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PRESIDENTIAL ADDRESS

"THE GROUP HERD TESTING MOVEMENT"

by

C. M. HUME, DORALTO ROAD, NEW PLYMOUTH.

Whilst appreciating the honour of delivering the first Presidential address in the Post War period, I recognise that fact has added to my responsibilities. The World as a whole is facing change, and to meet those changed conditions we must face the facts as they are not as they have been.

The subject of my address - The Group Herd Testing Movement - is surely opportune as the Old World is desperately in need of food stuffs, and the Group movement is one of the most important links in the drive for increased production. Whilst a short term plan is necessary, consideration must also be given to the long term plan to offset reduction in price when our pre-war competitors have re-established their dairy industries. It must be recognised that, in view of the leeway they have to make up, they will adopt the most up-to-date methods of rebuilding, and for that reason they are likely to produce at a much lower cost in the future than they ever did in the past. It is that fact that will compel us to bring to the light of day the weak spots in our breeding and feeding programme and improve whilst we have the opportunity. Opportunity is here now, action a few years hence will certainly be too late.

I would like, however, to touch for a few minutes on the fact that dairy farming today has not the same appeal as after 1918. Too many of the country lads are seeking positions in the city, and if the industry is to continue at its present magnitude something must be done to make the work on the dairy farm more attractive than it is at the present time. For instance the time spent in the shed can be considerably reduced if non-stripping is adopted. There are sufficient figures available to show that no ill effects or loss of production follows this practice, provided the machines are kept in good order. Whittleston, now attached to the Animal Research Station at Ruakura, has devised ways and means for checking the effectiveness of milking machines. If Dairy Companies would appoint the necessary technicians to service regularly all the machines in use in their area the machine side of milking could rapidly be brought up to date. Such technicians would be operating without a profit motive, and would therefore discourage the purchase of many of the gadgets which now find a ready sale. I know of no more unsatisfactory job, or one more provocative to unsettled argument than the milking of dairy cows without testing them. Fancy a lad taking a position on a dairy farm practically as an apprentice. How can he learn the difference in the productive ability of the cows, or the success or otherwise of the breeding programme, or the real value of supplementary feeding, if the herd is not under test? It would be sound to adopt a policy that if labour is subsidised that herd should be under test. Strange as it may seem, there is no bulletin in existence which sets out the most efficient method of handling a dairy herd, and the milking plant, from the time the shed is made ready until the cleanup is finished. I know that few do the job in the same way, but I am convinced that if the best methods were collected and put together they would at least provide an ideal which the new farmers would strive to attain.

The Group Herd Testing Movement is well known and understood by many of those present, and to those of us closely associated with it, the development has been of great interest. Experience is a sound teacher and its value lies in the guidance which it provides for the future if we will but accept it. The opinion has been expressed by many who have studied Herd Testing methods that our Herd Improvement Organisation compares very favourably indeed with similar work overseas. It would be opportune therefore to examine the steps that were taken in building that organisation, the reasons for those steps, and the results that have been achieved. Let me add here that though the results have been

acclaimed, they are far from what could have been achieved had there been a really unified effort.

Herd Testing was first organised in the 1909-10 season by the Department of Agriculture in conjunction with the suppliers of the Dalefield Dairy Company in the Wairarapa. Some 815 cows were tested, the farmers taking the individual weights and samples over a four milking period, the samples being tested for butterfat by the Factory Manager, or by an officer of the Department. All calculations were made in Wellington, and the farmers were supplied monthly with the results and the individual production up to date. The work was known as THE ASSOCIATION TEST. Good progress was made up to the Great War period (1914) when of necessity the number of cows under test declined considerably. The work up to that date, however, had opened the eyes of many farmers to the fact that good looks in a cow did not necessarily mean she was a profitable producer.

