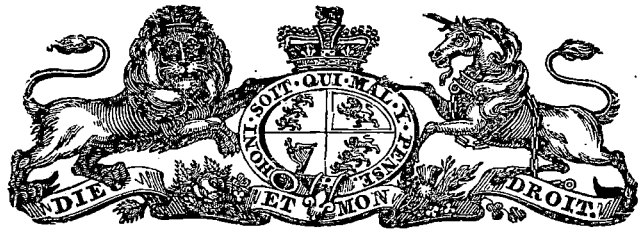


(No. 33.)



1900.

PARLIAMENT OF TASMANIA.

COUNCIL OF AGRICULTURE, TASMANIA:

REPORT FOR 1899.

Presented to both Houses of Parliament by His Excellency's Command.

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COUNCIL OF AGRICULTURE, TASMANIA.

REPORT FOR 1899.

Council of Agriculture, Hobart, 6th June, 1900.

SIR,

WE have the honour to report as follows:—

PERSONNEL OF COUNCIL.

Mr. L. M. Shoobridge (Derwent), Mr. A. Oliver (Devon), Mr. C. W. Allen (Westmorland) Mr. W. J. Thomas (Huon), Colonel Legge (Cornwall), Mr. J. W. Cheek (Launceston), Mr. A. Monnington (Wellington), Mr. F. W. Briggs (Dorset), Mr. M. Fletcher, jun. (Hobart), Mr. J. R. Pillinger (Cumberland), Mr. W. W. Henwood (Pembroke).

In accordance with Section 5 of the Act, lots were drawn, and Messrs. Oliver, Thomas, and Cheek retired at the end of June, but were eligible for re-election.

The two firstnamed gentlemen were returned unopposed, but Mr. G. M. Barnard was elected to represent the District of Launceston. In consequence of Mr. Henwood having failed to attend two consecutive meetings of the Council, without consent, his resignation was accepted, and, in the ensuing election, Mr. Chas. Chipman took his seat as representative for Pembroke. The Council has to record the much-regretted death, through a buggy accident, of Mr. Oliver: Mr. W. E. Bovill was returned as the member for Devon in his stead.

Mr. L. M. Shoobridge still retains the office of Vice-President, and Mr. Thomas A. Tabart that of Secretary, assisted by Mr. L. A. Evans.

MEETINGS OF COUNCIL.

The Council held six meetings during the year, and the following shows the number of attendances of members:—Mr. L. M. Shoobridge (6), Mr. C. W. Allen (6), Mr. A. Monnington (6), Mr. W. J. Thomas (6), Mr. A. Oliver (6), Mr. M. Fletcher (5), Mr. J. R. Pillinger (5), Mr. F. W. Briggs (5), Colonel Legge (4), Mr. Chas. Chipman¹ (3), Mr. W. Cheek² (3), Mr. G. M. Barnard³ (2), Mr. Henwood⁴ (*nil*).

THE COUNCIL'S FUNDS.

It is desirable to point out that hitherto we have had to content ourselves principally with making suggestions in legislative enactments of agricultural importance, the existing circumstances preventing a fair vote being advanced, consequently, many schemes which might easily be introduced, with the certainty of beneficial results following, have had to remain in abeyance. With the increasing prosperity of the Colony, it is, however, felt certain that agriculture will receive more generous treatment, and the necessity of the existence of a recognised body, elected by the farmers themselves, for the purpose of advising and formulating suggestions for Governmental action, arise and occupy the importance it deserves. Without funds very little of a practical nature can be accomplished, and the time now seems at hand when we can claim a larger vote and, consequently, a more extended field of action.

AGRICULTURAL EDUCATION AND EXPERIMENTAL PLOTS.

The movement of establishing field experiments in various portions of the Colony has been in abeyance, owing to reasons stated in the preceding paragraph; but, with the appointment of Mr.

¹ Took office in July. ² Retired, under the Act, in June. Took office in October. ⁴ Resigned in April. Mr. Bovill was elected in May, 1900.

