



EDITORIAL

If this second issue of QUANDONG is received as well as the first, the Editor will be well satisfied. Features of this issue include a summary on growing nut trees from seed, an article on the macadamia nut, an extract from an American book on nuts, and a personal evaluation of what nut trees can be grown in different parts of the state.

The most important item for attention of members is the notice about the showing of a FILM ON ALMOND PRODUCTION IN CALIFORNIA, details of which are given below. This film is open free of charge to members of the public, so don't hesitate to bring along any members of the public in the form of your friends, neighbours, workmates, and children, if you think they may be interested. We can enrol any of them in the Society on the spot, if they look enthusiastic!

In many ways it is a paradox that here in Australia we are reprinting an article on the macadamia which was written in California. The macadamia nut is a native of northern New South Wales and southern Queensland, but has been largely neglected in its native land. Back in the last century the Americans began work on this nut, principally in Hawaii, to develop or find methods of propagation, cultural practices, and superior high-yielding, thin-shelled varieties for the macadamia. Now macadamia growing is number 1 or 2 in importance as an industry in the state of Hawaii, having displaced even pineapple growing. Hawaiian macadamia nuts are now exported all over the world, even to Australia. Acreages planted to macadamia in California are much less than in Hawaii, but due to the formation of the California Macadamia Society twenty years ago, California has become the world centre of macadamia information and research.

Film! Film! Film!

The West Australian Nutgrowing Society

proudly presents

a film on almond production in California, entitled

"ELEGANCE IS AN ALMOND"

to be shown at the TREE SOCIETY hall, 258 Mill Point Rd,
South Perth, on Thursday and Friday,
AUGUST 7 and 8.

Time: 8 p.m. Admission: Free!

Color!

Made in
Hollywood
California

QUANDONG : official Newsletter of the
WEST AUSTRALIAN NUTGROWING SOCIETY

Editor : David G. Noel
Secretary-Treasurer : Mrs Carolyn Blackwell

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Material may be reprinted if source is acknowledged

MEMBERS' NOTES

Mr Paul Sinclair, 70 Viewway
NEDLANDS 6009.

While visiting 'Garden Week' at Perry Lakes, I noticed your stand in the horticultural pavilion. We moved here from Sydney just over two years ago. We use nuts - raw and, if possible, unsprayed - as our main source of protein. We obtain most of our supplies of almonds, walnuts and pecans from within 30 miles of Perth, but have to import from Sydney part of our almonds and all of our brazils, cashews and hazelnuts. We noted your display of a wide variety of nuts and wondered whether we might be able to grow any on an ordinary residential block.

Mr Peter Good, 8 Norman Street
WEMBLEY DOWNS 6019.

I have a small glass-house and am thinking of developing it for propagating tropical seeds and nuts, e.g. nutmeg, coffee, brazil nuts, with the eventual idea of maintaining the plants in appropriate microclimates.

Mr R.L. Routley, 1 Overton Gardens
COTTESLOE 6011.

I am keenly interested and look forward to hearing from the Society at an early date. I have small properties at Talbot Brook and East Northcliffe on which I have been and will be planting trees - natives at the former, principally exotics, including conifers and nut trees, at the latter.

Mr Peter Kendrick, 101 Kenny St., Rungway
GERRARDSON 6006.

I have been interested in nut growing for some time now, and am intending to look into it further. I am intending buying a small block, five or ten acres. I would be very grateful if you could advise me what types of nut are best suited to this area, preferred types of soil, etc.

Mr V. Irvine, 314 Belmont Avenue
CLOVERDALE 6105.

I am growing all types of fruit trees, most of which have borne only one or two crops, being quite young. I have Avocado (3 varieties), Apple (7 varieties), Orange (2), Grapefruit (2), Prunes (2), Cherries (2), Plums (2 Japanese var., 2 European), Peaches (2 var.), Legum (2), Mangoes (8), Guava (4), Coffee (1), Lemon, Lime (3), Persimons (2), Mandarin (2), Citron (1), Pear (2), Apricot (2), Quince, Peachstone, Drumstick tree (2 types), Pomegranate (2), Custard apple (2 species), Cherry guava, Burdakin plum, Kaffir plum, and Starfruit.

