

SOUTH AUSTRALIA

A Review of the Department of Agriculture
in the Light of
Changed and Changing Needs

Report by: Sir Allan R. Callaghan, C.M.G.

Adelaide, December 1973

Terms of Reference

To conduct a review of the present functions of the Department of Agriculture in relation to its proposed future role as envisaged by the Director and adopted by the Government, working within the following terms of reference:

1. To examine the proposals outlined by the Director of Agriculture in his submission dated 30th June, 1972, on "The Future Role of the Department of Agriculture".
2. In line with the proposed terms of reference set out on pages 5 to 11 of this submission, and following consultation with the Director and his staff, to advise on the most appropriate methods of adapting the existing organization and functions of the Department.
3. To make recommendations on priorities for the implementation of the revised objectives and functions of the Department and on the desirability and practicability of expanding or curtailing any existing activities.
4. To make such other recommendations as may be deemed appropriate to the adjustment of the objectives, functions and organization of the Department of Agriculture to serve the changing needs of agricultural industries more effectively in the future.

(The full text of the Director's submission dated 30th June, 1972 referred to above, is given in Appendix 3.)

Acknowledgements

The enthusiastic help and encouragement given by the Director of Agriculture, Mr. Marshall Irving, has expedited and made possible within reasonable time, a sufficiently comprehensive review of the Department's work to develop ideas and desirable changes. The concept of re-organizing the Department along the lines reported was the outcome of various opinions and views, many of which emanated from officers of the Department.

In order to obtain as wide a consensus as possible, opinions were sought from both within and outside the Department. Officers at all levels covering the many diverse interests and services of the Department were drawn into discussion at specially arranged meetings. An open invitation to contribute was extended, and many availed themselves of the opportunity, either openly in group discussion or by representation made personally or in writing.

A number of industry and other interested organizations and individuals made extremely useful representations which were of importance in assessing the implications of change in relation to the present and future role of the Department's functions and services.

The Director General of Agriculture in New South Wales and the Director of Agriculture in Victoria generously provided information with respect to the operations of their Regional Extension Services. With their concurrence, visits were made to Regional Extension Centres at Orange and Wagga in New South Wales, and Bendigo in Victoria. Many relevant opinions were obtained from the frank discussions with the regional officers at these Centres.

In view of the recent restructuring of the Commonwealth Department of Primary Industry, opportunity was taken to discuss the re-organization with the Secretary, Mr. Walter Ives, and senior members of his staff. These discussions, and access to the report covering the recommendations for the changes that have been made, proved useful guides to considerations of re-organization outlined in this report.

The office accommodation and secretarial assistance provided by the Honourable the Minister of Agriculture greatly facilitated the task and enabled evidence and opinions to be fully recorded and available for future reference by the Department should this at any time be desirable.

Information drawn from many published sources has been used to develop and confirm opinions. This, and constructive and critical opinions expressed by others, are gratefully acknowledged.

It is particularly pleasing to acknowledge the splendid spirit of co-operation shown by the Director of Agriculture, Mr. Marshall Irving, his Assistant Directors, Messrs. A.J.K. Walker, P.McK. Barrow and H.P.C. Trumble, and the officers heading the various Branches and Research Centres of the Department, as well as the invaluable and willing services rendered by Miss Helen Westbrook as Secretary during the review.