H. J. Colbourn to the scientific staff, this very valuable means of education for farmers can be brought about, if the necessary funds are forthcoming. As instancing the value of these experimental undertakings, we quote the following remarks of Mr. F. J. Cooke, a well-known Norfolk (England) farmer, at a lecture to the London Farmers' Club, in 1894—"Local experiments teach the simple principles which should determine the selection of manures, as well as scientific accuracy and method in their use. The value of experiments is thus brought home to men who would not go far to discover it; and the practice of a few simple trials upon a correct system, each on his own farm, is encouraged. For some years, I have annually conducted private experiments on a very humble scale, and am not aware of any other separate practice which has been so useful to me. It has been pursued upon two light-land farms in different parts of the same country: yet, in respect of manurial requirements, the proper treatment for one of them has differed so essentially from the other that a common practice upon both would have been simply ruinous."

Tasmania imported £32,000 worth of fertilisers during the year 1899, besides that manufactured locally, and the need of such field experiments as those suggested in the "Experimental Plots Report," to demonstrate the rightful and most economical use of such, becomes strikingly apparent. Besides manures, the exposition of the various valuable advances in agricultural practice throughout the world could be undertaken in a small way, so that the farmers in their several districts would have the opportunity of becoming conversant with them without a heavy travelling fare and loss of time.

The Council regrets that, in its opinion, the work of the Agricultural Technical School at Ulverstone did not warrant a recommendation that the subsidy to Mr. Gurney should be continued.

THE DAIRYING INDUSTRY.

A large amount of interest in the direction of improving our dairy stock has been awakened during the period under review, and warm discussions have taken place through the pages of the Council's journal. The consensus of opinion seemed to point to a low condition of our dairy cattle, brought about by neglect and improper breeding, and this view is supported by that well-known breeder, Mr. M'Nab, of Tullarnarine, Victoria, who, at the instance of the then Minister for Agriculture (the Right Hon. Sir Edward Braddon), visited and inspected a large number of our dairy herds in different portions of the Colony. Mr. M'Nab particularised several of the herds which came under his notice as being of a suitable order, but, on the whole, he found them to be of an inferior class, and of no particular breed or type, of which fully 50 per cent. are not in any way suitable for profitable dairying. His report will be found in the December issue of the *Agricultural Gazette*.

With a view to further stimulate advancement in this much-desired direction, the Council accepted a suggestion from the Launceston Branch Board, that Mr. H. W. Potts, the Victorian Scientific Expert in Dairying, should be engaged for a lecturing tour. The Victorian Minister for Agriculture very kindly fell in with the suggestion, on your application, and Mr. Potts visited and lectured at Launceston, Burnie, Wynyard, Ulverstone, Latrobe, Deloraine, Scottsdale, Ringarooma, Lilydale, Tunnack, Sorell, Franklin, Hobart, and St. Marys. In all, fourteen addresses were given to dairy farmers and others, with an aggregate attendance of 2260. Where practicable, a lime-light apparatus, with suitable illustrations, was used, and added greatly to the interest, besides assisting the lecturer to show the photos. of the desired type of cattle. Mr. Potts also inspected six public butter-factories, two private butter-factories, one cheese-factory, one creamery, one milk-supply company's depôt, besides herds of cattle and dairies. Two technical lectures, with demonstrations, were delivered to fourteen butter and cheese factory managers at Launceston on the higher branches of dairying science. Mr. Potts bears out Mr. M'Nab in his opinion that the great majority of our dairy cattle are of a low type, and recommends the Government to import herds of pure-bred dairy strains, the natural advantages of the Colony for their successful development and increase being all that can be desired. This Report will be found in detail in the March (1900) issue of the *Agricultural Gazette*.

The Council notes with much approval the appointment of Mr. A. Conlan as instructor in dairying matters.

THE MANURES ADULTERATION ACT.

No less than six prosecutions have been undertaken within the past season against vendors for failing to post an invoice-certificate of their manures whilst being stored. Five verdicts have been awarded, and in the other case a stand was taken, resulting in a dismissal, which reveals several weak points in the successful administration of the Act.

The result of Mr. Ward's analyses of samples taken by inspectors, and published in the *Agricultural Gazette*, shows an improvement in certain directions, yet a still greater advance can take place; but, unfortunately, it seems to call for more co-operation amongst the farmers themselves, without which, the standard of quality will never be raised to what it should be. The accompanying certificates from outside sources are not in many cases correct when samples are taken from the bulk and analysed.

