THE NEED FOR COLLABORATION BETWEEN INDUSTRY AND GOVERNMENT AGENCIES

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Summary

Recent developments regarding insecticide residues and the necessity for urgent and complicated legislative controls have highlighted the great need for improved collaboration between the chemical industry and Government agencies. If the control of insect pest problems is to be effectively achieved without prejudicing the marketing of New Zealand's primary products or the interests of associated industries, for example, apiarists and orchardists, a much better utilization of existing knowledge and scientific data available from overseas sources, must be aimed at, whether from Government research agencies or from the research programmes of the larger chemical companies. New Zealand cannot afford to duplicate much of this work because of the time factor, the expense, and the limited number of scientists available. A pooling of technical knowledge and experience and a frank interchange of opinions should do much to assist in developing satisfactory and acceptable pest control methods. Suggestions on how this vital problem may be resolved are made.

No BETTER INTRODUCTION to this topic can be made than to quote the conclusions of a leading American university authority:

We must search diligently for a basis of common understanding between Government regulators, research scientists and business executives so that we can meet the dual objectives of a safe and healthful food supply on the one hand, while, at the same time, avail ourselves of every scientific aid to produce, process and merchandize that food supply ever more efficiently and economically. These dual objectives are not in conflict; they are completely compatible, if sensible and determined men set themselves diligently to the task in an atmosphere of scientific objectivity.

This statement sets out very clearly the objectives which should be aimed at. In the ultimate analysis research workers and commercial firms are all working to convey some economic benefits to their clients, the farming community, and to the agricultural progress of the country as a whole. This paper was suggested because it seems certain that much good would come if some better means of collaboration between government agencies and industry can be devised. In other countries collaboration appears to exist to a much better degree.

No useful purpose would be achieved in reviewing the trend of developments over the post-war years. All are aware that there is a great deal that can be done to improve these relationships. First, to ensure that the benefits of the scientific aids developed by commerce or by Government departments are passed on correctly

and as quickly as possible to the farming community; secondly, to protect the farmers from unsound or unproven practices; thirdly, to ensure that any legislation is in fact necessary, and, if so, that it is soundly based and effective in achieving the desired result; fourthly, to ensure that the national economy, export markets, etc., are not prejudiced by chemical residues or other complications.

If it is accepted that an improvement in collaboration is necessary and desirable, then some of the barriers which appear to exist might be examined. In the first place, some of the criticisms of commercial interests might be considered.

(1) *Commerce is actuated by the profit motive*

That is perfectly true. Profits are the lifeblood of commerce, they always have been and always will be. Commerce is under no obligation to apologize for the profit motive. The profit motive leads to the development of commercial enterprise and is the basis for research and development in industry. The charge of exorbitant or excessive profits can usually be refuted nowadays. The agricultural chemical industry both locally and internationally is extremely competitive. This competitive pressure ensures that companies keep the prices of their products down to the lowest economic level. Furthermore, there is in operation machinery for the control of exorbitant profits. A more tolerant acceptance of this profit motive would be a step in the right direction.

(2) *Commercial research is biased*

This might have been justified to some degree some years ago, but, in the present-day concept of the agricultural industry, it can be rather unfair. Most companies in New Zealand are acting as agents for substantial overseas companies who invest large amounts of money into research programmes and employ scientific staff of the highest calibre. The majority of their research work is ultimately published in scientific journals and then can be subjected to normal scientific criticism. These criticisms do, in fact, occur but to no greater degree than occurs with independent Government research workers. Furthermore, the usual pattern in industry is that, as a result of promising research leads, a considerable financial investment (involving shareholders' funds) is made to establish pilot plants and ultimately full-scale manufacturing units. If the research were unsound because of bias, the company's reputation particularly at the shareholders' level, would inevitably suffer.

(3) *Commerce makes exaggerated claims*

Many of the labels, label claims, advertising material, literature, etc., used by New Zealand companies, on behalf of their principal's products, must be approved by those principals before they are used in New Zealand. It is important to recognize that this control is exercised before the labels are submitted to the local approving authority such as the Agricultural Chemical Board or the Stock Remedies Board. These overseas principals are normally very jealous of the prestige and standing of their company and will not permit exaggeration. Furthermore, there is an increasing tendency by New Zealand companies to employ technically qualified staff to conduct experimental work and give technical service. These technical officers are usually very conscious of the need

to continue to command the respect of their non-commercial scientific colleagues. This trend is leading to a more conservative and sound approach regarding product claims.

