DEPARTMENT OF AGRICULTURE
HORTICULTURE DIVISION

CONFERENCE ADDRESS BY
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1. Introduction:

Two years ago, at Christchurch, your Executive extended an invitation to me to address your Annual Conference, and my remarks were fully reported in the "N.Z. Beekeeper" of August, 1951.

This year I appreciate the opportunity of reviewing the work now being done for beekeepers by members of the Department of Agriculture.

2. Staff:

The advisory and inspectorial services to beekeepers are being maintained, and at present the Apiary Section of the Horticulture Division has its full complement of Apiary Instructors—11 in all, stationed at Auckland, Hamilton, Tauranga, Hastings, Palmerston North, Hawera, Greymouth, Christchurch, Oamaru and Invercargill.

The apicultural cadetship scheme has not been successful. The two young men failed to complete their university training, and it may be desirable to initiate a special beekeeping diploma as an appropriate qualification for future recruits to the staff of the Division.

Honey grading work has increased, and Mr R. S. Walsh, Honey Grader, examined honey at the Auckland Depot and also made two special visits to Christchurch.

Research and experimental work on behalf of beekeepers has been undertaken by a Departmental team of officers whose efforts are co-ordinated by Mr T. S. Winter, the Superintendent of the Beekeeping Industry with headquarters at Wellington.

Mr Palmer-Jones, of the Wallaceville Research Station, under the direction of Dr. I. J. Cunningham, has continued with work on the following lines:—

- Diagnosing bee diseases and related problems.
- Acting as a bee quarantine officer to check all bees entering the country.
- Testing the moisture content of N.Z. honey and assisting in the removal of excess moisture.
- Designing a method of producing honey mead from low grade honeys.

The Extension Division of the Department has assisted with the honey cost of production survey; in the experiments in the Waikato on white clover nectar yield and in testing whether D.D.T. super caused bee losses. Advisory officers of the Extension Division warn farmers of the dangers to honey bees if D.D.T. super is supplied at any time when nectar sources are in bloom.

Mr C. R. Paterson, Apiculturist—with headquarters at Hamilton but with Dominion coverage in his work—has been concentrating on the following:—

- An improved method for the extraction of moisture from N.Z. honey.
- A standard plant for handling manuka honey.
- Cost of production of honey.
- The white clover nectar problem in the Waikato.

3. (a) Inspection of Apiaries:

The inspection of apiaries by part-time Inspectors was continued last year—5,104 apiaries being visited and 43,137 hives inspected. Of these 1,290 hives, or 3%, were found to be diseased. The burning policy commenced

over two years ago is giving good results. In addition 172 colonies of bees were destroyed because they were not established in frame hives.

There has been no cut in expenditure on inspection work—£779 was spent in the year ending 31st March, 1951, £1,123 for 1952, and £1,228 for 1953. The actual number of apiaries and hives inspected differs little from two years ago, but last spring, especially in the North Island, was a difficult period for inspection and many of the apiaries visited were more remote from Inspectors' headquarters.

3. (b):

From time to time during inspection duties it is found that the hives in some apiaries are semi-abandoned and completely covered in vegetation such as gorse and blackberry. It will be appreciated that under such circumstances the work of inspection is retarded and time and energy have to be spent before inspection can be undertaken. At present there is no provision in the Apiaries Act requiring an owner to keep his registered apiary maintained in such condition that it can be readily inspected. As I feel that this is an omission which could be restified when an Apiaries Amendment Bill is next before the House, I would appreciate the support of this Conference in that direction.

4. Decentralisation of Apiary Registration:

This year, on 31st October next, all apiary registrations expire and re-registration is necessary if a check for inspection purposes is to be maintained on the 200,000 hives in the country.

In line with Departmental policy to decentralise registration work as far as it is practicable, it has been decided to make each centre where an Apiary Instructor is stationed into a registration district, and the Apiary Instructor there will be the registrar.