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Section I

Introduction

A Concept of Regional Organization to meet Changed and Changing Needs

1. In conformity with the Terms of Reference, this report covers a review of the Department conducted with the Director and his staff, and supplemented by opinions from interested individuals and related organizations.
2. The review was never envisaged as a public enquiry, but rather as an objective examination of the present structure, management and functions of the Department, and the manner in which these could best be adjusted to achieve the objectives outlined by the Director in his submission to the Honourable the Minister of Agriculture entitled "The Future Role of the Department of Agriculture" dated 30th June, 1972. (See Appendix 3)
3. An important key to the conclusions reached as a result of the review is the reference in the Director's report to the need for regionalization of the Department's research and advisory services. It was obviously in mind that District Offices of the Department were developing into effective service units, and plans for setting up a regional advisory centre at Struan had already been formulated. Moreover, in recent years, professional seminars under various guises in Australia had emphasized and explored the possible avenues for greater regionalization of agricultural research and extension.
4. In the course of the review, evidence from within the Department overwhelmingly favoured greater regionalization, but opinions as to how this could best be administratively achieved were clouded by the obstructions of fixed thinking around the long-standing administrative structure of the Department. It soon became evident that general re-organization was necessary to achieve regionalization of services.
5. Consequently, a structural format to meet the changed and changing needs and to incorporate the professionally expressed desirability of regionalization of services was designed and discussed with the Director and Assistant Directors as a tentative approach pending further enquiry.
6. The principle of regionalization of agricultural services has been widely accepted overseas, and from tentative beginnings has more recently found favour in other Australian States.
7. In New South Wales, regionalization of the extension services of the Department of Agriculture was begun in 1953. It has grown in strength and its future was assured by the establishment of a Division of Extension Services in 1967. The arrangements in New South Wales have gone through a period of steady growth towards greater autonomy, structural independence and recognition as an effective and permanent improvement to the advisory services. The success with extension led to regionalization of research being undertaken in 1972. The present regions of research and extension do not coincide and both extension and research are still preserved as separate entities without formal structural integration.
8. The Victorian Department of Agriculture established an Extension Services Branch in 1971 with the specific object of regionalizing the Department's extension services. This method aimed to meet the size, complexity and changing needs of the Department's field services, and followed the successful operation of several informal district groups. Research remains independent, but the Extension Services Branch assists in such research matters as defining problems, selecting experimental sites, and integration of results with district practices. The new branch has been fitted into the existing divisional and branch structure of the Department.
9. In both New South Wales and Victoria, retention of the structural format of the Department along former conventional lines has to varying degrees conflicted with the regionalization arrangements.

This created administrative problems, a certain amount of divisiveness, and the Regional Extension Centres have had to evolve towards greater regional autonomy. To make the regional approach completely effective, greater regional autonomy must eventually be achieved.

10. It is important that any changes contemplated within the South Australian Department should profit from the experience gained in other States.
11. With the above in mind, three approaches to regionalization were examined:
 - (a) Regionalization of extension services only in the South-East as a forerunner to the eventual inclusion of research at a later date; the experience so gained to act as a guide to the establishment of other regional centres in the State.
 - (b) The regionalization of extension services independently of research and regulatory functions.
 - (c) The complete simultaneous regionalization of all services of the Department, each region being autonomous, subject to policy direction and resource allocation from Head Office.
12. Evidence in favour of complete simultaneous regionalization was such that it was considered it would be a mistake to go through the organizational difficulties encountered by both New South Wales and Victoria by attempting to graft regional development on to the existing structural organization and allow it to evolve. The preservation of the existing Departmental structure would be incompatible with both the need for other important changes and regionalization.
13. The trauma of immediate change and simultaneous re-organization is likely to be less exacting than a prolonged agonizing evolution that could lead to frustration and a large element of administrative confusion.
14. In order to justify and support the recommendations made, scientific, technical and sociological changes and their impact have been examined, and some necessary professional philosophising made

on the extent and nature of the agricultural services and their relation to the community.

15. The report is by no means meant to be a comprehensive document detailing all the facets of administrative change that will be involved if the guidelines enunciated are approved. Sufficient in-depth examination has been done to prove the feasibility and advantages of the changes recommended. However, considerable study, contemplation and consolidation remain to be done in order to assure the best possible use of the human resources available, and especially those relating to administrative talent and leadership. This next phase is an operational function to be undertaken by the Director and his staff in consultation with the Public Service Board, should the Government approve the principles of the changes recommended.

Section II

Government Services and the Rural Industries

1. We are in a period when former standards are being questioned and challenged. Traditional beliefs, practices and services are no longer accepted on their face value, nor frequently enough are their original concepts properly understood.

