

Quandong

magazine of the
West Australian Nut & Tree Crop Association (Inc)

August 1987 • Vol 13 No 3 • ISSN 0312-8989

Registered by Australia Post : Publication WBH0868

PRICE \$ 1.00



MUNDU (*Garcinia dulcis* (Roxb.) Kurz)

NEXT MEETING

THE KIMBERLEY CASHEWS PROJECT Wednesday August 19, at 7.30 pm

Our speaker at the next meeting will be Barry Collinson, Chairman of Kimberley Cashews Ltd, who will be speaking on the company's huge cashew production project based at Kununurra in the Ord River Irrigation Area of the Kimberleys.

The project aims to create a plantation of 800 hectares (2000 acres) of cashews on the company's farms over the next 3 years. This will be easily the largest nut production project in the State, and one of the largest in Australia. It will also be the first major tree crop project set in the tropical Kimberley region in the far north of W.A.

This meeting will be a "world première" - the first public description of this giant undertaking. It will be open to members of the public and to the press, so it is a unique opportunity for everyone interested to hear about this innovative undertaking at first hand.

New Membership Leaflet Now Available

Together with this issue of *Quandong* is enclosed a copy of the Association's new Information and Membership Leaflet, titled 'Growing Nuts, Exotic Fruits, and other Tree Crops in Western Australia'.

Please show this leaflet to someone you know who could be interested in becoming a member — the more members we have, the more and better services we can provide. If you know of a garden centre or other outlet who would like copies to distribute, please contact the Secretary, Lorna Budd, on 458 5918. Bulk supplies are available free of charge as a public service.

We believe that the leaflet is a considerable improvement on the old, but it can be made better still with your help. Please phone or write with your comments to the *Quandong* Office — details on bottom of back page.

Granny Smith's Bookshop

Specialists in books on nuts, fruits and tree crops

Now open 9-5 at the Tree Crops Centre

Suite 8, 88 Broadway, Nedlands

Mail address: PO Box 27, Subiaco WA 6008

Phonc: (09) 386 8093. Call or write for our free catalogue.

ASSOCIATION ACCOUNTS

The Executive of WANATCA extends its grateful thanks to member Don Findlay for undertaking to audit its Books of Account.

The audited accounts will be printed in the next issue of Quandong so that they are available for consideration by the next Annual General Meeting in November.

QUANDONG AVAILABLE TO THE PUBLIC

The Executive of WANATCA has decided to make Quandong available for sale to the public through garden centres, health food stores, fruit merchants, newsagents, and other suitable outlets. We believe that this will improve the Association's public image and promote membership.

If you know of an outlet interested in handling Quandong, please ask them to contact the Quandong office on 09-386 8093, or call us yourself.

Members will receive their Quandong by mail well before each issue is released to the public. The WANATCA Yearbook and other membership services will not be available to the public.

W.A. TREE CROPS CO-OP REACTIVATED

West Australian Nut Supplies Cooperative Ltd, the cooperative company owned by certain members of the Association, is moving to again take a more active stance on the commercial side of tree crop activities.

The Directors have resolved to re-open the Share Register of the Company, after investigations on appropriate shareholder entry conditions have been completed.

All tree crop activities which have a commercial component and can be assisted on a cooperative basis, from production planning right through to marketing, will be considered by the Co-op if approaches are made to it.

As an early step, the Co-op has already arranged for nut cracking facilities to be made available to local producers (see announcement elsewhere in this issue of Quandong).

The Co-op is also developing a scheme by which areas of land will be made available to shareholders at low cost for tree crop production and experiment. This scheme will be pursued with the approval of State Government and Local Authorities.

