

**JOURNAL  
OF THE  
ROYAL NEW ZEALAND  
INSTITUTE  
OF  
HORTICULTURE**

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# **Journal of the Royal New Zealand Institute of Horticulture**

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## **EDUCATION IN HORTICULTURE.**

### **FOREWORD.**

The movement which led to the establishment of our Royal New Zealand Institute of Horticulture originated through papers upon the subject of Education in Horticulture, contributed by the present writer to the Annual Conferences of the New Zealand Association of Nurserymen, held in Wellington in the years 1916 and 1917. The Nurserymen's Association—now known as The New Zealand Horticultural Trades Association—was then the only Dominion wide organisation which was concerned, directly and indirectly with all aspects of horticultural practice, aesthetic as well as economic. These papers are considered worthy of publication even after the years that have elapsed; to this I have readily agreed, in the hope that they may help to a bigger interest in the importance of skilled horticulturists necessary to the better New Zealand which, we trust, will develop after the present war.

I take the opportunity here to pay tribute to the work of the late Mr. Geo. A. Green who, as secretary of the Nurserymen's Association, was able in his travels to contact interested people in all parts of the Dominion and eventually, as our first secretary and organiser, to get our Institute established upon a solid foundation. Through business ties, my own further contributions were made by remits to conferences and by writing and speaking, as opportunity offered, to supplement the work of Mr. Geo. A. Green.

As an Honorary Examiner, I can testify so far as Christchurch is concerned, to the excellent standard attained by those trained at our Botanic Gardens and City Reserves, and who passed through our Institute's examinations. The war has unfortunately caught most of those trained and training and it is sad to know that of these some will never return to us.

The prospect that well trained horticulturists will be available in sufficient numbers after the war does not look promising at present; possibly rehabilitation schemes may help to meet this difficulty if a suitable School of Horticulture be established.

In thinking of the rebuilding of broken men and a broken world, I am reminded of the words of that deep-thinking man of

Elizabethan times—Lord Bacon—expressing so much that is just as true in this twentieth century:—"God Almighty first planted a garden, and, indeed, it is the purest of human pleasures; it is the greatest refreshment to the spirits of men, without which buildings and palaces are but gross handiwork; and a man shall ever see that where ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

A. H. Shrubshall, N.D.H. (N.Z.),

Honorary Fellow of the Royal New Zealand Institute of Horticulture,  
Christchurch, 25th November, 1943.

"It was suggested to me as the outcome of some remarks I had made at a fairly recent meeting of the North Canterbury Council of our Association that I should contribute a paper on the occasion of the present annual conference dealing with the subject mentioned. We had been discussing the proposal of securing legislation to provide for the registration of nurseries, and it appeared to me that such a measure, while it will undoubtedly aid our profession against the unfair competition we are subjected to at present in so many ways, at the same time benefiting the public by the assurance of clean and healthy stocks, yet it is not of the nature to forward the other objects of our Association.

I have been impressed during meetings of our Council at the high ideal frequently sounded, that in our seeking to promote the interests of our trade we must have in view not just our personal prosperity as an end in itself, but also to aim at getting the profession upon a higher level that it may carry stronger influence for good in the affairs of the community.

Perhaps my views of things lead me to give particular attention to these moral objects of our Association, certainly as I see possibilities in such direction, but there should be no hesitation in realising that in obtaining of the State good material opportunities it is our duty to return to society not merely genuine value in goods, but also the best social service we can give through our profession.

Does it ever occur to you that we have in our profession one of the greatest influences for civilisation? Do we not mark the development of human society very largely by its economic phases? Savagery we associate with hunting and fishing, barbarism with pastoral life and crude agriculture, while with the development of modern civilisation not only has agriculture made tremendous strides, but horticulture much greater. Indeed, it has been by horticulture methods that farm crops have been so wonderfully improved during the last century, and will continue to be improved in the future. Plant hybridisation and selection along scientific lines will bring out yet further improvements in economic plants, while the tendencies of agriculture in the thickly populated countries are to more intensive methods by which the plants of the crop dealt with are treated more or less individually and the best got out of them.



But apart from the economic value of modern horticulture, we have on its aesthetic side an influence of at least equal value to that of good pictures, good literature, and good architecture. Can we consider a modern home complete without a garden and flowers, or a town or city complete without its parks and public gardens? Are not modern ideas of town planning such that will establish "Garden Cities?" Yes, we have in horticulture one of the greatest of civilising influences, and by intelligently promoting the interests of our profession we are certainly in line with the forces that make for social well being. Therefore, in seeking to raise our status and influence among the professions it is imperative not only to improve general public interest in things horticultural, but particularly to ensure that those engaged in the horticulture industries shall have good and sufficient opportunity to deserve this desired status and influence.

With regard to the improvement of public interest in horticulture, much is already being done. The children are being induced by the system of school gardens and the enthusiasm of their teachers to take an interest in gardening. Most of the newspapers give a weekly column to horticultural matters, and a fine range of books upon gardening is offered by the booksellers. Any well-kept public garden both stimulates and educates the public taste, and the Government experimental farms are able by trials to obtain and give reliable information of economic value. All this has a great and growing influence upon general horticulture, helping to create a larger demand for the nurseryman's products and for the gardener's services, and I have no doubt that when our association has the will to do so they can as an effective organisation help very materially to a much greater interest in horticulture.

It is not, however, upon this aspect of education in horticulture that I wish particularly to direct your attention, but to the possibilities of technical education as a help towards raising the status of our profession.

