

1924.  
NEW ZEALAND.

# BOARD OF AGRICULTURE

(REPORT OF THE) FOR THE YEAR 1923-24.

*Laid on the Table of the House of Representatives by Leave.*

## REPORT.

The Hon. Minister of Agriculture.

SIR,—

30th June, 1924.

I beg to submit the following report of the work of the Board of Agriculture for the year ended 30th April last.

It is with deep regret that I have to record the death in October last of Mr. J. A. Haycock, representative on the Board of the Marlborough, Nelson, and Westland district. Mr. W. D. Pike, Blenheim, was appointed to fill the consequential vacancy.

I should also like to take this opportunity of placing on record the Board's thanks to Dr. Reakes, Director-General of Agriculture, and other officers of the Department for the information and advice they have given to the Board from time to time when matters of a technical character have been under review.

### REGISTRATION OF VETERINARIANS.

In May, 1923, the Board discussed with the Director-General of Agriculture the question of the introduction of legislation for the registration of veterinary surgeons, and carried a resolution approving of the principle of such legislation. At a subsequent meeting a draft Bill was submitted for consideration, and met with the Board's approval.

### INSPECTION OF FARM MACHINERY.

A communication was received from the Secretary of the Marine and Inspection of Machinery Department stating that provision had been made in the Inspection of Machinery Amendment Bill for the exemption from the provisions of the principal Act of any machinery, the motive power of which does not exceed 6 horse-power, used on any land by the occupier thereof for agricultural, pastoral, horticultural, viticultural, or dairying purposes. We replied to this letter to the effect that in our opinion the inspection of such machinery was a waste of money, and that we thought the Government might go even further than was proposed, and exempt all oil-engines under 6 horse-power, irrespective of the purpose for which they were used.

### INSPECTION AND REGISTRATION OF STALLIONS.

This matter again came before the Board for consideration. A copy of the Bill which was prepared in 1913 was sent to the secretary of the Clydesdale Horse Society for the purpose of obtaining the present views of the society on the subject, and the reply received intimated that the society was strongly in favour of the proposed measure. Our views coincided with those of the Clydesdale Society, and a resolution was passed strongly urging upon the Government the desirability of having the measure placed upon the statute-book this year. You will remember that we communicated with you to that effect.

## SAND-DRIFT AREAS.

The question of the control of drifting sand has come before the Board on several occasions, and we are strongly of opinion that the vigorous continuation and extension of the work of the reclamation and planting of sand-dune areas should be a policy of the Government. The matter was discussed at length with Dr. Reakes, and the following resolution was finally passed :—

“That a new Act or an amendment to existing legislation should be passed, empowering settlers to form “reclamation areas,” with power to elect Boards to administer the same, and with power to levy rates on the land contained within the area under the Board’s jurisdiction for the purpose of planting timber-trees and other plants necessary for the creation of forests on sand-drift areas.”

## CATTLE-TICK.

In connection with this important matter Dr. Reakes briefly detailed the results of the investigation, as far as it had progressed, being made by the Department into the life-history of the cattle-tick, and indicated that as soon as finality had been reached a public announcement on the subject would be made. (The report was published in the *Journal of Agriculture* for May, 1924.) With respect to the regulations for the control of the tick, he intimated that it had been found impracticable to enforce clause 10 as regards the compulsory dipping of all tick-infected stock in area “A” at intervals of not less than twenty-one days during the period 1st September to 31st March. It was therefore proposed to amend the regulations in the direction of throwing upon owners the responsibility of taking at all times steps to keep their stock free from ticks. The Director-General further indicated that the Department proposed to insist upon dipping where stock exhibited for sale in cattle-yards were found to be infested with tick. The amendments suggested by the Department were concurred in.

## PROPOSED AMENDMENTS TO EXISTING LEGISLATION.

Proposals for the amendment of the following Acts in the direction indicated were considered and generally concurred in :—

*Stock Act.*

- (1.) Mustering for the delivery of stray or suspected stock, and
- (2.) Branding, making the ear-mark the principal element in the brand.

*Noxious Weeds Act.*

(1.) Amending section 2 by omitting from the definition of the term “clear” the words “any part thereof flowering,” and substituting therefor the words “the spread thereof by seeding or otherwise.”

