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Bulletin

of the

New Zealand Institute of Horticulture

Reprinted from "The New Zealand Fruitgrower and Apiarist."

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New Zealand Institute of Horticulture

(Incorporated)

Horticultural Education

INFORMATION FROM ABROAD

Some time ago Dr. L. Cockayne wrote to a number of eminent men in Great Britain and U.S.A., asking for information with regard to Horticultural Education. In reply, Dr. Cockayne, who is President of the New Zealand Institute of Horticulture, has received some interesting information.

A LETTER FROM ILLINOIS.

Professor H. B. Dorner, of the University of Illinois, wrote as follows:—

"The teaching of horticulture as a college subject in this country was first taken up in our agricultural colleges and State universities about fifty years ago. Its development at first was rather slow, but has advanced very rapidly during the past twenty-five years. Horticulture, as first taught, dealt mainly with fruit culture, especially along the lines of fruit varieties, methods of culture, and the control of diseases and insects. As other lines of garden crops became more important they were added to the curriculums; thus vegetable gardening, landscape gardening, and floriculture have taken their places in our educational scheme.

"All of the agricultural institutions of the country are now offering various lines in horticulture; the specialties offered depending upon the sections of the country in which the institutions are located. For example, those institutions located in fruit-producing sections offer especially strong lines in fruit growing. Again, in those States where flower production is of considerable importance, as in Illinois, New York and Massachusetts, floricultural education is rapidly gaining in importance. In Illinois, which has a larger greenhouse area than any other State in the Union, the State university (University of Illinois) is now offering four years of training in floriculture and allied courses leading to a degree in B.S. in Floriculture.

"The accepted method of teaching horticulture in most of our institutions is to offer courses in the theory underlying the subject, with enough laboratory or practical work to make the subject clear and to prepare the student for his life's work. The object is not to develop a finished horticulturist, but to prepare the student by giving him a good foundation upon which to build. The apprentice method, which was, and is, employed in Europe, has never been developed in this country. We feel that it is better for the student to get the fundamentals, so that he will more readily understand the reasons for doing things in a particular way. It also fits him to work out the solution to his special problems.

"In addition to the purely horticultural subjects, the student is compelled to ground himself in those sciences such as botany, chemistry, pathology, entomology, physics, etc., which form the foundation of horticultural science. The student is also advised to study some of the more cultural subjects, so as to round out his education and prevent the narrowness which results from concentration upon a single line of work in which he is specially interested. In other words, we strive in our institutions not only to develop good horticulturists, but also good citizens, well fitted to benefit not only themselves but their country as well.

"In recent years, agriculture has been projected into our secondary schools, with the result that many of our high schools are now offering courses in elementary horticulture to their students. This makes it possible for the boy or girl who cannot attend college to secure information concerning the growing of horticultural products before their school days are over. The teaching of horticulture in the secondary schools is now in its infancy, and more time and work will be necessary before it reaches an entirely satisfactory state.

"In addition to the horticultural training offered by the colleges, the several State experiment stations and the Federal Department of Agriculture are carrying on extensive experiments along the various horticultural lines, and are doing much that is of value

to the commercial man. The results of this work are carried to the commercial man through bulletins and circulars published by the experiment stations and through the extension service organised in connection with most of our agricultural institutions. I mention the experiment stations, as they must be considered as important agencies in carrying on our horticultural education.

"In connection with the mention of landscape gardening, I must offer a brief explanation. In some of our institutions this subject is offered as a part of horticulture, while in others it is classed as architecture, or as a fine art. It is also true that while sometimes the subject is approached from the horticultural side, and at other times from the architecture side, in either case it should enter our discussion, as plants form the material from which a landscape is mainly composed. The treatment of landscape gardening differs from the other lines, since it is not considered as a trade or business, but as a distinct profession, and is given a special degree.

"A few words concerning our horticultural organisation here at the University of Illinois may be of interest to you. Horticulture, with Professor J. C. Blair as its head, is organised as a department of the College of Agriculture. The department, in turn, consists of five divisions, namely, Pomology, Olericulture, Landscape Gardening, Plant Breeding, and Floriculture. Each division, in turn, is in charge of a division head who, with his staff, is held responsible for the work of his division. This arrangement has the advantage of close co-operation, which is not always true where each line of work is independent. Thirty-two people, ranking from assistants to professors, comprise the staff of the department.

"At the University of Illinois the Agricultural Experiment Station and the College are essentially one, as far as operation is concerned. Both are manned by the same staff. This arrangement also has its advantages in that the two phases of the work are in close co-operation.

"In addition to occupying quarters in the Agricultural Building, the Department of Horticulture also operates one of the finest field laboratories in the country, a floricultural building, a vegetable and plant breeding building, 36,000 square feet of greenhouse space, and about 360 acres of land. I merely mention this to give you an idea of the important place horticulture holds in Illinois."

MESSAGE FROM ITHACA.