With the cessation of hostilities - in 1918 - a rapid expansion in dairying set in, and, as is already evident today, new methods and new approaches to problems were employed. The recruits to dairying were not prepared to start with hand milking - they demanded to make their start on the most up to date methods then known. Milking machines came into almost general use, many of the new men having had city experience, endeavoured to obtain stock from farmers who were testing their herds. They looked almost with envy on the farmer with the 50 guinea bull, and felt that daughters from such a sire would put them "in easy street" in a very few years. A wide extension in herd testing practice was visualised, but the new factor - of milking machines - prevented its realisation. Experience showed that an extra hand was required in the shed to take the weights and samples. Whilst this could be arranged for in many cases it was found most inconvenient during busy periods, and in consequence hundreds of farmers started testing at the beginning of the season and dropped it before the season was half finished. Dairy Companies did all they could to foster the work, in many cases testing the samples and completing the calculations at no direct cost to the testing supplier. Other factors also arose. Cows were bought on tested figures disclosed at the sale and, after going into the buyer's herd they failed to produce anything approaching these figures. At that time it was quite common to hear quoted in the saleyard the butterfat test of a cow without any indication as to the quantity of milk or the period of lactation when such test was taken. The thoughtful dairyfarmers, however, realised that the testing of cows was imperative if he was to get the maximum out of his labours, and was to be in a position to correctly interpret what was occurring on his farm. It was at this stage that the farmers set out to help themselves, and 1922 saw the start of the Group system, whereby the farmers formed themselves into groups of 27 members and made a levy on a per cow basis to finance an officer to travel from herd to herd once each month taking the weights and samples and testing them for butterfat. The Group system was not new, except to the New Zealand dairyfarmer, for it was in vogue in the Northern districts of New South Wales for some time prior to 1914. Recognising the necessity of the testing of cows, the organisation aimed at providing figures for their members which would be complete and reliable, and at the same time be acceptable to the buying public. As was expected - and it is inherent in all new movements - many difficulties arose the major one being finance. Considerable expenditure was necessary before an Association could operate, and the only way in which credit could be obtained was through a Joint and Several with the Bank signed by a number of public-spirited and keen members. Test fees were collected by order on the dairy company supplied and usually they were spread over the flush months of supply.

In those days there was keen competition between companies and it was not uncommon to find supply transferred during the season without notification to the testing association. Bad debts arose, and as each 27 members constituted a separate finan-

cial unit, these debts made all the difference between profit and loss. Some units had a large number of cows and indeed refused to accept a small herd, thus enabling them to operate at about 4/- per cow. Others, however, had to accept a percentage of small herds to fill the group, and their costs went as high as 8/- per cow. Some dairy companies then stepped into the breach giving a subsidy on each cow tested and guaranteeing the Association's Bank account. In such cases the Dairy Company had representation on the Management Committee of the Association. The principle that each group be a separate financial unit then disappeared and a uniform fee per cow was levied on all members. It was soon recognised, however, that, though the movement should accept herds of any size, a uniform fee was carrying co-operation too far, and a sliding scale of fees was introduced. Rapid expansion took place which but added to the financial difficulties. With most concerns increase in turnover results in the lowering of costs. Such does not apply to any appreciable extent in the group testing work. Each 26 additional members requires another testing officer's salary and travelling expenses, another full set of equipment, more acid for testing and more computations. The only item that is reduced is supervision, and that reduction is almost negligible after a certain point has been reached.

It took little experience to show that, in the interests of all, it was essential that every cow in the herd should be put under test. Many members dropped out after one season, others wished to test only the new cows and heifers, and but few recognised that there was more to the service than merely ascertaining the production of each cow.

Prior to the commencement of the Group Movement, there was no reliable figure of production per cow in given districts, and those guiding the destinies of the Movement recognised how essential such a measuring rod was.