Specifically nut trees, I am growing Almonds (2 types), Coconuts, English walnut, Litchi nut (not a true nut), Pecan, Hazel nut (2 types), Macadamia (ternifolia and grafted integrifolia), and sweet chestnut. I have germinated cashew nuts, but not having a hot house, I find they grow well then are affected by cold, they wilt and die on the onset of the cold weather.

Are the Sea Almond, Okari nut, Rose nut, and Ball nut edible? I cannot find them listed in encyclopedias in our local library.

((Ed:- Of these four, 1, 2, and 3 are edible. All except 2 are native to Australia, 2 grows in New Guinea. Mr Irvine's garden must be seen to be believed. All the above trees are growing and flourishing in infertile white sand on a small suburban block. Mr Irvine has developed a special technique for tropical plants, which we hope to give details of in a later issue of QUANTONG.))

Mr Alex T. Sas, 52 Croydon Road
ROLEYSTONE 6111.

I have a small orchard of young walnut and pecan trees (about 21 in number) situated in Roleystone. Having very little experience and knowledge in this field of horticulture, I think becoming a member of the Society would prove very valuable.

I If You are not already a member, AND
You have read this far, then PROBABLY
You already have some appreciation of the benefits of nut growing. These include the production of a high-quality, tasty food, the beautification of garden and landscape, the production of highly sought-after timber, control of soil erosion, general ecological benefits, and the satisfaction of creating something of real lasting value for the future. If you would like to find out more about this challenging and rewarding activity, which is now gathering great momentum in Western Australia, we invite you to join the WAST AUSTRALIAN NUTGROWING SOCIETY. For your annual subscription of \$5 you will receive all the Society's publications for the specified year, including all issues of the newsletter 'Quandong', the authoritative 'Yearbook' of the Society, and any special publications or leaflets.

IN A NUTSHELL

The nuts of the peanut or groundnut grow underground, but they do not grow on the roots of the plant! The peanut is in fact a relative of the pea, and bears typical pea-shaped flowers, usually yellow in colour. After the flower is fertilized by a bee or other insect, a long stalk called a 'peg' grows out from the centre of the flower and dives into the ground. On the end of this peg the familiar peanut forms, with the crinkled shell in place of the pea pod. Soil must be loose around fruiting peanuts so that the peg is able to force its way into the ground.

Growing Nut Trees: Profit without Labor

In ancient times, nut trees had a special name. They were so easy to grow and yielded so bountifully, they were called "profit without labor."

A good many gardeners today are rediscovering the truth of this. Doctors, housewives, businessmen—everybody's getting on the bandwagon and growing nut trees.

The big attraction, of course, is the "double merit" nature of these trees. Besides producing a delectable, highly nutritious crop, they make fine ornaments. They grow well and provide shade for the front lawn, backyard or anywhere else a hand—some addition to the home grounds is needed.

Because of newly developed varieties, you don't have to worry much about the hardness of the nut trees you choose to plant, even if you live pretty far north. The size of the tree will be the important consideration for most people. You can choose from giants like the black walnut; medium-sized trees such as the hickory, pecan or English walnut; or comparative pygmies like the chinquapin, filbert or English walnut.

Now that the boom in home-grown nut trees is really under way, the plant breeders can be expected to develop even more varieties. Already they are producing a high-yielding hybrid of black and English walnuts, and one of heartnuts and butternuts. "Hican," a hybrid of hickories and pecans, is now on the market, as is a dwarf Asiatic chestnut which starts to bear nuts when it is less than a foot high.

Here are some useful tips to follow when you decide to grow your own nut trees: buy budded or grafted trees of a named variety; plan on having at least two varieties to insure pollination; and plant late varieties to avoid damage from late spring frosts.

Nut trees generally want a sunny spot and deep, well-drained soil. Use plenty of organic matter in the soil. Avoid southern exposures, except near a hilltop. Plant trees on northern and eastern slopes to help them prevent injury from winter and late spring frost.

* * * * *

The above extract is from a recent papertack, "Nuts and seeds, the natural snacks", compiled by Joanne Moyer, published by Rodale Press, 1973. Price \$2.95.