First of all, I must allude to the connection between good technical training and increased efficiency. This is now thoroughly established, and the educational facilities of New Zealand give opportunities for technical training in many important trades and industries, such as engineering, wood-working, printing, plumbing, etc.; but I have not yet heard of any centre being asked to provide facilities for technical education in horticulture. It may perhaps be thought by some members present what need have we for technical education in our line? Do we not staff our nurseries with men who have gained efficient experience often in other parts of the world, or do not our cadets get proper training in our nurseries, and if the apprentice desires to forward his knowledge there are plenty of books to be procured which will aid him in his quest? To this I must point out that the same argument applies to most of the industries and trades which have had technical facilities provided for

their cadets, and I do not think that either, employers or employees engaged in these trades and industries would now agree to those facilities being done away with. They have proved too helpful.

Then in our profession the term "gardener" is such an abused one that it is sufficient to describe either the highest skilled man or the casual labourer, who, while he may be able to use a spade and a rake, knows precious little about plants. This is not as it should be, and the result is that the really skilled man and the profession in general is kept reduced in status by the easy way in which the non-efficient are able to attach themselves to the line.

One of the methods to remedy this, as an accompaniment to the better prosperity we anticipate, will be along the lines of requiring cadets to qualify in theory as well as in practice, and to see that the necessary facilities are available in the country. The educated man gathers the self-respect and confidence which demands and obtains a return for services rendered in keeping with the better standard of life he looks for. There is ample scope for technical instruction in the various branches of horticulture, such as, for instance, nursery management, nomenclature, forestry, landscape gardening, public parks and gardens, fruitgrowing, tree grading and packing, floristry, seed growing and saving, pests and diseases, and many other things bearing directly upon the practical work. On the pure theory side there is plant anatomy and physiology, classificatory botany, studies in the habits, habitats, and natural distribution of plants, elementary chemistry, etc. Altogether, I could compile a course of technical instruction in horticulture which would certainly help to produce the better educated type of man that our profession has got to have in its ranks to ensure a higher status.

In many parts of Europe and America, where horticulture is more greatly developed than here, quite a lot has been done in the way of technical education. The Royal Horticultural Society of England is doing much by its examinations and scholarships to promote a good grade of gardener, and scores of men who pass through the exceptional training that Kew Gardens provide, have been thus qualified to fill very responsible positions in different parts of the world.

Many of the British county councils, which control the educational affairs of their respective areas; have done a good deal for horticulture along the lines of technical instruction. I myself received exceptional help through the Essex County School of Horticulture, probably at that time the best of its kind in the country. The Swanley Horticultural College, in Kent, England, is also a well known establishment, which has given special attention to the training of women for horticultural work.

As regards the United States, I am not familiar with the different institutions, but I believe I am correct in coupling the names of Cornell University and Professor L. H. Bailey as of considerable consequence in the horticultural circles of that country. Here in

New Zealand, a country that is bound to develop rapidly. horticulture is only in its infancy. The horticultural trade has wisely come together to organise its forces for the future, and I have no hesitation in saying that not one of the least important things will be the adoption and furthering of the ideas expressed in this paper. I know that there are plenty of difficulties in the way, one of which is the scattered nature of the industry and the need of a somewhat uniform system through the Dominion for the labour conditions. However, these are matters easily dealt with once there is the will to do it.

We are at present in the position of not being able to offer prospects to rising young New Zealanders that many lines of industry requiring less knowledge and training are able to do. We ought to be able to attract to our ranks some of the good talent available, and be able and desirous of remunerating it at least as well as so many other businesses are able to do. Our profession deserves to be in this position, instead of being the sort of "Cinderella" among businesses that it is. Unity of action and purpose by the trade in this country can effect tremendous improvements, especially if that purpose be leavened by an idea that it is not concerned purely with £ s. d. results.

I think my hearers will agree that I have, by the ideas I have expressed, provided much food for thought, the outcome of which will be that the future policy of our Association shall include the educational methods I have suggested as a means to raise our status and add power to our influence.

I might say, gentlemen, that I would like to hear some discussion in regard to this matter, and I shall be glad to answer any questions that may be asked. I have with me some English papers which give an idea of the methods adopted at Home. When I was in the Old Country I interested myself in this matter, and, besides having studied at the schools I have mentioned, I was with the Department of Agriculture in Ireland for three years, and did a great deal of lecturing and organising work. I am, therefore, fairly well up in the subject of technical instruction in horticulture. It is a subject we should give attention to and lay ourselves out to forward it in this country, not merely in the interests of the profession, but in the interests of the community as well. (Applause.)"

#### DISCUSSION ON MR. SHRUBSHALL'S PAPER.

The President: I think, gentlemen, that the paper we have just heard read is a very valuable and scholarly paper. (Hear, hear.) We must all feel proud to know that we have a man amongst us who can stand up and handle the subject as Mr. Shrubshall has done. The subject is one that has got to be dealt with in the near future, or otherwise we shall not have efficient men coming along to forward the business as is being done in other parts of the world. I trust there will be a full discussion on the matter so that we may have the benefit of various opinions.



Mr. Davies: I think Mr. Shrubshall's paper is an excellent one. The subject he has dealt with is one I am keenly interested in, and one which I have endeavoured to help on as much as possible. The main difficulty is to get suitable instructors. I agree with all that Mr. Shrubshall has said, and I shall be willing to assist in every way I can to attain the objects desired.

Mr. Cooper: The subject is one I have not given much time or thought to. The difficulty in connection with the matter is the small number of pupils who would be available for the classes of instruction. Wherever the instruction could be carried out, I think it would be an excellent idea. The difficulty we have in getting boys to take an interest in the business is simply alarming, and there is no doubt that they require proper training in order to make them of any use to their employers and to themselves. I also agree that something should be done to improve the status of the profession.