Members were therefore supplied with the herd average month by month, and publication was made monthly and annually of the Group and the Association averages. Even in those early days there were averages of nearly 400 lbs. per cow, but, in practically all such cases, some cows had been excluded from test. Had the slips, sick cows, strippers, and cows being carried over empty, been included the average would have been probably 50 lbs. less. It can be claimed of the Group Movement that from commencement it adopted the policy of "showing the cards face up on the table" and that principle is still adhered to. In effect, it is a case of disclosing all the facts, not merely the facts which are to the benefit of the particular member. Whilst that principle has had much to do with the success achieved, it is the main reason for much of the criticism levelled at the Movement. The task of those controlling the Movement has been far from easy. How pleasing it is to give members what they want!!! In this Movement, however, the policy is firstly to give the member what is in the best interests of the industry as a whole, and, secondly, what is in the true interest of the member himself. These are principles only possible of attainment in a co-operative organisation, and as long as the organisation adheres to those principles so long will it grow from strength to strength with the wholehearted support of our great dairy industry behind it.

Despite the financial difficulties - and I can assure you they were very real by 1925 - the Movement was kept going and an approach was made to the Government for a subsidy, the points made being that the work was of a national benefit, and that the loss made in testing the small herds - at a reasonable cost to such members - was pressing too heavily on the owners of the larger herds. In addition, protection was sought for the Calf Marking Scheme then in operation by the New Zealand Co-operative Herd Testing Association in the Waikato. Though the Minister of Agriculture was most sympathetic it was quite apparent that no subsidy would be forthcoming until unity was achieved of the 8 associations then operating in different parts of the Dominion.

In regard to the Calf Marking Scheme, the Minister made it quite clear that protection could be given only if the scheme was available to all dairyfarmers in the Dominion.

Steps were then taken to form a Federation and this was achieved in July, 1926, to the extent that all Associations linked up except one. That Association operated but one group and at less than 4/- per cow. The subsequent approach to the Minister by the Dominion Group Herd Testing Federation proved successful, and a subsidy of 1/- per cow was approved by Cabinet to apply to the 1927/28 season. A Subsidy Allocation Board was set up to administer the subsidy and when the allocations were made - after the end of the season - Associations were dismayed to find that as the basis of the subsidy was "to reduce the cost of testing to the testing dairyfarmer" the subsidy had to be refunded to each member. The Association's funds were, therefore, reduced by the costs incurred in making the refunds, and another season had commenced without the fees being increased to meet the deficit. The Subsidy encouraged more farmers to test, and a few new Associations were formed, but, in effect the Movement's finances were worse off than ever. A further approach was made to the Minister which resulted in the setting up of the New Zealand Herd Testing Central Executive with power to administer the subsidies in the best interests of the Movement. The Central Executive was composed of the Director-General of Agriculture. The Director of the Dairy Division, Chairman of the N.Z. Dairy Board, Professor W. Riddet and 4 nominees of the Federation one of whom was to be the Chairman of the new body. Later, the President for the time being of the Dairy Breeds' Federation was given a seat on the Executive. At their first meeting, held in Wellington in July, 1929, a broad basis for financial assistance was laid down, and a grant was made to the Federation which enabled that body to appoint a Supervisor of Herd Testing, whose duty it was to assist in the development of the service throughout the Dominion, and where necessary to take the necessary steps to form new Associations in those districts where Group Herd Testing was not then available, and to report to the Federation and to the Central Executive.

Grants became available for the full cost of new plant for new Associations, and for entirely new groups within existing Associations. This gave a real impetus to the Movement, and by 1931 the Group service was available in every dairying district of the Dominion. 28 Associations were operating and all were affiliated with the Federation. Each of these Associations controlled their own affairs but were bound to observe the Uniform Rules of the Federation in respect to the methods of testing, the forms to be used, the method of calf marking and the identification of stock. A Meeting of the Federation was held annually at which each Association had one vote irrespective of the size of the Association. At the time the Federation was formed the N.Z. Co-op. Herd Testing Association in Hamilton was testing more than two-thirds of the cows under Group Test and their action in agreeing to the principle of one Association one vote laid the foundation for the harmony which was outstandingly evident throughout the 13 years the Federation was in existence. At each Annual Meeting the Federation elected their President for the ensuing year and filled the vacancies on the management committee, two of whom retired annually but were eligible for re-election. There was no Ward system for the election of committeemen, but the principle that representation be well spread was never departed from. Membership in the Federation was not compulsory except that Grants were paid only to members of the Federation and calf marking was also entirely in the control of the Federation. Despite these advantages breakaways occurred, and whilst not of serious consequence except in one case, they did indicate that some even more rigid form of control must be instituted if the service was to be kept on the desired plane of efficiency to maintain the confidence of the industry. Representations were therefore made to the Dairy Industry Commission and in their report issued in October, 1934, they stated the value of Herd Testing in these words:-

