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Horticulture

in New Zealand

Bulletin of the Royal New Zealand Institute of Horticulture (Inc)



HORTICULTURE

IN NEW ZEALAND



BULLETIN OF THE ROYAL N.Z. INSTITUTE OF HORTICULTURE

NUMBER 1, SPRING 1976

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Royal New Zealand Institute of Horticulture (Inc.)

Patron: His Excellency the Governor General, Sir Denis Blundell

President: Dr J. D. Atkinson

Chairman of Executive: Professor T. M. Morrison

Editor: Chris Howden

Dominion Secretary: Keith J. Lemmon, P.O. Box 450, Wellington

The Editor welcomes articles, letters and illustrations for consideration for publication. Deadline dates for material are: Autumn issue, February 20; Winter, May 20; Spring, August 20; Summer, October, 30. Contributions should be addressed to the Editor, Box 450, Wellington.

Views expressed in the bulletin are not necessarily those of R.N.Z.I.H.

Can the Institute survive?

The will to survive is a characteristic of all living things. It is manifest sometimes by panic, sometimes by a deliberate planning and insulation against hard times or accidents. The recent changes in the Institute were not panic measures, in that we are not faced with a bankrupt Institute; rather they represent a careful plan to keep the Institute in step with developments around it.

Membership of the Institute does not reflect the range or numerical strength of horticulture in New Zealand. Of the 11 000 people involved in commercial horticulture in this country, less than a handful belong to the Institute. Of the 300 or 400 horticultural scientists, advisory officers, educators, perhaps a handful belong to the Institute. Of the thousands of New Zealanders for whom horticulture is a principal hobby only a few hundred belong to the Institute.

The Institute has been overtaken, even in fields which should be peculiarly its own, by other groups which present a more demanding national image than we have.

There is a danger that our time-honoured leadership in horticultural education could be superseded, particularly in practical horticulture, by government-sponsored agencies.

The Institute conferences have become an occasion of small importance in horticulture in New Zealand and have failed to appeal to those who would be pleased to contribute to discussions of national significance.

We are not earning our Royal Charter as the learned society of horticulture in New Zealand.

Your newly-elected Executive is determined to see that the Institute fulfil its objectives and earn its claim as the leader of horticulture in New Zealand. We have held a number of preliminary discussions on various functions of the Institute and this bulletin is a result of one of them. We are determined to see that communication among horticulturists is improved and that no section of those interested in its furtherance is excluded. We are intent upon seeing that the Institute will not shrink from making very positive statements on matters which concern it, and in this regard we would welcome views from members on issues of national importance and of regional application, if they have a national implication. We shall be extremely careful to see that we do not impinge on the specific domestic interests of specialist societies or growers' organizations but we hope we can present an interest for members of those groups.

We have been fortunate, in the extreme, to find a president and vice-president who not only represent horticultural scientists and major horticultural industries but are also men of long experience in the

administration and politics of horticulture. Both have shown their real interest in the Institute by their presence at executive meetings and committee discussions. If the Institute fails in its revival, it will not be the fault of its president and vice-president.

Your Executive hopes that members will retain their loyalty to the Institute and may derive some pleasure and pride in belonging to it. We hope the benefits are made obvious to a wider public than we presently enjoy, as long as that wider public in return will make some contribution other than financial to the Institute.

T. M. MORRISON
Chairman of the Executive

The new bulletin

The new bulletin, *Horticulture in New Zealand*, replaces the old Newsletter. The aim is to increase the horticultural content and the quality of publication while, at the same time, improving the level of communication among horticulturists in New Zealand.

New Zealanders are fortunate to live in a country that is better than most for growing plants. Are we making the best use of this natural environment? There is room for much improvement. Horticulture was described as the “lost relation” of agriculture and other industries at the Institute’s Annual General Meeting in May 1976.

The bulletin aims to advertise horticulture to the country but its success will depend on the co-operation of all horticulturists — home gardeners, parks people, administrators, commercial growers, teachers, students, scientists, and anyone else who is interested in growing plants.

Articles, letters and suitable illustrations will be welcomed, no matter how small in content. We are looking for:

- (1) Articles of interesting and original horticultural content.
- (2) Articles developing new areas of horticulture (for example, urban forestry and horticulture in modern suburbs).
- (3) Information on horticultural programmes in local areas.
- (4) Comments on published articles and letters.
- (5) News and information from specialist horticultural groups and societies.
- (6) Questions about horticultural or Institute matters.
- (7) Advertising.