The ever-recurring question is "How do we reconcile the past conduct of affairs with the needs of today?"

How, then, should we view the accepted practice of providing Government services to the rural industries? What innovations, modifications or changes in approach and direction are needed to meet the changed and changing circumstances?

2. Governments in all advanced countries of the world provide such services to develop, improve and guide agricultural production, and to protect its economic viability including the welfare of its farmers. That this should be so has never been validly challenged, because a continuance of such services is essential to the efficiency and prosperity of rural production and the maintenance of balance in economic development.

3. The rationale for this stems from the **national importance** of agriculture and from the many **economic features peculiar to rural industry**, as exemplified by the following:

- (a) The rural industries are sources of food and fibre at all times essential to the community, and their capacity to supply these needs is a vital insurance in times of national emergency. Consequently, their continued well-being is a matter of paramount national importance.
- (b) Agriculture uses the most important national resource of all — the soil. Farmers are the trustees of this resource. Its exploitation has spelt ruin to former regions of high production and to civilizations that depended on them.
- (c) Land is the basic factor of production: plants grown on it receive rain

and sunshine — the energy for production. Plants, in turn, are indispensable sources of food and energy for animals and man. Because of this, agriculture is an economy of nature dependent on water and sunlight for energy, with its —

- roots in the soil;
- production units widely and unevenly dispersed;
- limitations and opportunities determined by variable seasonal and other natural phenomena.

Agriculture uses, and will continue to use, the primary and inexhaustible energy source for food and fibre production.

- (d) Rural products are produced, not in large single factories with recognized know-how, controlled procedures and regular output of standard quality goods, but by innumerable widely-scattered units of production — family farms — "the firms" — dependent upon variable knowledge and skills, variable soil and climate, and with inevitably variable quantity and quality of output.
- (e) In most other industries, a new technique discovered anywhere can be applied immediately everywhere. This is not so in agriculture. Two major variants are soil and climate. These determine the crops that are grown. Soils, climates and crops differ greatly not only from country to country, but from region to region, and even district to district. A new practice or a new crop variety developed anywhere is by no means suitable everywhere. There intervenes the need for testing the applicability of innovations to local environmental conditions.
- (f) Protection of rural industries from the full ravages of pests and diseases makes a mammoth contribution

to production. The chemical aids used in such protection are presenting other problems relating to ecological balance and hygienic standards. Quarantine and disease eradication are further protective measures of direct service to both the producer and consumer.

- (g) For the most part, agricultural goods are produced in large seasonal quantities rather than continuously, and most are either bulky or perishable, requiring storage, processing or immediate sale. Their levels of production and prices are not very predictable. To ensure basic levels of production and stability of supply to markets at all times, surplus production from time to time is an inevitable consequence. Export outlets are essential to preserve continuity of local supplies.
- (h) In the process of production, the farmer has to perform many tasks. His production is usually diversified. This means greater variation in the tasks he, his labourer or family must perform. It follows that for the most part continuous output and division of labour — the very foundations of industrial production — are lacking in agriculture.
- (i) In marketing, rural products go through a long procedure of handling, transport, aggregation, storage and distribution from the farm to the consumer — a procedure which, in highly developed economies, is more costly than the initial costs of producing the raw material.
- (j) Rural producers depend on their own skills and management. These are conditioned by their capacity to interpret and adapt to their own particular circumstances, advances in knowledge and other aids to production. Consequently, a prerequisite to improvement in their skills and managerial ability lies in the ready availability of technical and economic advice.
- (k) Unless improved production techniques are constantly sought by research, and farmers are led and encouraged to apply them, rising

costs of production will prevent the possibility of food remaining relatively cheap, with a significant bearing on the cost structure of the community as a whole. Agricultural research, advice and biological protection thus have implications extending far beyond their direct application.