(2.) Empowering a local authority to declare that any plants mentioned in the Second Schedule of the principal Act, except blackberry, should be deemed not to be noxious weeds, and to amend or revoke a declaration in respect of noxious weeds at any time.

(3.) Occupier required to trim hedges or live fences consisting of barberry, sweetbriar, gorse, broom, or hakea (whether the same are noxious weeds or not).

(4.) Occupiers of land on which blackberry is growing, otherwise than in small patches, to clear so much thereof as may be required by the Inspector.

(5.) Occupiers of land on which barberry, sweetbriar, gorse, broom, or hakea are growing shall, in districts in which such plants are noxious weeds, clear so much as may be required by the Inspector.

(6.) Granting right of appeal to occupier on ground that the requirements of the Inspector are unreasonable.

(7.) Special measures for the control of noxious weeds may be agreed upon between Inspector and occupier.

(8.) Empowering local authorities to assume control of the administration of the Noxious Weeds Act in their territory.

*Rabbit Nuisance Act.*

- (1.) Enabling Boards to be established on either “rateable value” or “acreage rating” basis.
- (2.) Elections of trustees to be held on same day as county elections.

## THE CULL COW AND SCRUB BULL.

In connection with the cull cow, this matter is still exercising the attention of the Board, which learned with interest that the Department has allocated a special brand for cull dairy cows, and this is being given a trial on a purely voluntary basis in the Morrinsville and Helensville districts. It is too soon yet to make any report as to the use that has been made of the arrangement, but it is hoped that the scheme will prove successful, and that its application may be extended to embrace the whole of the Dominion. The scrub-bull question is also receiving consideration, with a view to determining what is the best course of action to adopt to secure the elimination of these inferior animals. It is really difficult to understand why producers continue to penalize themselves by using inferior bulls and cows, and, although the Board does not yet recommend the application of coercive measures, such action may be found necessary if the educational work which is being performed does not bring about the desired improvement. However, a most welcome sign is the development which has taken place in herd-testing work.

#### NAURU AND OCEAN ISLANDS PHOSPHATE.

In connection with the use of this fertilizer, I advised the Board that it came to my notice that some top-dressing experiments with very finely ground phosphate rock derived from Nauru and Ocean Islands were being carried out in Victoria with good results. A sample of the material was secured, and handed for examination to Mr. B. C. Aston, Agricultural Chemist, who reported that it was much finer than any phosphate used in New Zealand, and would pass through a sieve of 120 meshes to the inch. The phosphate in the sample was, therefore, in a much more available form than that on the market in this country. The Board was of opinion that a sufficient quantity of the material should be secured for the purpose of carrying out experiments, which should be conducted under the supervision of the Department of Agriculture. Dr. Reakes stated he would be pleased to give effect to the Board's recommendation, and would furnish reports in due course of the results of such experiments as might be determined upon.

#### ROYAL AGRICULTURAL SOCIETY OF NEW ZEALAND.

A letter was received from the secretary of the society stating that the constitution of the Royal Agricultural Society of New Zealand permitted of the Board of Agriculture nominating two of its members to sit on the council of the society, and asking that two appointees be chosen. The Board has selected Messrs. D. W. Westenra (Dunsandel) and D. Marshall (Waianiwa) to represent it.

#### BUSH-SICKNESS INVESTIGATION.

An outline of the progress made and of the work at present being carried on at the Department's experimental farm at Mamaku was furnished to the Board by Dr. Reakes and Mr. B. C. Aston, Agricultural Chemist. It was noted with satisfaction that the developments on the farm, both as regards the maintenance of live-stock and the improvements made, were very satisfactory. Mr. Aston, who is dealing with the chemistry side of the investigation, in co-operation with the Live-stock Division, stated that the results which have been so far arrived at were gratifying, and the current work was holding out prospects of a still further advance in the knowledge possessed regarding bush sickness and the methods to be adopted in order to overcome it. After receiving this information the Board expressed its satisfaction at the progress which has been made.

