

powers of this proposed Board would be simply advisory, and whether it be appointed by Act of Parliament or by the Minister what is the difference?

The Hon. R. T. Melrose—It would lead to the creation of another department.

The Hon. T. McCallum—To the creation of a magnified department.

The MINISTER of AGRICULTURE—I cannot see in what way. It is easy enough to state fears, but in what way is there that danger? Mr. McCallum has referred to the autocratic powers of the proposed Board. Everywhere in the Bill where it is stated that the Board shall do certain things it is subject to the control and direction of the Minister, and members' fears about the responsibility of the Minister being taken away are ill-founded. Where it is stated that the Governor "may" do certain things those matters have to go through Cabinet first, so there is no fear there. The power of the engineer at present is much more autocratic than would be the power of a Board consisting of three members.

The Hon. H. Tassie—Besides the engineer will the other two members be the inspectors?

The MINISTER of AGRICULTURE—That is so.

The Hon. H. TASSIE—If the Board is to consist of the engineer and two inspectors why should it not be so stated in the Bill? As it is now worded it would be competent for the Board to be appointed of any persons in the Public Service whether they are in the Roads Department or not. Although the Bill contains features which I object to—powers which seem to be more in the way of coercing a council rather than co-operating with it—I shall support the retention of this clause in the hope that the matters which I think go too far may be eliminated. If they are not eliminated I shall have the right to vote against the third reading.

Clause 6 declared passed.

The Committee divided—

Ayes (7).—The Hons. J. G. Bice, J. Carr, T. Ghuyas, W. Hannaford, A. A. Kirkpatrick, T. Pascoe (teller), and H. Tassie.

Noes (7).—The Hons. J. H. Cooke, J. Cowan, W. G. Duncan, D. J. Gordon (teller), T. McCallum, R. T. Melrose, and G. H. Prosser.

Pair.—Aye—The Hon. J. Jelley. No—The Hon. J. Lewis.

The CHAIRMAN—There are 7 Ayes and 7 Noes. I give my casting vote for the Ayes, in order to allow of further consideration.

Clause 6 thus passed.

Progress reported; Committee to sit again, November 9.

DAIRY CATTLE IMPROVEMENT BILL.

The Minister of Agriculture, having obtained leave, introduced a Bill to promote and encourage the improvement of dairy cattle. Read a first time.

Second reading.

The MINISTER of AGRICULTURE (Hon. T. Pascoe)—Some time ago Mr. Peter Waite made a gift to the State of certain lands for educational purposes. The Government appointed a fairly large and representative Committee to inquire into the question of the utilisation of this gift. Certain matters came before that Committee dealing with the agricultural industry as a whole, and some of them were relegated to subcommittees for consideration and report to the main Committee, in order to economise time and so on. The adoption of the findings of the main Committee has been delayed, probably one of the reasons being the financial condition of the State. The utilisation of that very fine gift of Mr. Peter Waite for educational purposes and to carry out the recommendations of the Committee, mean the expenditure of more money than we can afford at present. We had distinct recommendations from a subcommittee with respect to the improvement of dairy stock. I shall read the report of the subcommittee to the main Committee, which adopted it, and sent it on to Cabinet. In turn Cabinet approved of the recommendations, and this Bill is the result. The report is:—

Your subcommittee has held three meetings, at the last of which representatives of the following livestock associations were present:—The Friesian Cattle Club of South Australia, South Australian Wholesale Milk Producers' Association, Royal Agricultural and Horticultural Society, Stock Owners' Association, Adelaide and Suburban Dairymen's Association, the Australasian Jersey Herd Society. The need for the improvement of our dairy cattle is too obvious to require discussion. The subcommittee recognise that improvement must come through the use of pure-bred bulls of approved milking strains, and that every effort should be made to discourage the use of mongrel bulls and to check bulls of this description being allowed to run at large, as is the case in many districts of the State. A knowledge of the milk-producing records of their cows will induce the majority of dairymen to make every effort to breed only from the best and to improve their stock by the use of bulls from tested milking