CHRIS HOWDEN
Editor

The new look

Less than two decades ago, the words “environment” and “ecology” rarely moved out of the stuffy pages of our dictionaries. Indeed the word ecology was understood by only a small percentage of our population. Today the vast majority of people not only understand the meanings of the words but also hold strong appreciation of their significance in day-by-day development in the world around us. The realization of the direction in which the uncontrolled industrial development and the environmental destruction of the 1940s, 50s, and 60s were taking us, and the mounting demand for people to stop and take stock of where we were going is now being seen to be having a secondary effect — and a pleasing one, too. It has stimulated awareness and interest in the things that grow and sometimes struggle for survival around us — our grasses, plants, and trees.

To put this new outlook into more simplified terms, the man in the street and the child at school are showing a steadily increasing interest in horticulture. Even our flat dwellers, the group previously categorized as having little interest in horticulture, are bowing to the winds of change. Their pot plant, previously a piece of furniture, is now looked upon as something having life — something that responds to a little love and attention. In the home garden, attitudes are changing. What was a chore has become a rewarding pastime.

Most areas of commercial horticulture, especially the seed and nursery trades, are well aware of this stimulation of interest. It is pleasing to them for it means good business, but, conscious as they are of their commitment to supply and demand, they remain apprehensive as to whether it is all just a passing phase.

At this stage, many questions on the whole subject remain unanswered. And we must remember that, if we try to come up with answers, they should not be based on the wishful thinking of horticultural enthusiasts. We know that figures of enrolments for horticultural education (in broad terms) are up by about 30%. We know that the commercial seed trade reports greatly increased trading everywhere. We know that the nursery trade is experiencing very busy times. We know that reports from overseas indicate stimulation of interest in horticulture. But what we do not know with any great degree of certainty is the reason for it all, or the exact direction that it is likely to take. Any boom may carry with it a cataclysm, and, for this reason, if for no other, a cold hard look must be taken at the whole situation. With the great increase in enrolment for horticultural education, the question must be posed as to whether, in fact, this horticultural awakening is going to be translated into job opportunities. If it is not,

there could well be some very disillusioned students on the labour market in a few years' time.

And where does R.N.Z.I.H. see its responsibility in this situation? Clearly it must accept its position as the focal point. The "new look" Dominion Executive is well supplied with people qualified in nearly all aspects of horticulture. While, in all probability, no sudden and dramatic change in direction is called for, the Institute must take this new horticultural psychology into its stride and be sure that its policies and communications are living in the present and not in the past.

T. H. WARBURTON
Vice-President

Vegetative propagation of primulas

Propagation by division of dormant crowns has long been the standard method of increasing numbers of herbaceous perennials, and many species and cultivars of primulas are multiplied in this way, yielding varying numbers of divisions depending on size, age, species and cultivar.

One technique that does not appear to have been applied to primulas is the use of crown discs. By this method it is possible to obtain considerably more plantlets per division of the mother plant.

- (1) Dig up plant, remove all leaves and roots, and wash all soil off the rhizomatous crown that is left.
- (2) Cut the crown into 1 to 1.5 cm sections and soak them in 1 gram captan to 1 litre of water for 10 min.
- (3) Insert the cut sections apical end uppermost in a 50/50 mix of sand and fine sieved peat. Water well.
- (4) Cover the pot or container with a sheet of glass or put in a large plastic bag. Seal and place it out of direct sun.
- (5) Inspect regularly for rotting. If any occurs drench the container with an appropriate fungicide.
- (6) Lateral buds which would not normally sprout start moving after 7 to 10 days. As roots form at the base of the shoots at the same time, it is possible when the leaves have grown to 2 to 2.5 cm long to remove the young plantlets with a sharp knife. They are then pricked out into a simple potting mix, *i.e.*, equal parts peat, sand and loam, to harden them off.

After 2 to 3 weeks they should be ready to plant out.