Next November every beekeeper who is at present registered with the Horticulture Division, Wellington, should receive a new application form and a stamped envelope addressed to the local registrar. The form should be completed by the beekeeper as soon as possible and forwarded to the Apiary Instructor for the district. The form has a tear-off section which will be returned to the beekeeper by the Instructor. This will be the evidence of registration and replaces the special certificates which were previously issued from Wellington.

Registration continues as a free service and is closely linked with the inspection service for American foul brood.

Re-registration is intended at five-yearly intervals.

5. Hawkes Bay Bee Protection Advisory Committee:

No losses of bees due to arsenate of lead poisoning were reported from Hawke's Bay in the spring of 1952, and I feel that this was largely as a result of the work of the Hawke's Bay Bee Protection Advisory Committee. Mr A. D. Masters, President of the Hawke's Bay Fruitgrowers' Association, and Mr G. F. R. Gordon, past Secretary of the Hawke's Bay branch of the National Beekeepers' Association, are now members of this committee, and I feel that their presence ensures that practical efforts are being made to keep bee losses to a minimum. I wish particularly to thank the N.B.A. and Mr Gordon for their co-operation in tackling this problem.

Considerable publicity was given the question in Hawke's Bay. There were three special radio broadcasts, an article in the "Orchardist" and the "Commercial Gardener"; advertisements in the local papers; screen slides were shown in Hastings theatres during the most dangerous period in October; and a circular was issued to each Hawke's Bay fruitgrower, berry-fruit grower and beekeeper. In addition, Horticultural Inspectors at Hastings maintained a careful supervision over the spraying of apple and pear trees during the blossom period. The existing legislation states that "No person shall spray or dust any fruit trees . . . with any poisoning substance injurious to bees unless almost all the blossoms have fallen from the trees." As berry fruits such as raspberry canes are not specifically covered by the term "fruit tree," an amendment has been recommended to the Government to widen

the definition to cover raspberries and related species of plants, and it is hoped that the amending legislation will be passed this year.

6. Research & Experimental Work:

(a) Moisture in honey and a new method for its reduction.

Honey with too high a moisture content is liable to ferment. This is the reason why a maximum of 17.2% moisture has been fixed for all honey submitted for export, and this standard must be maintained.

On the local market honey has been seen in a fermenting condition, and too large a quantity of honey with excess moisture has been submitted for grading.

Messrs Paterson and Palmer-Jones have tackled this problem and designed a plant to remove excess moisture from honey. This plant has already been tested at Wallaceville and has proved so satisfactory that authority has been obtained for these two workers to design an up-to-date model which could be regarded as a prototype for beekeepers requiring equipment for this purpose.

(b) Manuka honey.

Manuka honey cannot be clarified or blended with other honey by the usual methods. Because of this difficulty, beekeepers are not being encouraged to produce this type of honey. However, where it is impossible for a beekeeper to move from a manuka area the honey produced must be handled. Messrs Paterson and Roberts are designing a plant for handling manuka honey and details will be published shortly.

(c) D.D.T. super and its effects on honey bees.

Beekeepers have expressed concern lest the use of D.D.T. super by farmers for the control of grass grub might, at certain periods of the year, be harmful to honey bees.

Reports from Apiary Instructors state that no signs of excessive bee mortality have been noticed in those areas where D.D.T. super was applied last year.

Arrangements, however, were made last October for experiments in the Marton district to obtain data on this question, but these proposals had to be abandoned owing to unfavourable seasonal conditions. Next season it is hoped to proceed with the trials in a more favourable locality near Levin.

(d) Nectar secretion.

From the preliminary nectar secretion work already done at the Rukuhia Research Station, Hamilton, it seems that more honey was formerly produced from weeds, such as blackberry, than was generally realised. The intensive weed control campaigns by modern weed-killers seems to be the cause of the fall in honey production of some Waikato hives.