"Herd-testing is recognised as one of the most progressive movements for increasing the efficiency of dairy herds, and of dairy-farm management. It creates an intelligent interest, shared by the farmer, his family, and employees, in each animal in the herd; raises butterfat-production per cow and per acre, thereby reducing costs of production; and provides a check at monthly intervals on the efficiency of milkers, cows, feeding, season, and farm and herd management. It is the basis of constructive cow selection and herd replacement, and discloses to finance institutions and other lenders the comparative efficiency of individual production units on the dairy-farm. It is, therefore, a movement which is worthy of the greatest commendation."

At that time there were four distinct methods of testing in New Zealand - The Certificate of Record (known as C.O.R.), for selected pedigree cows conducted by the Dairy Division, Department of Agriculture; The Government Official Herd Test (known as Government O.H.T.), also for pedigree cows but supplementary to C.O.R. and also conducted by the Dairy Division; The Group Herd Test - which provided that every cow in the herd must be under test; and the Association Own Sample Test. The Dairy Breeds Federation objected to the proposed change, and no action was taken despite the fact that the number of cows then under C.O.R. and O.H.T. was only 2983 for 248 breeders, as against 275,000 cows under Group Test for 5,500 dairyfarmers. Of the Group cows over 10,000 were pedigree.

The Federation some time later approached the Executive Commission of Agriculture who recommended that the Group Herd Testing work be placed under the New Zealand Dairy Board. The Herd Testing Regulations, 1936, gave the Board authority to regulate and control Group Herd Testing and the branding or marking of stock for the purpose of identifying permanently such stock as being of a standard of merit fixed under a group herd testing system. The Board took over the staff of the Dominion Group Herd Testing Federation and assumed control of the Movement from the 1st April, 1936. The Central Executive then ceased to function and the Board set up a Herd Recording Council to act in an advisory capacity to the Board. The Council comprised 2 members of the Dairy Board, the Director General of Agriculture, a nominee of the N.Z. Dairy Breeds Federation, and four nominees from the Dominion Herd Testing Federation, together with three co-opted members, Professor Riddet from Massey Agricultural College, Dr. E. Marsden (Scientific and Industrial Research) and Mr. W.M. Singleton (Director of the Dairy Division). The Board decided that the Federation should continue to function as it provided the necessary machinery for the holding of annual conferences for the collection of levies, and for the election of the nominees to the Herd Recording Council. Government Grants were promised on a decreasing scale up to and including the 1940/41 financial year. In addition, the assets of the Federation were transferred to the Dairy Board.

The first meeting of the Board's Herd Recording Council was held on the 7th May, 1936, when the policy in relation to the improvement of the dairy herds throughout the Dominion was submitted and approved by the Board. The policy included provision for the annual licensing of Herd Testing Associations as from the 1st July, 1936, which immediately precluded the formation or operation of a group organisation considered unnecessary by the Dairy Board.

The Council also recommended and the Board agreed that a Technical Officer be appointed to the Herd Recording Department, and Mr. A. H. Ward was appointed to the position.

Up to this stage the policy of the Federation was to recommend that replacements and additions to the dairy herds be by "Marked" Stock, i.e., animals identified by way of tattoo as calves from dams which had reached specified standards of production under Group test and whose pedigree sire also had butterfat backing. This scheme was adopted in 1925, but at that time so few pedigree sires had butterfat backing that the scheme com-

menced without that limitation.