Although this book is basically a "health food" book, it is still of interest to the nut grower. About one-third of its 173 pages is devoted to the growing of nut trees. Unlike many such health food books, the information given is accurate, pertinent, and reasonably up-to-date.

The book was written for American conditions, and must be read with this in mind. For example, 'north-facing slope' must be translated to 'south-facing slope' for those down under. There is nowhere in Western Australia where growers must worry about hardness of trees subjected to heavy snow falls.

"Nuts and Seeds" is in no way comparable to the "Handbook of North American Nut Trees" reviewed elsewhere in this issue of *GUARDIAN*. It does however provide a reasonable summary of nut growing in temperate areas, and is fair value for the price. It is currently in stock at the University Bookshop, Nedlands, W.A. 6009.

SOURCES

The last issue of QUANGONG dealt with availability of trees. One local source which was not mentioned was the Forests Department of Western Australia. The Department's Nursery at Hamel offers a number of nut trees (chestnut, portuguese oak, pin oak, stone pine), but only to applicants outside the metropolitan area. The trees are cheap (30 cents each) and are sent free of charge to nominated sidings for 10 trees or more, but are small, only a few inches high in most cases.

This issue we will look at growing nut trees from seed. Nuts are such large seeds that many of the usual planting rules for seeds cannot apply. For example it is no use planting pecan nuts in a seed tray; when the nut germinates it sends down a root perhaps 12 inches deep before anything at all appears up top. I have had reasonable success planting such nuts in wide, deep black plastic tubes about 11 inches wide, with 20-30 nuts per tube, and potting out the resulting seedlings after about a year.

Some seeds can be obtained locally. Chestnuts from the fruit shop will germinate if planted immediately, but quickly lose viability if they become stale. Walnuts of local origin, if you can get them, stay viable rather longer, usually several months at least. Imported walnuts have usually been kiln dried and in any case are too old. Almonds retain viability for a long time, often several years, although naturally the percentage germination falls off with age. Nearly all the oaks are like the chestnut - seed will germinate only if sown before any marked drying out has occurred. Raw peanuts from any health food store will usually germinate freely at any time, provided the brown skins are not removed or damaged, and respond to soaking overnight.

Over the years, I have bought more nut seed from H.G. Fershaw (see advertisement on next page) than from any other seed salesman. Tropical seeds (see advertisement) have a good range of warmer climate seeds. Most of the plants from these will survive with care in Perth, but will not withstand frosts like those met with in the Hills or inland. Other sources worth mentioning are - Peter B. Dow & Co. Ltd., PO Box 695, Gisborne, New Zealand (pretty expensive); G. Ghose & Co., Townsend, Dardjeling, India (good service if slow); and Clyde Robin Seed Co. Inc., PO Box 2655, Castro Valley, California 94546, U.S.A. If you order seed from overseas, bear in mind that import of chestnut seed is absolutely forbidden, and with good reason; it may carry chestnut blight, a devastating disease which has virtually wiped out the American species (*Castanea dentata*) and is now attacking the Spanish chestnut (*Castanea sativa*) in Europe. Other nut seeds will usually be allowed in, if healthy, after fumigation by the Department of Agriculture. Germinated seeds and parts of plants other than seeds are also forbidden, except with special licence from the Federal Department of Plant Quarantine.

Nut Seeds from the 1975 Seed List of H.G.KERSHAW, P.O.Box 88,
Mona Vale, New South Wales 2103.

Calodendron capense (Cape chestnut) \$10.00/500g
Castanospermum australe (Moreton Bay chestnut) \$0.80/500g
Macadamia tetraphylla (Queensland nut) \$0.75/500g
Pistacia chinensis (rootstock - pistachio) \$0.50/100
Quercus palustris (Pin oak) \$1.00/100
Ginkgo biloba (Maidenhair tree) \$5.00/500g
Pinus coulteri (Coulter pine) \$1.50/25g
Pinus pinex (Stone pine) \$0.20/25g
Cycas media, Cycas revolute \$7.50/100
Macrozamia spiralis (Purrawong) \$2.50/100

Contact the supplier for conditions of sale, full seed list etc.