The veteran, Professor L. H. Bailey, in expressing his pleasure at the establishment of the New Zealand Institute of Horticulture, wrote:—

"In the United States there is a college of agriculture, or an equivalent institution, in each of the forty-eight States. These institutions are maintained by public funds, being the issue, directly or indirectly, of the Land Grant Act of 1862.

"Horticulture is taught in all these colleges, and investigations are in progress in the experiment stations. Of course, the character of the teaching depends to a large extent on the particular State and the dominant interests therein, as well as on the personnel of the department. As a general statement, it may be said that the agricultural subjects are developed as a means of broad training in citizenship, and on a parity with the older studies. The citizen who is to live on the land should have a developed intellectual and educational interest in his occupation and situation, that he may be the equal of other men in a democracy. Therefore, the higher institutions maintained by voted funds must interpret their responsibilities broadly, looking towards training for life. Of course, the specialties are highly developed, as dairying, fruit-growing, poultry-raising; but these specialties comprise only a part in a rather broad college course.

"Aside from this, there are certain vocational schools that train in particular specialties. A number of these are devoted to gardening and horticulture. I think that these are all on private foundations.

"You have a very interesting problem before you in New Zealand in view of the fact that your conditions are so peculiar, and the further fact that you have been so free to make significant departures in the handling of public problems. Whatever you undertake ought to be of much significance, not only to yourselves, but to persons elsewhere in the world who look for help and suggestions in every new enterprise for the development of education by means of agricultural subjects. To that end, although I am no longer connected with an institution, I hope I shall be kept in touch with your institute, so that I may have the benefit of your experience."

THE VALUE OF AESTHETIC HORTICULTURE

(By H. A. SHRUBSHALL.)

Horticultural practice as an economic factor in our civilisation has a value which can be estimated in figures and calculated in £ s. d. Horticultural crops have a market price; they are commodities of trade, and so can be considered upon a money basis. The potentialities of horticultural methods, if applied to agricultural crops, may also be reckoned in figures, as, for instance, that in China by gardening methods crops of over one hundred bushels of wheat per acre are regularly obtained.

But horticulture as a whole embraces much more than this. There is the whole range of gardening for ornamental purposes—or, as it is best termed, aesthetic horticulture—and the part which this takes in our lives and in our civilisation has a value of another kind, one not to be reckoned in figures, but in the means it provides to promote the health and happiness of mind and body.

We do not live by bread alone. The mind requires nutrition as well as the body. In this respect the influence of good pictures, literature, music or drama has due recognition, but how few realise the part which aesthetic horticulture serves in satisfying the desire for beauty, or the potentialities that lay with it as a means toward the elevation of the public mind?

That deep-thinking man of Elizabethan times—Lord Bacon—must have had some ideas of this sort in his mind when he penned the opening remarks to his essay "On Gardens." He commences by saying: "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 handiworks; and a man shall ever see that when ages grow to civility and elegancy, men come to build stately sooner than to garden finally, as if gardening were the greater perfection."

As a horticulturist, one is tempted to claim that aesthetic horticulture is really the greater perfection, for, with all the growth of human knowledge and of the process we call civilisation, we have not come to build with better taste than the middle ages or the ancient Greeks. But modern horticulture can provide gardens which are a gladness to the eye and a feast to the mind, so that amid such, buildings need have no great architectural features, being often best draped with a beautiful mantle of climbing plants. We have, in fact, in aesthetic horticulture one of the most refining influences of our civilisation.

How incomplete is a modern home without an ornamental garden! Where the conditions of town life prevent the possession of such, how the desire to obtain some association with the charms of plant life shows itself; it may be by little window gardens, boxes of plants upon the window-sills, pot plants within and cut flowers in vases, to brighten and ornament the rooms. Then no town or city can consider itself modern without its public parks and gardens, and modern ideas of town-planning are to create "garden cities," in keeping with the higher standard of life and culture which is developing.

Yes, we have in aesthetic horticulture a factor, actual and potential, in our civilisation, which yields only good; actual as an expression of the degree of refinement attained, and potential in the higher degree of refinement which it induces, and for the possibilities it gives for our betterment by an intelligent recognition of its value.

The New Zealand Institute of Horticulture has come into existence to help place this element of our culture in the high status it should attain. This Dominion has a unique opportunity of developing a culture and civilisation of a remarkably high character. Already seeking to avoid the errors which have produced the slums and poverty of the older lands, we can further utilise our particular advantages of climate and natural resources in such a way that the conditions of life in New Zealand shall be a beacon to the world.

This is a worthy ideal, and in its development aesthetic horticulture must take an important part. To obtain a due recognition of the psychical and social value of the aesthetic branch of horticulture is one of the needs of our times.

VALUE IN HORTICULTURE

EDUCATIONAL ASPECT.

DEFINITE STATUS WANTED.