In view of the fact that ever since 1925 it has been policy of the Group movement to recommend the building of our herds through the pedigree herd sire, and that this movement has probably done even more for the stud breeder than all his costly advertising, it is remarkable that some of the prominent breeders have been so antagonistic to the development of the Group movement. The answer is definitely found in the fact that the group organisation tests every cow in the herd whereas the other forms of testing allow the breeder to select individuals which are coming in right and which are likely to have a good season. If a good record is obtained then advertising, and a clientele, usually with little understanding of the merits of the figures, brings kudos not only to the particular animal, but to the stud as well. I emphasise again that fundamentally the work of group testing is for the building up of the dairy industry as a whole, the occasional testing of odd purebred cows is for the benefit of the breeder and not necessarily for the benefit of the industry. With the appointment of a Technical Officer it became possible for a careful study to be made of the testing figures over a number of years, and particularly a careful examination of the results to date of the calf marking scheme. It was known that the position generally was far from right, but it was of course useless to put forward opinions that could not be substantiated by figures. For instance, one large herd, using a herd sire whose daughters were producing at least 300 lbs. of fat as 2 year olds, and yet was in the position that the herd average of about 350 lbs. of fat was starting to fall. The fact of the matter was that the dams to which this sire was mated were all top producers, well over the 400 lb. standard. An examination of the production of marked stock, as compared with their dams over a period of years showed that the daughters on the average were considerably lower in production. The answer was, of course, the sire. Of this I will refer in more detail later on in this address. Suffice to say here that at the end of the 1936/37 season the Council recommended that a service be provided for all testing members whereby the general effect of the sire in the herd may be ascertained. The fact was stressed that the scheme should be essentially investigational in character and as complete information as possible should be obtained from the industry. For that reason no discrimination should be made between data from registered and unregistered sires.

It was in March, 1937, that a resolution was carried at the Board's Ward Conference in Gisborne:-

"That the Board give consideration to the establishment of herd testing as a National service, if necessary with financial assistance from the industry as a whole and that this matter be discussed at the Dominion Conference."

This remit was supported by the Dominion Conference early in 1938 and Conference instructed the Board to investigate the position and report to the next Conference. The problem was then handed to the Herd Recording Council and Herd Improvement Plan was evolved. I would again remind you that the Herd Recording Council was representative of all interests connected with dairying, and it was therefore possible to produce a Plan satisfactory to all. The summary of the plan is as follows:-

The N.Z. Dairy Board to institute a Dairy Board Herd Improvement Plan.

The Government to assist financially, in co-operation with the Dairy Board in giving effect to this plan.

The N.Z. Dairy Board to approach the Breed Societies in order to secure their co-operation in the Plan to provide an improvement in the standard of Herd Sires.

The Minister of Marketing to be approached with the request that increased efficiency should not be completely offset by increase in the per cow index on which the Guaranteed Price is based.

After the Minister of Marketing had agreed to the last mentioned clause the Dominion Conference approved of the Plan, and the Herd Testing movement at last became established on a permanent basis. In the consequent re-organisation to obtain greater efficiency, the first step was to encourage amalgamations so that the Dominion would be served by six well organised Herd Improvement Associations, instead of the 28 Herd Testing Associations, many of which were controlled by part time Secretaries who, in many cases, had little knowledge of the work. Each of these 28 Associations had a management committee of at least 8 testing members, without whose help the development of group testing would have been impossible. The task therefore of encouraging amalgamation was one of some magnitude. Meetings were called at central places and an invitation was extended, not only to the Associations it was desired should amalgamate, but also to each member of each management committee, and the Dairy Board agreed to pay the necessary travelling expenses. Within a matter of two or three weeks all Associations, except one, had accepted the Herd Improvement Plan, in its entirety.

The Herd Improvement Plan gave the opportunity of appointing six Consulting Officers who were attached to the six Herd Improvement Associations, though on the staff of the Board. The services of these officers are available to all dairyfarmers whether the farmer is a testing member or not. As the name implies, the Consulting Officer consults with the successful dairy-farmer in his district and then passes on to others those methods which have in practice proved successful. They have a thorough knowledge of the Herd Testing Work and the interpretation of records and in consequence their assistance to members in these directions does materially tend to more continuous testing than would otherwise be the case. And it is mainly from the continuous test records that the annual statistics issued by the Dairy Board are derived. These officers work in the closest possible co-operation with the Field Officers of the various Government Departments, and they therefore provide an excellent channel for the dissemination of information.