#### DEPARTMENTAL FARMS AND EXPERIMENTAL PLOTS.

Balance-sheets of the various farms under the control of the Department of Agriculture were submitted for the Board's consideration, and were reviewed. Each farm was taken separately, and suggestions made in regard to future policy of each. In addition the following resolution was passed in regard to the large farms:—

“In the opinion of the Board the time has arrived when the future policy of the large State farms should be dealt with. Some have served their original purpose, and, unless put to some other use (notably the education of future farmers) of a public benefit, their continuance upon present lines is not warranted. At the same time, the Board appreciates the improved financial position of these farms, as compared with an earlier period.”

#### AGRICULTURAL EDUCATION.

Mr. A. E. V. Richardson, Superintendent of Agriculture, Victoria, paid a visit to the Dominion during 1923, and submitted a report to the New Zealand University Senate on agricultural education in New Zealand.

The University Senate referred the report to the Board for its consideration and comments, and the matter received earnest attention, a comprehensive reply being sent to the Senate.

Since the foregoing was written, in October, 1923, the establishment of a Chair of Agriculture at the Victoria University, Wellington, has been proceeded with, and the appointment of a professor has been made in the person of Mr. G. S. Peren, B.Sc. Agric., Toronto University. The conditions of the trust fund created by Sir Walter Buchanan for the establishment of a Chair of Agriculture required that the selection of a professor had to be approved by the Board. All applications for the position were first submitted to a special and fully qualified selection committee which had been set up in England. This committee communicated its recommendation through the High Commissioner for New Zealand, London, to the University authorities. This information, along with the papers of the various applicants, was made available to the Board, and a special meeting was held to deal with the matter. The relative merits of the various applicants were thoroughly discussed, and the Board decided to endorse the recommendation of the selection committee. This decision was communicated to the Victoria College Council, with whom the final selection rested.

#### MATRICULATION EXAMINATION.

The question of the Matriculation Examination in regard to those students who were studying higher agriculture was again brought up. The Board has formerly made representation to the University Senate, suggesting that the Senate eliminate the necessity for such students having to take a foreign language in the examination and substitute an agricultural subject. The Senate advised that the Board's recommendation could not be given effect to; but, in view of the importance of the question, it was decided to again approach the Senate on the matter.

## RUAKURA FARM SCHOOL.

Early this year Dr. Reakes advised the Board that a commencement had been made with the training of lads at Ruakura, and was proceeding quite satisfactorily. Forty youths were at present undergoing a course of instruction, and it was found that Mr. Smallfield, the resident instructor, required assistance to enable him to cope satisfactorily with the syllabus laid down, and a junior instructor was therefore being appointed.

## RESOLUTIONS FROM COUNCIL OF AGRICULTURE.

The following resolutions, which were referred to us from last year's conference, were fully considered, and replies as set out hereunder have been sent:—

1. "Now that the country is in a better financial position the Government be urged to adopt a more progressive policy in regard to the training of future farmers."

*Reply.*—The principle of this remit was approved, and it was decided to advise the Hon. Minister of Agriculture accordingly. The Hon. Minister has now replied as follows:—

"While the Government realizes the necessity which exists for the provision of suitable facilities for the training of youths in agriculture, the financial position during the past few years has been such that funds could not be made available for the establishment of farm schools. However, as your Board is aware, a commencement has this year been made by the opening of one school at the Ruakura Farm of Instruction, and as additional funds become available it is hoped to extend the instructional work in this and other directions."

2. "That it is desirable that an official scheme be prepared and put into operation to carry out field experiments under uniform conditions."

3. "That Lincoln College, Cawthron Institute, and the Department's experts should meet and agree upon the technicalities of a concerted plan of experiments, such plans to be submitted to the Board of Agriculture."

*Reply.*—These matters were fully considered, and the Board was pleased to learn from Mr. A. H. Cockayne, Director of the Fields Division, that a conference had been arranged between the officers of the Department, the officers of Canterbury Agricultural College, and the Cawthron Institute to discuss the question of field experiments and promote a comprehensive scheme, such scheme to be submitted to the Department and the Board of Agriculture.

4. "That the executive of the New Zealand Council of Agriculture make an effort to secure a reduction in shipping freights on stud stock shipped to the Argentine."

*Reply.*—The Director-General of Agriculture advises me that he has received advice from the Chairman of the Overseas Shipping Committee to the effect that this matter has been carefully considered, but, in view of the fact that the rate on live-stock to the Argentine was considerably reduced early in 1922, it is regretted that at the present time it is not possible to consider further reductions.

