

## NARROWING THE GAP BETWEEN LIVESTOCK RESEARCH FINDINGS AND APPLICATION

C.A. Murray

12 Morecambe Avenue, Belvedere, Salisbury.

I consider it a great, and may I also say well deserved, compliment to Rhodesia that the Society should have decided to hold its Twelfth Congress here in Salisbury. To me it is a great honour to have been asked to serve as your President for the past year and to address you here today.

The editor of our Society's regular News Letter recently had the following to say in an editorial: "Dissatisfaction has been expressed at all levels about the fact that research results are not effectively conveyed to and applied by the farmer and that this is an important reason for our generally inefficient animal production."

I am in complete agreement with these views. As a matter of fact I raised this very question at Congress some years ago and suggested that the reasons for the wide gap between research findings and their successful application by the farmer should be examined. I do not know whether this was ever done.

There are, of course, very good reasons why we should be worried about the inefficiency of much of our animal production. *First*, there is the problem of applying research findings in farming practices as already mentioned. We would, I think, all like to have the satisfaction of seeing the information obtained by our research workers applied by our farmers to their advantage. *Second*, and more particularly in so far as beef is concerned, we are desperately in need of increased production to meet our local and export requirements in the foreseeable future. As far as I can see we will have to obtain practically all of this increase from increased production per hectare which can again only come from increased efficiency. *Third*, we cannot expect an appreciable increase in production from that part of the national herd which is found in the African occupied areas (53% in Rhodesia and 33% in the Republic of South Africa).

Let me assure you all that whatever views I express, I do so with the greatest respect for our distinguished research workers, devoted extension officers and deserving farmers. I would also like to pay tribute to our Governments and the many departments of Governments who have done so much, in one way or another, to assist in the development of livestock farming.

In starting let me emphasise that there is no easy or short-cut solution to our problem. To encourage farmers to exploit new knowledge profitably there are available three powerful and complementary instruments or means of inducement, namely "Extension Services", "Credit" and "Prices". For success all three must be used wisely and in a carefully co-ordinated manner.

Dealing with the *Extension Services* first, I refer particularly to the agricultural advisory services provided by government and the private sector. I think we are all aware that the question of who should be responsible for agricultural advisory work is often a very controversial one. For instance, some feel very strongly that it should be entirely a government responsibility. I am, however, in complete

disagreement with this point of view and fail to find any sound or unprejudiced reasons to support it. In my opinion the government should provide the overall service which, among many other things, should also be responsible for co-ordinating the very valuable advisory services provided by the private sector with those of its own in such a manner that they will be entirely complementary and unnecessary duplication thus avoided. For an extension service to be really effective it *must be dynamic, inspired and adequate*. Likewise it must have the necessary *research and specialist* support and it must work *with and through* the people concerned, the farmers. To me these are basic essentials for success. In a dynamic extension service there is no room for complacency. It is essentially an active field service and workers at all levels should spend a minimum of time in office. At all times there must be a sense of urgency to get things done.

I said the service must be inspired and to achieve this extension workers must *like* the work. They must *believe* in the cause they are serving and have in them something of the missionary or crusader spirit. First, they must get their inspiration from the top and secondly from the satisfaction derived from the creative work they do. I also emphasize that for success an extension service must be adequate in size. Generally speaking I would say that the extension services of the private sector are reasonably satisfactory in this respect. In so far as government extension services are concerned I believe they are adequate in certain parts but hopelessly inadequate in other parts of the area covered by our Society.

Based on my own experience under Southern African conditions, I do not believe a government extension officer, and I refer here to the general extension officer, can assist effectively more than 100 to 150 farmers. To expect him to cope with 1 000 or more is no less than a complete waste of manpower and to the officer himself a most frustrating experience. I have on more than one occasion heard it said that it will be quite impossible to provide an extension cover at the density level suggested by me. This I cannot accept. I believe it can be done provided we:

- (a) Make better use of existing staff in both the government and the private sectors.
- (b) Make the salaries for both the professional and the technical staff more attractive. This is essential for both research and extension workers and the surest way of slowing down to reasonable levels what is usually referred to as the "brain drain" and about which many of us are very worried.
- (c) Encourage the private sector to have more staff trained for their own requirements and as a result to recruit less from government services.

- (d) Agree that good extension workers are not necessarily men with four to six year degrees. Not just anybody, graduate or not, can be a successful extension officer, who is as scarce a "commodity" as the good research worker. Of first importance is the MAN. He must be of good personality and must possess the qualities of leadership, organising ability and able to get on with others. He must be prepared to work hard and should believe in the cause he is serving. Men who fit in with these requirements and who have a good diploma in agriculture are also able to do outstanding agricultural advisory work.