Mr. McDonald: I think it would be folly on anybody's part to suggest that technical education is not desirable. It is a self-evident fact. The necessity for it is met with on every hand, but unfortunately it has not attained to much prominence in our business. After employing a boy for five years as an apprentice one expects to have a competent nursery hand, but in my experience, the boys do not become qualified. The present day boys, after five years' apprenticeship, are not competent nursery hands. (Hear, hear.) There is no intermediate stage between the apprentice and the competent hand, and we therefore have to give him the wages payable to a competent hand. In a great many cases the boys are not worth their money. If a man cannot earn his money he has to go, and the same thing will apply to the boy unless he shows signs of improvement. There is, of course, a great deal of drudgery in our business which does not appeal to boys, such as weeding, washing pots, and such like. I think the suggestions of Mr. Shrubshall must tend towards a betterment of the trade, and the improvement of the workmen we have in our employ. I most heartily support his ideas.

Mr. Poole: The suggestions put forward in the paper are very good, and I shall be glad to give any support I can to putting them into practice. They will result in educating the people up to the values and difficulties of raising nursery stock, and also probably help us in getting rid of a lot of useless talk about prices, because the prices would regulate themselves when they know the prices of the stuff. At present the people do not know the value of stuff. (Hear, hear.) It is difficult to get young fellows to make a start at the beginning of the business. It would be a great benefit to have classes as suggested, and I would be willing to do my utmost in helping the idea along.

Mr. Wall: The suggestions put forward by Mr. Shrubshall are excellent, and I agree that the status of the profession should be improved. From the man in the Botanic Gardens to the man you pick up in the street they are all put down as gardeners. They should

not be in the same grade. As far as the young boys are concerned, they usually only stay a few weeks in the business, and I think it would be an excellent idea to give them some sort of training or apprenticeship.

Mr. McMillan: I think something should be done in the direction indicated. The more the boys were taught of the business the greater interest they would take in it. The difficulty is to know how to actually put the idea into practice.

Mr. Morrison: I feel it is my duty to say something on this subject. I claim to have a pretty good knowledge of school boys and girls and schools generally. For four or five years it was my duty to instruct the boys in Taranaki. Mr. Cooper said there was a difficulty in getting pupils, but I find that is not so—the pupils love the work. It is only necessary for the Department to go a step further and get competent teachers. I do not profess to be quite up in the technical branch of the work, but I am in the practical part. Special knowledge is required to be imparted, and that knowledge can only be obtained if the man has a thorough grounding in his early days. I was very much interested in the able paper which Mr. Shrubshall has read.

Mr. Lennie: I think the conference is indebted to Mr. Shrubshall for introducing the subject, which is a very important one. We have only to look at the success of the nation at present at war with us to see the value of technical education. In Britain and New Zealand, it is a fact that technical education has been neglected. Technical education is supported by the Government to the extent that it covers education by means of schools, which assumes that every boy is of the same mental capacity. It seems to me that, if we are going to get any value out of technical education, it must be taken up after the school age is passed by boys who have a special bent or inclination in that way, and to have expert teachers. The colleges and schools mentioned by Mr. Shrubshall are entirely apart from the Government as far as I know; they are open to everyone, but every boy is not compelled to attend. The same thing applies to the military or naval service. It is said that our nurseries are not technically efficient at the present time, but the majority of us find a difficulty in getting proficient men for the higher branches of the work. We can get any number of labourers, but not proficient men. I think this conference should decide to do all it can to forward the suggestions contained in the paper. The Government should be informed that the nurserymen of New Zealand think the time has come when the matter of technical education in horticulture should receive careful consideration. With that object in view, I move: "That this conference of New Zealand nurserymen, while appreciating the efforts of the Education Department as regards technical education in our schools, desires to bring under the notice of the Government the desirability of improving technical education from

a horticultural and nurserymen's standpoint." No doubt that motion is capable of improvement, but it will be the means of expressing ourselves so far as the Government and the public are concerned. If such a college were established in New Zealand there are any number of us who would be only too glad to send our sons to it in order to give them a better start than we have had ourselves. Most of us have had to scratch for our information, whereas if we had a suitable college that would not be the case with the rising generation. In my opinion the present instructors in most of the schools are not sufficiently proficient in all the subjects mentioned by Mr. Shrubshall in his paper. I think the time has come when the Government should be asked to consider the matter, and see if something could not be done on the lines suggested.

Mr. Green: I should like to second that, and ask the mover if he would add to the motion that it be an instruction to the executive to bring this matter at once under the notice of the Government by medium of a deputation which is to wait on the Prime Minister and Minister of Agriculture on Friday morning.

The President: I am glad Mr. Lennie has moved the motion, but I should like to get a further expression of opinion on the matter from the delegates present.

Mr. Hale: The opinion seems to exist amongst delegates that there is no technical education being given in the public schools, but that is a very great mistake. It is being given in the Wairarapa, and very likely in many other places. I have had a considerable number of pupils at my nursery, and no doubt others are in the same position. It has been a great pleasure to me to give the instruction to the youngsters, and you would be surprised to see how keen the boys are to secure the instruction. I had a man with me who had given all his life to nursery work, but just lately he has left and taken on dairying. In the present state of the business there is not sufficient in it to pay better wages, and we should endeavour to get higher prices for our goods, and enable us to pay a higher remuneration to our employees. If we only could do that and better our conditions, that alone would justify our meeting.

Mr. Buxton: I desire to say that I appreciate to a great extent the able paper which has been read to us to-night by Mr. Shrubshall. One point is very clear, and that is that we shall never get boys or nurserymen or gardeners unless we one and all pull together and obtain better prices for our product. Absolutely everything depends on that. (Hear, hear.) I am satisfied the public are willing to pay us a reasonable price for our products, but we are fools to ourselves and do not take it. I have had some very fine lads in my business since I started, but the time has come when I could not pay them what they were worth, and it has given me great pain not to be able to do so, and to have to part with them. If we cannot pay our employees what they are worth naturally they will go elsewhere, and that is the reason why the nurserymen and gardeners



to-day are in a poor way. I sincerely hope that something will be done in carrying out the suggestions contained in the paper.