If vendors were compelled to sell only on certificates granted within the Colony, revelations would ensue to convince even themselves of its importance; and this we submit for your Government's consideration. This course has been closely approached by more than one vendor, and, in consequence, a large shipment (200 tons) of bonedust, containing some 10 per cent. of insoluble matter, has been withheld from sale.

RESTRICTIONS ON NURSERY STOCKS, &c.

The Council has felt it necessary to debar entrance into the Colony of any fruit trees, &c., for the purpose of guarding the fruit industry from the ravages of such pests as the San José and other scales, and to closely examine all imported fruit for flies, &c. That precautionary measures are needed is shown by the repeated appearance of infected fruit on board steamers, which, if passed into consumption, might be the means of distributing these pests throughout the Colony.

The inspection of imported fruit on board steamers prior to its being landed, and its being jettisoned at sea, if condemned, instead of being destroyed on shore, will further remove the possibility of outside contagion.

In order to comply with the demands made by the New South Wales Government, a large quantity of fruit exported hence is subjected to fumigation in properly-constructed chambers, before shipment.

ENTOMOLOGICAL AND BOTANICAL.

The conduct of experiments for the destruction of Codlin Moth and Black Spot has occupied a good deal of the Entomologist's time since his appointment. Mr. Lea is located in the building occupied by the Commissioner of Taxes, and his work is facilitated by the purchase of a cabinet and microscope. His report will be found attached. This officer has been of particular value in detecting San José Scale and Fruit Fly larvæ on fruit stocks and fruit respectively, besides lecturing and giving advice of a practical kind generally.

The Council desires to further place on record the services rendered by the Honorary Botanist, Mr. L. Rodway.

CONFERENCES.

The Council held its Annual Conference of Branch Boards at Launceston in October last. Some 38 Boards of Agriculture were represented, and many practical papers were read and discussed. The holding of Conferences of District Branch Boards is making considerable headway, no less than seven having been held this season, and suggestions formulated for the Council's consideration.

THE POULTRY INDUSTRY.

The advent of Mr. R. J. Terry from London to the Colony, and his subsequent appointment as Poultry Expert and Manager of the Quarantine Station, has been the signal for a large amount of interest being taken in the poultry-yards of the Colony. This much-neglected, yet profitable, branch of farming, it is hoped, will rise in importance, and form a substantial gain to the by-products of the farm, particularly as farmers will now be enabled to secure reliable birds and settings of eggs at a nominal cost. The utility of the quarantine grounds at Nubeena is thereby largely increased, as poultry in no way interferes with the management of cattle, and the necessary outlay for buildings, &c., has been reduced to a minimum. Mr. Terry has already visited some 20 or more different centres throughout the Colony, and given lectures which have received much enthusiastic attention. Even before the poultry season commenced orders for no less than 140 settings of eggs, besides birds, had been handed in. An all-round improvement in poultry is much to be desired, and it is hoped, ere long, that a small shipment of dressed birds, upon which point Mr. Terry is a specialist, will be placed on the London market. His report, giving names of pens of birds, &c., will be found attached.

ARBORICULTURE.

The regulations prohibiting the importation of trees from outside the Colony may probably have tended to check the planting of trees, but the recent decision of the Council to recommend a list of trees, &c., to be drawn up by the Entomologist, which will include members of the *Coniferae*, to be introduced, subject to regulations, will remove this excuse. There are many odd corners about the homestead where suitable trees could be planted, which, besides furnishing shelter for stock from the sun's heat and exposed situations in winter, would form ornamental improvements to what are at present unpromising situations.

OUR PASTURES.

Side by side with the intended improvement of our dairy cattle and their products will come the necessity for increased attention to the Colony's pasture lands. Mr. Briggs, our member for Scottsdale, who has devoted a life-long attention to this subject at his own expense, recently visited and lectured at Forcett, Sorell, Bream Creek, Franklin, New Norfolk, Bagdad, Kempton, Macquarie Plains, and Woodsdale. The thanks of the community are due to Mr. Briggs for his generous interest in this direction, for he has at all times been only too willing to furnish practical information on the grasses and clovers coming under his notice.