5. "That the Conference requests the Board of Agriculture and the Department of Agriculture to take the necessary steps to endeavour to obtain the sanction of the British agricultural authorities to allow New-Zealand-bred stud stock to land in England."

*Reply.*—Dr. Reakes informed the Board that he had set out in a memorandum to the Hon. Minister of Agriculture the full position in regard to the introduction of New Zealand stock into Great Britain, and had represented how unfair was its operation against the Dominion, where animal-disease is so well controlled. He had pointed out that on account of the distance it was unlikely that stock would ever be shipped in any number, and that, as New Zealand obtains most of its stud stock from Great Britain, it was anomalous that we could not send stud animals there. The subject was to be discussed at the Imperial Economic Conference, and the Right Hon. the Prime Minister had taken this memorandum Home with him. It was decided to cable Mr. Massey stating that the Board was particularly anxious that he should press the British Government, through the Economic Conference, to modify the existing restrictions. A cable was despatched accordingly.

6. "That the time has now arrived when a scheme should be adopted whereby all draught stallions travelling or standing for hire in New Zealand should be licensed and subject to veterinary inspection by the officers of the Department of Agriculture."

*Reply.*—It was decided to advise the Hon. Minister of Agriculture that the Board had again had this matter under consideration, and that the Clydesdale Society was entirely in favour of the Bill as presented to the House in 1913, and that the Board trusts that next session he will be able to have it put through, in order that a much-needed improvement in the quality of draught horses may be brought about.

7. "That the question of cattle-tick in the North Island be considered. (Note.—I am instructed to direct the special attention of the Board to the transport of stock on the railways. It is understood that the Department of Agriculture has been endeavouring to arrange with the Railways to refuse to carry stock without permits, and, as there is considerable danger of the spread of tick through transportation on the railways, the Board's attention is specially directed to this point.)"

*Reply.*—This question was discussed with the Director-General of Agriculture, and it is evident that every possible precaution is being taken by the Department's officers to prevent the spread of cattle-tick from localities where it is at present known to exist. All cattle are required to be treated before being allowed to leave the affected "A" area. In the "B" or buffer area a special staff of officers is engaged in keeping a close supervision and to assist settlers in dealing effectively with ticks on any property upon which they are found. No cattle are allowed to leave these properties or their vicinity without first being properly treated to destroy any ticks which may possibly be upon them.

As regards your note drawing special attention to the carriage of stock on the railways, I may mention that, in the tick-infested areas, when stock are not accompanied by a permit from an Inspector the Railway officials have instructions to warn the owner that the removal of such stock is a breach of the Cattle-tick Regulations on his part, also to report the matter to the Inspector of Stock for the district.

8. "That the attention of the Bacteriological Department of the Government be drawn to the large amount of sterility existing amongst cows at the present time, and that urgent steps be taken to cope with the trouble, which is causing very considerable loss."

*Reply.*—This question was discussed with Dr. Reakes, Director-General of Agriculture, and Mr. A. R. Young, M.R.C.V.S., Director of the Live-stock Division. It was stated that sterility is frequently associated with contagious abortion, in other cases by vaginitis, and sometimes probably by dietetic causes. The Department proposed to carry out a special investigation in order to obtain any further knowledge possible, particularly regarding preventive measures. Vaccination was not yet established as a safe and reliable treatment, and under New Zealand conditions, where the cows are not housed, there would be difficulty in applying it in practice, even if it were adopted. Officers of the Department throughout the country were doing a great deal in advising settlers and assisting them to overcome both vaginitis and abortion. The Board agreed that every possible attention is being given to the matter by the Department.

9. "That the Agricultural Department be requested to issue a leaflet on the benefits of dehorning cattle, and the best method of dehorning."

10. "That all cattle (registered purebreds excepted) be dehorned before attaining the age of two years; the Government be asked to legislate in that direction."

*Reply.*—Mr. A. R. Young's article in the *Journal of Agriculture* of January, 1918, was brought under notice, and it was agreed that it was quite suitable for reproduction in leaflet form. The Department of Agriculture was asked to publish it accordingly. An introduction is also being added to the leaflet, dealing with the great suffering and damage being caused by horned cattle in trucks and yards. The Board, however, is not at the present time prepared to recommend that the matter should be dealt with by statute as proposed.