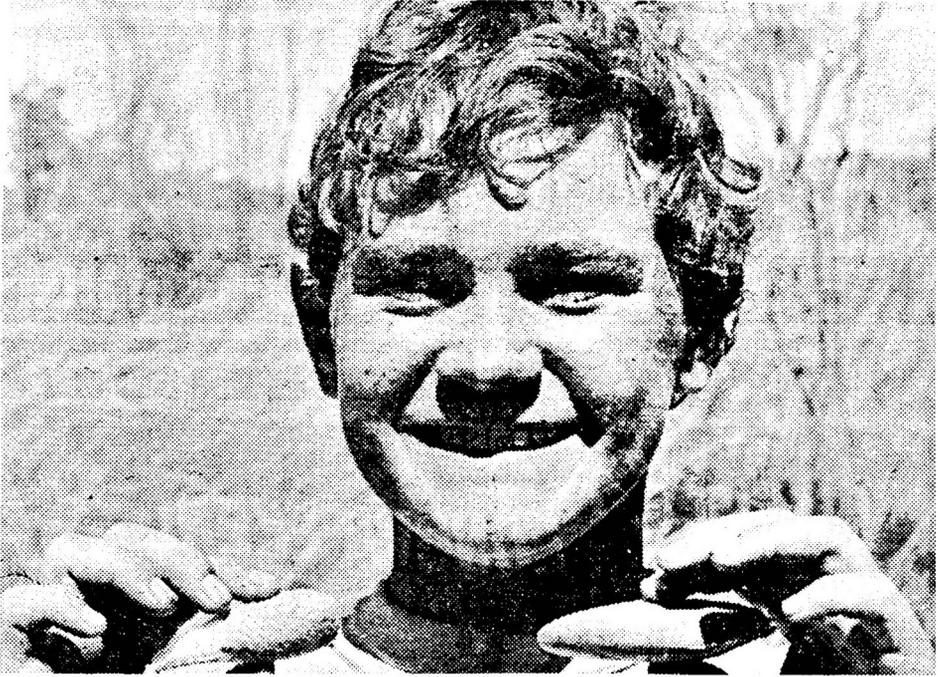
Further news on the Co-op will be released in the near future. Enquiries should be directed to the Tree Crops Centre.

THE BUSH BANANA

The WA Herbarium finally has its first specimen of the tasty Kimberley fruit called the bush banana.

The popular native food was passed on to the herbarium by two Broome brothers who have their own secret cache. Broome Botanical Society members Ian Foulkes (13) and his brother Troy (12) learned of the fruit from Aboriginal friends who called it "muggabulla".

They notified botanist Kevin Kenneally, who has been working on Kimberley flora for more than 10 years, and carefully tagged the plant until he could check it on a recent visit to the North. They had to keep the location secret because bush bananas, which taste like sweet green peas, are eagerly sought after by European and Aboriginal children.



Troy Foulkes holding peeled and unpeeled fruits.

Mr. Kenneally said this week that the plant was a traditional food well known in Aboriginal songs and legend. It belonged to the *Marsdenia* genus and was commonly found climbing over trees in the arid, wattle-and-thicket country called the pindan.

Botanists had known of its existence but had not been able to find the fruit because it flowered during the wet season. The mature fruit was in such high demand that children ate them before they could be collected.

(Alex Harris)

LETTER FROM BARRY KAULER

I was wondering if you could provide some assistance in locating a particular plant. I'm extremely interested in obtaining seedlings of the *Dovyalis*, or kei-apple, featured in *Quandong* Nov. 1986, p. 8.

I live east of Narrogin in a light rainfall region, mediocre soil, and I'm setting my half acre block up with appropriate trees and plants, such as carob, honey locust, pistachio, torrey/bunya/digger pines, tagasaste, almond, prickly pear, fig, olive, etc, and the *Dovyalis* looks like an ideal addition. I wonder how it handles windy conditions, as I'm interested in its windbreak potential, as well as a food source.

According to my calculations it is possible to achieve food self-sufficiency on half an acre, which is what I'm aiming for – well in several years time we'll see. It would be good if you can help me.

Barry Kauler, P.O. Box 25, Tincurrin, W.A. 6361

LETTER FROM CHRISTMAS ISLAND

I have recently read an article about your centre in the 'Countryman' newspaper.

Is it possible to obtain information from your centre by correspondence?

I have a variety of tropical fruits planted on Christmas Island as a trial, and am interested in information which may assist in determining which trees warrant more extensive plantings. Any advice would be most appreciated.

Cheryl Wright, P.O. Box 62, Christmas Island,
Indian Ocean 6798

NEVILLE SHORTER OFFERING CONSULTANCY SERVICES

Quandong is pleased to announce that Neville Shorter, WANATCA Executive Member and formerly of the W.A. Department of Agriculture, is now available for consulting work on tree crops.

Neville has been closely involved with tree crops in the Ag. Dept. for more than 30 years. He has worked at the Department's Offices at Bunbury, South Perth, and Midland, and at its Stoneville and Medina Research Stations.

Neville has wide experience with both traditional and new tree crops. Topics he has successfully worked on include plant nutrient standard, for pome fruit, stone fruit, and citrus in the Southwest, and chemical thinning of fruit, orchard weedicides, and pest and disease control.

In recent years, Neville's interests have extended to new fruit crops, including nuts, Asian pears, persimmons, avocados, litchees, white sapotes, and cherimoyas. In particular, Neville became the Department's expert on pecans and pistachios.

Publications which he has prepared include the *'Guide to Pest and Disease Control'*, now the standard work on the subject, and a wide range of bulletins and handouts on technical topics. He also edited the Fruit Industry Newsletter for some years, and has been active on Technical Committees and in arranging Field Days and Discussion groups.