Mr. Hay: I am very glad that I have heard this paper read to-night. It is a most able paper, and one that will tend to elevate our profession if the suggestions are carried out, but to my mind one of the most important matters was overlooked altogether, and that is the necessity to bring up good nurserymen who must possess a classical education. The expert nurseryman must first have a good schooling and start with a classical education, being in possession of a good knowledge of Latin and Greek. One of the most important matters to start with is a good education, and we nurserymen could do much to assist our apprentices in that direction. I had one of the most promising men in New Zealand as an apprentice. He is now with the Government, and twice a week I gave him an afternoon off to enable him to attend the university lectures, and at the present time he is one of the most promising officials coming on. I think we could do a great deal with our apprentices in assisting them in that way. Mr. Kallagher, the head of the Technical School at Auckland, is doing an immense amount of good in the way of imparting technical education in horticulture and agriculture.

Mr. Lippiatt: I have listened to the paper read by Mr. Shrubshall with great interest, and also the exhaustive remarks of Mr. Lennie. I think our educational system requires extension so as to include special classes in horticulture, and in the universities more attention should be given to the subject. Some years ago Mr. Cheeseman used to have classes in botany, and the pupils used to go to the Domain to be instructed, and I think some such system as that might be extended so as to embrace horticulture. More attention should also be given to the boys in school.

Mr. Green: It must be evident to everyone that the training of boys spells trained men in the future. At the present time we have no apprentices in New Zealand who are going to be great men in the future unless they shape up. Mr. Hay has mentioned the only man I remember in our trade in the North Island who has ever gone through the University, and that young fellow was an exceptional man. Look at the wages that carpenters, plumbers and bricklayers get as compared with nurserymen. I have two boys going to the University, and they say to me, "What has the nursery business done for you?" What is the good of talking nursery to them? They go amongst young fellows, amongst the sons of those who have grown up with me, but who have succeeded in other walks of life, and who have got into better positions than I have. My lads say there is nobody in your trade who has done anything worth speaking of. Now that should not be so. I say our trade should be one of the most intellectual and the best paying. If those who started in the trade 25 or 30 years ago had been in the position that they should have been in, had received the wages they were entitled

to, and had obtained the prices for their goods which they had a right to receive, there would have been more able and successful men in the business to-day. There would also have been more experts available now, who would have become Government or private departmental officers at good salaries, and they would have been able to maintain themselves in a better position to-day. We want to start from the present and go right ahead to the future.

The Government of this country must be "the father of its people." Let us explain to the Government what is necessary. Let us as men do our duty and say to the Government, "You do yours," and let the next generation have a better start than we had. Then let the rising generation see that it will be their own fault if they do not raise our business and put it on a proper footing. (Applause.)

Mr. Shrubshall: I am very pleased to have heard the discussion that has come forth this evening. It sounds good. There are two aspects of this question, namely, the moral and business aspect. In regard to the business side of it; in order to improve the business side of the future, we have got to provide better prospects for those engaged in it, and in order to do that we must have better men. It is agreed that technical education properly carried out will help towards that end. Some speakers have instanced the difficulty experienced with lads in the trade. It does not matter in what line they are engaged, where the drudgery is not tempered with something which lightens it and creates an interest, the lads will be dissatisfied with whatever they are in. However, I am satisfied that even the drudgery of the nursery trade or any other trade can be very largely overcome by the work being conducted and carried on in a more social way and under proper conditions. Take, for instance, most of the potting sheds; they are most depressing places, and even a good whitewash would liven them up and tend to create a better feeling in the employees towards their work. One speaker considered that technical education was likely to be badly crippled for want of instructors, but if the right men are not available in the country I do not think there should be much difficulty in obtaining them from some other parts of the British Empire. I believe Canada could spare a few men if the Government took the matter up seriously. A beginning has to be made, and the Correspondence Schools could be utilised in the initial stages, and the instructors, by getting into touch with those engaged in the business, could put them on the road to educating themselves for a start. Mr. Hale referred to the children of Wairarapa getting some sort of education in horticulture, but the type of education he refers to is more in the nature of school gardening. I have had something to do with that in Ireland, and there are very great possibilities in it. Certainly something of the sort should be done in the primary schools. In that connection my ideas run more in the direction of getting it in conformity with other methods, with the object of training the eye and the hand to work together. The work should

be carried along the lines of Nature study, so as to give the children some better idea of the work and to create an interest in Nature as well as in gardening. The question of the lack of apprentices and the prospects for them seem to be associated with the institution of a Dominion award which, I understand, has been postponed till next conference. Certainly we will have to offer much better prospects to cadets for the future. The industry is one which calls upon the intelligence of those engaged in it to a very great degree, and I am of the opinion that a well-trained horticulturist, who is thoroughly proficient in his work, exhibits as high a mental capacity as those engaged in many very well paid professions. Another point is that we want to keep the education ahead of the immediate practical work—that is to say, by keeping the mind ahead of its immediate requirements, you create an incentive or driving force which impels the individual forward to better things. By teaching the cadet the pure theory side of many subjects, which do not seem to apply directly to the trade, you create an intellectual atmosphere in his mind which is a driving force towards his desiring a higher status for his profession. (Hear, hear.) With regard to the need for better returns for the products, part of the work the lad does not like is the necessity of being driven along. If there is only a small margin of profit on any line, naturally a person has to do as much as possible in a given time, with the result that he is being continually urged to get on, so that a man cannot take the necessary time to do the work and take an interest in it.

The motion was carried.

