tool indeed, about 50 per cent of the 160,000 ha of bluegums planted in WA have been established through tax effective investment and this is the sole significant source of funding from Government for tree crop development.

"Therefore there has been no serious support for integrated tree crops or genuine farm forestry, the support has only been there for industrial woodchip production."

This meant there were no real incentives for ordinary farmers who, due to the cost price squeeze that has characterised agriculture over the past two decades, do not have tax problems, so tax based programs are largely ineffective Dr Sharp said.

After the substantial sums provided for Landcare through the sale of Telstra and the Natural Heritage Trust dry up this year, many of the landcare officer positions created in the



Dr Christine Sharp and P.B. Foreman, of Cape Mentelle, at the UWA conference

lower rainfall areas of the wheatbelt are likely to be lost.

Dr Sharp said it was crucial the Government moved on the issue.

"Clearly the trees that have been planted through the tax effective schemes are not in the right place, the funding should be directed at those regions which experience less than 700 mm rainfall," she said.

"It is extremely important that we work out a way of valuing tree crop plantings in the drier areas of the State, particularly the areas to the East."

— Paul Jarvis

New exotic fruit tree source in Perth

In April a caller told me about a nursery centre in Maddington which had available a good range of tropical and exotic fruit trees.

The caller said that it lay behind a very ordinary facade which gave no indication of the treasures lying behind, and gave me a general description of where it was. In April, intrigued by the description, I tracked it down while on a sweep round Perth with Roger Meyer and his family from California (in Perth for Acotanc-2001).

The place was worth the search! There, at 1915 Albany Highway Maddington, was Maddington Flora & Garden Supplies, <A3404>, actually an old-established garden centre which I remembered selling some bunya pine seedlings to over 20 years ago.

Down the back was an exceptional range

of exotic fruit trees, including lychee, longan, black sapote (chocolate pudding fruit), casimiroa (white sapote), acerola (barbados cherry), and many more. All were good-sized trees over 1.5 metres tall, mostly at under \$30 each. Roger said that in California, they would be four times the price.

I was particularly struck with the good-sized soursops (*Annona reticulata*, warm-climate custard apples) and the jakfruits, neither of which had I seen on sale in Perth before. Once, up at West Gingin, John Verheyen showed me a flower on his single soursop tree, and I was impressed at this feat!

We talked with Lee, the owner, who told us that he was familiar with these trees from his childhood in Malaysia. The ones he was selling had been brought in from Queensland.

So after squashing Roger and his wife Shirley over to one side of the back seat, I drove away very happy with four new big trees for my yard, including a black sapote which already had seven good fruits formed on it, in the pot.

— David Noel

(Lee's phone number is 9493 1496)

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[Countryman / 2001 Apr 26]

New web page for seed choice

The Forest Products Commission (FPC) has launched a new web page to assist nurseries and landowners to select seed.

The site's database offers the flexibility to chose a species based on rainfall zone, soil or use.

Head of the FPC's Seed Technologies Section, Dr Liz Barbour, said the species range included those commonly used for land rehabilitation or commercial tree-crops.

"The information has been available in a seed catalogue posted out to regular customers, but now is widely accessible on an easy-to-use website," she said.

Dr Barbour said the FPC was well known

[Countryman / 2000 Dec 7]

Horticulture restructure complete

Restructuring of horticultural industry bodies into a company was passed by Federal Parliament last week.

Assets, liabilities and staff of the existing Australian Horticultural Corporation <A1015> and Horticultural Research and Development Corporation <A1252> will be transferred to the new company [Horticulture Australia] which will oversee R&D, marketing and export controls.

The most notable use of export control powers has been in sales of oranges to the US, where Australian growers now earn \$40 million a year through price premiums for quality fruit meeting US quarantine requirements.

The Australian Dried Fruits Board will be abolished and its \$2 million in funds held in a trust for marketing programs.

for its tree breeding and seed production of south-west WA tree farm species.

"The major species involved in commercial treeplantings are Maritime Pine (*Pinus pinaster*), Monterey Pine (*Pinus radiata*) and Western Blue Gum (*Eucalyptus globulus*) all of which are supported by highly advanced tree breeding programs," she said.

"To support the State's Salinity Action Plan, the choice of species is being broadened into low rainfall areas saline landscapes and alternate commercial products.

"We also have a new section on the website which highlights recent developments in treecrops, with present emphasis on sawlogs."

Dr Barbour said seed supplied from the FPC tree breeding programs was superior to harvested native seed.

The website address is www.fpc.wa.gov.au/seed.

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[Countryman Horticulture / 2000 Nov 2]

Bark mulches on fruit trees looking "very good"

The soil in the valleys around Pemberton is among the richest in the State in organic matter. But for orchardist Russell Delroy there are still benefits to be gained from increasing organic levels.

Mr Delroy has been conducting an on-property trial over the past two years looking at the effect of bark mulch on avocados, kiwifruit and tamarillos, and so far things are looking very good.