While dealing with the general extension officer I may say I am very concerned to observe a tendency to attach less and less importance to him and more and more to the specialist. I am convinced that this is a movement very much in the wrong direction. Even in medicine the importance of the general practitioner is once again being increasingly appreciated. Let me say too that there is nothing more dangerous than advice given in isolation to the farmer by a variety of specialists without regard to his preferences, his abilities and his farm as a whole.

I mentioned earlier that an extension service must have the support of the research and specialist departments. I am sure we all accept this. At this stage I would like to pay tribute to the research workers, and there are many of them, who have done so much for the livestock industry of Southern Africa. They have certainly done a fine job of work and have much to be proud of. We should all honour them. But in spite of all this excellent work many problems still require solution. Of equal importance is the fact that much of the valuable information which is available is not in general use by farmers. In fact its application lags far behind.

As regards the research work, in relation to its value to the farmer, good and valuable as it is and has been, I would like to make a few observations which I do with the greatest respect for all concerned. I believe there is a great and urgent need for a complete and objective re-assessment of priorities to make sure that more effort, both basic and applied, is concentrated on finding solutions to the more urgent problems of practical importance to our farmers, both European and African, and the industry. May I here make a special plea for effort to solve the problem of how to make the animal industry in our African areas more productive. In general I believe there are certain important fields of work that have had insufficient attention. An examination of the kind suggested will highlight these and may also indicate lines of work that could be discontinued, as research workers often find it difficult to know when to stop work on particular problems. I would also like to see more emphasis on applied work not only as a follow-up but also as a precursor to basic work. Essential too is economic justification of research projects and economic interpretation of results. To me, it is vitally important that in any agricultural research organisation (or planning team) there should be at least one experienced agricultural

economist. A further point I would like to make is that there should be, when necessary, close co-ordination of effort in the research field between government and private enterprise.

May I also put forward a very strong plea to the research worker to make special efforts as a follow-up to his work, to get useful results to the farmer either direct, via the extension services, or by any other means. Far too many of our workers seem to show little interest beyond writing scientific reports on their work. I fail to see how any research worker can get real satisfaction from his efforts until he has seen his findings applied successfully by the farmers. In my opinion, it is very important that the research officer should, at reasonably frequent intervals, spend some time among the farmers of his area to see what is going on and to gain first-hand knowledge of their problems. In some cases he may even assist in identifying them. The discussions will be of great assistance not only to him but to the extension officer and the farmer as well.

There is also the question of the part an Agricultural Research Council could play in narrowing the gap between research and its application. If suitably constituted with farmer representation it should be able to play a vital role in co-ordinating, guiding and strengthening a research programme as well as assisting in making the necessary contact with the farmer and gaining his confidence and support. I do not think, however, that the Council should take over and be responsible for all agricultural research work, both government and private. This, I believe, will be highly undesirable.

As regards the specialist extension officer (i.e. animal husbandry, pasture, soil, etc. specialists) in my opinion he has a key role to play in any extension service but most certainly not in place of or at the expense of the general extension officer. I would emphasise that he should be attached to the service in a full-time capacity. He should, of course, be proficient in his subject. His first and foremost responsibility would be to give in-service training to all extension officers operating in the area served by him. To me, it is important that the specialist should at all times take the initiative. He should never sit and wait for calls for assistance from farmers or extension officers.

At this point I would also like to suggest that at extension level pasture and veld management advisory work should be the responsibility of the animal husbandry specialist. I am pleased to say that this is the position in Rhodesia and I would like to congratulate those concerned on bringing about this very sound and sensible approach. My information is that it is working very well. I feel confident that it will lead to substantially higher levels of veld management over the next decade or so.

I have mentioned very briefly the importance and responsibilities of the animal husbandry specialist in an agricultural extension service. I feel I should also refer to a specialist field in which I believe our extension services have let our farmers down very badly in the past. I refer to the economic field. Farming today requires not only considerable technical knowledge and the ability to apply such knowledge, but also financial planning as well as financial management at a high level. It is nothing less than a highly

complicated business. Thus, it is in the economic field that we find the major weakness in the running of most of our farms and until we can overcome it I can see little progress in raising production efficiency over a wide front. It seems to me essential, therefore, that the trained and experienced agricultural economist should perhaps hold a more important place among the specialist staff serving the extension service than any other specialist. Nothing encourages the farmer to apply new findings and so raise his standard of farming more than worthwhile profits. An economist in the team should also assist in ensuring that all the advice given to farmers is economically sound.

Earlier on I mentioned that an extension service must work with and through the people concerned – the farmers – to be successful. Today this approach is accepted as a *sine qua non* for success. I believe Rhodesia has an organisation which has proved most effective in this respect. I refer to the Intensive Conservation Area system operating under the supervision and guidance of an independent Natural Resources Board. These committees are elected by the farmers themselves. Each Intensive Conservation Area has from 100 to 120 farmers in it. The Committees receive technical assistance from the Department of Conservation and Extension through the services of an extension officer attached to each committee. In this set-up the liaison between officer, committee and farmers is such that the committee looks upon the extension officer as *their* officer assisting *them* and *their* farmers in their area. Similarly the officer feels that the committee is *his* committee helping *him* to assist *his* community of farmers.