Neville can be contacted through Nut & Tree Crop Consultants at the Tree Crops Centre (see advertisement in this issue of Quandong).

NUT CRACKING FACILITIES

Facilities for the cracking of small or large quantities of locally-produced nuts are now available to members through the W.A. Nut Supplies Cooperative Ltd.

Two separate cracking plants are available. One is intended for macadamias, and dehusking facilities are also available at this plant. The other handles pecans and almonds. It should also be suitable for peanuts. Other nuts will also be trialled on request.

This operation is a pilot scheme, undertaken to provide a service. Charges will be low or nominal, and the operators have expressed a willingness to improve their techniques to meet local demands on processing any nuts.

For further information, please contact the Co-op at the Tree Crops Centre - phone 09-386 8093, or mail to PO Box 27, Subiaco, WA 6008.

SITES WANTED FOR CAROB TRIALS

Under the direction of Henry Esbenshade, author of *Growing Carobs in Australia*, Men of the Trees are raising approximately 10,000 Carob seedlings at their Hazelmere nursery for planting in farm trials this winter.

Seed has been gathered from a range of provenances to see which ones will produce fast growing, sturdy root stock. Farmers and others taking seedlings are asked to keep a record of management and growth rates so that the information can be correlated.

The seedlings when supplied will be no more than six weeks old. Young seedlings are necessary because the Carob sends out a fast growing tap root which is very sensitive. It will not stand physical damage or air drying on transplanting.

Seedlings have been grown in one-litre milk cartons to give adequate depth of potting mix and these should be planted intact with the bottom removed so as to cause minimal root disturbance.

Young seedlings must be protected from weed competition, browsing stock, abrasive winds, and frost during their first year. Ideally they should be planted into deep sandy soils. Occasional watering with an organic fertilizer will benefit.

Special care through the first year will repay the farmer with fast growing sturdy trees which may be grafted with budwood from high yielding cultivars when the stem is about one centimetre diameter.

Anyone wishing to participate in these trials should contact Barrie Oldfield on (09) 291 6619 and arrange to collect the seedlings from the nursery, St. Barbe Grove, at the corner of Amherst Road and Stirling Crescent, Hazelmere. Business hours are 8 am to 4 pm, Monday to Friday, weekends by appointment. A charge of 60¢ each is made. Pre-germinated seed can also be supplied if seven days warning is given.

NUT & TREE CROP CONSULTANTS

Consulting in all aspects of nut and tree crop culture, economics, marketing, and research

Nut and Tree Crops Consultants are pleased to announce that the services of Neville Shorter are now available through their Consultancy. Small and large commissions undertaken, on traditional and new tree crops.

Principal: David Noel
Tree Crops Centre, Suite 8, 88 Broadway, Nedlands, WA 6009
Phone: (09) 386 8093 Fax: (09) 386 7676

STREETS TO BLOOM – COTTESLOE HAS GONE NUTS OVER TREES

Cottesloe shoppers will go nuts this year – Almond tree blossoms and swooping green parrots are the latest street trend in the beachside suburb.

Cottesloe Town Council is looking for 12 to 18 mature young almond nut trees about 2.5 metres tall to plant in Napoleon Street, the beachfront suburb's main shopping centre, which is being revamped.

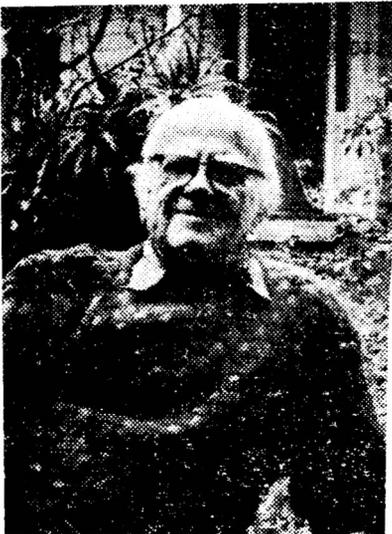
More almond trees could be planted in adjoining streets, and neighbouring Claremont is expected to replace some of its old street trees with avenues of almonds.

Almonds are the concept of veteran landscape architect John Oldham, who was asked by Cottesloe shopkeepers to suggest a suitable tree for the centre's development.

Said Mr Oldham: "I looked for a tree that was not too large, had a changing display throughout the year, would be reasonably easy to control, and would have a degree of toughness in hot summer conditions. In Adelaide almonds are a lovely scene throughout the city and you have the unusual theme of a winter flowering. Nuts bring birds. I have one in my back yard that is entirely for the twenty-eight parrots. I'd rather buy my nuts and have the birds visit. With almond trees in Napoleon Street, you'll have twenty-eights swooping down among the shoppers".