TROPICAL SEEDS, Box 9, Yorkey's Knob, Queensland 4874, have an excellent seed list with coded guides to preferred plant conditions and characteristics. Some of the nut trees on the list are as follows:

Cycas (cycads, 3 species); Pandanus (screw pines, 6 species); Barringtonia (2 species); Aleurites moluccana (candle nut); Artocarpus incisa (bread nut); Castanospermum australe (moreton bay chestnut); Elaeocarpus bancroftii (Johnson River almond); Terminalia catappa (Sea almond); Terminalia okeri (Okari nut); Anacardium occidentale (cashew); Canarium (Pili nut);

WANS EVENTS

The following nominations have been received for the Society's Board of Directors. In the 1975 elections, nominations to fill the four positions will be for specified terms of 4,3,2, and 1 years. Thereafter each director will serve for 4 years, one Director retiring each year. Nominations:

1. David Noel (4 years)
2. Carolyn Blackwell (3 years)
3. Peter Good (2 years)
4. Paul Sinclair (1 year)

If no further nominations are received before August 6, the above nominees will be declared elected. If other nominations are received, the election will be held at 7.30pm on August 7, immediately before the first showing of the film noted on page 1. The by-laws of the Society were published in QUANDONG volume 1, No.1, which has been issued to all members.

David G. Noel

Once somebody knows that you are interested in growing nuts, the first question asked is often "What nuts can I grow in such-and-such a place?". In an attempt to produce a preliminary answer to this question, the map shown opposite has been produced. The State has been divided into 12 zones. To see what nuts you should be able to grow in your area, locate its zone on the map. Then consult the column for that zone in the table below, which lists 20 different species or groups of nut plants.

I must emphasize that this table, and the division into zones, is only tentative. Some of the information is based on my own experience, but most is derived by applying overseas experience to Australian conditions. Moreover different varieties of the same sort of nut may differ considerably in success in a particular set of conditions.

Help us to make this information more accurate by writing in with details of nut trees which are bearing well outside the marked zones, or of ones which have generally failed within a zone marked for probable success.

Nut	Zone	1	2	3	4	5	6	7	8	9	10	11	12
Almond								○ _m	⊗	○ [^]	○	○ [^] _m	○ [^] _m
Brazil nut		⊗	○	○ _v	?	?							
Bunya								○ _v	○	○	○	○ _v	?
Cashew		⊗	○	○			○ _v						
Chestnut								?	○	⊗	○ _v	○ _v	?
Coconut		⊗	○	○ _v									
Ginkgo						?	?	○	⊗	⊗	⊗	○	○ _v
Hazel									?	○	?		
Jajoba				○	○	○	⊗	○	○	○	○	⊗	⊗
Macadamia							⊗ _v	○	○	○	○	○ _v	
Marula				?	?	?	⊗	○	○	○	○	⊗	⊗
Oak								○	○	○	○	○	○
Parana pine								○	⊗	○ [^]	⊗ [^]	○ [^]	
Peanut		○	⊗	○ _v		○ _v	○ _v	○ _v	○ _v				○ _v
Pecan							⊗	⊗	⊗	⊗	⊗	⊗	○ _v
Pistachio					○ _v	○ _v	○	⊗	○	?	○	⊗	○ _v
Quandong				?	○	○	⊗	⊗	○	⊗	⊗	⊗	○
Stone pine						?	○	⊗	⊗	⊗	⊗	○	○
Tung								○	⊗	○	⊗	○	○
Walnut								?	○	⊗	○	?	