K. L. DAVEY
Levin

Potato cyst nematode tests plant protection service

The Ministry of Agriculture and Fisheries has the responsibility for administering the "Plants Act 1970". In simple terms, we are required to supervise the health standards of plant material, both imports and intended exports, and of plants and crops grown in New Zealand. To provide the comprehensive plant protection service, the Advisory Services Division relies on a large team with specialist training in diagnosis, advice and inspection. When a decision is made to take action against any pest or disease threat, all staff are aware of their responsibilities, and of the procedures that will be followed.

When a routine sample from a wilting Pukekohe potato crop, in 1972, resulted in potato cyst nematode (*Heterodera pallida*) being diagnosed for the first time in New Zealand, "Outbreak Procedures" went into action. This cyst-forming nematode is a serious pest of temperate zone potato crops throughout the world. In a monoculture potato production system, nematode levels build up quickly with resulting yield losses exceeding 25 tonnes/ha not unusual from heavily infested land in the United Kingdom. With a \$20M commercial potato crop in New Zealand at stake, and the strict international quarantine requirements that could become a trade barrier to our exports, the potato cyst nematode could not be taken lightly.

The policy followed by the Ministry since 1972 has concentrated on identification by surveys followed by strict quarantine to prevent the spread of soil-borne cysts. Our objective is simple — "nematode-free seed potatoes sown on nematode-free land" — and to achieve this we need the awareness and co-operation of everyone involved with potato production. Public interest has been at a high level and can best be gauged by the response to the release of the publication *Ag. Link No. 22, "The Potato Cyst Nematode"*, available from the Ministry. A thousand copies went in the first week following printing and now with the 6th reprint of a thousand copies, this publication has exceeded by far the demand for any previous release.

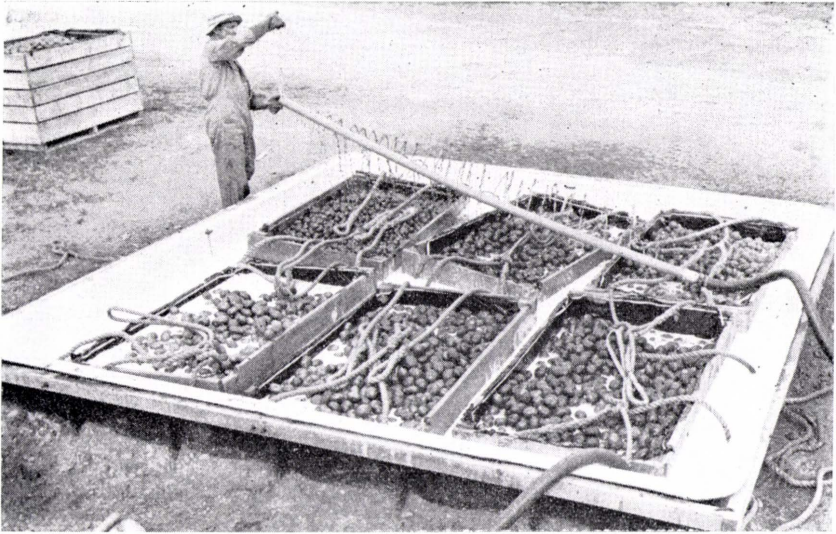
The survey reached a peak last season (1975-6) when half of the estimated 9000 ha national potato crop was sampled. This survey fully extended the resources available to the Ministry and cost an estimated \$175 000 to complete. As a result of the survey we now know that we have both *Heterodera pallida* and *Heterodera rostochiensis* in the South Island, and the nematode is well distributed in the old-established table-producing districts of Marshlands and Outram. Marshlands is of particular concern with 52 properties of a national total of 99 now under notice following confirmed identifications. Nationally, however,

with a reduced scale of new identifications despite an intensified survey, the prospects for eventual control have improved.

A new development during the past season's intensive survey was not unexpected. Fourteen home gardens throughout Otago and Southland were found to be infested and it is probable that potato cyst



*A: A cyst-infested potato plant.
B: An enlargement of A showing roots and cysts.*
MAF photograph



A pioneer experimental dipping plant for testing sodium hypochlorite as a nematocide.

The New Zealand Potato Board has now completed a \$50 000 commercial plant that will be dipping in excess of 700 tonnes of seed potatoes in Canterbury this season.

MAF photograph

nematode is well established in considerably more home gardens. Intensive surveys of home gardens are not practicable, but where routine enquiries confirm an infestation the property is put under notice and quarantine requirements have been drawn up to protect commercial producers.

