

"SOME ASPECTS OF PROBLEMS RELATIVE TO INCREASED APPLICATION
OF KNOWLEDGE OF GRASS FARMING."

by

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The final test of the usefulness of the **labours** of grassland workers is not the knowledge which is acquired by those workers but the extent to **which** that knowledge is applied in practice.

Brief consideration of the extent to which the knowledge we **already** possess is being **applied** seems **likely to** prove doubly useful - firstly, as it may give some measure of the extent 'to which any **future valuable** additions to our knowledge are likely to be used under a continuation of existing conditions, **and**, secondly, as it seems to give unassailable **indication** of great scope for valuable work irrespective of the possibility of future advances in our knowledge of the technique of grass farming.

Evidence of Relatively Poor Application of Knowledge.

The following three circumstances are cited because they seem **illustrative** of the present position in diverse types of **farming**.

Firstly, in a group of **dairy** farms which, for purposes **of study**, were **put on** a uniform footing in respect of valuation, **in** that valuations were made in the one **season by** the same **valuers throughout**, the cost of production of butterfat was found to **be 50 to 70%** higher in some instances than in others.

Secondly, it is **not difficult** to locate, **among North Island** farms which are **devoted** dominantly to fat **lamb** production, pairs of farms which are essentially similar in **respect** to soil and climate and in which the carrying capacity **is 50 to 80 per cent** higher in one than in the other.

Thirdly, it is not difficult to locate adjacent pairs of hill-1 **country** sheep runs of similar **aspect and soil conditions**, one of **which** is so overrun with weeds of secondary growth such as bracken and hard fern as to be in danger of falling into disuse while the other is composed of weed-free pastures right up to **the** boundary fence.

If **such** instances **are** typical of what is occurring in **grass** farming generally, and it is believed that **they** are, then there is **a** serious gap between **our** knowledge and **over general application of that knowledge**. Further it is reasonable to believe that this serious gap will persist unless we seek to remedy it.

Therefore a question of considerable moment that seems to **confront** us is - how to minimise the gap between the knowledge of how **to** advance grass farming and the general application **of** this knowledge.

That the **question** is not a simple one may be seen from a cursory examination of **some** subsidiary questions that arise.

Influence of Source of Information.

It may well be asked, for instance, "**Have those** participating in the task of grass farming advancement adequately taken into account the, fact that the **source** of information **greatly affects** the value attached by farmers to it as guidance for **farmers?**"

It is highly probable that the more removed the source of information is from the farmer's daily life and work, the less likely is the information to lead to changes in his farm practice. If this is so, then farmers generally will pay less heed to advice based on results obtained in laboratories than to that based on results obtained on experimental farms. In--turn they will pay less attention to results on experimental farms than to those on private farms and less to those on private farms, at a distance than to those on private farms in their own neighbourhood.

If all this is true, the question arises, whether, for general guidance; we should not endeavour to make greater use of the methods and results of the better farmers in the various communities. And where these cannot be employed! suitably to take us far enough along the way of advancement whether we should not endeavour to initiate some form of demonstration farms. From what has just been said, it follows that such demonstration farms should probably be departures from farms which are in effect Government stations conducted by paid employees. Probably the needs of the Situation would be satisfactorily filled only by Demonstration farms on an entirely different plan - farms in which the owners would carry on demonstrations entirely at their own expense, but, if deemed advisable, with some assistance financially. While such Demonstration Farms hold promise of being of high advisory value,, they would also fortunately involve no monetary hurdles provided proper care were exercised both in the selection of the matter for demonstration and in execution of the demonstrations.

That the source of advice regarding grassland should be as close as possible to, the daily life and work of those for whom it is intended implies no peculiarity in the mental outlook of farmers. Indeed it seems to exemplify a rule applicable to all human affairs - the 8 rule which would probably be in evidence, for example, in the reactions of a city business man considering the purchase of a motor car. To tell such a man that the value of a particular car had been established in engineering laboratories, would sway him less than to tell him that its value had been established on the racing track, which probably would not sway him much. . . . But to tell him its value had been established by the performance of a similar car in the hands of a neighbour whose roaa conditions are identical and whose skill and care he does not consider superior to his own, would most likely at once beget the attention that is the precursor of action. The respect for the performance of the neighbouring car seems to parallel the respect for the performance of the neighbouring farm.