○ - should grow

○_m - some watering needed

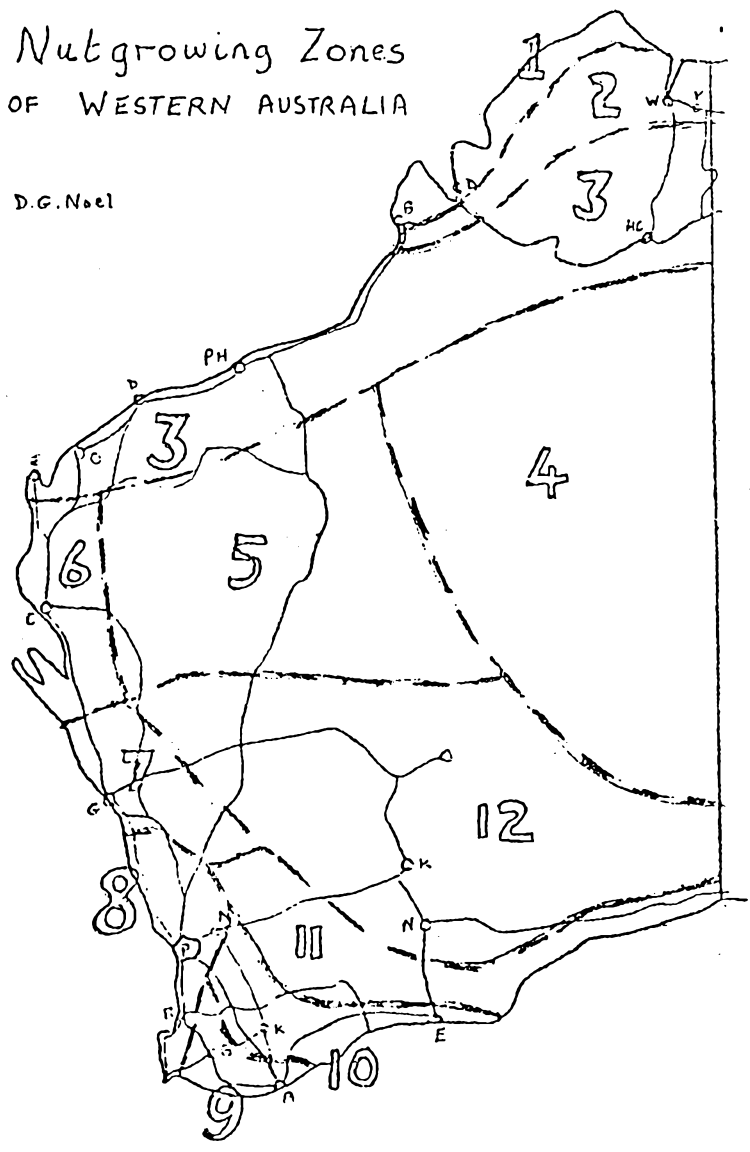
⊗ - should do well

○[^] - frost protection needed

? - marginal, uncertain; may succeed with special care

Nutgrowing Zones OF WESTERN AUSTRALIA

D.G.Noel



BOOKS

Six of the most important books about nuts were listed in the first issue of QUANDONG. Here are some more.

1. WOODROOF, J.G. "Coconuts". 1970.
2. WOODROOF, J.G. "Peanuts". 1966.
3. CHILD, R. "Coconuts". 1964.
4. MEYER, Joanne. "Nuts and seeds, the natural snacks". 1973.
5. CRIBB, A.B.&J.W. "Wild food in Australia". 1975.

The first three on this list are known to be available from the Library Board of W.A. through your local public library. No.4 is mentioned elsewhere in this issue. The last one on the list has just been published. It deals with many other plants as well as nut trees, but is still an excellent and interesting source of information on native and some introduced nuts.

book review

HANDBOOK OF NORTH AMERICAN NUT TREES. Edited by Richard A. Jaynes.

Published by the Northern Nut Growers Association, 4518 Holston Hills Road, Knoxville Tennessee 37914. First issued 1969. Contains 421 pages. Cost is \$9.50 at present.

This is the best book on nut growing ever produced. No-one who is considering growing nuts commercially should be without a copy. The first book reviewed in QUANDONG, J.Russell Smith's "Tree Crops", was said to be a fascinating and inspiring book. The NNGA HANDBOOK is of a quite different nature, it is an authoritative and concise, well-written guide on how to grow the different nut trees.

In spite of its title, the book is by no means limited to the native nut trees of North America, but includes most nut trees which have been grown in the United States and Canada, wherever they originated. Even coconuts and cashews are mentioned, since these can be grown in southern Florida. Most attention is paid to the commercial nuts, including the pecan, hickories, black walnut, parson walnut, chestnut, filbert, almond, and macadamia. Briefer entries appear for the butternut, oaks, beech, pine nuts, ginkgo and pistachio. Sixteen of the 32 chapters are on general topics such as propagation, pruning, bird damage, mulching, tree breeding, judging, and nut processing and storage.