Mr Oldham, a landscaping consultant for Claremont Town Council, has recommended almond trees on street verges in historic Richardson Avenue, which runs from Stirling Highway to Osborne Parade, near the old Loreto Convent riverfront.

(Philip Bodeker)



LETTER FROM SYRIA

I am a higher degree student in the Horticulture Division of the Agricultural College, University of Aleppo.

I wish to receive publications of your organisation concerning the *Pistacia vera* tree, as well as more information on the agriculture of *Picacia vera* in Australia. I should appreciate full details on these subjects, and also would like to know your terms.

Mohamad Tahir Mallah, Agricultural Engineer,
University of Aleppo, Agricultural College,
P.O. Box 7831, Aleppo, Syria

Tree Crops Centre Statistical Bulletin No. 1 *Areas planted to various nut crops in Australia* (Estimates)

NUT CROP	AREA (ha)
Peanut	29 000
Almond	5 000
Macadamia	3 500
Chestnut	1 600
Cashew	1 100
Pecan	900
Pistachio	250
Walnut	200
Hazel	90

Notes. Areas are estimates only, based on best available information.
Includes some plantings currently in progress.

Date of compilation: 1987 July

[Agstats (1986/87 Agricultural Census)]

KIMBERLEY TREE CROPS

Bananas are not the most famous product associated with the Kimberley region (an honour which usually goes to its beef cattle), but 600 tonnes were produced there in 1985-86.

Bananas are just part of a steady increase in the fruit and vegetable production in the fertile Ord irrigation area, according to figures released by the Australian Bureau of Statistics following the 1985-86 Agricultural Census.

The area has 292 hectares under vegetable cultivation and 82 hectares producing fruits.

Not sufficient yet to rival the major producers in the South - but perhaps the seeds are planted for a major market garden industry?

The following article of interest is brought to your attention by Tom and Christine Bateman of **Pistachio Plantations**, 4 Lygnern Crescent, Kallaroo, 09-401 8138, who are taking orders for superior terebinthus rootstocks and grafted trees. Limited low chill budwood is still available.

Pistachio Yield Results, 1983-1986
of Cultivar x Rootstock Trial at
Loxton Research Centre.

The average dry split nut yield in kilograms per tree per year, for five cultivars by three rootstock combinations, were recorded at Loxton Research Centre for the period 1983-1986. The trees were planted in 1974-1976.

Cultivars (average of 5 trees each combination)

<u>Rootstock</u>	<u>Sirora</u>	<u>15-19</u>	<u>Kerman</u>	<u>Bronte</u>	<u>Lassen</u>
Vera	5.3	3.6	2.5	0.06	0.2
Terebinthus	11.3	4.6	2.2	0.4	0.4
Atlantica	10.3	6.6	5.4	0.4	0.2

Sirora was the highest yielding cultivar and out-yielded 15-19 and Kerman by 80 and 167 percent respectively.

Kerman is the cultivar grown extensively in California, U.S.A. Its nuts are slightly larger than Sirora's, however. Kerman's lower yield and blander taste are two undesirable characteristics. The yields of Bronte and Lassen were extremely low and they are omitted from further discussion.

There appears to be a rootstock/cultivar interaction (significance not yet checked). Sirora on terebinthus yielded more than on atlantica, and 15-19 and Kerman, each on atlantica, yielded more than on terebinthus. Terebinthus is reported to be highly resistant to *Verticillium dahliae* (blackheart) whereas atlantica and vera rootstocks are highly susceptible. If the decision is to plant 15-19 or Kerman in a *Verticillium dahliae* infected site, then terebinthus, even though the yields were reduced, must be considered as the rootstock to use.

15-19 ripened earlier than Sirora or Kerman and this would be an advantage in areas where summer heat is insufficient to ripen Sirora or Kerman before the risk of autumn rains at harvest becomes unacceptable.

These yield results are from Loxton Research Centre and apply directly to areas with similar soil and climate characteristics.

Addendum: This year, one grower near Loxton produced 83 kilograms of fresh nuts (which dried out to 23.5 kg of saleable first grade nuts) from a 12-year old Sirora on an atlantica rootstock tree. This illustrates the yield potential of pistachio trees.

TEA TREES

On the weekend, a fisherman asked me where he could find some teatree. He said fifteen teatree branches in a bundle was currently worth \$7. Apparently the branches are boiled and used for repairing old style circular craypots.

To protect the teatree stands I knew of in the district, I feigned shrubby ignorance. Up till then, I knew this modest bush only for the subsoil on which it grew: a grey clay with water holding capacity that made perfect dam building sites.