strains. For this reason the subcommittee recommend that every effort should be made to encourage herd testing under official supervision. The subcommittee, with the support of the representatives of the livestock associations previously referred to, recommend that the Government be asked to introduce legislation to provide for:—(a) The registration of all bulls of nine months of age or over. An annual fee of ten shillings is suggested. This will not only discourage the keeping of mongrel bulls, but will provide the necessary funds to enable recommendation No. 3 to be given effect to at little cost to the public fund. (b) That an annual sale or sales of purebred dairy bulls be held under the auspices of the Minister of Agriculture. (c) That with a view to encouraging herd testing and the use of bulls of tested milking strains, the Government should grant a subsidy on the cost of such bulls purchased by breeders who are prepared to place the bulls at the services of the owners of other dairy cows. Your subcommittee submits the following suggestions as the basis of the scheme, full details of which would require to be settled by a departmental committee:—(I.) Registration of Bulls.—(1) All bulls over nine months of age inside of hundreds must be registered at an annual fee of ten shillings. (II.) Sales of Pure-bred Dairy Bulls.—(1) There should be an annual sale of pure-bred dairy bulls at such centres as the demand justifies; the bulls to be offered at such sales must comply with the following conditions:—(a) The bull must be pure bred or eligible as foundation stock for Australian Herd Book entry. (b) No bull shall be subsidised which is not the progeny of officially tested stock with satisfactory performance records according to standards to be fixed. (c) The bull must be well grown and true to type. (d) The bull must have passed the official tuberculin test. (III.) Subsidy to Purchasers of Approved Dairy Bulls.—(1) Subject to the following conditions the Government shall offer to approved purchasers of such bulls, provided for in I. (b), a bonus of 25 per cent. of the purchase price at the end of the first year, provided that such bonus does not exceed £25, and 12½ per cent. of the purchase price at the end of each of the two subsequent years, provided that such payment does not exceed £12 10s. per year. (a) The application for bonus to be made on forms supplied at the sale and indorsed by the auctioneer and Government representative. (b) That the owner allows the bull to be available for other owners of cows for service at a fee not exceeding 10s. per cow. The owner shall, in the case of bulls under two years of age at the time of sale, be prepared to accept up to 20 cows during the first year, and the bull must have served up to 10 cows for the same year for which the bonus is paid, and for bulls of greater age he shall be prepared to accept up to 40 cows for the first and subsequent years, and must have served up to 20 cows for the first and subsequent years. (c) The owner to supply to Department of Agriculture list of names of owners of cows and dates of service. (d) The bull shall be kept under conditions satisfactory to the Department of

Agriculture. (e) The owner of the bull shall have the right to refuse to allow cows, which he may have reason to believe to be suffering from contagious disease, to be served by the bull; this to be subject to appeal to the Department of Agriculture. The purchaser shall take precautions against the spread of contagious abortion by regularly disinfecting the bull.

Generally speaking, South Australia possesses a poor lot of dairy cattle. The reason may be that, taken as a whole, we have not been a dairying people.

The Hon. J. Cowan—Because it was not profitable.

The MINISTER of AGRICULTURE—That may have something to do with it. One of the chief reasons why it was not profitable was because the cows did not produce sufficient butter to make it so. It is no good barking the question. The settlers of this State have not been alive to the necessity of keeping well-bred cattle. They have trusted too much to luck in the production of their animals, instead of breeding on a scientific basis. Many of our settlers do not realise that even if dairying is not their chief means of livelihood, it is more profitable to keep a good than a bad strain of dairy cow. Further, no trouble is taken with respect to the bull. Some farmers will not even taken the trouble to castrate their bull calves, and animals of this class of all ages find their way to the abattoirs. No encouragement has been given to the settler with a small herd to buy a good bull and to care for it properly. Whilst mongrels are roaming about the owners of dairy cattle will not pay a few shillings for the services of a good bull. The result is that people who, for their own benefit, have tried to purchase good bulls for their herds have received no encouragement from their neighbors. So the industry has gone from bad to worse. Years ago the Agricultural Department tried to improve the dairy stock by the purchase of what were known as Bureau bulls. The Department bought the bulls and hired them out to the settlers. The result, however, was disappointing. Very few of the settlers were willing to avail themselves of the Bureau bulls, and the men who hired them were generally left to bear the whole expense. The result is that in the inside country, where at least there should be a fairly decent type of beast, the general thing is to find that the animals are no good for dairying, for beef, or for anything else. No wonder that visitors such as His Excellency the Governor, who have taken a keen interest in cattle production in other parts, should feel