### **REPORT OF THE EXECUTIVE COUNCIL FOR THE YEAR ENDED 30th SEPTEMBER, 1943.**

PERSONAL:—Lieutenant J. A. McPherson, Director of the Botanic Gardens, Christchurch, who was passing through Wellington to superintend Vegetable Production for New Zealand Servicemen in the Pacific Islands, was welcomed at the June Executive Meeting.

Other visitors to Wellington have been Messrs. A. H. Shrubshall, Hon. N.Z. Fellow, J. N. McLeod, Hon. Secretary of the Canterbury District Council, and W. J. Humm, Managing Director of Nairn's Nurseries Ltd., all of Christchurch, also N. R. W. Thomas, Hon. Treasurer, Auckland District Council.

Messrs. F. Cooper Limited, Wellington, advised the March Executive Meeting of the retirement, for health reasons, of Mr. Geo. J. W. Cooper. It is pleasing to know, however, that he will continue his valued assistance on the Executive Council.

Season's greetings from C.Q.M.S. B. P. Mansfield, Overseas, received at the December meeting, were heartily reciprocated by members and acknowledged by the President.



Best wishes on his retirement from the office of Director-General of Agriculture have been conveyed from the Annual Meeting, 1943, to Mr. A. H. Cockayne, Hon. N.Z. Fellow and member of the Executive Council and its Examining Board.

CONGRATULATIONS on his promotion to the office of Director-General of Agriculture have been conveyed to Mr. E. J. Fawcett, M.A., who was elected to the Executive Council, at the Annual Meeting, 1943, vice Mr. A. H. Cockayne.

EDUCATION:—This is dealt with fully in the Examining Board's Report, but the opportunity is again taken of thanking the Board's Chairman, members and examiners for their efficient and valued voluntary services.

It is pleasing to note that courses in Horticulture are being made available at Lincoln and Massey Agricultural Colleges.

R.H.S. COLOUR CHART:—Volume 2 of the Royal Horticultural Society's Colour Chart has come to hand during the year and extra sets were imported for affiliated and allied bodies.

JOURNAL:—It was mentioned at the April, 1943, Executive Meeting, that there had been no offers of articles for the Journal over a term of years. It is pleasing to state that several articles have since been promised.

ARBOR DAY:—The only report of Arbor Day functions, on the 4th August last, are in respect of those held at Auckland and Wellington. At Auckland, trees were planted as war memorials and, at Wellington, Oak trees were planted at the Railway Station.

GREETINGS FROM MELBOURNE:—Mr. J. Owens, Assistant Curator of the Parks and Gardens Department, Melbourne, has expressed his thanks for our Journal and appreciation of the carrying on of the Institute's activities under war conditions. In thanking him for his heartening letter, his desire for greater co-operation between the two countries, particularly from the horticultural standpoint, was heartily reciprocated.

LODER CUP COMPETITION, 1942:—The Loder Cup Competition for the year ended 30th November, 1942, was won by Mr. A. W. Wastney, of Glen Road, Wakapuaka, Nelson, for his zeal in the preservation, propagation and cultivation of our native flora, especially of the more difficult genera, bulk collection, storage and distribution of its seed and assistance to overseas botanists, etc.

ANNUAL MEETING, 1943:—The Twentieth Annual Meeting of the Institute was held in the Board Room, Wellington Commercial Travellers' Building, Wellington, on Thursday, 28th January, 1943. A Summary of the Proceedings has been published in the April, 1943, Journal—Vol. 12, No. 4.

DISTRICT COUNCILS:—Canterbury continues its activities in educational matters. Its Syllabus in Horticulture at the Christchurch Technical College attracts strong support and practically all the Lecturers for the seven months session are members of the Institute.

Otago:—Mr. D. Tannock, Hon. Secretary, arranged for the

girls training at the Botanic Gardens, Dunedin, to attend Classes in Botany at the local Technical College.

Southland:—Mr. K. I. Robertson, Acting Hon. Secretary at Invercargill, during Mr. B. P. Mansfield's absence overseas, was promoted to the Headmastership of the Lawrence (Otago) District High School, and congratulations from the Executive Council were duly conveyed to him with thanks for past services. Mr. G. A. R. Petrie, N.D.H. (N.Z.), 122 Janet Street, Invercargill, has been appointed in his place.

DIG FOR VICTORY CAMPAIGN:—On the 11th May last the National Vegetable Committee (Mr. Ben Roberts, M.P., Chairman) held a meeting of representatives of interested bodies in the Parliamentary Buildings, Wellington, to discuss the principles and proposed details of a combined campaign for increased production of home-grown vegetables owing to the increased demand by the service forces in the Pacific. A General Action Committee was then set up, on which the Institute is strongly represented. Public meetings, with each Mayor in the Chair, were held and all Annual Meetings of Horticultural Societies were addressed. A deputation visited Auckland for the same purpose. The E.P.S. organization has been found of great value in contacting households and furthering the scheme by digging and otherwise and a great deal of assistance has also been given by the Home Guard. Radio instructional talks have been given weekly, films have been shown, advertising through the Press and posters, etc. bring the campaign under universal notice, not to mention seed growing, planting, compost making and other public demonstrations.

Special Vegetable Classes for novices—men, women, women groups engaged in horticulture, and primary and secondary school children are being provided with good prize money at midsummer and autumn horticultural shows in Wellington and Lower Hutt City and Suburban districts. A "Dig for Victory" Exhibition of Vegetables, Flowers etc., organized by the Junior Chamber of Commerce, in association with the Wellington and Hutt Valley Horticultural Societies, will be held in the Town Hall, Wellington, on the 9th, 10th and 11th February, 1944.