But on further investigation, I find the dryland teatree (also known as Rottnest Island teatree) to be "one of the hardiest species of the genus, thriving on unfavourable sites with a mean rainfall of only 9 inches". What's more, "it will tolerate

appreciable salt in the soil. For low shelter belts which only require minimum attention, it has few equals in the drier parts of southern Australia".

Further commercial incentive to grow teatree comes from its developing pharmaceutical usage. Teatree oil is used in certain skin care treatments, where its soothing anesthetic quality and penetrating oily consistency give it distinct advantages over synthetic equivalents.

I don't know if many sunburnt fishermen have discovered the soothing ability of the teatree, but I'm sure a lot of struggling wheatbelt farmers would like to grow teatree on their salt affected soils, if it would help to relieve the redness of their bank balance.

(Robert Grylls)

[Agstats (1986/87 Agricultural Census)]

DID YOU KNOW.....

- there are 1,890 farms around Perth?
- they produce 86 per cent of the State's poultry?
- They contain 47 per cent of the State's vineyards?
- and grow 0.2 per cent of the State's lupin crop?

The area — the Perth Statistical Division — stretches from Yanchep in the north, to Peelhurst in the south, reaching up to 60 kilometres inland. It holds only 0.1 per cent of the

State's agricultural properties but produced \$145 million worth of primary produce in 1985-1986.

These figures were taken from the 1985-86 Agricultural Census conducted by the Australian Bureau of Statistics. The annual Census provides an up-to-date picture of local and national primary production which is used by commerce, industry and government in policy planning and development.

'MODERN PRODUCTION OF SWEET CHERRIES'

Neville Shorter, who recently retired from the Department of Agriculture, completed a new bulletin on modern production of sweet cherries before he left.

The bulletin covers in detail many concepts new to cherry growing. These are aimed at making management much easier and reducing costs.

Featured in the bulletin are:

- markets and market potential
- site selection
- well designed irrigation
- the Tatura Trellis tree training system
- overcoming low winter chilling
- growth regulator treatments
- control of diseases, insect pests and birds
- soil management
- tree nutrition
- picking and post-harvest handling – from quality control to cool storage
- virus tested root stocks and scionwood.

There is a special section on varieties – selection, pollination needs, and descriptions of newly introduced and standard varieties. Large fruit size and firm high quality fruits are needed. Varieties must have a low chilling requirement

The Tatura system is preferred at this stage, based on available results. Growth regulators are expected to play a vital role in promoting lateral growth, controlling tree size and inducing fruit set and fruit firmness.

The bulletin will shortly be available, free or at nominal cost, from the Department of Agriculture at South Perth, Midland, Bunbury or Manjimup.

BOOM TIME FOR CO-OPS IN U.K.

If there is one thing Australian farmers still aren't very good at, it's co-operating.

The contrast with Great Britain, where most of our co-operative notions originated, is stark. In Australia our record is marred by co-op disasters, but in Britain the movement is booming.

This is the opinion of Australian farm economist Deane Crabb in a report on the British farm co-op scene. In fact, nearly three-quarters of English farmers today are involved, formally or informally, in some form of co-operative, be it a machinery syndicate or a marketing body.

Today the accent is on promotion and marketing. Most growth has taken place there, with an increase on co-op marketing turnover of 152% in the late 1970s, nearly double the expansion rate of farm production.

Today British rural marketing co-ops turn over more than \$3000 million a year. Another trend is towards farmers sharing the services of costly expert advisers in areas such as pasture or crop agronomy.

The UK co-op movement plays a vital role in the "Food from Britain" farm export campaign, which has as one of its main aims the encouragement of armer co-ops at all levels. A Co-op

Development Agency has been set up to help farmers overcome the sorts of skill, planning, promotional and finance problems which inexperienced members can run into.

One role of the co-ops is to help finance the activities of members. One way is through revolving funds, which enable a co-op's investment to be built up while still giving members a fair slice of the profits.

Another tactic which the umbrella body, the Central Council for Agricultural and Horticultural Co-operation (CCAHC), encourages is for co-ops to develop better ties with their members. Participation is the key, it says.

CCAHC helps co-ops to analyse member attitudes towards them, to build a solid image, to publicise their successes more widely, to explain to farmers the economies they can achieve through membership, to offer security of sale of farm produce, and the opportunity for farmers to concentrate on farming without having to worry too much about marketing.

Crabb feels there are few obstacles to co-ops enjoying a similar success in Australia as long as they can offer an equivalent image of security and dynamism.