He said the decision to plant the three non-traditional crops in the region came from a desire to retain as much control over the product from tree to consumer as possible.

"The rationale behind growing avocados, kiwifruit and tamarillos was to pursue smaller product lines to gain better control, particularly at the marketing end," Mr Delroy said.

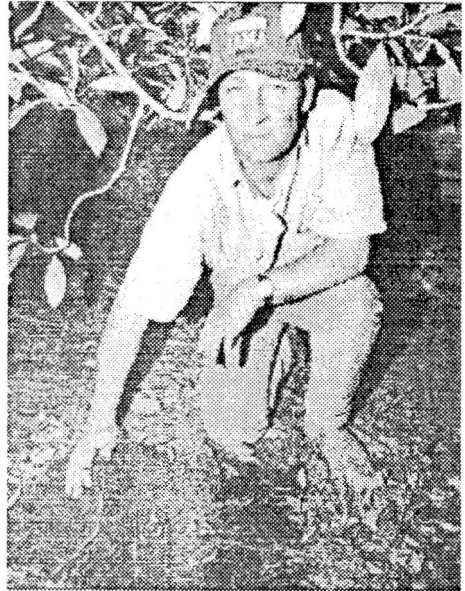
"We have other guys who grow for us and we all work together in terms of production methods to make sure the product we are putting on the market is of a consistent quality to maintain the reputation of our brand."

The bark mulch trial was initiated as part of the focus on maintaining quality standards and the results, particularly for avocado production have met expectations while highlighting the value of general tree health.

"The attributes of the bark mulch are quite different from other mulches," Mr Delroy said.

"The bark mulch lasts longer, it has a half-life of about three years and probably because of that you get greater proliferation of microflora.

"By half-life I mean the period before you have to start topping it up — a lot of mulches are really only annual.



Pemberton grower Russell Delroy with bark mulch on the tree line under avocados — part of a two-year on-property trial examining the advantages of the the harder bark mulch on orchard crops

"We also achieved a significant benefit in terms of reducing the incidence of phytophthora and there is evidence going back quite a while of the benefits of high organic matter in the soil for controlling phytophthora."

The mulch trials on the kiwifruit and tamarillos are also looking good but according to Mr Delroy, as they have not been running as long as the avocado trial, it is probably too



Russell Delroy and Lisa Henderson, of Iama Manjimup, with avocados on Mr Delroy's Pemberton property

early to begin quantifying the results.

The success of the bark mulch trial so far has led to the development of an arrangement with SOTICO's Manjimup processing plant to take the bark waste, which is normally burnt, and mulch it.

The infrastructure has been built on site at SOTICO and is due to be commissioned this month.

Mr Delroy said the plant would produce about 60,000 cubic metres of bark mulch a year, which equated to two road-trains of mulch daily

To use such high volumes a custom designed spreader has been built with a capacity of 17 cubic metres which is capable of spreading 250 cubic metres of mulch during

an average working day.

The spreader is towed by a customised Manitou telehandler which has the advantage of a compact design while being able to load the 4.2 m-high spreader designed to feed the mulch out in a continuous stream under the tree line.

While admitting there is likely to be limited demand initially in the orchard industries, Mr Delroy believes opportunities exist in the burgeoning viticultural plantings in the region as well as in the sandier soils to the west and south.

"These karri soil types have relatively high organic matter, but we have plantings of avocados in Capel, and for sandier areas like that I can see stronger interest," he said.

[Countryman / 2000 Jul 20]

Rip out trees, orange orchardists asked

Australian orange growers are being asked to rip out thousands of their trees in a bid to force up prices.

Riverina Citrus, based in the southern New South Wales city of Griffith, has put forward a plan which would cut valencia orange production by 20 per cent. But there has only been lukewarm support so far.

The acting executive officer of Riverina Citrus, Dominic Nardi, said farmers had to take radical steps if they were to remain viable.

He said juice companies were picking off growers because although only 180,000 tonnes of oranges were needed, more than 350,000 t were produced in Australia each year.

"If we can get farmers everywhere to take out an acre or two of their oranges, then we can cut 30,000-60,000 t of oranges from production," he said.

"Instead of being forced into taking low prices, we can push up prices.

"Valencia oranges attract prices anywhere between \$80-180 /t but most producers find they are barely breaking even on \$120 /t."

Mr Nardi said research done by Riverina Citrus showed a farmer with 12 hectares of valencia oranges could increase income by almost \$20,000 by taking out half a hectare of trees and forcing prices up.

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CALENDAR OF FORTHCOMING EVENTS

Deadline for next issue: Jul 20

2001

Jul 3	Tue	Wantca Executive Committee Meeting
Aug 14	Tue	<u>WANATCA General Meeting</u>
Aug 28-30		•Dowerin Field Day, Dowerin
Nov 13	Tue	<u>Annual General Meeting</u>

*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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