5. Air Transport of Bees:

The air transport of bees in packages from North Auckland to the South Island has been tested and found to be superior to rail and sea transport. Details will be published soon.

6. Export of Comb Honey:

Trial shipments of comb honey to the United Kingdom and United States have been made, and we await results.

7. Visit to United Kingdom:

Last year I was nominated by the Government to attend the 13th International Horticultural Congress, held in London during September, 1952. In addition I spent seven weeks in the United Kingdom and visited various horticultural institutions. Included was the Bee Research Department, Rothamsted Experimental Station under Dr. C. G. Butler. This institute, a part of Rothamsted near Harpenden, 40 miles north of London, has a staff of 19—6 of whom are technical.

In the course of discussions the following points were mentioned:—

Much of Dr. Butler's work is the field behaviour of pollinating insects in an effort to increase seed yields. He considered time has been wasted on large scale trials in England and that it is necessary to study the behaviour of individual colonies of bees in relation to pollination.

I also met the Ministry of Agriculture Chief Bee Advisory Officer, Mr P. S. Milne.

Ministry advisory officers in England only serve commercial producers, whilst domestic beekeepers with up to 40 hives receive an advisory service from the County Beekeeping Instructors, numbering 26 in all. On the commercial side Mr Milne has only one assistant at Rothamsted and one in Wales.

Foul-brood legislation is administered by County executive committees with full-time organisers and local beekeepers as Inspectors. The aim is to cover a county in three or four years, and the figures of disease given are on the basis of diseased colonies compared with colonies inspected. In 1944 it was 7%, reduced to 3% in 1946, and down to 1.7% during 1951 and 1952. Foul-brood eradication is associated with an insurance scheme in England.

About two years ago Nosema was detected in one worker accompanying a queen bee from New Zealand.

Some bee losses are being experienced through the use of new sprays, but at present the Ministry is collecting data and endeavouring to reduce losses through an educational campaign.

No move has yet been made by the universities in Britain to establish a diploma in beekeeping, but a National diploma in beekeeping is being considered by the Beekeeping Education Association, which aims to have a diploma of equal standing to the National diploma in horticulture granted by the Royal Horticultural Society and recognised by the United Kingdom Ministry of Agriculture as a suitable qualification for Horticultural Advisory Officers.

The British Beekeepers' Association has initiated a series of examinations open to beekeepers.

The prerequisite is a certificate that the applicant has kept and managed bees for at least a full year or that he has taken an approved course of instruction which must include practical work in the apiary.

This is followed by a preliminary examination of two parts—a practical examination in the manipulation of a modern hive of bees and an oral examination on the year's work in the apiary.

After the preliminary examination a candidate may elect to continue on practical lines, and having kept bees for at least five years may undertake oral and practical examinations which, if successfully passed, entitle him to the designation.

"Practical Beekeeper":

On the other hand, he may continue with Intermediate and Senior examinations covering the practical and scientific aspects — bee pasturage, anatomy, physiology and pathology. Final examinations are only open to those who have kept and managed bees for at least three full years.

On completion the candidate is entitled to the designation *"Master Beekeeper."*

I feel the time has arrived when the National Beekeepers' Association of New Zealand, in co-operation with the Horticulture Division, should discuss a similar series of recognised qualifications for New Zealand beekeepers, from whom future Apiary Instructors could be recruited. Such a move will have my personal interest and support.

8. Congratulations:

I am pleased to have this opportunity to congratulate the N.B.A. in having such a distinguished member as the conqueror of Everest—Sir Edmund Hillary. There is a man who has looked forward and upward. At the various annual conferences of this Association which I have attended in recent years I regret to say that some members seem to have been more concerned with what a fellow member said 20 years ago than with where beekeepers individually and collectively are going in the future. This year your organisation is being offered by the Minister a new approach in the marketing of your product. May you take this opportunity to deal with an important problem and concentrate your attention to the future—looking forward instead of looking backward.

I wish you the best for a successful Conference.