(Julian Cribb)

PAPAYAS

The papaya (*Carica papaya*), or the pawpaw as it is known in Australia is native to tropical America. It is a large hollow-stemmed herb without any woody tissue. It is usually unbranched but injury to the growing point or pruning induces branching. The papaya is a fast growing but short lived plant. Although it can grow to about 10 metres, the most desirable cultivars rarely exceed 5 metres. There are monosexual and bisexual types. Bisexual papayas are best suited to the tropics while monosexual types crop better in cooler areas. Cross pollination is necessary for fruit set. Under ideal conditions fruit production begins within a year of planting, is more or less continuous and a tree can produce more than 100 fruit in a year. The fruit is oval to elongate and size varies considerably, but averages about 1 kg. The tree has an economic life of about 3 years.

Papayas are grown commercially at Carnarvon. There are also plantings in the Pilbara and Kimberley districts. Fruit surplus to local requirements is road freighted to Perth. Ripe papayas do not travel well, so fruit for the Perth market is picked before it is fully ripe. It then has to be artificially ripened before being sold. Unfortunately some of the fruit which comes onto the market is too immature to ripen properly. Immature and artificially ripened papayas are a poor substitute for tree-ripened fruit. This problem could be overcome by picking the fruit at a more advanced stage of maturity and by using refrigerated transport.

Papaya fanciers in Perth try to grow their own but with mixed success. In Perth papayas require a warm, sheltered, frost

free site. A northerly aspect with protection from wind is most suitable. Tree grow much more slowly than in the tropics, fruit set is often poor and the fruit is slow to ripen. Monosexual types are best suited to the Perth climate but unfortunately bisexual types are more readily available from local nurseries. The flowers of bisexual papayas tend to change in cool weather and are unable to set fruit. Hence the poor results obtained by many home gardeners.

Gardeners in Perth and the Southwest would have better results if they grew their own plants from seed. Carnarvon grown papayas are mostly of the monosexual type and seed saved from these will produce both male and female plants.

Several trees should be planted and once the sex can be determined after flowering, those not needed can be removed.

The cultivation of papayas in a controlled environment may be worth considering for the Perth area. Being a small tree it lends itself to close planting and under shadehouse conditions a spacing of 1 x 1.5 metres should be possible. Cheap, easily constructed plastic covered greenhouses should be suitable. During summer the plastic cover could be removed and replaced with shadecloth. Dwarf or semi-dwarf selections would be best suited to this type of culture, and vegetatively propagated material would result in a more even stand. It may be possible to produce such a tree by tissue culture.

(Tim Enright)

POLLINATION PROBLEMS WITH CUSTARD APPLES

The whole custard apple family, including the Cherimoya, Sweet Sop, Guyanabana, llama and Bullocks Heart, are very sensitive to temperature and humidity variations when it comes to setting fruit.

High temperatures and extremes in humidity (either very high or very low) affect the pollination of the flower by either breaking down the pollen before it has done its job or drying out the flowering parts.

Pollination of this whole family is a problem throughout the world, even under the best conditions. Introducing bees into the area does little to improve pollination as most of these insects find the flower of the custard apple unattractive.

Most fruit are set in the custard apples through self-pollination. If there is only partial pollination the result will be a deformed or dropped-shoulder fruit.

To understand why malformed fruit occur, it is important to understand the structure of the flower and the fruit. If you remove one of the bigger flowers which have just opened on your custard apple tree and break off one of the three thick creamy-green petals, the embryo fruit can be seen in the centre.

There is a low, cone-like centre surrounded by many whitish pollen sacs. Each of these contains a number of pollen grains. Looking closer at the centre of the embryo fruit, you can see numerous small segments of the central cone that are wet and sticky. These are the female parts of the flower, or the stigma, that receives and retains the pollen.

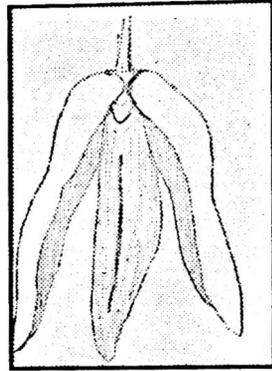
The mature fruit consists of numerous segments attached to a centraicone, each containing a seed. Once fertilisation is achieved, each one of the female stigmas develops a seed. These developing seeds secrete a hormone called Auxin, which stimulates the growth of the fruit segment surrounding them. The segments without a developing seed don't enlarge to any extent. When a pollination rate is low, a malformed fruit is the result.

HAND POLLINATING TECHNIQUES:

A simple hand-pollinating technique has been developed that is quite an economical method of improving both the number of fruits on a tree and the quality of individual fruits. The first step is to remove from the tree, flowers that have opened and are big and creamy. This is best done in the afternoon, around 4 o'clock.