CONDOLENCE:—The Institute has expressed its sympathy to the relatives of Sir Robert A. Anderson, C.M.G., Southland Vice-President and J. Scott Thomson, Dunedin, an Hon. (N.Z.) Fellow and a noted botanist particularly of the native flora.

A resolution of sympathy has also been conveyed to Mr. J. G. MacKenzie, Superintendent of Parks and Reserves, Wellington, on the loss of his son, Donald, missing on air operations.

FINANCE:—Subscriptions, mostly collected by post, show an increase of £20/11/6 and examination fees of £15/15/-.

We have again to thank the Government for the renewal of its grant, which is always appreciated.

## REVIEW.

We have pleasure in acknowledging receipt of a publication in book form entitled "The Production of Seed of Root Crops and Vegetables," published by the Imperial Bureau of Horticulture and Plant Crops Central Sales Branch, Penglais, Aberystwyth, England.

Prior to the outbreak of War a large part of the various seeds used in Great Britain and its Colonies and also in America was produced in Austria, Germany, Hungary, Italy, France and other parts of Europe; plus some produced in Japan. As the War caused a total loss of these supplies it was necessary to extend and/or endeavour to develop new sources of supply in the various "Allied" countries and Colonies.

This large book of 90 pages deals exhaustively with the efforts which have been made since the outbreak of this War by the various countries to produce sufficient seeds for the needs of the "Allied" countries. It includes reports by experts in England, Scotland, U.S.A., Canada, Australia, South Africa, New Zealand and the British Colonies. The reports from each country are made by those prominently connected with the matter.

The report upon the efforts made in New Zealand is written by Messrs. G. A. Holmes and A. A. Copeland, two Members of the Staff of the N.Z. Department of Agriculture, who have been for about two years in England upon loan to the British Department of Agriculture and have been acting upon the War Agricultural Executive Committee.

We are glad to note that the book makes it clear that it is very important that great care must be taken, when growing seeds and saving them, to see that the precautions, which are essential to guard against admixture or contamination by cross fertilization, are rigidly carried out.

It is pointed out for instance (page 17) and elsewhere that many species of the cabbage group, including Savoys, Brussels Sprouts, Broccoli, Cauliflower, Choumoellier, all Kales and forms of wild cabbage will cross fertilize and mix with one another. They must therefore be grown not less than a mile apart and separated from each other.

In a similar way all of the Beet family will become mixed if any two of Mangels, Sugar Beet, Red Beet, Silver Beet, Spinach Beet, or any of the wild forms of these are grown closer than a mile apart. In addition, of course, the different varieties must also be grown well apart from each other.

The same remarks apply to Carrots, Red, White, Yellow, and wild Carrots. Before arranging to save seeds, great care must be taken to be certain that none of the wild forms of Turnip, Rape, Carrot, Parsnip, Radish, Parsley, etc. are growing anywhere near the proposed crops, otherwise the resultant crops will probably be



quite useless or worse than useless, through being mixed and inferior stocks.

The reports make it clear that immensely increased quantities of farm and vegetable seeds are now being produced in Allied countries—in many cases from five to fifty times as much as pre-war and the crops for the coming season will be even much larger in quantity. In many of the countries a large part of these seeds is being grown with the intention of exporting them to Great Britain and other Allied countries.

### INSTITUTE NOTES.

**PERSONAL:**—It is pleasing to note that our President, Mr Hope B. Gibbons, and Mr Geo. Cooper, Executive members, have recovered from recent illnesses.

Welcome was extended, at the October meeting, to Mr F. S. Pope, Past President, who has been absent in the North for some months.

It was mentioned, at the December Executive meeting, at which he was unable to be present, that Mr. Wm. C. Hyde, Horticulturist, Division of Horticulture, Department of Agriculture, is retiring at the end of the year and it was hoped that he would be able to see his way to remain on the Executive Council.

**ANNUAL EXAMINATION:**—It was reported to the November Executive meeting, that 19 candidates, in various stages, had taken this—Junior, 3 full and 7 partial; Intermediate, 4 full; Diploma, 1 full, 2 partial and 2 special Certificate. The written examination was held at New Plymouth, Palmerston North, Wellington, Christchurch and Dunedin, on Thursday and Friday, 18th and 19th November, from 9 to 12. The separate Oral Tests and Practical Tests were held in the afternoon and evening, if found necessary.

**GARDEN VETERANS:**—At the December Executive meeting, the Secretary mentioned that, at a recent Committee Meeting of the Karori Horticultural Society, Wellington, one member present is approaching eighty whilst two others have passed that age. Each of the two latter is still a keen exhibitor of vegetables and excels in staging collections.

**CANTERBURY DISTRICT COUNCIL Annual Meeting** was held at Christchurch on the 1st December and was well attended.

**CONDOLENCE:**—At the September Executive Meeting the Chairman made reference to the death on the 23rd August of Mr William Duncan, Chairman of the Wellington City Council Reserves Committee, and a motion of condolence was passed for conveyance to his widow.

**ANNUAL MEETINGS, 1944.**

The programme of the 1944 Annual Meetings of the Institute and kindred bodies is as follows:—

Horticultural Seedsmen's Association of New Zealand (Inc.):—  
Tuesday, 25th January, 1944, at 2 p.m., in the Board Room of  
Messrs. F. Cooper, Ltd., Dixon Street, Wellington, C.I.

New Zealand Florists' Telegraphic Exchange:—  
Wednesday, 26th January, 1944, at 9 a.m.

New Zealand Horticultural Trades Association (Inc.):—  
Wednesday, 26th January, 1944, at 1 p.m.

Royal New Zealand Institute of Horticulture (Inc.):—  
Thursday, 27th January, 1944, at 10 a.m.

All meetings, except that of the Seedsmen's Association, will be held in the Board Room, Second Floor, Wellington Commercial Travellers' Building, 107-109 Customhouse Quay, Wellington.