"THE AGRICULTURAL GAZETTE."

The issue of the Council's organ has been maintained with regularity, and in the increased size. Selected articles from the Journals of the Royal Agricultural Society of England; the Board of Agriculture, London; Mark Lane Express; Agricultural Gazette; North British Agriculturist; and the various publications of the Agricultural Departments throughout the world are inserted, when applicable to the Colony's condition. We feel, that notwithstanding the utterances in one or two quarters, and by people little acquainted with its contents, that farmers

are well satisfied with the paper, and this is further evidenced by the interest displayed by members of Branch Boards in regularly requisitioning the issues as they appear. Mr. Thos. Hogarth still controls the editorship, assisted by Mr. L. A. Evans.

THE BOARDS OF AGRICULTURE.

Steady progress has characterised the work done by the Boards during the year. In one instance a Board has become defunct, but new branches have been established at Tunnack, Woodsdale, Spring Bay, Ellendale, and Forcett, making a total of 45.

The following is a list of subjects that have been discussed during the past year:—Taxing Orchards; San José Scale; Dairy Records; Sparrows; Cape Weed; Ensilage; Quarantine Regulations; Importation of Plants; Spraying Charlock; Tuberculosis; Dairy Cattle; Slaughtering and Sale of Meat; Fruit Fly; Blackberry Pest; Rape Culture; Fruit Fumigation; Co-operation; Pickling Wheat, *Paspalum dilatatum*, bugs in, &c.

The following papers have been read and discussed:—

Bagdad.—“Smut,” J. J. Hayes.

Lilydale.—“Reaper and Binder,” M. T. Cheek; “The Dairying Interests,” “Establishment of Factories in Tasmania,” “New Industries,” W. Orr; “The Dairying Interest,” Jas. Wilson.

Launceston.—“Cleanliness in Dairying;” “Cultivation of Rape,” “The Quarantine Restrictions,” G. M. Barnard; “The Army Caterpillar,” “Pear and Cherry Slug,” F. M. Littler; “The Soil and its Fertility,” J. G. O. Tepper.

Queenborough.—“Spraying Fruit,” J. Langley.

Sassafras.—“Application of Manures,” H. J. Colbourn.

South Bruni.—“Smut in Grain,” H. Goodwin.

Spring Bay.—“Sheep Dipping,” S. Drake; “Manures,” J. E. Fitzpatrick; “Marketing our Produce,” H. J. Salier.

Ulverstone.—“Hemp Growing,” H. J. Colbourn.

Westbury.—“Destructive Power of Sparrows,” G. Newton; “Improvement of Crops by Selection of Seed,” S. Bendall.

We have the honour to be,
Sir,

Your obedient Servants,

L. M. SHOBRIDGE, *Vice President.*

THOMAS A. TABART, *Secretary.*

The Hon. the Minister for Agriculture.

ENTOMOLOGIST'S ANNUAL REPORT.

It might be as well in this, my first Annual Report, to point out that, previous to my appointment, the Council of Agriculture had no collection of insects, nor entomological material of any kind. Fortunately, anticipating something of the sort, I was enabled to borrow some pins and other absolutely necessary entomological goods from the Western Australian Department of Agriculture. There has subsequently been obtained an entomological cabinet, store boxes, pins, tubes, cork, setting-boards, microscope, &c.

It might also be pointed out that, at the present time (except in my own possession), the available entomological literature of any kind, and especially of economic entomology, is remarkably scarce in Hobart.

During the past year I have been steadily collecting large quantities of insects, in their various stages, and more especially those of economic importance. A number of orchardists and others have also sent in specimens to the department. The entire collection now consists of about 2000 species of all orders, principally from Tasmania, but with large drafts from various parts of the mainland, contributed by myself. Of certain very destructive species, large numbers of specimens have been taken, with a view to preparing sets for presentation to the different Branch Boards and fruit boards. Most of the specimens are carded or pinned, but a few are still in spirits.

It was thought necessary that, before arranging the general collection of insects in the cabinet, it would be as well to wait till the results of two years' collections could be put together, as by that time sufficient material should be available to avoid the necessity of constant rearrangements that would otherwise be necessary with a limited amount of material; in consequence, the general collection is at present in store boxes.