- (l) There exists a built-in resilience, backed as a rule by great human fortitude, to the fluctuating fortunes of farming. As a way of life it offers challenge, it is satisfying, essentially independent, steady, and more durable in the face of temporary misfortunes than is the case with other occupations. This makes change to other occupations uninviting and even frightening.
 - (m) Many advocated changes posed by economic principles such as the application of the economy of scale, lead the producer into unaccustomed problems of finance and financial management.
4. Although modern innovations and advanced technology have increased the efficiency of all aspects of production, distribution and marketing, wrought tremendous changes in procedures, practices and the way of life, increased capital needs and reduced labour requirements, the unique significance and organization of agriculture as an industry remains. It still —
- provides raw materials for food and fibre with its welfare of great national importance: the bulwark of national self-sufficiency in times of need;
 - has the same economic peculiarities that distinguished it from all other forms of production;
 - has to fit new knowledge to very variable environments and circumstances.
5. For these reasons, the need for agricultural services is not a relic of the past. It is a concept as vital today as much as it has been in the past: a justifiable charge to be met by the community as a whole. But the past approaches, methods and organizations are being challenged in the light of technological changes that have

affected production, quarantine, food standards, disease and pest control, marketing, transport, communication, personal movement, and the integration and levelling out of information available to the community.

6. There is a growing tendency by the community to overlook the crucial role played by rural industries in providing food and fibre for domestic needs at reasonable costs, and the part they play in generating overseas credit through their exports. It would be inimical to progress if this led to reduction in the continuous service to rural industries by Government, and to industry sponsored research and advice.
7. In this connection, it should be pointed out, however, that the pattern of financial support for rural industry through the Departments of Agriculture in all States, has undergone a marked change in the last 20 years. The advent of Commonwealth Government support for research and extension work, through the Commonwealth Extension Services Grant, and by way of grants matching \$ for \$ funds raised by many rural industries, has been most significant. In 1972-73, for instance, expenditure from all sources by the South Australian Department of Agriculture on research, extension and regulatory work, totalled \$6.28 million; of this \$1.25 million was provided by the Commonwealth Government and Commonwealth/industry funds for research and extension.
8. A full appraisal of the interaction of the deployment and effect of such funds with those provided by the State Treasury has not been made and should be undertaken. Of special concern is the effect of financial support on a non-permanent basis from bodies outside the South Australian Government on staffing of the Department of Agriculture.
9. A nation neglecting its agriculture can only do so at its peril. In a country still so dependent on its agricultural industries for overseas income as is Australia, and as is South Australia in particular, agriculture is even of more transcending importance.

Section III

Scientific, Technical and Sociological Change

The Changed and Changing Scene

1. Since World War II, scientific and technological advances have revolutionized production techniques and increased efficiency. Progress in rural production and in its efficiency has been as noteworthy as any; but the true significance of this progress has been masked and perspective lost by parallel developments in industry of equal significance.
2. Economic growth and rising productivity in the community will continue to be accompanied by:
 - Greater industrialization and urbanization;
 - More and more of the nation's work force engaged in industry, commerce, mining and tertiary services;
 - Reduction in the percentage contribution by the rural industries to the gross national product;
 - Diminution of agriculture in political strength.
3. On the other hand, the rural industries will continue to be:
 - The custodians of the nation's greatest resource – the land;
 - The suppliers of the nation's food and much of its fibre;
 - Important earners of overseas income.
4. Frequently overlooked is the tremendously important contribution made to the growth of industry by demand from the rural sector for farm machinery, transport vehicles, fertilizers, pesticides, herbicides and veterinary medicines. Moreover, rural industries support and stimulate large segments of commerce and finance through the transport, storage, processing and marketing of rural products, and the financing of production and distribution.
5. The greater reliance on off-farm inputs represents a change of widespread economic significance, with implications affecting farm life, efficiency of production, and the relationships between agriculture and industry. The many aids to production have been developed and are merchandised by industry bringing about a shift in labour requirements from agriculture to industry, increasing farm capital and financial requirements, and the need for greater farm managerial skill.
6. Many of the inter-dependent agencies have a large staff to serve their sales or merchandising operations. Bankers and financiers generally are not very well informed agriculturally. These representatives of industry and business have made, and will continue to make, a contribution to the dissemination of knowledge to the scattered "firms" of agriculture, but they are no substitute for the impartial and well-trained agricultural scientist. In view of their considerable responsibility to agriculture and animal husbandry, and their tremendous influence on what the farmer does, this large group of employees influencing agriculture should work more closely with the Department of Agriculture, so that they are better informed for the tasks in hand, and complement the independent advisory work of Departmental officers.
7. An obvious place exists in the Department of Agriculture to assist by directing some of its educational and extension efforts to meet these needs. Co-operation, encouragement and help will be mutually beneficial and act as a safeguard to the many financial decisions that the producer has to take.
8. It is fallacious to assume that the ancillary industries and others duplicate or supersede Government agricultural services. Rather, there is an urgent need to bring about a closer correlation between the two groups by lifting the agricultural or animal husbandry qualifications of industry employees. Special training courses provided by the Department for the major groups would serve to unify the content and quality of the advice given and bring about a desirable closer working relationship with industry.

