

Doing More With Less - The Challenges and Changing Landscape of Research, Development and Extension and The Role of Australia's Rural Research and Development Corporations

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Abstract

In 2010, the Australian Federal Government is calling all Research and Development Corporations (RDCs) to account for efficacy and impact in the respective industries which they service. This review, and the development of the new National Research, Development and Extension (RD&E) Strategies for Beef and Sheepmeat Production, are the latest in a series of actions calling on all agencies investing in the rural RD&E system in Australia to strive for greater efficiency and effectiveness from their collective investment, but with a particular focus on the efficiency with which RDCs collaborate with other RD&E providers in delivering, and measuring, a return on investment to individual enterprises, whole industries and the broader public.

The paper explores some of the weaknesses that currently exist across the RD&E continuum, and seeks to highlight those for which considerable scope exists to improve. In particular, the paper draws attention to the significant benefits associated with a more co-ordinated and systematic approach to monitoring and evaluation systems, building and aligning extension delivery models and policy, and differentiating the respective resource capabilities and strengths between different RD&E agencies.

Concluding with a summary of new initiatives that RDCs such as Meat and Livestock Australia (MLA) are moving to embrace, this paper highlights the critical elements necessary for facilitating effective organisational and cultural change, both of which will ultimately underpin the successful implementation of the National RD&E Strategies and the overarching National Primary Industries RD&E Framework.

Introduction

Across the board, Australia's Rural Research and Development Corporations (RDCs) are under close observation by those who provide the resources and mandate that underpin their operation. In recent years, two calls to action have been put in train, the culmination of which has generated a need for RDCs to individually and collectively:

- Demonstrate more accountability for industry *and* public RD&E investments and benefits;
- Maintain transparency and rigor in the evaluation of the impact of those investments; and,
- Adopt a more collaborative approach to leveraging synergies, and minimising duplication, in RD&E.

The first and most recent call stems directly from the Federal Government under the recommendations from separate reviews conducted by the Productivity Commission (Corish, 2006) and industry (Cutler, 2008). Referencing a combined annual operating budget in excess of AUS\$1b invested in agriculture and food RD&E by the Australian government, rural RDCs and other agencies (CSIRO, state agencies etc), Corish summarised the necessity of an effective RD&E platform, noting: "*continued productivity growth, driven significantly by research, development and innovation, is the most effective way to offset a continuing long term downward trend in farmers' terms of trade (ratio of prices received to prices paid)*". Equally, Corish highlighted the need for improved, more consistent approaches for evaluating the returns from RD&E investments. In particular, greater collaboration between RDCs was noted as a critical step to improve transparency, and help build confidence that funds are being well managed, especially in relation to addressing duplication or gaps in RD&E activities.

Cutler (2008) was commissioned to collate information and policy to support the development of the National Innovation System. The author highlighted the fact that the impetus behind the initiation of the RDCs in the 1980s is now overshadowed by an overall shortfall in the capacity to effectively and efficiently operate, especially given the competition for declining public funding at all levels across the RD&E continuum. Accordingly, the pursuit of innovation has now been placed at the forefront of all RD&E and evaluation activities, whereby synergies and efficiency in delivery, along with accountability for public and industry funding expenditure, is fundamental to all RDC operations. In the 2010 sequel to Cutler's work, an additional review by the Productivity Commission has been initiated to establish the public benefit achieved from rural RD&E investment. This will likely be a major step in shaping policy and institutional structures to support rural RD&E in Australia in to the future.

The second call for action emerged from the Primary Industries Ministerial Council (PIMC) in the form of the *National Primary Industries R&D Framework*. Embracing all federal, state and territory rural RD&E agencies and RDCs, the framework provides a formal mechanism for collaborating in the collation and delivery of the priority RD&E needs of agricultural industries. The processes and elements associated with the co-construction of the National Beef and Sheepmeat Production RD&E Strategies under the framework are presented in detail by Johnsson (2010, this conference). Pertinent to this paper are the principles of national planning and co-ordination of the research agenda, with development and extension programs adapted at regional and local levels, respectively.

Maintaining the momentum and meeting the challenge

The Cutler (2008) and Corish (2006) reviews, along with the formal endorsement of the National Primary Industries RD&E Framework, have been catalytic in initiating the momentum and impetus for changes to the processes for RD&E priority setting, collaboration and monitoring and evaluation (M&E). While change in itself is not new to the RD&E landscape, it is the concurrent pressures of changing industry and public priorities, alongside a significant reduction in RD&E resources, which is posing an unprecedented challenge to RD&E providers, individually and collectively. On the resource side alone, Commonwealth spending on science and innovation has fallen 22% as a share of gross domestic product (GDP) since 1993-94 (Australian government, 2009).