The Herd Improvement Plan was launched in July, 1939, just prior to the outbreak of war. It has been carried on over the intervening years despite almost insuperable difficulties. In February, 1943, the Herd Recording Council set up a sub-committee consisting of Messrs. R.A. Candy, C.G.C. Dermer, Prof. W. Riddet, Dr. C.P. McMeekan, Messrs. W.M. Hamilton, C.M. Hume and A.H. Ward, to make a critical review of the sire survey work carried out to date and to prepare a plan to put into effect in the dairy industry the steps necessary to attain the goal indicated as appropriate from sire surveys and to submit its report in a form suitable for submission to the Dairy Board as the considered views of the Herd Recording Council. This was the first opportunity that presented itself of having a thorough examination of the progress of the Group movement since its inception. This report on Sire Survey Work and Herd Improvement Through Breeding was approved by the Herd Recording Council and the N.Z. Dairy Board on the 7th October, 1943, and has been duly published. I will, however, repeat a few of the conclusions arrived at.

The rate of improvement in per cow production has gradually diminished over the past 20 years and is at present practically stationary.

The observed improvement in production per cow in New Zealand since 1920 has been mainly due to improved feeding due to top dressing, better pasture management, conservation of additional winter feed, and the like, with its associated increase in the

of the survey and this has been done.

The report received wide publicity, and whilst the breeders made no approach to the Herd Recording Council - and by the way 6 members of the Council are also members of the Breed Societies - they did attend a meeting called to discuss the future of C.O.R. and O.H.T. As the result of that meeting it was decided that as from probably August, 1946, the Department would not test any pedigree cow under C.O.R. unless all the other pedigree cows in the herd are tested under C.O.R. or under O.H.T. This means that any Group supporter who wishes to have one or more of his pedigree cows tested under C.O.R. must test all his cows with the Government systems and resign from the Group Movement. Many of the committeemen as well as the Presidents of the old Group Associations are breeders. These are the men who have made the Group Movement. In the past their pedigree cows, if under C.O.R. test, were also tested by the Group organisation but at no cost to the member, for the reason that all cows had to be included to obtain the herd average. There are many herds in the Dominion that comprise both pedigree and grade cows, and, if herd testing is to be extended - and it must be if this Dominion is to hold its place on the World's Markets - there must inevitably be a serious overlapping of the two services. A really serious position is unfortunately developing. Not only did the meeting in question seriously handicap the breeder who is a Group member, but it also requested the Department to build up a sire survey scheme for the Herds Testing with the Department as well as a Lifetime Merit Register on the same narrow basis. Taking first the question of Sire Survey:

This has been evolved by the Group Movement and it is dependent on almost continuous testing if the official survey is to be of use during the lifetime of a sire. Is it possible that another Sire Survey Scheme, under quite different control and direction, will be maintained on uniform lines with that already well established and understood? Why a second Lifetime Merit Register? The present one is open to all tested cows - pedigree or grade - and whether tested under C.O.R., O.H.T., or Group provided the cow has reached a total production of at least 2500 lbs. of fat in not more than eight successive years. Both these schemes were built up by the Herd Recording Council, and I again remind you that both the Department of Agriculture, and the Dairy Breeds Federation are represented on the Council. Why now do certain Breeders want a scheme restricted to a comparatively small number of breeders? Who uses the bulk of pedigree bulls sold each year? The grade dairy farmer, and it is the test figures of his herd which proves whether the bull is an asset or a liability to the industry. It is therefore the testing of the grade herds which is essential for the improvement of the industry. In the old days we considered that we were quite safe in choosing a sire from a high producing dam - and that idea encouraged many breeders to enter cows for C.O.R. test. Sire Survey in this country, as well as overseas, has shown conclusively that the emphasis must be on the herd sire, and it is only by testing his progeny that certain progress can be made.