9. There is a growing tendency for what economists call "integration", both horizontal and vertical. This development is especially true in livestock production, where such systems of production have been pioneered by the egg and broiler industries, and where methods and management have more in common with industrial production than with those that apply to normal agriculture. The greater the integration, the less dependent are such industries on advice, because the very nature of their methods and management call for expertise within the organization itself.
10. On the other hand, the Department can perform and is already performing a valuable service to these industries and the community as a whole by providing objectively designed and formulated segments of the integrated structure, and equally objectively oriented advice. This is well exemplified by the work being done by the Department for the poultry industry covering the genetic, feeding, disease control and marketing segments of this highly integrated industry, a service which may well prevent excessive exploitation of the industry by monopolies in this State.

Recognizing and Meeting Change

11. As the economy expands, changes in attitudes must be recognized. The danger is that the present misinterpretation of the importance of rural industries, the part they play in the well-being and welfare of people and the economy as a whole, will be exacerbated by opinions based on false premises. While the urban sector regards the rural sector as being cosseted and pampered beyond its worth, this unenlightened opinion will gain ground.
12. The Department of Agriculture has a real function to perform in restoring balanced thinking. Public relations efforts should be aimed to create a more accurate image by influencing rural industry organizations as well as portraying to all sectors of the community their continued dependence upon the prosperity of the rural industries. The ubiquitous fluctuations in the fortunes of primary producers is a feature of their occupation. They have their prosperous times, but "crying wolf" when times are

bad does little to enhance their image. Essentially, the Department should provide a continuous service, but sufficiently flexible to meet the ever-recurring variations. It should be fully informed on the true state of the rural industries, and advise Government on policies that are in their long-term interests.

13. The handling, storage and marketing of farm produce have undergone revolutionary changes, so much so that it is difficult for the producer to identify his produce when it reaches the consumer from supermarkets. Markets are being affected more and more by consumer preferences which in turn are determined by levels of income, standards of living and advertising. Processing and packaging of foods and the manufacture of fibres have reached new levels of refinement. Preservation and storage techniques are making foods available in season and out of season (at a price). So great have been these changes that the farm-gate price is frequently only a fraction of the price the consumer pays. American research has shown that something like 70% of the price is attributable to the marketing process.
14. An objective examination of all these changes in the interests of both producer and consumer is a service that should be rendered by the Department of Agriculture.