(4) *The objective of commerce is to exploit the farmer*

This is nothing but a fallacy. Any company selling such products has, as its main objective, the idea of conveying a genuine and direct benefit to the farmer. Commercial people all know that their respective company's standing in the opinion of the farmer and of departmental officials is dependent on the reliability of their product and its label claims. Commercial people endeavour to develop goodwill towards their companies on a long-term basis by the performance of their products and the soundness of their recommendations. Exaggerated or extravagant claims which are not fulfilled by the product's performance in the field can lead to only one thing—a poor reputation in the eyes of the farming community.

These are some points of the critical attitude adopted by some people or departments towards commercial interests. Commerce can justifiably refute them to a greater or lesser degree and state that any company, provided it is operating on the basic principles mentioned of reasonable profits, sound research and experimental programmes, and sound and proven label claims is entitled to expect reasonable collaboration from Government agencies.

It is only fair to state some points of criticism of the "official attitude", and that phrase is used in its most impersonal sense, so that these in turn can perhaps be refuted.

- (1) There is a tendency to consider only local experimental or research work as of any value, whilst at the same time it is freely admitted that local resources simply cannot cope with all the various aspects that should be considered.
- (2) There is a tendency to suggest that only local departmental work is entitled to recognition. Yet many people are well aware of the differences of opinion that exist in New Zealand between different departments and different research workers on the results they have each separately obtained.
- (3) There is a tendency to discourage recommending a new development until all possible variations have been studied and resolved. This holds back progress and completely overlooks the fact that New Zealand farmers are willing to try out a new practice, which might convey a significant benefit, at quite an early stage when success cannot always be guaranteed.
- (4) Commercial research is regarded as suspect until it is confirmed by local official trials—this at a time when there is a continuing clamour about the chronic shortage of finance, equipment and scientific man-power, whilst at the same time commercial interests can offer to New Zealand the benefits of commercial research programmes totalling many millions of pounds and involving hundreds of skilled scientific workers.
- (5) In some cases there is an obvious antagonism towards chemicals as an answer to some problems. Admittedly the use of chemicals has brought its own problems, such as resistance, residues, etc., but many of New Zealand's major agricultural developments in the post-war years have been directly and solely attributable to chemicals developed by commercial research programmes—chemicals such as 2,4-D, MCPA, butyric, 2,4,5-T, DDT, lindane, the organic phosphates, the chlorinated hydrocarbons, new anthelmintics, etc., have contributed greatly to

agricultural methods since the war. The chemical industry which developed and produced these chemicals is designed to continue to produce such chemicals, and until such time as alternative, effective means of controlling weeds, insect pests and internal or external parasites of livestock are developed, the chemical industry will continue to develop new and more effective chemicals to assist the primary producer in dealing with his pest control problems. As the past has shown, farmers will continue to welcome these new chemicals as aids in their farming problems.

- (6) In some cases departments appear to have a mass of data available but very little is published or available to commerce. Commerce is therefore confronted with a departmental opinion which it is unable to study from the point of view of experimental data and perhaps question in the light of its own knowledge.

In some ways and in some cases the above comments may be an exaggeration. They certainly do not apply in each and every case. In many cases excellent collaboration does exist at the personal level but these "attitudes", from a departmental point of view, do exist and they are obviously barriers to improved collaboration and progress.

As the first step, the writer would say the initial responsibility lies with the technical staff of commerce. They must show that they are "sensible and determined men willing to discuss problems in an atmosphere of scientific objectivity." Experimental data must be obtained by scientifically qualified personnel using correct techniques and these results should be presented in a scientific manner. If this is done, then commerce is entitled to expect Government officials to consider such information "in an atmosphere of scientific objectivity". Any discussions at the technical level must be free from commercial or sales pressure. A technical policy can then be formulated from sound scientific principles.

