



The Agricultural Research and Development Model

Policy Paper

Introduction / Background

The current R&D Corporation model was established by the PIERD Act in 1989. (<https://www.legislation.gov.au/Details/C2014C00582>). This enables the Federal Government to collect a levy from agricultural producers. The rate of the levy is recommended by the relevant industry body and is matched, by Government funds for R&D purposes \$ for \$ up to 0.5% Gross Value of Production. This model has served Australian agriculture very well. It has enabled Agricultural industries to fund RD&E, which benefits the industry as a whole.

However, since their establishment, agricultural RD&E has had major change and the R&D Corporations have responded variously to these changes. Some of the changes are outlined below:

- State Departments of Agriculture, CSIRO and Universities have reduced funding into RD&E.
- Government agencies are now more focussed on policy support for Government rather than the delivery of science to agriculture.
- Private sector consultants have become much more important in farm decision making.
- The types and scope of agricultural innovation has changed considerably. For example, GM crops, the use of DNA technologies in animal breeding, the use of GPS and Internet technologies in farm operations.
- Intellectual property considerations now affect most new technologies, particularly in crop and animal improvement.
- The number of farmers has reduced (larger farm size) and the next generation of farmers has progressively taken control of farm decision making.
- Many of the gains from RD&E now come from changes to production systems rather than single innovations.
- The development of very successful Cooperative Research Centres, some of which have completed their terms.

Problem Statement

All of these factors combine to lead us to consider how the current model could be improved. Because the R&D Corporations have now become “core” funders of RD&E rather than “marginal” funders and because the Government institutions now no longer invest as much in RD&E scientists, there is an over-riding need to re-evaluate the RDC model to ensure we have the necessary scientific capability for the future.

Objectives

Ag Institute Australia believes that new arrangements are required to ensure RD&E is applied to cross-sectoral issues (land and resource management, climate risk management etc.). New infrastructure for RD&E is also required and this must have cooperative investment from all interested parties. R&D Corporations must fund scientists for the time they need to analyse and interpret data, and make inferences from their work. This time allocation includes time to ensure work is properly published

Analysis of Options and Policy Recommendations

Because innovation is essential to improving productivity in agriculture, the Government should continue to invest public funds into RD&E. Increased investment of public funds will also protect the contribution agriculture makes to the overall economy and increased funding should be targeted at improving the rate of productivity gain and maintaining competitiveness of Australian agriculture in global markets. Public funds invested in RD&E have excellent returns on investment (usually in excess of \$9 for each \$ dollar invested).

The Government should focus some of its investment in RD&E into enabling and supporting collaboration between the public institutions, the private sector and primary producers. This collaboration is essential in delivering benefits from investment in RD&E and requires specific attention. A re-invigoration and enhanced funding of new Cooperative Research Centres is warranted.

Because innovation from research is difficult to predict, investments must be made carefully, but not prescriptively. While some RD&E is aimed at problem solving, the innovations that have had a major impact on agriculture in the last two decades have often originated from “blue-sky” research that has originated in the public sector (Universities, CSIRO, State Government institutions) and effectively commercialised by the private sector. A concerted effort is required to reduce micro-management of over-prescriptive projects funded by R&D Corporations.

R&D Corporation and other Government funds should be invested in people as well as projects. The current Rural Research and Development Corporation model encourages a high level of accountability and focuses on projects with defined milestones. AIA accepts the need for accountability, but this closely managed project approach stifles innovation. In addition, CSIRO and State Departments of Agriculture have suffered from reduced funding, leading to reductions in staff numbers and greater reliance on R&D Corporation funding.

A number of R&D Corporations have observed the reductions in critical RD&E positions in State Departments of Agriculture. This reduction in staffing has had the direct impact of reducing the capacity to accelerate adoption of new technology but has the “knock-on” effect of the Departments of Agriculture no longer serving as a “training ground” for professional consultants. This has led to a shortage of young professional consultants and the appointment by some agribusiness firms of under-qualified field staff.

Additional public funds should be invested in Extension to secure the greatest advantages from innovation. Agricultural Extension is an essential component of innovation and although the private sector is well placed to provide farm advisory services wherever they can derive benefit for their investment, a strong need for public sector extension services remains in those areas where the private sector cannot derive a profit from their activities with farmers. The areas which do not readily provide an income for the private sector include managing our landscape for future generations, regional approaches to pest and weed management, biosecurity, empowering producers with better knowledge and early stage innovation. State and Federal Governments continue to have an essential role in these areas.

Funding should be specifically applied to advance training in Extension Methodology. Advanced skills in extension must be fostered and supported and should be provided to train extension professionals in both the public and the private sectors.

The re-establishment of a Land, Water and Climate R&D Corporation is warranted. Because of the unique nature of the Australian Landscape, the scarcity of our water resources for agriculture, the risks of drought, flood, frost, fire and other impacts, Australia must continue to invest in RD&E related to our landscape, our climate and our water resources. The continued support for farmer groups focussed on Landcare is also supported.

A specific effort by Government agencies and the R&D Corporations must be made to ensure close engagement with farmers in the processes of RD&E. This close engagement is an essential component of innovation in agriculture. While farmers must be involved in the process of priority setting for investments in RD&E, the process must be collaborative with scientists and other participants in the RD&E process. The reason for this is that farmers bring an understanding of the problems they face and the scientists bring an understanding of the current and recent research related to the topic and ideas on possible solutions.

Recommended Readings

- Nil for this Policy Paper

February 2018