The conditions today remind me of those facing us in 1926 when it became necessary to form a Federation so that undue overlapping and divergence of methods would be prevented. I am not criticising the Department of Agriculture who did so much by way of subsidy to assist in the development of the group work, and is assisting 50/50 with the Herd Improvement work at the present time. My criticism is of those breeders who press for a system not in the true interests of the industry. The problems ahead are serious ones, and this is not the time to make any mistakes.

When speaking of herd averages, and the necessity of every cow in the herd being under test, I stated that the Group movement gave first consideration to the good of the industry. At the meeting with the breeders the Department, I understand, in-

length of lactation, and to the rapid change in breed composition of herds, rather than to selection and elimination of low producers.

The improvement possible on the basis of selection of replacements from the higher producing dams is very slow, due to -
 Regression of daughters towards the mean,
 Heavy culling for disease necessitates saving approximately one-third of replacements from cows below the herd average,
 Rapid expansion in herd numbers by approximately 1,000,000 cows since 1920 has further limited the scope available for selection,
 And not more than 30% of cows have ever been tested, and therefore two-thirds of farmers do not know which are their highest cows.

The farmer has therefore been reliant upon the herd sire as the chief means of ensuring that herd replacements will be of superior producing ability to the culls they replace.

The 1078 Sire Surveys conducted to date indicate that only ONE IN THREE of the bulls surveyed has improved production in the herd in which he has been used, and the net result is that these bulls have been completely unable to improve production.

We believe the present position has arisen because the grade herds in which these bulls have been used now approximate the same level of production as the pedigree stock from which herd sires are drawn.

The difficulties confronting the pedigree breeders in attempting to raise production have been similar to those of the grade herd, but complicated by the pedigree breeders' dual allegiance to type and ancestry as well as performance, and his reluctance to cull rigorously on a basis of performance.

The concluding paragraph of this section of the report reads:-

The facts set out above disclose a very disquieting position in the industry, and one which can be viewed with complacency by neither the industry nor the Breed Societies concerned.

The report went on to make Recommendations to improve the position, and these included:-

The encouraging by Breed Societies by every possible means the use of proven sires in pedigree herds.

Selective registration on a basis of performance, and as a necessary basis for constructive breeding every pedigree herd should be continuously recorded, but the owner should have the option of excluding any cow from the annual herd average by cancelling her registration.

The report stated that more rapid improvement of grade herds can be secured by the sire surveying of as large a proportion as possible of the sires in use in the industry and by using the best proven sires as widely as possible in grade and particularly in pedigree herds by the wide-spread use of artificial insemination. Continuous recording of as high a proportion of herds as possible is necessary to provide the production data on which sire surveys are built up.

The report strongly recommended that the results of all official sire surveys be published irrespective of the results

sisted that every cow must be put under test and that was agreed to. Herd averages then became possible in regard to the pedigree herds being tested by the Government. I noticed recently, yes, with consternation, that even before the new plan comes into operation the Dairy Division has advised the Jersey Breed Society "that it was considered reasonable to exempt, if the owner desired, any cow which had been tested under C.O.R. or O.H.T. for three complete lactations whether in succession or at intervals". I am particularly impressed with the words "if the owner desires" and I contend that such exemption is not in the interests of the industry as a whole. There are some breeders who are resisting to the utmost any scheme through which an herd average can be made up. Few people realise that the destiny of our Dairy Industry is really in the hands of less than 300 breeders - for that number provides practically all the pedigree bulls which go into the industry. The majority of those breeders are not Group supporters. The Government systems provide them with a 3 milking test which in many cases is used for advertising purposes and not for the improvement of their herds. It cannot be otherwise when only some individuals in the herds are under test. Much of this advertising misleads the average dairyfarmer. The 500 or 600 lbs. C.O.R. record is regarded by him as being far in excess of the production of any cow in his herd, and he imagines that a sire with such a backing will surely raise the production of his herd considerably. Such, unfortunately, is not the case. He has quite overlooked the fact that the feeding conditions behind that record were probably far and away ahead of what his own cows had received, in fact had the cow in question been in his own herd it might only have been one of his average producers. Sire Survey results show that the average herd sire is not improving the average herd, and it is the fact of testing selected individuals that encourages this "splash of printer's ink" which, though it assists the breeder financially in many cases turns out to be but another brake on the progress of the industry. With many breeders pedigree is a fetish. What is pedigree? Purely a promise of what we are likely to receive, and promises are so often unfulfilled. The first publication of Sire Survey results was for 100 surveys issued to 31st August, 1938, and showed that 28% of the bulls had improved production, 34% had maintained production, and 38% had lowered production. The last publication, giving the results of 2386 surveys issued to 30th November, 1945, shows that 31% of the bulls had improved, 29% had maintained and 40% had lowered production. These results are almost identical with those obtained seven years earlier and they must convince the most optimistic that all is far from well with the breeding side of our industry. A recent Bulletin (N.89) by Hamilton on the Dairy Industry in New Zealand has appeared at a most opportune time. In an excellent survey of Herd Improvement work he states:-

