

AGRICULTURAL SCIENTISTS - WHERE TO NOW?

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The recent demonstrations of rural unrest and concern about the future are very reminiscent of the early 1970s. Wheat quotas were in place and wool prices at disastrously low levels. An important question is whether the current rural crisis is merely an aberration and given time will conveniently disappear, or does it reflect a basic underlying change in agriculture's operating environment. After all, agriculture survived the 1970's crisis and it will do it again. Nevertheless, it is clear that the agricultural sector will need to continue to structurally adjust and there will be some periods of severe- pressure which will cause particular problems for certain industries and for certain individuals.

My particular approach to the issue of "Agricultural Scientists - Where to Now?" is pitched in a setting in which the level of real resources being provided for government agricultural services is being steadily and significantly reduced, as has been the case in NSW, Victoria and South Australia.

This is somewhat in contrast to the scene in recent years in Western Australia where major land development has taken place and the financial resources made available to the Department of Agriculture have been broadly maintained in real terms. It is also important to recognise that during the developmental phase the role of the research scientist is generally emphasised, and the role of extension seen as primarily concerned with passing on the results of research and reducing the so-

called research-adoption gap. Fundamental to my approach also is the theme that there has been a basic change in agriculture's operating environment which has important implications for the farming community, the institutions servicing agriculture, and the profession.

The discussion will concentrate on the impact on institutions, and in particular on departments of agriculture, the most significant employers of agricultural scientists.

I'm sure we all appreciate that the last decade or so has been one of enormous changes - we are, in effect, now going through the third major revolution, following the Agricultural and Industrial Revolutions. This revolution - sometimes called the Information Revolution - is based on the impact of computer technology and the various flow-on effects through the world economies and into everyday life in advanced/developed countries.

We recognise, I hope, that the political/economic scene within which Australian agriculture must operate has changed dramatically. For example:

- the agriculture sector now contributes around 40 per cent to exports, four-five per cent of GDP, and employs approximately six per cent of the workforce;
- the economy no longer will be managed with agriculture's needs paramount - it is a much more complex macroeconomic scene;
- there has been a tremendous increase in government expenditures in the big three - health, welfare and education;
- we now have a sophisticated, comparatively well-educated, democratic society with a proliferation of interest (lobby) groups endeavouring to influence government decisions - many of which impact directly on agriculture, eg conservation, animal lib./welfare interests;
- although there are still some hard to shift areas of relatively high

protection in both agriculture and manufacturing industry, we are now more open to international competition;

- financial markets have been deregulated, we have a floating exchange rate, but labour markets are still substantially regulated;
- an international trading environment which is particularly difficult at the moment with a severe weakness in world agricultural commodity markets. This situation is likely to continue for some time and may even reflect fundamental changes in world production patterns and markets. A trade war is on between EC and USA; and we have a severe balance of payments problem and there is increasing pressure on public expenditures and for accountability in the public sector.

This basic change in the operating environment obviously impacts on the institutions servicing agriculture. The future form and viability of these institutions, be they government departments, statutory marketing authorities, research organisations, will substantially depend on their capacity to accept the challenge and tackle it in a positive way. By and large, public agencies are not noted for the dynamic approach to change. To some extent, this reflects the influence of the professional technocrat during the developing/production phase of Australia's economic development. In terms of public decision making, this is sometimes referred to as the technocrat model. In many aspects, we are now exhibiting characteristics of a mature economy where the political/bargaining model is more relevant. Are we professionals ready to cope with this, or is it to be taken out of our hands. The rise of research assistants and of the general management type as departmental heads may well reflect a failure of the professions to face up to the management implications of the changing environment. There has even been active resistance to accepting management responsibility by agricultural scientists - a continued faith in research as the way out. The vast majority of the professional rewards in the Institute has gone, and still is going, to researchers.

There has been criticism of* departments of agriculture as being unresponsive to the needs of the rural community, and not without some justification. This general underlying criticism has been evident over the last fifteen or so years. During periods of crisis the pressure becomes more obvious and is strongly reflected in political attitudes. It will not go away this time.

What is basically needed is a major attitudinal change. The profession and its institutions, in particular departments of agriculture, and marketing authorities need to become more market orientated. Not just in terms of the outputs of agriculture, that is obviously important, but in terms of the product (service) being marketed by, say, a Department of Agriculture. Accountability of public institutions is becoming of increasing importance, and a major part of this accountability relates to providing effective and relevant services to the "market".

What are the markets relevant to a department of agriculture?

- Rural community - primarily farmers, but also the rural community as a whole. The need to develop policies and programs aimed at regional/district problems on a community basis is becoming increasingly evident.