Repetitive growing of solanaceous crops in home gardens provides the optimum conditions for a build-up of nematode. In some cases the original infestation can be traced to suburban development of former market gardening land, but other identifications suggest that either small potatoes saved for seed from a commercial table sack, or soil tipped out from the bottom of a bag, are the most likely causes of initial cyst contamination. Home garden potato production makes a substantial contribution to domestic supplies and the virus and disease risk associated with using uncertified seed cannot be overemphasized.

The overall situation is one of steady but encouraging progress in coming to grips with potato cyst nematode. A survey of all the national seed crops last season suggests that the few identifications on Canterbury seed producing land the previous season were isolated. DSIR has demonstrated that a 2-hour soak in a 1% solution of sodium hypo-

chlorite will destroy the cyst walls and kill both eggs and nematode larvae. As a direct result of this we now have a New Zealand Potato Board-financed \$50 000 treatment plant that will enable us to guarantee nematode-free potatoes.

In the North Island, identifications and several seasons' research suggest that it is possible to clean up Pukekohe and protect the other potato growing land.

In the South Island, a longer-term programme will be required. DSIR is now typing the nematode species, measuring actual yield losses, evaluating nematicides, considering trap crops and checking overseas cultivars bred for resistance to the nematode.

As the results come to hand policy modifications can be introduced to ease the restrictions on affected growers without prejudicing the national potato industry.

In the meantime further surveys and quarantine supervision will be given priority by the Ministry and this will be more than justified once our long-term objective of controlling the potato cyst nematode is realized.

JIM CURRIE

Trees saved by polyurethane

A new foam tool for tree surgery

Bayer's horticultural experts and polyurethane technologists have recently found a new approach to the problem of curing diseased trees in an avenue of 60-year-old plane trees. Decayed sections of the trees are chiselled out, the wounds are treated with special latex products, and then filled with a rigid polyurethane foam which Bayer have registered as "Baytherm". This provides an effective and permanent seal against moisture. After the trimming away of any excess foam, the surface is treated with a green-pigmented, water-repellent, polyurethane-based coating. Ultra-violet radiation soon causes the coating to darken and take on the colour of the tree bark.

Jolendale

Otago District members visit a private horticultural research garden

Jolendale is a private recreational research parkland situated on Bridge Hill, immediately south of Alexandra on State Highway 8.

The property was first established in 1961 with aims of obtaining a better understanding of the limitations imposed by climate on the successful establishment of a wide variety of trees and shrubs in this semi-arid district. The planting has aimed at maintaining important views and highlighting the landscape of rock outcrops. Access has also been opened up to enable a public walkway to be linked with the town.

This experimental area experiences an average annual rainfall of 335 mm and a period from early spring to late autumn when evaporation greatly exceeds rainfall. Numerous heavy frosts are experienced with those in late spring being a critical limiting factor in plant establishment. The altitude of the site ranges from 200 to 240 m; the area is exposed and well drained with a thin veneer of soil (brown-grey earths). On the site there are approximately twenty indigenous species together with exotic plants such as thyme, horehound, teasel, mullein and eschscholtzia, naturalized, and contributing much to this adapted landscape.

The majority of plantings were carried out from 1961-3 with over 1000 trees and shrubs representing 109 species of some 52 genera. The main groups evaluated are the conifers, eucalypts, and deciduous trees such as oak, birch, poplar and willow.

In addition, a home garden style rockery is situated in front of the residence in a 12 m deep gully portraying impressive plantings of junipers and other shrubs.

Jolyon and Enny Manning are the owners and perpetrators of this imaginative scheme with its immense regional impact, and their actions must be commended.

Because of the expansion of Alexandra and the operation of a district scheme, it has been necessary for the Mannings to apply to the Minister of Lands to have Jolendale declared a scenic reserve in order that the area may be retained for the benefit of the public as a scenic, recreational and scientific area. The property is an official site for observations of the N.Z. Forest Research Institute.

GRAEME PATERSON
Chairman
Otago District

News and comment

A Major Event for Australasia

The twentieth International Horticultural Congress is to be held in Sydney, Australia, from August 15 to 23, 1978. This will be the first occasion that the Congress has been held in the southern hemisphere. The main objective is to exchange technical and scientific information in all spheres of horticultural activity. However, the Congress is open to all and will cater for the interests of technologists, scientists and practising horticulturists.