Sociological Changes

15. While agricultural methods and practices have changed, so too has the way of life. The former contrasts between country life and city life have been largely eliminated:
 - No longer are country people isolated as they were before the universal use of motor transport;
 - Country people are no less privileged than others in having daily news and comments. In many respects, they use communication, television and radio facilities more purposefully than city folk;
 - Improvement in educational opportunities for country children have greatly reduced former disparities;

- Telephone services, electricity, refrigeration and innumerable other conveniences are almost universal.
16. Never before has the community placed such importance on pollution control, preservation of the environment, conservation of resources, ecological awareness, health hazards and hygiene standards. All have far reaching implications.
 17. The over-all effect of these sociological changes has placed an obsolescence on many former practices, attitudes and needs, and broadened the outlook and educational opportunities of all segments of the rural community.
 18. Although services are directed to increase the efficiency of rural production, they are indirectly of extreme importance to the community as a whole. (See para. 3, Section II) Because of the significant sociological changes, especially those associated with city life, there now exists a continuing need to inform the urban dweller about rural matters objectively, without prejudice, and with the least obvious propaganda as possible. Proper public relations are essential to improve the image of the primary producer. In a modern Department of Agriculture, effective public relations is an indispensable function necessary to help formulate sound public opinion, and through such opinion, Government policies relating to agriculture.

Section IV

The Department of Agriculture in a Modern Setting

The Present

1. The harsh and uncharted environment of South Australia made its agricultural development a saga of great human fortitude and scientific achievement. The state has been well served by its pioneers and its Department of Agriculture.
 2. Meeting the extremes of soil and climate demanded persistence, ingenuity and research. Pioneering and consolidating phases have passed. The stage of permanence has been reached. We now have a secure, efficient and dynamic agriculture.
 3. Soil fertility levels are higher than ever. Pasture development and improvement have brought millions of acres into production. Livestock husbandry has improved and the State's stock carrying capacity increased enormously. Irrigation and irrigation techniques have diversified production. (See Attachment 1 – "Rural Industries – their Progress, Change and Importance".)
 4. Economically, our agriculture is now highly mechanised, capital intensive, and a relatively low labour-using industry, very dependent on high levels of off-farm inputs.
 5. Some farmers, but by no means all, are better informed, more business-like and more receptive to production, marketing and commercial advice.
 6. Rapid advances in science, technology and sociology are accelerating change as never before, and future changes in the agricultural format and needs will also accelerate. (See Section III – "Scientific, Technical and Sociological Change".)
- Animal breeding and production techniques will continue to change, with intensive feed-lots becoming more numerous and presenting greater disease and other problems.
 - Marketing and marketing procedures and practices will impose new restraints on the quality and style of agricultural commodities;
 - Health and hygiene, both in domestic and export markets, will continue to impose new standards of cleanliness and freedom from disease and contaminants, involving national efforts to eradicate animal diseases such as brucellosis and tuberculosis, and controlling insect infestation of grain;
 - The introduction of new insect pests, weeds and diseases, made more possible by modern means of travel and transport, will continue to create changing technical situations;
 - Environmental and ecological factors will become increasingly important;
 - Improvement in educational facilities and attitudes in rural areas, together with mass media and other modern means of communication will lift the receptivity of producers to new ideas and practices and raise the standards of farm management;
 - Greater financial skills will be required and the level of success will depend more and more on entrepreneurship – ability to use resources to the best advantage, a willingness to take risks, the development of sound judgment, and making the most favourable decisions under all circumstances;

The Future

7. Accordingly, in the future:
 - Fewer farmers will be working with fewer, but larger farms, with greatly increased capital needs;
 - Higher soil fertility levels will enable greater diversity in cropping and pasture management;
8. In the circumstances, changes are essential in the goals, organization and nature of the State's agricultural services. The

Changed Aims

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former principal objective of increasing productivity will need to be more closely identified with one of increasing economic viability of rural producers and reducing costs of production. This will place increased emphasis on efficiency of production and the need for close study of costs and the factors generating them. Greater emphasis on human and economic factors will be essential. In this regard, the increasing capability of farmers to absorb and adjust to technical advances, change and innovations must be recognized.