11. "That the question of disease in turnips in the several districts affected be investigated by the Agricultural Department, the loss in the failure of crops being a most serious one to the growers and the Dominion."

*Reply.*—Mr. A. H. Cockayne, Director of the Fields Division, explained the work so far done by the Department to find a swede turnip resistant to dry-rot, the carrying-out of which work, he said, presented no difficulties from a scientific point of view, but many from a departmental point of view, as it would cost considerable money and require skilful attention from both the breeding and pathological standpoints. The Board decided to recommend to the Minister that the work should be pushed on, as the results would many times repay the outlay.

12. "That an endeavour be made to eradicate or check the spread of hutiwai, and that a most thorough method of research work be undertaken by the Department of Agriculture."

*Reply.*—Mr. Cockayne, Director of the Fields Division, was invited to place his views on this question before the Board, and the following paper read by him is quoted for the information of your executive:—

"*The Control of Hutiwai.*—It is difficult at the present moment to outline any direct research work in connection with the control of hutiwai. The Fields Division has, however, carried out a considerable amount of field-work regarding the main methods that have and are being employed against the weed.

"It has been pretty clearly shown that the continued presence and increase of hutiwai is a clear indication that either the management conditions are faulty or else the country is of such a nature that proper management is not possible. Where the spread of hutiwai has been occasioned by fairly continuous close grazing with sheep, spelling the pasture, so that the runners of the plant become raised from the ground-level, and the heavy grazing of these spelled areas by cattle alone during the late summer and winter is a regular practice. This method of control has eliminated hutiwai as a serious weed over thousands of acres in the North. On country suitable for cattle which is moderately well subdivided hutiwai offers no great difficulties in control. The number of cattle necessary for successful crushing will vary according to the badness of the weed, and the ratio of cattle to sheep may vary from one to ten down to as low as one to three and a half. A good deal, however, depends on the actual size of the individual paddock: the smaller the paddocks the wider can be the ratio.

"There are, however, two classes of country where the control of hutiwai presents serious difficulties. These are areas unsuitable for cattle-grazing and where mortality is likely to be high, and areas where the boundaries are often badly fenced and the cattle cannot be confined and are liable to be lost. In the latter cases fencing is the only solution, and in the former (and this refers particularly to steep faces and country requiring a second burn) one will have to have recourse to burning followed by surface sowing with grass. The Fields Division is carrying out some work in this direction in the Whangamomona County to determine what type of mixture is most suitable for country of this description.

"The natural-enemy method of control has not been lost sight of, but at the present time the outlook in this direction is not promising. Recently there have been reports that

hutiwai is kept in control by certain insects in Tasmania, and this matter has been taken up with the Tasmanian Department. So soon as the field investigations have been completed it is intended to publish the results in the departmental *Journal*, and critically discuss the various methods of management that are adopted. In general it can be said that these vary in different districts, but are all fundamentally alike in as much as spelling and then overstocking with cattle for certain periods are the cardinal features."

13. "That this meeting recommend that the control of noxious weeds be vested in County Councils in place of the Agriculture Department, and that this resolution be submitted to the Board of Agriculture for its approval and support."

*Reply.*—In February, 1923, the Board passed a resolution approving this principle. It might be pointed out also that the County Councils have certain powers under this Act to deal with this question already.

14. "That the question of the appointment of a Plant-breeder for the purpose of developing the growth of grasses be referred to the Board of Agriculture, with a strong recommendation in favour of such an appointment."

*Reply.*—It was decided to recommend this for the favourable consideration of the Hon. Minister of Agriculture, who has now advised that arrangements have been made for a Plant-breeder to be appointed in the near future and stationed at the Ruakura Farm of Instruction, Hamilton.

The Board desires me to thank you for the encouragement it has always received at your hands.

Yours, &c.,

JAMES G. WILSON, President.

*Approximate Cost of Paper.*—Preparation, not given; printing (675 copies), £6 10s.

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By Authority: W. A. G. SKINNER, Government Printer, Wellington.—1924.

*Price 6d.*]