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**ROYAL NEW ZEALAND INSTITUTE OF HORTICULTURE  
TWENTY-FIRST ANNUAL MEETING.**

THURSDAY, 27th JANUARY, 1944, at 10 a.m.

**ORDER OF BUSINESS:**

1. Minutes of last Conference—pages 74-77, Journal of April, 1943.
2. Roll Call and Apologies.
3. Chairman's Address and Executive Report and Statement of Accounts.
4. Election of Officers—
  - (a) President.
  - (b) Vice-Presidents (one from each District Council).
  - (c) Executive Committee (seven at least).
  - (d) Hon. Auditor.
5. General.

## REPORT OF THE EXAMINING BOARD FOR THE YEAR ENDED 30th SEPTEMBER, 1943.

**CONDOLENCE:**—The Board's sympathy has been conveyed to the widow and family of W. S. La Trobe, C.B.E. a former Superintendent of Technical Education, who died at Auckland on the 28th September last. Deceased was the first representative of the Education Department on the Examining Board and his thorough knowledge and experience of examinations made him a most valuable member.

At a Board Meeting in January last, reference was made to the accidental death of H. E. Cann, whilst engaged in Army training in New Zealand. Formerly employed at Duncan and Davies Limited, Nurserymen, New Plymouth, he passed his Junior Examination in 1941 and had intended sitting for his Special Subject for the Intermediate Examination, 1942, as he was going overseas on active service.

**PERSONAL:**—During the year under review, Mr. J. G. C. MacKenzie, Superintendent of Parks and Reserves, Hastings, entered camp. He had acted as an examiner for the Oral Tests and Practical Tests in Hawkes Bay and the Board expressed its appreciation of his services.

THE EDUCATION DEPARTMENT'S CORRESPONDENCE SCHOOL already gives tuition in the Education Department's Subjects of Chemistry and General Experimental Science, when no Technical Classes are available in the vicinity of the student's home. Provided that satisfactory arrangements can be made by the Headmaster, the School is now prepared to teach Horticultural Botany and the Principles of Plant Protection and the Board has expressed its deep appreciation of this valued assistance.

**J. A. CAMPBELL MEMORIAL AWARD:**—The J. A. Campbell Memorial Award to the most successful student in the 1942 Examination, has been made to Miss Dorothy Hosking of New Plymouth.

**STUDENTS WAR CONCESSIONS:**—The following Resolution was forwarded by the Canterbury District Council for consideration at the Institute's Annual Meeting, 1943:—

That the Executive Council be recommended to request the Examining Board to consider the cases of all students, where courses have been interrupted by war service, with a view to (a) granting passes, and (b) reducing the service required before sitting subsequent examinations.

In all such cases, the local examining Committee should be asked to report on the work and capabilities of the student prior to entering upon war service.

The resolution was approved for reference to the Examining Council with a recommendation that it be passed on to the Examining Board.

As a meeting of the Examining Board, for examination results, was held just prior to the Annual Meeting on the 28th January, 1943,

this matter was dealt with at the next Board Meeting on the 25th June when it was decided that a list of those on service should be taken out to see whether any student would benefit by any concession in the Board's power to grant and, if so, to grant it.

**LOAN OF THESIS:**—It has been decided by the Board that each thesis should be retained and that a Library of these should be formed under definite rules. It should be made clear to all students that each thesis submitted becomes the property of the Institute and that each candidate forwarding a thesis should retain a copy.

**SYLLABUS AMENDMENTS:**—A list of all amendments to the Syllabus has been circulated to all District Councils, Conveners, Examiners and registered Students.

**THANKS:**—The Board has again to record its thanks to local conveners and examiners who conducted the separate oral tests and practical tests, examiners who set the written examination papers and marked the scripts, and to all others who assisted in any way with the examinations.

**EXAMINATIONS:**—The number of candidates for the November, 1942, Examination showed a further decrease of 10, mainly owing to war conditions. The following is a summary of the results:—

Examination	Complete Pass.	Partial Pass.	Failure.
Junior .. .. .	2	2	1
Intermediate .. .	2	—	—
Diploma .. . . .		1	1
Special Certificate	1		

**DIPLOMAS AND CERTIFICATES:**—List of Diplomas and Certificates under Section 4 of the New Zealand Institute of Horticulture Act, 1927, since the issue of the 1941-42 Annual Report:—

#### DIPLOMA IN HORTICULTURE.

Further Special Subject.

Melhuish, Frederick Jordan.

#### INTERMEDIATE CERTIFICATE IN HORTICULTURE.

Hosking, Miss Dorothy, New Plymouth.

Smith, Leslie Francis, Christchurch.

#### JUNIOR CERTIFICATE IN HORTICULTURE.

Blumhardt, Herbert, Auckland.

Middleditch, (Miss) Patricia, Dunedin.

#### TOTALS ISSUED TO DATE.

Diploma: Without Examination .. . . .	170
By Examination .. . . .	73
Further Special Certificate .. . . .	1
Certificates: Intermediate .. . . .	43
Junior .. . . .	59
Fruit Culture .. . . .	1
Florists .. . . .	54
Seedsmen .. . . .	18