9. In the pursuit of these goals, specific attention will need to be given to ecological and conservational factors and the broad issues of pollution in relation to agriculture, and the hygienic production of all foodstuffs for local and export markets.
10. The trend to larger farm, orchard, vineyard, herd and flock sizes will call for significant re-organization of farm operations and management. In this respect, the managerial capacity and operative skill of producers varies between individuals and their education, and especially their experience with the environment, with equipment, with methods, and in their financial capacity. There are few who would not welcome and benefit from farm management counsel.
11. In the future, market circumstances or trends may make new developments more or less acceptable. The financial circumstances of the producer and credit availability will frequently determine the feasibility or otherwise of innovations.
12. No longer can research and advisory effort finish when it has shown that innovations fit the environment. They must also be related to existing circumstances — education, entrepreneurial, economic, and social. While we must continue research and other services to ensure that the State's agricultural resources are wisely managed and conserved, special attention is required to increase the amount of knowledge and education in production, commercial and managerial skills and to determine the best methods of spreading this through communication and advisory services.

Defined Objectives

13. Objectives of the Department of Agriculture therefore should be:

A. In general to:

Foster the development, conservation and use of the State's soil, land, water and pastoral resources in the best interests of the community to meet present and future needs, and at all times oversight the economic welfare of the State's rural industries and its producers.

B. Specifically to:

(a) *Advise the Government on all matters pertaining to policy affecting rural industry at the State level, and through the Australian Agricultural Council at the national level.*

(b) *Promote efficient production of farm produce by development (through research) and adoption (through extension) of modern innovations, sound farm managerial, marketing and commercial practices, and the economic use of technical aids, calling for —*

(i) Research and guidance to ensure —

- that sound farm production decisions are taken with respect to alternate land use, market needs and prospects (both short and long-term);

- the use of new production aids and techniques; and

- the financing of total farm and specific production items.

(ii) Protection of crops, pastures and livestock from insects, diseases, weeds and other pests, involving:

- Development of effective economic and ecolo-

gically acceptable means for controlling pests and diseases causing losses in crops, pastures and livestock;

- Quarantine precautions to prevent the introduction of new pests or diseases;
- Continued efforts to eradicate endemic diseases and pests wherever this is feasible;
- Continued vigilance, study and communication of matters relating to the hygiene of plant and animal products, and the residue significance of pesticides, agricultural chemicals and veterinary drugs.

(c) *Promote greater efficiency in the marketing of produce from the farm-gate to the consumer and providing better market guides to assist in production and marketing decisions.*

This involves:

- Collection, collation and dissemination of market intelligence;
- Research into the marketing process;
- Improvement in the quality and availability of farm produce and its distribution to meet consumer preferences;
- Reduction wherever possible in the costs of marketing so that producer returns may be increased and/or consumer prices reduced.

(d) *Undertake research and advice in farm management to promote:*

- Farm organization and commodity production in conformity with environmental

conditions, available resources and market prospects;

- Managerial counsel on financial matters and decisions affecting the profitability of farm business.

(e) *Assist the welfare of rural people by working with their organized social groups, and by research and advice to meet the needs of:*

- Disseminating information on the availability of agricultural knowledge and how to obtain it;
- Rural industry structural change and adjustment;
- The income and standard of living of rural families in unsatisfactory circumstances;
- The technical and economic guidance of disadvantaged rural people wishing to improve their socio-economic status.

(f) *Provide, through its available biological expertise, assistance to other Departments and organizations to meet consumer needs and community development by:*

- Ensuring the safety, wholesomeness and nutritional qualities of foods;
- Prevention of transmission of animal diseases and parasites to people;
- Resource conservation and environmental control by ecological, water and soil studies;
- Helping with the ways and means of general adult education in agricultural and livestock matters.

14. Evidence from within and without the Department strongly implies these new objectives can best be met by re-organization of the Department on a regional as distinct from a purely industry basis,

placing new emphasis on economic factors affecting markets, marketing and farm management, paying particular attention to the well-being of rural communities and to public relations, by up-dating affiliated organizations and using to full advantage associated organizations of industry and finance.

15. Adequate research, extension and regulatory services of the Department carried out in the particular environmental zones or regions to which they apply, will overcome many existing shortcomings, be more effective, and give greater job satisfaction to everyone involved. (See Section V — "The Research-Extension Process in Modern Terms".)