On page 41: "New Zealand has lagged thirty years behind Denmark and Sweden in its approach to problems of animal improvement."

and on page 47:

"The high proportion of cows under test and the high average production achieved (in Denmark) should give pause for thought in this country. At the same time, in N.Z. one finds dairy breed societies grading stock for excellence on a 'type' basis, judging of dairy stock at agricultural shows on the same basis, and the Young Farmers' Club movement running a competition among its members to place in order of merit a group of PHOTOGRAPHS of dairy cows. In short, there is no general appreciation in this country of the fact that the only sound basis of selection of cows is on individual performance under test or that the value of a sire rests entirely on the lifetime production of his progeny.

Our chief competitors in dairy produce in the near future will certainly be Denmark and the Baltic States and we can rest assured that the latter will copy the Danish methods in rebuild-

ing their herds. We cannot afford to carry on with methods which barely maintain the productive capacity of the industry. The Dairy Board has already had a report setting out the position, and Hamilton's Bulletin, issued by the Council of Scientific and Industrial Research, is even more outspoken on the present unsatisfactory position. The position calls for definite action NOW. The Dairy Board is the recognised head of the industry and it is their job to give the necessary lead to the industry. At the present time their licensed Associations are testing over 4,500 herds comprising over 250,000 cows, many thousands of which are pedigrees. On their advisory Council the Dairy Breeds Federation is directly represented, and each of the Dairy Breeds are indirectly represented by at least one member of each Breed Society. Why, then, continue with the Government's service, for a comparatively small number of cows, especially now that the testing of all pedigree cows continuously is essential to the well being of the industry. The two systems can run conjointly, to the advantage of both, but they cannot both survive in opposition one to the other and the recent decisions in regard to C.O.R. and O.H.T. cannot help but bring about that opposition.

It is contended by some breeders that they require a Government certificate to assist them to build up an overseas market. What about first building up our own industry - practically standing still for the past eight years? In any case, if the Dairy Board had full control of all testing, and the Government has direct representation on both the Dairy Board and the Herd Recording Council, then surely their certificate would be just as acceptable overseas as the C.O.R. certificate is today. The present Group organisation covers every dairying district of the Dominion, they have the desirable decentralisation in 6 main centres, they have committeemen in practically every group, their rules are based on the well being of the industry, and they, in turn, are guided and controlled by the Herd Recording Council on which all interests associated with dairying, including the Government, are represented. Such an organisation is unique and I contend that it is hardly possible to better it. Why, therefore, continue the ill-founded idea to operate two separate organisations in opposition one to the other when already one is thoroughly organised to do the whole job?

In conclusion, my message to this Society, and to the Dairy Industry, is summed up in Hamilton's words:-

"An improvement of 25 per cent to 30 per cent in the average production per cow is not an impossible objective for the dairy industry in New Zealand in the ten years after the War".

You know how to do it - make a start NOW.