disgusted when they see the type of dairy cattle in South Australia. Everything the Government have tried with the idea of improving our dairy cattle, while it may have stemmed the tide of deterioration somewhat, has had no marked effect upon the general run of cattle. While the present conditions continue there is no hope of improvement. Liberal terms have been offered by the Department with respect to bulls. The same can be said with respect to herd testing societies. Much effort has been made by the Government to encourage the formation of such societies. The sole result of all the propaganda work of the Department in bureaux and bureau conferences, and from visits the officers have made to various portions of the State in connection with herd testing, is that we have one herd testing society in the State at Murray Bridge. The benefit of herd testing can easily be seen by the result of the first 10 months' work of that society. From October, 1920, to July, 1921, representing 10 months, the figures are:—Mean number of cows, 303; mean yield of milk per cow, 563 gallons; mean yield of butter fat per cow, 244lbs. Those figures are for the whole of the cows tested, but I also obtained the results from the best herd and the worst herd. The figures relating to the former are:—Mean number of cows, 45; mean yield of milk per cow, 799 gallons, or 236 gallons more than the average of the whole of the cows; mean yield of butter fat per cow, 306lbs., or 62lbs. more than the average yield of the whole number tested. The figures for the worst herd are:—Number of cows, 18; mean yield of milk per cow, 384 gallons, or 415 gallons below the average of the best herd; mean yield of butter fat per cow, 184lbs., or 122lbs. below the average of the best herd.

The Hon. R. T. Melrose—They might have been on different pastures.

The MINISTER of AGRICULTURE—In supplying those figures the Director of Agriculture makes the following comment:—

Whilst it is true that the best herd consisted mainly of pure bred cattle and the worst one of indiscriminately bred animals, it would, in my opinion, be incorrect to attribute the whole of the increased output from the best herd to purity of breed. Equally important from this point of view is, in my opinion, the fact that one dairyman was a good, liberal feeder whilst the other made inadequate provision for winter feeding.

The operations of that particular society show that there is a vast difference between the

yields obtained from different herds, but the benefit of herd testing is that it not only gives you an indication of the value of the herd, but also of any particular cow. One is brought into competition with his neighbors and can see the benefit of their better treatment or vice versa. The knowledge thus gained creates greater interest and impels the dairyman to adopt more scientific methods both as regards management and breeding. The general tendency will, therefore, be towards a better type of cow and greater wealth to the community. There are three essentials necessary to successful dairying. First comes good feeding and treatment. No animal responds more to kindness than does the dairy cow. Careful selection is another thing by which one can increase the type of the dairy herd, and that is within the reach of every man whether rich or poor as it means keeping only the calves from the best producers. The third essential is that of buying, so far as one's financial position will allow, a well-bred bull that comes from a tested line of good milkers. It may not be generally known how great an influence the bull has upon the quality of the dairy herd. It is well known by breeders that cows transmit milking tendencies more strongly through their sons than through their daughters. You can generally get a better result from mating a good bull with an inferior cow than you can from mating an inferior bull with a good cow. The bull, therefore, is one of the most important factors in dairying. I obtained a report on this question from the Dairy Expert, Mr. Suter, and the information he supplies is very interesting. His report is as follows:—

The necessity for some action being taken towards the improvement of our dairy stock is indeed urgent. The low average yield per cow clearly indicates that the dairy stock are not bred upon lines to successfully fulfil the purpose for which they are kept. The proposal under consideration will ensure the breeding of stock of better type and of greater milk and butter producing capacity. Similar action has been taken by other countries. The Swiss Government, starting in 1893, voted the sum of £16,000 annually, and in 1902, so satisfied were they that marked improvement had been effected during the previous years, that they increased the amount to £20,000. Holland has also taken the matter up. In that country co-operative breeding societies are formed, a good bull is purchased, a limited number of cows are allowed, and every assistance is given, even to one or two cow men, with the result that many of those small dairymen now possess some of the finest type of milkers in the Netherlands. Good bulls, the property of these societies, are not allowed