To summarise, therefore, the requirements of a successful extension service are that it *must* be *dynamic*, *inspired* and *adequate*. It *must* have the necessary *research* and *specialist* support and it *must* work *with* and *through* the people concerned, the farmers.

The second important lever which can be made available to assist and encourage farmers to implement useful research information is the "credit" one. It is obviously essential that farmers should have the necessary finance to implement the advice given to them. Unfortunately, we know only too well that many, if not the great majority, of our farmers are not able to apply sound financial planning and management to their operations. I would go so far as to say that this is the main reason why so many are not successful and find themselves in financial difficulty. This brings us to the question of the keeping of proper records. There are two main reasons why the majority of farmers are not interested in participating in or making use of farm management accounting services. The first is they do not appreciate the importance or value of financial management and the second is they dislike intensely maintaining simple records and submitting them monthly. Active participation in a farm management accounting service soon pinpoints to the farmer where he is making or losing money. It shows him where his inputs are excessive and how to improve efficiency. It teaches him how to plan his programmes on an economically sound basis and gets him to look at everything he does from a business point of view. And as he becomes financially more successful he becomes more and more interested in applying new information that will raise his efficiency and

increase the profitability of his farming operations. I believe the resistance of the farmer to participating in a farm management accounting service can be overcome quite easily if our major money lending organisations, such as the Land Banks (Agricultural Finance Corporation in Rhodesia) and Farmers' Co-operatives, would make the granting of loans or credit to their farmer customers conditional on their participating in a farm management accounting service. When necessary implementation of a particular farming programme may also be included in the agreement.

I am, I regret to say, very critical of the way our lending organisations lend money to the farmers. Their primary interest is security – to get their money back. With this I do not quarrel. After all it is mostly government money they are dealing with. But where I disagree very strongly is that they do not insist on the farmer to whom they advance a loan keeping simple, accurate and meaningful financial and other records of his farming operations. If they would insist on his doing this and submitting a Farm Management Account Service report on his farming activities for the previous year when applying for a loan for the following season, there would soon be an improvement in sounder lending and more profitable farming. But instead of the most valuable Farm Management Accounting Service report some lending organisations insist on the submission of a document, a balance sheet, which is useful for income tax and some other purposes but, in my opinion, quite inadequate for farm management purposes. I would, therefore, like to make a very special, sincere and urgent appeal to all concerned – government departments, lending organisations, organised agriculture and others interested in the farming industry, to make the fullest use of granting loans and credit to farmers as a means of raising their efficiency and the profitability of their farming. At this point of time and in the foreseeable future it seems to me the most powerful instrument, the "Great Key" I would call it, for success.

I would like to make a further point with regard to the granting of credit. Unfortunately some of our farmers, I would say approximately 25% of them, need not only their credit linked with participation in a Farm Management Service but also require close supervision of their farming activities until they are back on their feet. In other words I suggest they need what is known in other parts of the world as "supervised credit" in close co-operation with the extension officer or a nearby successful farmer. As a matter of interest, experience has shown that by participating in a Farm Management Accounting Service even the successful farmer can increase substantially the profitability of this farm.

Finally, I would like to say a few words about the third factor, mentioned earlier, which can also be an effective means, if used wisely, of inducing farmers to raise their efficiency in production. I refer to prices. In my experience, nothing seems to stimulate the farmers' interest in efficient production as good prices for farm products. I am sure we can all accept this and therefore should, at all times, do our utmost to ensure satisfactory prices for farm produce. For too long farmers have produced food for the masses at unnecessarily low prices.

I feel I must, however, convey a few words of praise to our governments and to the others concerned for the

excellent orderly marketing organisations they have developed over the years in Southern Africa. I believe they are, on the whole, as good as the best in the world although, in saying this, I think that at times they could pay the producer better prices for some commodities.

If I may again summarise briefly what I have tried to convey to you on ways and means of narrowing the gap between research findings and their application by the farmer, I would first like to emphasize once more that there is no easy solution. For successful and co-ordinated use must be made of the key instruments of "Extension", "Credit" and "Prices". In the past they have not always been properly co-ordinated or wisely used to their maximum extent. There

seems no other solution if rapid progress in this direction, namely greater efficiency and profitability in farming, is to be achieved and which is so desperately needed in Southern Africa today.

In conclusion, may I make a very special appeal to all members, both present and absent, of this Society. Our responsibility to the farmer and livestock industry of Southern Africa is great, indeed very great. If we are dissatisfied with the progress we are making in fostering efficiency in animal production let us not blame only the farmers. Let us do some deep self-examination of our own efforts and see what we can do to improve matters. One thing we should not do is let down the farming community and the industry we serve.