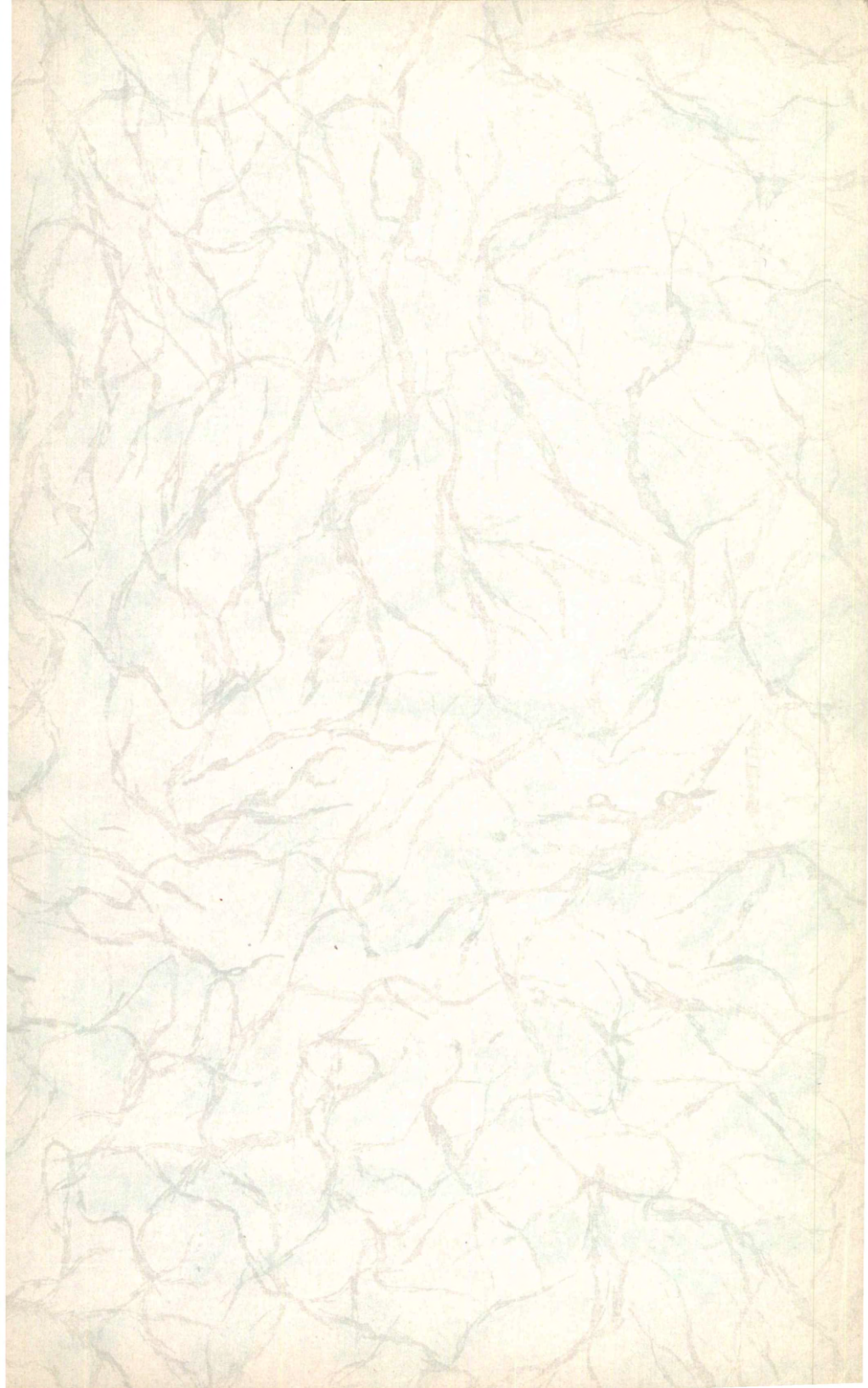
# Income and Expenditure Account for the year ended 30th September, 1943.

				£	s.	d.					£	s.	d.
To	Conference Rent	.....	.....		1	7	6	By	Subscriptions—				
„	Salaries	.....	.....		151	10	0		Affiliated Societies	.....	56	14	0
„	Publications	.....	.....		57	12	0		Individual	.....	126	16	3
„	Depreciation	.....	.....		2	0	0						183 10 3
„	Office Expenses—							„	Examination Fees	.....		28	7 0
	Rent, Light and Cleaning	.....	.....	40	5	8		„	State Subsidy	.....		100	0 0
	Printing and Stationery	.....	.....	11	8	4		„	Interest Government Stock	.....	14	8	0
	Postage and Telegrams	.....	.....	21	11	1		„	Interest P.O.S.B.	.....	4	10	4
	Examination Expenses	.....	.....	1	8	6							18 18 4
	Sundries	.....	.....	9	10	2		„	Sundries	.....		5	0
					84	3	9						
„	Excess of Income over Expenditure	.....	.....		34	7	4						
					£331	0	7						£331 0 7

# Balance Sheet as at 30th September, 1943.

LIABILITIES.					ASSETS.				
	£	s.	d.	£	s.	d.	£	s.	d.
F. Cooper, Ltd. Trust Fund .....	115	10	0				Cash at Bank .....	26	15 8
Add Income .....	13	11	3				Cash at P.O.S.B. ....	136	11 5
				129	1	3			163 7 1
J. A. Campbell Memorial Fund ...	155	1	0				Government Stock—		
Add Income .....	10	15	9				F. Cooper, Ltd. Trust Fund	100	17 6
				165	16	9	J. A. Campbell Memorial Fund	105	0 0
Subscriptions in advance .....				4	9	9	Institute .....	377	2 0
Endowment Fund .....				63	0	0			582 19 6
Accumulated Fund as at 1/10/43	430	11	6				National Savings Bonds—		
Excess of Income over Ex-							F. Cooper Ltd. Trust Fund	15	0 0
penditure .....	34	7	4				J. A. Campbell Memorial Fund	50	0 0
				464	18	19			65 0 0
							Office Furniture .....	18	0 0
							Less Depreciation .....	2	0 0
									16 0 0
									£827 6 7
				£827	6	7			£827 6 7

G. S. Nicoll,  
 Dominion Treasurer.  
 1st December, 1943.







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