to be exported, but are retained for the country's good. The using of pure-bred sires, with substantial ancestral milk and butter records, has been proved conclusively to have had a marked improvement in the class of stock and milking capacity. Numerous experiments could be cited. At the Ohio Experimental Station the most searching records, going back for many years, showed that from the very commencement the cows were divided into two groups, one group with a bull of unknown breeding milk records on dam's side, the other group with a pedigreed sire whose dam and grand dam held official records showing heavy milk and butter yields, and that the former bull's progeny (daughters) were no good. They yielded over all lactation periods 52galls. and 52lbs. butter fat less than their mothers, and were of defective type. On the other hand, the use of the pure-bred bull, with milk records on both dam's and sire's side, resulted in an increase in milk and butter yields from his daughters over their mothers of 109galls. of milk and 60lbs. of butter fat per lactation period during the year, and an average yearly increase for the entire period of their lactations of 117½galls. of milk and 42lbs. of butter fat. Records show that the price fixed for this bull was just twice that paid for the first bull, who failed to transmit any increased milk and butter capacity to the progeny. Taking a number of years' records of the heifers from both groups of cows bred from, the daughters of the pedigreed bull (a bull from great milk and butter cows) showed such heifers to lead the others by 217galls. and 108lbs. of commercial butter in the first year. Following up the mating of the daughters from the bull of no recognised breeding with a second bull (non-pedigreed), with no official records of his ancestry, but selected on a reputation of having come from a deep milking dam and a sire that had been imported into the State as a good dairy bull, the daughters of this bull, on test, showed an increase of 120galls. of milk and 49lbs. of butter fat over their mothers which were the progeny of a nondescript animal. In pedigree stock breeding the breeder works with a view to increasing the productive power of his animals, and to fix a certain type, but the ordinary dairyman has no objective in view. For instance, I might cite the case of the average milk producer, who does not rest his stock, or at the most only a few head. He pays no attention to the breed of bull, his primary object being to increase his cows freshening each year. But as these calves are sold to a certain producer, reared, and subsequently brought on to the market as calving heifers, a number certainly find their way into the herd of the original breeders. Having been bred from inferior stock, their productive powers are limited, and their progeny, born under the same conditions, will consequently be of inferior quality. This ultimately means the deterioration of our stock, absence of type and milking capacity. In too many cases the only quality of the bull which counts with the farmer is cheapness. The scrub bull is doing more to retard the improvement of breeding stock of type and milk and butter capacity than

any other single factor. It is absolutely useless to attempt any great improvement of the herd unless careful attention is given to the selection of this all-important member. He cannot be too carefully selected from a strain which has a record for large milk production, constitution, &c. The services of such an animal are valuable beyond comparison with one of indifferent breeding. It is wisdom to see that such a bull is mated with none but cows which come up to a good standard. I am hopeful in the near future that the herd-testing results will induce largely in the direction of encouraging farmers to use better sires.

The improvement so desirable in our dairy stock can be brought about by three means, viz., (1) by ridding the herd of poor producers, (2) by using better sires, (3) by better feeding and management. There is no means of determining accurately the production of a cow without weighing and testing the milk at regular intervals. It is true that by means of conformation one can often pick a good producing animal, but this has proved uncertain. The record of a year is not always a fair indication of the real capacity of a cow, since some unusually favorable or unfavorable factors may cause the yield to be higher or lower than normal. The record of a herd should, therefore, be taken as a guide. No way is known whereby the real value of a cow may be determined without any actual test. The herd testing carried out by the Scottish societies has proved its great value to not only the breeders, but also the average man following dairying as an occupation. Until records schemes were adopted, there was no means of knowing the best milk producers. In the past there was very little to show definitely what the progeny of a bull were likely to do when brought into milk. Now, with the information and reliable data available, selection can be made with some considerable confidence. Better sires means profitable stock. The following returns, carefully kept at New Windsor (America), show the improvement made due to a good sire:—Pure-bred bull No. 1—Seven daughters, average lbs. butterfat, 270.5lbs.; seven dams, 208.3lbs.; increase, 62.2lbs. Pure-bred bull No. 2—Seven daughters, average lbs. butterfat, 281.6lbs.; seven dams, 226.4lbs.; increase, 55.2lbs. Pure-bred bull No. 3—Two daughters, average lbs. butterfat, 369.5lbs.; two dams, 254.0lbs.; increase, 115.5lbs. Fourteen out of 16 daughters excelled their dams; the average increase of the daughters over their dams was 30 per cent. On the other hand, a poor bull decreases the milk and butter production of his daughters, and absence of type makes the dairying non-profitable. In the case of a dairying mongrel bull the dam produced 145lbs. butterfat; the daughter or progeny of this scrub bull and this dam produced 126lbs. butterfat; and the granddaughter of the scrub bull produced 99lbs. butterfat. The full value of the sire is determined by comparing the lifetime production of his daughters with that of their dams. Thus it is shown that the blood of the pure-bred dairy sire will influence the herd production for many generations, and