Flowers are suitable for collection when the pollen sacs have turned a creamy colour and are held in a fairly loose arrangement. Immature

pollen sacs are white and tightly packed. If the flowers are left too long on the tree, the petals flex fully and the pollen sacs separate completely and shed their pollen.



Pollen can be collected from the flowers like this.

Collect the exposed flowers and place them in a brown paper bag that is left open. The pollen should be discharged through the afternoon; 20 to 30 flowers should produce enough pollen to pollinate about 60 blooms.

The pollen can be separated from the pollen sacs by slightly shaking the flowers over a piece of paper. Discard the petals and the flower stems, place the pollen and any sacs in a small container and store it in the refrigerator for use the next morning.

The best time for hand-pollination is before 7 am. Select sheltered newly opened flowers. The best flowers to choose are the bigger ones arising at the base of the current season's growth.

Gently separate the petals and, using a soft hair brush, transfer the pollen and pollen sacs from the container of previously collected pollen to the female parts of the flower. Gently twist the brush to ensure the even pollination of all the female parts. It is essential that new pollen is used fresh each day.

Hand-pollination of the custard apple family is not a difficult task, but it is certainly worthwhile because it substantially increases the yield.

While weather conditions at the time of flowering in Perth's metropolitan area appear to favour a good level of natural pollination, some growers I know have achieved quite remarkable crops with this hand-pollination method.

(Neville Passmore)

SOURCES OF TAGASASTE

I continue to receive requests for the addresses of people who can supply seed and/or seedling of tagasaste. I have received a number of letters from numerous nurserymen around Australia telling me that sales of tagasaste seedlings and seed have become big business. Diggers Seeds of Dromana, Victoria, for example, wrote and said that although they are primarily flower seed and bulb merchants, tagasaste has been their best seller in 1986.

Some suppliers:

Kimberley Seeds, 51 King Edward Road, Osborne Park 6017, Ph. 09-4464 377.

Diggers Seeds, 105 Latrobe Parade, Dromana 3936

Farm Fiddler Trees, P.O. Box 77, Olinda 3788

Innovation Nurseries, Burnside Road, Nambour 4560, Ph. 07-1411 396

B.C. McMullen, Nurseryman, Box 944, Bathurst 2795

Jason Alexandria, Nurseryman, Bathurst 2795

E.J.S. Cook, 'Mungedar', Dandaragan 6507, Ph. 095-447-063.

(Laurie Snook, Margaret River)

COMMENT FROM NORTH QUEENSLAND

I am a Rare Fruit backyard grower from North Queensland. In early February this year I enjoyed learning what grows in Perth and the Southwest parts of your State. I am a dedicated organic grower and was interested to meet many organic and permaculture minded enthusiasts.

Many of the Rare Fruits that are being sold by your nurseries will have a hard time in W.A., but Jak Fruit, Rollinias (South American custard apples) and the Chocolate Pudding Fruit (Black Sapote) will, I think, thrive with care. All three grow well from seed and fruit within three years. I have seed available in season.

(Marjorie Spear, Box 112, Kuranda 4872)

COURSES

from Australian Horticultural
Correspondance Courses



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| <input type="checkbox"/> Business Studies | <input type="checkbox"/> Plant Propagation |
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| <input type="checkbox"/> Fitness | <input type="checkbox"/> Hydroponics |

Australian Horticultural Correspondence School
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'TIS THE SEASON OF FRESH CHESTNUTS

Wherever the Romans planted grape vines in ancient times, they also planted chestnut trees.

The strong straight trunks were used to create trellises for the vines while the sprawling branches gave shelter to the grapes. Later generations of Romans established the custom of offering roasted chestnuts with spicy local sausage at wine tastings when the new vintage is celebrated in the autumn.

Today the remote areas of south eastern France may be thought of as the chestnut centre of the world. When summer ends and the chestnut leaves are tinged with streaks of gold, a sudden frost causes many of the chestnut burrs to open, signalling the beginning of the harvest.

Very early in the morning, farmers head into the forests carrying long poles to knock the nuts from the trees.

The fallen burrs that are still closed are tapped with mallets to retrieve the nut.

Nuts are collected in canvas pouches tied around the farmer's waist. From each filled pouch, the crop is sorted and graded. Various forms of the chestnut are shipped all over the world.

In WA, fresh chestnuts are only available in the autumn and early winter. The region around Bridgetown and Balingup is yielding the harvest at present and fresh chestnuts are available in fruit outlets. Fresh juicy chestnuts can be boiled or steamed which gives them a delicious distinctive flavour. They may be used in place of potatoes, in a stuffing for turkey, as an accompaniment for Brussel sprouts or celery, in soup, or preparations for sweet dishes.