There is evidence that the government services have been "captured" by the progressive farmers, who are more likely to be on research advisory committees and involved in farm organisations.

- Total community/political - it is vital that positive attitudes by the community regarding agriculture, and the Department of Agriculture, be held and expressed through the political process.

The contribution by agriculture to economic growth and

development on the one hand and its responsiveness to community attitudes to such areas of concern as conservation and environment must be recognised and appreciated by the public.

What are some of the elements of this market orientation?

Organisational change and flexibility

There is a need to continually review structures and processes in order to deliver a more effective and efficient service. Structures need to be developed to facilitate closer interaction with the "market". For example, regionalisation and policy development.

Improved Organisational Management

I draw a distinction between management and administration. Management relates to a changing environment, requiring planning, setting objectives, determining priorities and allocating resources. It must establish effective processes to ensure resources flow in priority directions.

Improved Research Management

A substantial proportion of the resources of a department of agriculture is concerned with research. Research management systems need to be in place to achieve greater value for the research dollar. Recent changes incorporated in the Commonwealth Rural Industries Research Act 1985 are a major step in the right direction. However, the major proportion of research funding still comes from state sources. What systems are in place to ensure its relevance? The dominance of production-orientated research is still a major problem. It is interesting to note the change in balance of research priorities occurring with some of the new RIRF

Councils. Traditional research agencies will need to compete with some new research groups entering the field.

Extension Services

For convenience, I will consider extension services as covering all field and technical services, including advisory and regulatory services and analysis and diagnostic services.

There are a number of important factors influencing changes in the provision of extension services. These include:

- improvements in technology, particularly communications technology;
- changes in the characteristics and expectations of clients, including governments;
- reduced resources being provided by governments for agriculture within the context of reductions in overall government expenditures;
- increased accountability being required by governments and the community;
- increased demand for services; and
- increased community interest in the respective roles of public and private sectors.

Within the context of reduced government resources and increased demand we could expect the following developments, some of which are already occurring:

- new forms of service delivery providing information using communications technology (eg Videotex) and computer programs to aid farm management decision making;
- less service being provided by government related to individual management problems and a concentration of government resources on community (regional/district) problems and resource protection substantially through planned programs;
- increasing emphasis on "user pay" approaches by government and possible eventual withdrawal from the provision of certain services; and
- greater involvement of the private sector in providing services to individual producers.

The issue of efficiency versus equity in the provision of government services has been around for some time. In the developmental phase, the tendency has been to emphasise production efficiency. It seems evident that government services may well be directed more towards equity issues (eg rural assistance and structural adjustment problems) and resource protection (eg salinity control, soil conservation).

The effective implementation of such changes requires considerable effort within government extension agencies through training programs and positive leadership in regions and districts. It will also require 'marketing' with farmers and farm organisations. A significant gap in farmer understanding exists between expectations involving traditional forms of extension delivery and the reality of these changes.

One of the interesting issues is how to ensure that the needs/demands by individual farmers is adequately met by an appropriate development of private services. It is obvious that the complementary relationship between government and private extension needs to be further developed. Government needs to develop some new approaches to stimulate the

expansion of private services.

There is a significant group of farmers who are quite capable of utilising informational sources from government, private firms, etc. into their management strategies and programs. Some farmers are prepared to employ private farm management consultants or specialist consultants (eg lucerne seed production specialists). An innovative approach would be for government to provide some financial support to consultants through a subsidy preferably decreasing over time to consultants or to farmers employing a consultant. It may well be more "cost effective" for individual farm advising to be carried out by the private sector, even with a subsidy.

It is interesting to note that the Tasmanian Department of Agriculture has recently advertised for a number of Farm Business Advisers to provide consulting services on a fee-for-service basis. In effect, this is almost certainly a "subsidised" service. My understanding is that the smart ones have gone out privately - this is a good result. Involving consultants more positively in rural assistance, perhaps assisting in the implementation of a farm improvement program, would also stimulate their activity.

The pressures for change are now very real and are resulting from some long term underlying influences - not just affecting agriculture, but more generally affecting the public sector and the community as a whole.

The question is whether positive, imaginative approaches can be developed by the responsible managers and staff or whether governments will seek new institutional solutions, bypassing the "traditional" agencies and progressively starving them of resources.

What about the profession? What is happening broadly is that there is tremendous change occurring in processes and products - substantially influenced by computer technology - the Information Revolution referred to earlier. The traditional roles of the professions are being modified,

sometimes drastically. The Education System is under great pressure - the market is determining the mix of skills and knowledge required, eg bio-engineers. Services to agriculture must come from a wider mix than traditional agricultural sciences - to what extent are the education institutions and the service delivery agencies effectively responding?