For the economic section a number of cabinet drawers have been already started, and completely or partially filled. Two have been prepared with the view of illustrating lectures.

Others are arranged to show the different pests, in their various stages, that attack particular fruit trees, vegetables, &c. These include both insect and fungus pests: for instance, two drawers are given up to pests of the apple, and one for those of the pear, and so on.

I have also been accumulating material for articles on the different pests, and especially for a monograph of the pests of the apple. It has been considered advisable not to publish much on the pests of the colony until after a full year's residence in it. More especially, as the excellent hand-books (at least Part II.) by my entomological predecessor are still available.

Correspondence has been started with Mr. D. M'Alpine (the Government Vegetable Pathologist of Victoria) with reference to some of the more obscure fungoid and bacterial diseases of the apple.

I have seen the following pests on imported nursery stocks, or on or in imported fruit. (The species marked with an asterisk (*) are not in Tasmania, as far as I am aware):—

HOMOPTERA (Bugs).

* San José Scale	...	...	...	...	<i>Aspidiotus perniciosus.</i>
* Red Scale	...	...	...	...	„ <i>aurantii.</i>
Greedy Scale	...	...	...	...	„ <i>rapax.</i>
Camelia Scale	...	...	...	...	„ <i>cameliæ.</i>
* Fig Scale	...	...	...	...	„ <i>ficus.</i>
* Lemon Mussel Scale	...	...	...	...	<i>Mytilaspis citricola.</i>
* Long Mussel Scale	...	...	...	...	„ <i>Gloveri.</i>
Apple Mussel Scale	...	...	...	...	„ <i>pomorum.</i>
* Croton Mussel Scale	...	...	...	...	„ <i>crotonis.</i>
Black or Brown Scale	...	...	...	...	<i>Lecanium oleæ.</i>
Broad Scale...	...	...	...	...	„ <i>hesperidum.</i>
* Small Black Scale	...	...	...	...	<i>Parlatoria zizyphi.</i>
* White Orange Scale	...	...	...	...	<i>Chionaspis citri.</i>
* Wax Scale	...	...	...	...	<i>Ceroplastes cirriferus.</i>
Mealy Bug	...	...	...	...	<i>Dactylopius adonidum.</i>
* Pine Blight	...	...	...	...	<i>Kermaphis.</i>
Cabbage Aphis	...	...	...	...	<i>Aphis brassicæ</i>
Apple Aphis...	...	...	...	...	<i>Aphis mali.</i>
Woolly Aphis	...	...	...	...	<i>Schizoneura lanigera.</i>
* Green Hopping Bug					

DIPTERA (Flies).

* Queensland Fruit Fly	...	...	...	...	<i>Tephritis Tryoni.</i>
* Mediterranean Fruit Fly	<i>Halterophora capitata.</i>

LEPIDOPTERA (Moths).

Codlin Moth	<i>Carpocapsa pomonella.</i>
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THYSANOPTERA (Thrips).

Thrips

ACARIDÆ (Mites).

* Maori	<i>Phytoptus oleivorus.</i>
Pear Mite	„ <i>pyri.</i>
Red Spider	<i>Tetranychus telarius.</i>

NEMATOIDEA (Worms).

* Root-gall	<i>Tylenchus arenarius.</i>
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From New South Wales the Colony has been constantly threatened during the past season with the Mediterranean Fruit Fly and the San José Scale. Both these pests have been seen on numerous occasions on peaches, quinces, and persimmons from Sydney, whilst the former has occasionally been seen in oranges. One consignment (240 cases of peaches for Hobart) was very badly infested indeed, the maggots from the cases littering the deck of the vessel where they had been placed.

The Mediterranean Fly appeared in three gardens at Launceston, but, owing to the prompt and liberal use of kerosene, it was effectually stamped out. Peaches and apples were the only fruits it attacked there, but there is little doubt that, had it not been checked, it would have extended to other fruits.

Frequent reports have been made by private persons or by Branch Boards about maggots in fruit, especially in bananas; but the maggots shown to me were invariably those of the common ferment fly or vinegar fly. In two instances, however, in which I did not see maggots, the descriptions of the same have led me to suppose that imported fruit infested with maggots had escaped condemnation by the inspectors, which was not the case. In connection with this, I might remark that, no matter how carefully an inspection is made (especially if early in the season), it is impossible, in all cases, to be sure that no maggoty fruit has passed.