Here is the method for peeling and cooking fresh chestnuts. With a sharp, pointed knife, make a slit on the flat side of each chestnut. Place the chestnuts in a saucepan and cover with cold water. Bring to the boil, reduce heat and simmer for 15 minutes. Remove from heat and take out several at a time, leaving the remainder in the hot water. Peel the outer shell and the inner skin from the chestnuts while they are still hot.

Discard cooking liquid. Place peeled chestnuts back in saucepan. Cover with water or milk and simmer until just tender, about 40 minutes (milk needs extra care not to scorch). For chestnut puree, the nuts should be simmered up to an hour or until they are very soft. The nuts are then ground in a food processor.

(Joy Sparrow)

NUT SEED OFFER

The Nebraska Nut Growers Association is offering a Nut Tree Seed Packet which will be available in the Spring of 1987. The following list of tree species is offered for \$10 a packet (\$20 outside the USA) and will contain approximately 5 seeds of at least eight of the species, for a total of 40 seeds.

Carpathian Walnut	Nebraska and Iowa
Japanese Heartnut (Bates)	Iowa
Hazelnut (Winkler)	Iowa
Butternut (Native)	Iowa
Shagbark Hickory	Nebraska
Pecan	Missouri
American Chestnut	Nebraska
Paw Paw (Native)	Nebraska
Korean Nut Pine	Korea
Black Walnut (Named varieties)	Iowa
Hican (Burlington)	Iowa

Send cheques or obtain order forms by writing to the Nebraska Nut Growers Association, P.O. Box 4644, Lincoln, NE 68504. The seeds will be shipped in the Spring of 1987.

Editor's Note: Chestnuts are a prohibited import into Australia. Anyone requesting seed from the 1987 or 1988 distribution should ask for chestnuts to be omitted. American 'Pawpaw' is a cold-tolerant custard apple (Asimina), not related to the papaya.



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We are a small but growing company. Our representatives spread throughout the state are well experienced agriculturalists, plus one or two have that unusual background related to special intensive projects, including horticulture.

Our philosophy of working in the market place is practical and determined, based on experience and a determination to succeed.

Initially, contact on any matter we may be able to assist with will be through our Perth Office, telephone 09-325 5100, contact Neil Dayman (a/h 09-332 3962) or Alan Bell (a/h) 09-3302074).

We look forward to hearing from you.

**West Australian Nut &
Tree Crop Association (Inc)**
PO Box 565 Subiaco WA 6008 Australia

EXECUTIVE COMMITTEE 1987

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Wayne Geddes	321.3200(W)	Neville Shorter	274.5355(W)
Reg Judd	276.6844		

CALENDAR OF FORTHCOMING EVENTS

1987

- Aug 19 Wed General Meeting* (Barry Collinson - The Kimberley Cashew Project)**
- Sept 2-3 Wed-Thur First National Low-Chill Stonefruit Conference, Lismore NSW (Info: Mary Wright, 066- 87 1672)**
- Sept 11 Fri Hills Orchard Improvement Group - Orchard Machines Field Day Karragullen Oval (Info: Tom Price: 397 5953)**
- Sept 18-20 Fri-Sun Protea Flower Festival, Orchard Convention Centre, Wellington St, Reth (Protea Growers Assn, PO Box 189, Busselton)**
- Sep 29 Tue Executive Committee Meeting**
- Nov 18 Wed Annual General Meeting* (? Casuarinas as and for Tree Crops?)**

1988

- Jun 13-14 New South Wales Nut Growers AGM & Conference, Goulburn**
- Aug 1-2 Victorian Nut Growers AGM & Conference, Warrigal**
- Aug 15-19 ACOTANC-4 Conference, Lismore (Fourth Australasian Conference on Tree & Nut Crops)**

*General Meetings are held at the Naturalists Hall, 63 Meriwa Street, Nedlands, starting at 7.30 pm. These meetings usually include a plant auction and current magazine display. Members wishing any matter to be considered at an Executive Committee meeting should contact the Secretary by 2 days before the meeting.

**Current Subscription Rate: \$30.00 per year
(includes all publications for the year) Student Rate: \$15.00**

Quandong is produced at the Tree Crops Centre, Suite 8, 88 Broadway, Nedlands. Mail Address: PO Box 27, Subiaco, WA 6008. Phone: 09-386 8093. Fax: 09-386 7676. Advertising Rates: Whole page, \$80; Half page, \$45; Quarter page, \$25; Eighth page, \$15. Small advertisements, \$1 per 5 words. 20% discount for 4 insertions