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is proof that he is the chief factor in dairy cattle improvement. In countries where the systematic testing and keeping of milk records has been carried out the movement has been successful in every case, and has resulted in an appreciable increase in the milk yield of the various herds. In Canada the milk yield per cow has increased by 245 gallons and in Sweden by 200 gallons, while in Holland an average yield of 840 gallons has been obtained from 100,000 cows.

The Hon. W. H. Harvey—What is the period represented by the increases in connection with the three pure bulls mentioned in that report?

The MINISTER of AGRICULTURE—I suppose it is for the lactation period. Notwithstanding what has been done in South Australia in regard to herd testing and the importation of good milking strains, by the Government and by private people, very little positive good has resulted. Notwithstanding the propaganda work of the officers and the offer of a liberal subsidy by the Government only one herd testing society has been formed, and we have come to a position when it is time that something else was tried. We have tried importing and loaning bulls and we have tried to encourage herd testing, but we cannot get them that way. Now we must attempt something else to improve our herds, because it is a national question. By the registration or taxation of bulls the probabilities are that we shall get rid of the mongrels, because if a man has to pay 10s. per annum to keep a bull he will realise that if he does not need the animal he will not keep it, and that if he does need it it will be just as cheap, in the matter of registration, to have a good animal as to have a bad one. The registration fee will be 10s. in July for all bulls over nine months old, and for any who have come to that age in January a fee of 5s. will have to be paid to carry them on until the next July. Then there is the question of subsidising and helping dairymen to purchase good bulls. A financial scheme will be drawn up for that, and it will require officers. The tax will be one which will not go into the ordinary revenue. It will be set aside for the specific purpose of encouraging dairying generally, and it is hoped that the tax will make the scheme self-supporting.

The Hon. J. Carr—How will you tell the age of bulls?

The MINISTER of AGRICULTURE—As my friend, Mr. Melrose. Assuming that the average cost of subsidised bulls will amount to £50 and that 3,000 bulls will be registered the following is an estimate of the financial position if the subsidy is withdrawn at the end of the fourth year:—Expenditure—First year, 25 bulls subsidised at £12 10s., £312 10s. administration, £250. Second year, 50 new bulls subsidised at £12 10s., £625; 25 old bulls £6 5s., £156 5s.; administration, £250. Third year, 100 new bulls subsidised at £12 10s., £1,250; 75 old bulls £6 5s., £468 15s.; administration, £250. Fourth year, 100 new bulls subsidised at £12 10s., £1,250; 150 old bulls £6 5s., £937 10s.; administration, £250. Fifth year, 200 old bulls subsidised at £6 5s., £1,250; administration, £250. Sixth year, 100 old bulls subsidised at £6 5s., £625; administration, £250. For the six years the total expenditure is estimated to be £8,375 in subsidy and administration, and the registration fees for those six years are estimated to total £9,000, leaving a small balance in hand to come and go on. The exact scheme is not set out in the Bill, because the conditions will vary from year to year, and the Bill will have to be carried out very largely by regulation. A dairy fund is to be established out of which the subsidies will be paid, and into which all fines and registration fees will be paid. The details of the measure can be dealt with in Committee. We have every reason to be proud of South Australia in regard to the condition of most of our primary industries, but in the matter of the dairying industry we can only look upon ourselves as a rank failure and, as a community, view the position with shame. Once we get those concerned, however, to realise the need for a better breed of dairy cattle I see no reason why we should not raise the value of that particular industry at least threefold. Such is the state into which it has got that I believe we are getting only about one-third that we ought to get from the average of our dairy cows in this State. I move the second reading of the Bill.

The Hon. W. G. DUNCAN secured the adjournment of the debate until November 9.

ADJOURNMENT.

At 4.40 p.m. the Council adjourned until Wednesday, November 9, at 2 p.m.

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Mr. Hugh