The Congress will comprise eight sections: interdisciplinary; post-harvest horticulture; citrus; viticulture; temperate fruits; subtropical and tropical fruits; vegetables; and ornamental horticulture.

There will be pre- and post-congress tours of horticultural and scenic interest taking in the various Australian states, New Zealand and Papua New Guinea.

More information will be provided in later issues of the bulletin. (Refer to the Qantas advertisement on the back cover of this issue for contacts and address for further information.)

International Daffodil Convention to be Held in New Zealand

Lower Hutt is hosting the Convention which will be held from Wednesday September 15 to Sunday September 19. A daffodil show will run from September 16 to 19. Further information is available from the secretary, Mr F. W. Taylor, 572 High Street, Lower Hutt ('phone 661-677).

Manual of Shrub and Old Roses

"The growing of old roses cannot improve the standard of living but it could assist, just a little, in improving the quality of life." That is Alan and Mary Mason's philosophy in the introduction of *A Manual of Shrub and Old Roses*. They have provided much factual information on rose varieties, hybrids and species to help rose enthusiasts achieve this philosophy. The manual is indexed and includes a bibliography for further reference. Copies are available (75c cash with order) from Frank Mason and Son Ltd., Box 155, Feilding.

Environmental Horticulture

I. L. Baumgart, Commissioner for the Environment, gave the Banks Memorial Lecture to the Institute's A.G.M. in May. He brought to

our notice that "approximately 10% of our indigenous plants are very rare or endangered." Such plants can be kept from extinction in living herbaria or museums but the better alternative is to protect the habitat by setting aside plant protection zones in our parks, reserves and forest sanctuaries.

Mr Baumgart said that the horticulturist "must be prepared to lift his vision beyond the plants he is managing to the system of which they and he form a part."

The home gardener and professional horticulturist have to gain more understanding and appreciation of the physical and social environment in which plants grow. Too much emphasis has been placed on the plant by making it bigger, better and beautiful. There is perhaps more beauty to be seen and progress to be made by understanding the plant ecosystem or the environment in which the plant grows.

International Dendrology Society to Tour New Zealand

The International Dendrology Society is arranging a tour of New Zealand for members between February 14 and March 9, 1977. The Society's membership is made up of a number of eminent horticulturists, and it is hoped to publish further details in the next issue.

The itinerary has been planned to provide opportunities to study both natural forest associations and artificial plantings of indigenous and exotic species. In several regions members of the the Institute will be directly involved in arrangements and hospitality. For details, if your district is involved, write to Public Relations Committee, R.N.Z.I.H., P.O. Box 450, Wellington.

Correction to Newsletter No. 8, December, 1975

In the article, "Eastwoodhill", there is an addition to the members on the Trust Board. The Gisborne City Council is represented on the Eastwoodhill Board by B. S. Davis, Gisborne Parks Department.

PUBLICATIONS FOR SALE

1975 Annual Journal

Floral Art Handbook

Copies of these publications may be purchased from the Dominion Secretary R.N.Z.I.H., P.O. Box 450, Wellington.

Journal \$3.50 Floral Art Handbook \$1.50 (cash with order please)

District news

Waikato

The programme for Hamilton meetings during the spring is as follows:

August 26: Propagation of Woody Ornamentals (Miss R. Hills).

September 23: An evening display and show of plants of interest from the region.

October 28: Climbing Plants (Mr H. Redgrave).

November 13-14: A proposed weekend trip to Puke-iti Rhododendron Trust, Taranaki.

November 28: A visit to University of Waikato to view plant collections. Barbecue and Social in the evening.

Bay of Plenty

The District will be involved with the following activities:

August 27: The spring show featuring camelias will be held in the Tauranga Town Hall.

September 11: The local branch of the Nurserymen's Association is having an "open day".

October 11-15: The District will be hosting visitors from Whangaparaoa. It is hoped that local members and any other visitors will join in on trips around the district.

November 5: The rose show will be held in Tauranga Town Hall.

Wellington

Letter to the Editor

The perennial question of the capitation payable to district councils from the annual subscription was raised again at the A.G.M. in Wellington. Members of the Wellington District Council discussed the issue and asked me to prepare a "letter of concern" for publication in the next Newsletter — concern that the payment stay as it is and that each district council does a little more to bolster its own finances.