The next responsibility lies with the commercial or sales side of commerce. Sales development must be based on reasonable product claims and reasonable advertising slogans. There is nothing worse than for technical staff, after they have obtained the respect and confidence of Government officials, to feel that they have been let down by the commercial policy of their company. This approach is not incompatible with successful sales development on a long-term basis. It can be incompatible with the short-term sales approach but the majority of companies nowadays do take the long-term view. There is ample practical evidence that companies following this pattern do not experience any great difficulties from officialdom as represented by the Agricultural Chemicals Board or the Stock Remedies Board. It is a pattern which commerce must follow if it wishes to feel entitled to improved collaboration with the Government.

These comments refer mainly to an individual company's policy, which is capable of resolution by each individual company. Much greater difficulty exists, however, when the Government has to consider a problem which involves the conflicting interests of several commercial organizations. There have been several examples of this in recent years, such as residues in meat and butter, the banning of certain dips and their withdrawal from farmers' hands, DDT residues in pastures, etc.

These situations demand collaboration between the Government and the chemical industry as a whole. An improved organizational approach is essential, and surely better provision must be made

for joint discussions at the technical level by technically qualified people. Commerce's own trade group, the Manufacturer's Federation, had an excellent example of this a few years ago. It is worth explaining because it was a good example of the value of collaboration.

Research work in the U.S.A., Australia and New Zealand had demonstrated the improved efficiency of phenothiazine of finer particle size than was currently being offered. Some New Zealand companies, but not all of them, were producing a fine particle phenothiazine or preparing to do so. Others were not. The Stock Remedies Board wished to establish a specification for fine particle phenothiazine. Scientists from Wallaceville met representatives from all the New Zealand companies manufacturing and marketing phenothiazine. They explained their findings and the specifications they wished to establish. This group discussed the problem quite objectively with them. The proposed standards were accepted as a reasonable compromise even though a few companies were adversely affected by the decision. The appropriate legislation was put through without any complications and the benefits of this development were passed on in a sound logical manner to the farming community.

This is a pattern which should be developed. Joint meetings or discussion groups of the technical personnel of the agricultural chemical industry and of the appropriate Government departments to discuss these problems are urgently needed. Conferences of the type of the Weed Control Conference are not satisfactory for these purposes. Representatives need to sit around a table to study experimental data, to present data, and to discuss and interchange their ideas. Industry representatives would certainly be willing and able to make a significant contribution on such matters.

It might be argued that this would be "just another conference" but the suggestion is that they would be discussion groups and that the expense the Government would be involved in would be justified by the benefits of pooling all available information to assist the Government, the farming community, and also the chemical industry in meeting official requirements.

A further example might help. In view of the major changes that have occurred in dipping practices over the last season and from the comments received from Federated Farmers, it is suggested that there is an urgent need for a discussion group on current dipping practices and recommended chemicals. Scientific data presented by industry and by departmental research workers, together with practical experience at the farmer level, could be considered quite objectively and this must surely lead to a better appreciation of the problems which lie ahead of the dipping industry, the officials responsible for the administration of the Stock Act, and the farming community.

Every year there are outstanding problems which would justify this approach. As another example, the present control methods for armyworm (largely *Pseudaletia separata*) could well justify a similar discussion group. There is a lot of confusion in the minds of the manufacturing industry, officials, distributors, as well as farmers, and such a meeting must lead to a useful clarification.

A second step which would improve collaboration would be for Government to make available to industry much more of the experimental information it has at its disposal. It is understood that much of this information is made available by the Department of Agriculture to departmental officers on a confidential basis. Certainly some of this information and possibly much of it, must be

confidential, but surely there must be some which could justifiably be made available to industry on the basis that it cannot be used for commercial purposes. This method was used by a Department of Scientific and Industrial Research officer who is now in commerce, and it was of great value to industry and, to the writer's knowledge, was not abused.

Similarly the deliberation and findings of the discussion groups mentioned above should be made available to all interested companies and not restricted to a selected few. Again an example may help. It is believed that DDT pellets have been shown to produce lower DDT residues on pastures. Obviously, some data must be available as a basis for this decision, but this does not appear to have been published and is apparently available only within limited circles.

It should be remembered that industry voluntarily makes available a tremendous amount of data to Government departments and that the obtaining of this data has necessitated very considerable expenditure. Furthermore, industry is required to submit experimental data to the various approving authorities supporting applications of registration, etc. At present, this appears very much a one-way affair and some attempts by the departments to make available a greater share of Government trial data would be greatly appreciated by industry and should lead to improved relationships and better services to the farmer.