The 25 authors who participated in the production of this book are all experts in their particular fields. Most of what they have written can be applied directly in non-tropical Australia, with one happy exception; most of the plant diseases and pests which they mention are not present in Australia.

This book can be borrowed through your local public library. You can buy a copy by sending U.S.\$9.50 to the address given. If you prefer, send Aust.\$9.50 to David Noel, PO Box 27, Subiaco, WA 6008, and he will arrange for the currency conversion and the ordering. Delivery by sea mail is slow, about 10 weeks, so don't be impatient!

"THE MACADAMIA NUT IN CALIFORNIA"

1. BOTANY: *Macadamia* is a genus in the family Proteaceae. The two species which produce edible nuts are *M. tetraphylla* and *M. integrifolia*, both natives of Australia. The former is a native of northeastern New South Wales, the latter of southeastern Queensland. The flowers are borne in pendant clusters of 200 - 300 or more on new or the previous flush of growth at leafy or leafless nodes. The flower is capable of self-fertilization. Therefore, a single tree will bear fruit. The fruit is a follicle, consisting of a single more or less spherical seed (sometimes two hemispherical seeds) in a husk which usually splits open at maturity. The seed is the nut and its kernel is the nut meat.
2. PROPAGATION: *Macadamia* varieties are propagated by grafting scions on seedling trees, or to a lesser extent by rooting cuttings. Detailed information on propagation is given on page 59 in the 1964 California Macadamia Society Yearbook.
3. CLIMATE: The macadamia tree has about the same frost tolerance as the lemon, lime and Fuerte avocado. However, where there is danger of even light frosts, the trunk of a young tree should be protected by some form of wrapping. The macadamia has greater tolerance to high temperatures than the avocado, but does not adapt well to the inland deserts.
4. IRRIGATION: *Macadamia* trees require adequate irrigation, carefully applied in order to achieve maximum production. The water needs and technique of application are similar to those recommended for commercial avocado orchards. On flat areas either a drip or sprinkler system may be used. A drip system would be best for a steep hillside. If a sprinkler system is used, basins may be provided, but they should be large, such as 10 by 10 feet and should be used only for the first couple of years. Information on irrigation may be obtained from the office of the County Farm Advisor.
5. SOIL: *Macadamia* trees are flourishing in soils which vary considerably from fairly heavy to quite sandy. They are less sensitive to salts than the avocado.
6. PLANTING: Balled trees should be planted with burlap intact. If in containers, the container should be removed. Care should be taken to not break the ball. When the tree is placed in the hole, the root crown should not be higher than the level of the surrounding soil. Young trees should be staked and the trunks painted with white latex paint. At ten years a tree may have a height of 12 feet or more and a spread of 12 feet. In some places trees will have a width of 30 feet or more in 25 years. A spacing is suggested for commercial plantings of 20 by 20 feet and greater intervals on deep, good soil. Closer plantings with thinning in 12 or 15 years is favored by many growers.

7. **FERTILIZER:** Fertilizer requirements vary with soil type. However, the following recommendations would pertain to most soil types in California where macadamias are grown. Newly planted young trees should not be fertilized for about six months. After six months, the trees should receive light applications of a balanced fertilizer two or three times a year. Mature trees over 10 years old should receive about two pounds of actual nitrogen per year. If a drip system is used, the fertilizer is put into the water. If a sprinkler system is used, the fertilizer may be broadcasted in the area of the drip line.

If mulch is desired, barn or rabbit manure may be used, but should be kept several inches from the trunk of the tree.

Explicit information on fertilization may be obtained from the Society or from the office of the County Farm Advisor.

8. **TRAINING AND PRUNING:** Early pruning is necessary to develop trees with a central leader and strong, wide-angled lateral branches. Trunks and branches exposed by removal of the protection given by foliage should be covered with white-wash or white latex paint. Mature trees require no pruning except for repairing damage by wind or other causes. Suggestions on pruning are in the Society's Yearbooks, 1960, page 25 and 1974, page 79.

9. **DISEASES AND PESTS:** At this time there are no important diseases occurring in either of the two species of macadamias in California. They are highly resistant to Cinnamon Fungus which has killed so many avocado trees.