Members at local level belong to and subscribe to a national organization because of their desire to have issues and perhaps grievances raised and discussed at a national level by a strong national executive. The new national executive of R.N.Z.I.H. should be representing and promoting local and national issues with the strongest possible voice, knowing it has the full support of all district councils. For this reason it is essential that the capitation payable to district councils remains at

the existing level to enable the remaining moneys to finance a strong, healthy administration, leaving the district council to arrange its own finances in such a way as to be able to budget each year with relative ease.

May I give one example of how we finance our own district council. Wellington has for the past two years held a public pruning demonstration in a member's garden. This is the major fund-raising venture for the district council. There is a silver collection at the gate, a charge is made for tea and coffee, and there is a sales table. Pruning of roses, ornamental shrubs, fruit trees, small fruits, etc., is demonstrated and advice on any gardening matter is freely given. Two such functions run by the Wellington District have raised, respectively, \$110 and \$153. We are giving consideration to running two or three such public days each year.

RICHARD NANSON,
Chairman,
Wellington District

SEED EXCHANGE

The Auckland District Council seed exchange is now in operation. Here is how it works:

Write to the following address enclosing a stamped and addressed envelope—Dr M. G. Goodey, 81 Gladstone Road, Parnell, Auckland 1.

You will be sent the seed list from which you can then place orders, again through Dr Goodey. Orders are limited to 10 packets per member at this stage, but may be increased later.

The seeds ordered will be posted to you free of cost. However, to ensure that the exchange can continue, you should send stamps to the value of those needed to forward the seeds to you, after receiving your order.

Please include alternative choices with your order to avoid disappointment resulting from short supply.

Contributors of seed are needed and all contributors will receive preference in seed orders.

This seed exchange will involve a considerable amount of work by the Auckland District Council, so please give it your support.

Institute affairs

Awards

R.N.Z.I.H. members have been in the news lately:

Congratulations to T. H. Warburton of Greytown on receiving an O.B.E. award and also to Miss C. E. Free of Hawera on receiving a B.E.M.

Ian Galloway, Director of Parks for Wellington, has been awarded the 1976 Newman's Award for his achievements in beautifying Wellington for the benefit of tourists and residents.

Ray Mole, curator of the Otari Native Plant Museum in Wilton, has been invested by the Royal Horticultural Society as an Associate of Honour for his work in the Wellington City Corporation Parks Department. There are no more than 100 Associates of Honour world-wide.

Corrections

There are two corrections to the 1975 Report of the Examining Board (page 14 of the 53rd Annual Report 1975):

R. W. Small completed the N.D.H. (Nursery Management — fourth schedule) — *not* N.D.H. (Fruit).

R. D. Bull completed the N.D.H. (Fruit — second schedule). He should be added to the list of those who completed the final diploma.

Library Services

Members have been enquiring about borrowing horticultural books through the Institute. The Institute does not offer a service of this kind and members are advised to consult their local library. Books can be borrowed from the National Library by way of the National Library Service. However, this has to be done through a local library.

Associate of Honour

At the 1976 A.G.M., G. G. Henderson of Dunedin and H.B. Williams of Turihaua (Gisborne) were awarded the distinction of Associates of Honour of R.N.Z.I.H.

Regional Horticulture

Mrs R. H. Shepherd writes on projects and the work of the Committee on Regional Horticulture:

In regard to the labelling of historic trees, a study of the present New Zealand legislation and current English law on the subject is being

made, materials and costs of suitable labels are being investigated and we hope to present some firm proposals to the next meeting of the National Executive in August.

Other matters under discussion are capitation to district councils, fellowships, ways of stimulating and encouraging co-operation between members of district councils and the National Executive.

Through the medium of the new bulletin we invite suggestions and comments from members and district councils. I also strongly recommend members or district councils to communicate with relevant committees on specific problems or topics. For example, a topic concerning the Award of Garden Excellence would be addressed to the Dominion Secretary, R.N.Z.I.H., Regional Horticulture, P.O. Box 450, Wellington.



INTERESTED IN THE OLD ROSES, THE ARISTOCRATS OF THE GARDEN?