Influence of Form of Advice.

It may also well be asked whether it would be advisable to give greater attention to the need of making advice reasonably simple. It seems to be not so much a matter of simplicity of language about which there nowadays seems little to complain, but simplicity in- the procedure recommended.

Relative to this matter, the American writer, C. B. Smith, cites a fable:-

"Long ago a man recommend& for 8 certain ailment a certain salt. Of those who suffered and heard him 90% used the salt and were cured. Then he suggested that they dissolve the salt in water, whereupon 75% used the salt.. He next stated proportions, 7½ oz. of salt, 9½ quarts of water,, and 60% used it. He warned against any but China receptacles and 45% used it.. He recommended that the water first be boiled and 30% used it. When he said that the solution should be strained through muslin 15% used it. He finally indicated distilled water for the solution, and then nobody used it at all. Each modification had been sound, and wise and he was much disappointed. Then he gave his solution a name and made

it- up himself and everybody used it."

so much for 8 fable. It probably carries 8 message to us. If so, it is interesting to consider the light it throws on the advice that is tendered at times - that about such grassland matters as rotational grazing and the technique of silage occur to one as recent examples.

To some extent a kindred question arises regarding the desirability or otherwise of giving a wealth of information supplementing any particular piece of advice - information explaining it, confirming it and illustrating it. - Perhaps one can obtain some light on this question-by considering how the average person reacts under parallel circumstances. Probably the average person who wishes to learn how to drive a car is desirous of being told simply what to do and is likely to be annoyed and indeed confused by being told many of the facts underlying or explaining the operation of the car. If so, do we err at times in being over profuse in elaborating our advice regarding grass farming,,

FARM FAMILY NOT
FARMER THE UNIT OF
ACTION IN FARM BUSINESS.

Another question relative to the comparatively poor application of our grassland knowledge arises from the fact that farming is often a mode of life as well as an occupation. Normally, a man's occupation is dominantly his concern, while his mode of life is the concern both of himself and of his family. Because of these facts the unit of action in farm management decisions is as a rule not the farmer but the farm family. Is it likely that we would make more progress in the application of our grassland knowledge if we paid more attention to this fact? There is some evidence that we would. For instance, the enthusiastic support that is accorded Calf Clubs in some districts is probably to be attributed to the fact that the interest of the farm family is aroused.

A measure of the support accorded these clubs may be had from the fact that at times, in school districts, the size of which may be gauged from the fact that the district does not even contain a local store, the field days of the calf clubs become virtually miniature stock shows attended by practically all parents, school committeemen and breeders of pure bred stock in the district.

In the same districts farm matters of much greater intrinsic worth attract very lukewarm attention probably because only the farmers and not their families also, have been reached by the agencies fostering grassfarming advancement. Could something more in the way of reaching the farm family be achieved at a reasonable cost, seems to be a question worth considering.

Age Gap in Advisory Contacts.

Another weighty matter that seems to call for attention arises in connection with the age of those with whom our advisory efforts give contact. Observation suggests that between the ages of 14 and 30 respectively few of those who become the farming community have any worth while contact with agencies fostering better farming. As what happens in the plastic stage of development between these ages must materially affect the ultimate aptitudes and outlook, it seems highly desirable to explore the possibility of doing something more than is being done in the way of acquainting the rising generation of farmers about grassland affairs.

Value of Farmers' Participation in Discovery of Farming.

Another matter which seems to deserve consideration arises from the accepted belief that learning by finding out for oneself is more effective than learning simply by being told. From this it seems to follow that a good foundation for the effective dissemination

of farming knowledge would result from participation of the farm people in assembling the information. The farmers' field competitions in Taranaki seem to illustrate this for it is likely that the high general standard of efficiency attained in Taranaki in such arts as ensilage, 833 farming and forage crop production correctly may be attributed largely to the knowledge gained and disseminated in the farmers' field competitions in which the farmers themselves have participated actively in co-operation with the Department of Agriculture. It would seem worth while to enquire into the practicability of extending such organised effort into other matters and into other districts.