"The horticultural products of the Dominion are valued at not less than £5,000,000 annually," said Mr. G. A. Green, secretary and organiser of the New Zealand Association of Nurserymen, at a special meeting of the Taranaki Nurserymen's Council at New Plymouth on March 20. So far, however, the subject had not been taken seriously from an educational point of view. Mr. Green was of the opinion that the time was coming when horticultural matters must receive more attention. Horticulture must be granted a definite status, but this could not be done until competent men with the necessary training came forward to assist in the status being maintained when it was once granted. Any system of horticultural education adopted would have to include the granting of certificates, diplomas and degrees according to the practical and theoretical courses taken by the students.

The Nurserymen's Association had always stood for education and practical training in connection with horticultural matters, and, having secured the support of the fruitgrowers and private horticulturists, the New Zealand Institute of Horticulture had now every prospect of receiving status. Scientific education and practical training would, he hoped, be provided for students in connection with the present proposed establishment of agricultural and forestry colleges.

"We live in a country with a climate especially adapted for the growth of flower and vegetable seeds for export, as well as for the local trade, and New Zealand should be able to assist in supplying the world's markets provided we have trained men and women to carry on the business," said Mr. Green in conclusion. "Already New Zealand has established a world-wide reputation in some lines of its seeds."

HORTICULTURAL EDUCATION IN CHRISTCHURCH

"One direct result of the inception of the Institute of Horticulture has been the formation of horticultural classes under the University College (Canterbury) conducted by the W.E.A. It is intended to arrange a practical and theoretical course, lecturers being men capable of speaking as experts in their respective branches of the business."

The School of Forestry in connection with Canterbury College has included in its curriculum a horticultural course. This is a step in the right direction, and will no doubt be followed by other colleges.

There is great need for not only a course of theoretical horticultural study, but for a school where an intensively practical course can be followed.

Have you heard of the salt cure for woolly aphis? Hopes were entertained, some time ago, that dressings of salt, applied to affected trees, would do the trick. Experiments in the Government orchard in South Australia failed badly, however.

A very complete diploma course in horticulture has been drawn up by the Auckland Educational Committee of the Institute of Horticulture, and will shortly be placed before the Dominion Educational Committee of the Institute.

The Executive of the Institute feels gratified at the recognition accorded to it by both the Senate of the University and the New Zealand Institute by appointing representatives to the Dominion Council of the New Zealand Institute of Horticulture. They also feel that they have been honoured by the selection of such distinguished men as Professor J. C. Sperrin-Johnson (representing the New Zealand Senate of the University) and Mr. B. C. Aston (representing the New Zealand Institute).

PLANTS FROM AUSTRALIA

VALUABLE COLLECTION FOR CHRISTCHURCH GARDENS.

Mr. Jas. Young, the curator of Christchurch Botanic Gardens, paid a visit to Australia in November, and brought back with him a very fine collection of plant specimens from the Commonwealth, which will make a valuable addition to the Gardens.

The plants came from the various Australian States, but principally from Melbourne, Adelaide, and Sydney. They were mostly sub-tropical plants, and, taken as a whole, proved a very valuable collection, which would last for a number of years. Amongst the collection were specimens of the famous Australian waratah, and the best of Australia's native flowering plants. Some of these would be planted out in the gardens themselves, and those which proved too delicate for the rigours of the Christchurch climate would be planted on the Cashmere Hills. Specimens of all the best acacias had been secured, as well as all the new varieties of flowering arums, collections of ferns, tropical and sub-tropical plants, and a number of very choice orchids. Besides these, tropical fruit-bearing plants, including papas, new varieties of bananas, pine-apples, breadfruit, and guavas, were also represented, but the flowering specimens were those in which Mr. Young had mainly interested himself. A very fine selection of palms had also been secured. These included the date palm, sago palm, cycads, and the palm from which the material for the manufacture of Panama hats is obtained.

In this last instance, Mr. Young stated, the plant was of a particularly interesting species. The palm sent out smooth shoots, somewhat thicker than an ordinary lead-pencil, and from one of these shoots, which reached a length of two or three feet, the entire material for a hat could be secured. The fibre itself came from the interior of the shoot, the outside bark having to be stripped away before the interior fibre could be obtained. Besides the palm plants themselves, a fine collection of palm seeds had also been obtained, and these would be raised locally.

Acting on behalf of the Auckland Racing Club, New Zealand, during his recent visit to Australia, Sir Edwin Mitchelson purchased 90 new and rare varieties of orchids. These will be added to the already fine collection of these plants gracing the gardens at the Ellerslie racecourse. The new collection of orchids was acquired in Sydney from Sir Rupert Clarke, and was selected by Sir Edwin Mitchelson from the 400 plants of this family in the former's possession. The greater number of the orchids in the Australian fancier's collection are identical in variety with those already to be seen at Ellerslie, but the 90 plants selected are quite new to Auckland. With the arrival of the new shipment, the collection of orchids at Ellerslie will number close on 300, and will enjoy the distinction of being the finest collection of orchids in either Australia or New Zealand. The nurseries at Ellerslie are now known to be without rival either in the Dominion or Australia, while the variety and beauty of the species and the picturesque arrangements of the grounds have proclaimed the popularity of the gardens among visitors and citizens alike. The gardens at Ellerslie form one of the show places of Auckland.

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