Well a visit to the Sandon Road nursery of
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Officers

The new Executive, elected to office at the A.G.M., May, 1976 is as follows:

President: Dr J. D. Atkinson, 28 Asquith Ave., Mt Albert, Auckland.

Vice-President: T. H. Warburton, 9 Kuratawhiti St., Greytown.

Chairman: Professor T. M. Morrison, Lincoln College, Canterbury.

Deputy Chairman: J. O. Taylor, 2 Westerna Tce., Christchurch 2.

Executive

R. J. Ballinger, 85 Budge St., Blenheim.

K. L. Davey, 50 Queenwood Rd., Levin.

I. D. Galloway, P.O. Box 2199, Wellington.

G. G. Henderson, Director of Parks, P.O. Box 5195, Dunedin.

R. E. Lycette, University of Waikato, Hillcrest Rd., Hamilton.

G. D. Mander, Moffat Rd., Bethlehem, R.D. 1, Tauranga.

A. L. Mason, P.O. Box 155, Feilding.

P. K. McCliskie, Redwood Valley, R.D. 1, Richmond, Nelson.

Mrs R. H. Shepherd, 19B Homewood Ave, Wellington 5.

Professor J. A. Veale, Massey University, Palmerston North.

Members of the Institute's Examining Board and committees are:

Examining Board

Professor H. D. Gordon (Chairman), Professor T. M. Morrison (*ex officio*), Professor J. A. Veale, R. J. Ballinger, and two representatives from each of: N.Z. Institute of Parks and Recreation Administration; N.Z. Vegetable and Produce Growers' Federation; N.Z. Fruitgrowers' Federation; N.Z. Nurserymen's Association; Ministry of Agriculture and Fisheries; N.Z. Technical Correspondence Institute.

Finance

I. D. Galloway (convener).

Editorial (Journal)

Professor T. M. Morrison (convener).

Public Relations

(*i.e.*, Bulletin, news releases, publicity, "Flowers for Shows", promotion among specialist societies)

R. E. Lycette (convener).

Regional Horticulture

(*i.e.*, district councils, environment, Award for Garden Excellence, historic and notable trees (labelling), register of judges)

Mrs R. H. Shepherd (convener).

Horticultural Science

(*i.e.*, Plant Raisers' Award, international congresses and visits, nomenclature, publishing historic and notable trees of New Zealand, Institute meetings and conferences).

R. J. Ballinger (convener).

Standing Committee

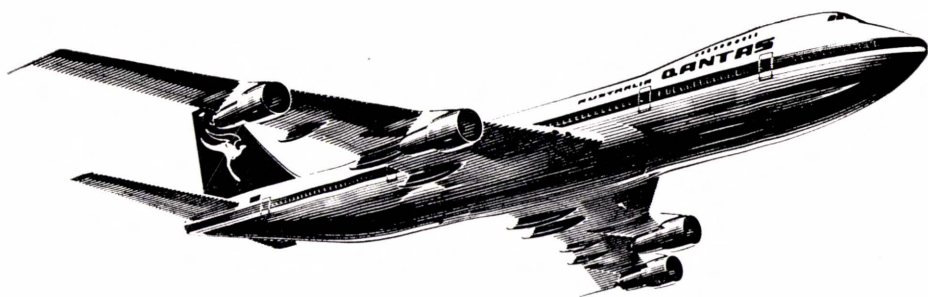
(*i.e.*, awards, honours, fellowships, urgent and other matters not allocated to a particular committee — an inner executive).

Professor T. M. Morrison (convener).

HORTICULTURE IN NEW ZEALAND

Subscription Rates

General members and Fellows	\$ 7.50
Husband/wife joint membership (where neither is a national member)	\$10.00
National members	\$15.00
Small non-commercial societies	\$ 7.50
Firms, companies (commercial)	\$ 7.50
National non-commercial societies	\$15.00
National commercial organizations	\$50.00



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AUGUST 15 to 23, 1978

For detailed Information on the Congress write to:

The Secretary
20th International Horticultural Congress,
157 Liverpool Street,
Sydney, N.S.W., 2000, Australia.

Your New Zealand contacts are:

Mr R. Lycette,
86 Hall street,
Cambridge.

Mrs W. Shepherd,
19B Homewood Avenue,
Karori,
Wellington.