Under experimental exposure, the macadamia tree has proven to be resistant to injury by snog.

The chief problem with pests is rodents. Rats and mice may be controlled with anticoagulants at any time of the year. Ground squirrels may be controlled during the summer with poisoned grain. To avoid the use of poisoned grain, ground squirrels may be destroyed during the winter by a method explained in the 1973 Yearbook, page 51. Gophers should be controlled since their tunnels may cause considerable water loss.

Treatment for insects is seldom necessary. However, to control ants which may carry other insects and mealy bugs to a young grove a band of chlordane granules around the trunk is effective.

Materials and information for pest control may be obtained from the Agricultural Commissioner's office.

10. **BEARING HABIT:** The crop seasons for macadamia trees vary considerably depending on variety, but nuts generally drop during the cool season of the year. Seedling trees cannot be expected to bear in less than 5 - 7 years. Grafted trees generally bear in 3 - 5 years after planting from nursery stock. Under favorable condi-

tions, macadamia trees are long-lived. There are trees in Australia which were mature when the forests in which they grew were cleared 150 years ago. There are trees in Hawaii and California which were planted about 90 years ago.

11. VARIETIES: More than 150 selections have been under observation by the Society's committee on varieties, as well as by individual growers. Among the latest recommendations are: *M. integrifolia*: Keauhou, Ikaika; *M. tetraphylla*: Elimbah, Cate. For home planting as an ornamental tree as well as a source of nuts, the variety Beaumont is suggested. Local climate, elevation, wind exposure and soil type appear to have a significant effect on the productivity of macadamia trees. Specific varieties suitable for the various mini-climates in southern California are still under study. Nuts from seedling trees vary in size, shape, flavor, color and therefore do not meet market requirements for a uniform product.

12. PRODUCTION: A yield of 75 to 100 lbs. per year per tree is reasonable with proper orchard management. Individual trees in California have produced over 165 lbs. of in-shell nuts annually. For nuts commercially acceptable, more than 33% of their weight should be kernel.

13. HARVESTING: The nuts fall from the tree when mature. They should be allowed to do so and be harvested from the ground. Nuts knocked or shaken from the trees may have immature, unusable kernels. The nuts should be gathered weekly and husks removed immediately to avoid mildew which can penetrate the nut and cause deterioration of the kernel.

Nuts to be used for seed should be stored in a cool, humid place without drying. They should be planted as soon as possible after harvesting to insure a high percentage of germination.

Nuts for home use or for marketing should be air dried by spreading them on trays with hardware cloth bottoms placed in a dry, shady location for 2 to 3 weeks. They should then be further dried either by:

- A. Placing them in a screen-bottom container over a furnace register for 72 hours or more, depending on nuts and amount of heat.
- B. Placing them in a shallow pan in an oven at lowest temperature (about 100-115° F). The warm setting on an electric oven is about right. The time required is usually about 12 hours.

14. MARKETING: The Gold Crown Marketing Association was organized in 1971. This association is a macadamia growers' cooperative organized under the laws of the State of California. It is processing and marketing the macadamia nuts of its members commercially. In addition, it is establishing quality standards for grow-

ers to insure acceptability by the association and to put a high quality product in the market. Inquiries regarding marketing should be addressed to:

GOLD CROWN MACADAMIA ASSOCIATION
2667 Los Palmas Drive
Escondido, California 92025, USA

The demand for macadamia nuts presently far exceeds the supply. This situation has established a high stable price for the quality product which is expected to continue for some years.

15. **NURSERY TREES:** First quality, grafted macadamia trees are currently in short supply, and it may be necessary to place your order well in advance of the desired delivery date. For information concerning availability of trees write to the Secretary of the California Macadamia Society.

16. **COOPERATION:** The University of California in Riverside and Whittier College cooperate with the Society by conducting certain lines of basic and applied research and by disseminating useful information of the macadamia. The offices of the Farm Advisers of the Agricultural Extension Service also have information available and can inform on local soil and climatic conditions.