The San José Scale has been seen on nursery stock from New South Wales on two different occasions. The first lot was consigned to New Norfolk, the second to Huonville. In consequence of this an embargo was placed on nursery stock and plants of all kinds from outside the Colony. Several attempts have been made to modify or annul this embargo, but the feeling amongst orchardists is strongly in favour of its maintenance. I have carefully examined every orchard visited in the Colony to see if the San José Scale was present in it, but, I am glad to say, it was invariably absent. It is quite possible that should this scale insect appear in the Colony it might not prove to be a serious pest; but we have every reason to conclude that it would be a most serious one.

I have delivered a number of lectures on insect and fungus pests in different parts of the Colony, and have attended a number of Branch Board meetings, conferences of different societies, &c.

Considerable time has been taken up in spraying for the Black Spot and Codlin Moth, and in investigating the same. For the Black Spot a special report has already been drawn up, and is now in print. A similar report is being prepared for the Codlin Moth, but, owing to the nature of the investigation, this cannot be completed for at least a month.

If the experiments against Black Spot, Codlin Moth, and other pests are to be continued, I would recommend the Council to purchase a larger pump than the one they possess; as, whilst the "Notus" pump is a very handy one, it is not suitable for spraying large trees, and two men with a horse will spray more trees in a day with a barrel-pump carried on a sledge, than can be covered in a week by a man working the "Notus" single-handed. Moreover, the "Notus" is especially liable to be choked when Bordeaux mixture is being used.

Yours, &c.,

ARTHUR M. LEA, *Entomologist.*

GOVERNMENT POULTRY FARM.

Brown's River Road, 26th May, 1900.

SIR,

Re your request, I have the honour to forward brief Report of the Government Poultry Farm, at Nubeena, Brown's River Road, and recent lecturing tour.

Four pens of birds were landed at Hobart on December 15, 1899—one pen of each of the following breeds:—Barred Plymouth Rocks, Single-combed Black Orpingtons, Indian Game, and Golden Wyandottes.

Within two months of the landing, 105 chicks were hatched by natural means (that is, not using the incubator). These chicks have grown remarkably well, the casualties being very low, and happening chiefly during my absence on tour. Some of the progeny promise to be an improvement on their parents. These chicks will be fit to breed from in the spring, and it is proposed to utilise them in the following manner:—First, in increasing the breeding stock at farm; and secondly, in distributing surplus roosters to farmers to improve their flocks. It must be borne in mind that, though these chicks have turned out well, they are really a catch-crop, there being no time for selection, or to note good points in parents, and mate accordingly. Also, the eggs, being the last of the season, the parents were run down; so that chicks hatched this spring and summer should show still further improvement.

As regards the lecturing tour, I have visited and lectured at Franklin, Launceston, Ulverstone, West Devonport, Westbury, Campbell Town, Scottsdale, Mersey, Bellerive, Glenorchy, New Norfolk, Beaconsfield, Frankford, Glengarry, Ringarooma, Sheffield, Burnie, Wesley Vale, Bagdad, Kempton, and Sorell. I have been very much encouraged by the interest shown by farmers, and I am of the opinion that there are very few parts of Tasmania that cannot successfully and profitably rear poultry. All that is wanted is a better class of birds, but even with the present stock, I find that on many farms the poultry pay the store bill for groceries, &c. Others find them very useful in keeping down insect pests. Two cases also came under my notice where a mossy grazing paddock was improved by feeding the fowls in a fresh part of it each day: in this way the moss was scratched up. Then there is the manure, the value of which is now being realised by the farmer.

Apart from the export trade, which will require to be very judiciously handled, and provision made to enforce the grading of all poultry exported either to the English or Colonial markets, there is a growing demand for poultry and eggs on the West Coast, at good prices. The demand is greater than the supply. As showing the interest farmers are taking, I have now about 160 sittings of eggs booked (2080 eggs), to be supplied this spring.

Yours faithfully,

ROBERT J. TERRY.

The Secretary for Agriculture.