Co-operation with Business Community.

still another matter that seems to warrant enquiry is the desirability of obtaining the intelligent support of other sections of the community. As far as lip service we probably already have this. As far as deeds it is very doubtful, although the support could probably be obtained by little effort. Relative to this view a specific case is interesting, especially as it throws light on the previous contention that advice based on neighbourhood experience is apt to be particularly impressive. . . .

In this case a farmer who never before had topdressed asked advice regarding topdressing. He was shown what his neighbour had done and told he could expect to obtain similar results from similar practice. After saying that he was convinced, he deplored the impossibility of convincing his banker. The banker was also shown and 160 tons of superphosphate were distributed by that farmer on his sheep farm this year. An illustration of the view that a successful advisory service depends to some extent upon co-operation of businessmen and farmers.

Farm Facts merely Tools in Advisory Work.

Probably enough has been said to indicate that giving facts is a small part of the task of bringing about reasonable application of our knowledge of grass farming.

The real task is to get people to change which means that we must know the laws of learning; must know what causes people to change. In brief the job is to teach people; the tools for the job are facts. The critical question is:- Do we generally possess the knowledge necessary to be able to use those tools with reasonable efficiency?

There is a good deal of evidence in support of the view that far too long and too commonly has it been accepted that the job is to know the facts, and so let it be said again, the job is to know how to use the facts and to use them in that way. And now let us think for a minute how we stand comparatively in this matter.

Others in the community use facts for the purpose of having them applied. The barrister, the clergyman, the teacher, the journalist are users of facts to fashion views and actions. It seems significant that in the courses of training for these callings offered at the University and elsewhere, there is specific provision for study of subjects which will fit the barrister, the clergyman, the teacher and the journalist to use his facts. Other parts of the courses are designed to supply the facts but these latter parts are apparently deemed incomplete without the courses that train in the use of facts.

Rightly, grassland workers concern themselves not only about the technique of farming, i.e. the facts of farming, but also about the technique of research that will give reliably the facts of farming. Surely, it may be suggested, that some of them at least should further concern themselves about the technique of teaching the facts when they have been ascertained.

If this is done it will probably be found that in the instruction of adults attention should be centred on the person not the subject matter. To some extent this would be a reversal of the methods now practised.

It may be said definitely that the technique of teaching grass farming in New Zealand most effectively is not known. Grassland workers look upon scientific research as of fundamental importance as the basis of subject matter for dissemination. Scientific information regarding the carrying out of advisory work is of almost equal importance if a national system of efficient education in grass farming is to develop in an orderly fashion. Further, it would be paradoxical if those engaged in advocating the application of scientific information to farming should not apply the same principle of scientific study to the carrying out of their own work.

In view of the apparent importance of the technique of the teaching of grassfarming, interest attaches to the fact that the technique of teaching farming has not been overlooked by others. In the United States studies carried out by the Department of Agriculture have brought out much information that would provide food for thought and possibly also grounds for action in New Zealand. These studies are being supplemented by kindred studies conducted by at least twenty of the individual States. Behind all these studies is the realisation that the successful teaching of farming is not merely a matter of obtaining and passing out information. It is well to remember that if the expenditure of a reasonable grant in improving and investigating the technique of teaching grass farming in New Zealand resulted only in a five per cent. increase in the efficiency of the work now being carried out in the interests of grass farming, then, assuming the present work is worth its cost, this modest increase in its effectiveness would pay many times over for the expenditure relative to the technique of teaching.

This paper, summed up, endeavours to indicate the advisability of calling social sciences such as psychology to the aid of grassland workers for the purpose of improving not their matter but their methods. Hence it is of interest that the following statement appeared in a recent editorial in Nature.

"The evidence suggests that one of the most urgent needs of today is an adequate attack on the social sciences."

"It is highly probable that the most important contributions of science to human welfare during the next few decades will come from such fields as these."