17. **THE CALIFORNIA MACADAMIA SOCIETY** aims to supply interested people with dependable, up-to-date information on macadamia culture and prospects, to furnish growers with harvesting and marketing data, to advise nurserymen on varieties and propagation methods, to encourage the University to assist the industry with research, and to formulate policies for presentation to the legislature.

The Board of Directors of the Society meets once each month. Contact the Secretary or officers for time and place. Visitors are always welcome and are encouraged to participate.

An annual meeting, which is in the nature of a macadamia institute is held each year in March. Problems of interest to growers are discussed by highly qualified speakers. Members of the Society and individuals interested in the macadamia are welcome to attend these meetings.

The Society's Yearbook has been published every year since 1955 and is recognized as an outstanding horticultural publication. In addition to libraries and educational institutions in the macadamia growing regions of southern California, it is requested by many centers of horticultural information across the United States and in a number of foreign countries. The Yearbook contains articles by authoritative writers on all aspects of macadamia culture of interest and value to

back issues are available. Editions 1955 through 1971 are \$5.00 each. Issues since 1971 are \$10.00 each. The 1962, 1968, and 1974 yearbooks each have an index of articles published in interim periods.

NEW MEMBERS ARE WELCOME and needed. It takes ideas, work and money to get an industry started. Memberships are \$10.00 (USA dollars) per year including the current Yearbook.

CALIFORNIA MACADAMIA SOCIETY

P. O. BOX 1352

VISTA, CALIFORNIA 92083

USA

A PUBLICATION OF THE CALIFORNIA MACADAMIA SOCIETY
REVISED MAY 1975

THE MACADAMIA NUT TREE

Macadamia nuts are produced by two species of large, handsome, evergreen trees. Their crisp, white flavorful kernels may be eaten either raw or roasted and are delicious.

The trees are suitable for orchard planting, home production and landscaping in favorable climatic regions in southern California. They grow well only in areas that are relatively frost-free. They are remarkably free from diseases, insects, and other pests.

In less than 50 years macadamia nuts have become an important crop in Hawaii, where their production continues to expand. Trees also are being planted in large numbers in tropical and subtropical regions in North America, Central America, South America, Africa and southern Asia.

IN A NUTSHELL

The kidney-shaped cashew nut grows in a shell of the same shape, one nut per shell. The nutshell (the true fruit) is perched ridiculously on the end of a pear-sized edible fruit called the cashew apple. This 'fruit' is actually the swollen stem of the true fruit, the nut! In some places only the cashew apple is used, the nut is thrown away. The nut shell contains a powerful blistering chemical which must be driven off by heating before the kernel can be eaten.

MEMBERS

WELCOME

Welcome to the following members, who joined the Society between January 1 and June 30 this year.

- Mr. Tom Spear, P.O.Box 71, Bridgetown 6255.
- Mr R.H.Mizen, 11 Moyle Place, Hillarys 6025.
- Mr Clive Glands, P.O.Box 143, Mundaring 6073.
- Mr Robin Routley, 1 Overton Gardens, Cottesloe 6011.
- Mr Paul Sinclair, 70 Viewway, Nedlands 6009.
- Mr Frank Van Boeckxmeer, Physiology Dept., University of W.A.,
Nedlands, W.A. 6009.
- Mr V.F.Irvine, 314 Belmont Avenue, Cloverdale 6105.
- Mr Peter Good, 8 Norman Street, Wembley Downs 6019.
- Mr Ron Lancaster, 13 Rome Road, Melville 6156
- Mr D.S.Bailey, 58 Lyons Street, Cottesloe 6011.
- Mr John Mercer, 45 Bridgewater Drive, Kallaroo 6025.
- Mr Peter Kendrick, 101 Henry Street, Rangway, Geraldton 6530.
- Mr F.C.J.Lullfitz, PO Box 65, Broome 6725.

A special welcome to Fred Lullfitz, who is our first member from the Northwest of the State. The name Lullfitz is well known in horticultural circles. Fred is the Government Tree Advisor to the Department of the Northwest, and is one of the most knowledgeable people in the State on tree growing in the unusual climate of the Northwest. Since June we have added a number of new members, including one from Victoria and one from Tasmania. The word is spreading!

WANS : P.O. BOX 27, SUBIACO, W.A. 6008, AUSTRALIA