The change now being imposed focuses on ensuring transparency and rigor in the deployment of resources, demonstration of impact, and the development of collaborative arrangements to achieve synergies across all areas of RD&E operation. The endorsement of the National Beef and Sheepmeat Production RD&E Strategies, by both agencies and industry groups indicates a consensus that such an initiative is a necessary and timely step. However, the successful implementation of these strategies, and the National RD&E Framework that overarches them, will require considerable support and commitment as contributors become aware of the changed *modus operandi* in a (formal) collaborative RD&E environment.

The relative focus on R&D delivery to date under the National Strategies reveals significant, and as yet unaddressed, scope to improve the efficiency and efficacy with which such R&D is extended to industry. In particular, a constructive critique of the National RD&E Framework highlights several challenges which will need to be addressed if the strategies that sit underneath it are to be ultimately judged by the impact they have on their respective industries. These include:

- The need to achieve, demonstrate and attribute impact from RD&E investment by imposing standardised processes and discipline in monitoring and evaluation systems across the RD&E continuum, and fostering a culture of continuous improvement and innovation in R&D delivery and extension.
- Recognition of the disconnect between “old models” of en mass extension activities and the actual adoption of new technologies and practices that address the rate-limiting issues in a particular enterprise. This includes the need to recognise the complexities associated with decision-making processes, and the resources required to support practice change and build innovative capacity in industry.
- Understanding regional and local impacts on, and measures of, enterprise performance (levels of efficiency, profitability etc), and thereby focus on the development of demand (not supply) driven extension strategies.
- Addressing the traditionally short-term nature of extension funding, including the need for medium- and long-term funding provisions to measure and monitor adoption profiles and levels over time, and to provide surety in extension resource allocations and succession planning, especially within the private sector.
- Understanding the demand, methods and resource needs for fostering the development of private sector extension capacity, including defining “market failure” and developing consistency in the various roles and responsibilities for RD&E providers in delivering public-, industry- and private-good products and services.
- Appreciating the significant levels of apathy or resistance to change within industry, accommodating the various learning formats appropriate to producers, and adopting a market segmentation and engagement strategy that targets extension activities at those segments of industry whom are most likely to benefit from them.
- Recognising the need for accountability across the full RD&E spectrum in a collective effort to measure *impact* on industry, including the need for more sophisticated and consistent modelling systems for establishing and measuring the triple-bottom-line benefits arising from a proposed RD&E investment.

Importantly, in the context of the National Primary Industries RD&E Framework and the strategies which sit within it, the capacity of the RD&E sector to collectively address these challenges will mean the difference between “good intentions” and actual success in delivering benefits on industry. Likewise, the responsibility for meeting these challenges, through individual yet integrated roles within a collaborative framework, falls collectively on *all* contributing agencies. While private sector RD&E providers are not formally engaged in the National Strategies, the progressive alignment of the policies and activities of not-for-profit agencies will, in itself, significantly improve the consistency and efficacy with which the private sector is – increasingly – engaged in RD&E delivery.

Towards a national communication and research adoption platform

The proposed mechanism for improving and fast-tracking the alignment of extension policies and activities under the National Beef and Sheepmeat Production RD&E Strategies is a co-constructed platform for the communication and adoption of research outputs, in which all contributing agencies have a defined and integrated role in the funding, co-ordination, delivery and/or monitoring of related activities. Refined on a sector by sector basis, the communication & research adoption (C&RA) platform will assist in:

- Identifying extension needs and methods in consultation with industry and extension agencies;
- Developing and promote quality controls and minimum delivery standards; and
- Brokering delivery arrangements in each state through PISC agencies, RDCs and other organisations / individuals, including the private sector.

The purpose of the C&RA platform is to facilitate – at a local, regional and national level – long-term consistency, efficacy and efficiency in the conduct of red meat development and extension activities. By aligning all agencies engaged in the National RD&E Framework, the platform will also improve the consistency with which each agency interacts with those entities that are not formally involved in the respective industry strategies, especially the private sector.

The C&RA platform is underpinned by a range of co-investment principles to assist RD&E providers in the apportionment of roles, responsibilities and resources in the delivery of public-, industry and private-good products and services, and as part of a truly integrated approach to fostering producer awareness of, and the skills and confidence to adopt, new R&D and innovation in industry.. While yet to be finalised and incorporated formally, these principles aim to:

- a. Ensure high quality and value for money in extension services;
- b. Foster better leveraging of public, industry and private sector investment to sustain collective resources for, and efficacy of, extension;
- c. Bolster development of extension capacity to adequately service industry needs;
- d. Identify and assist instances of market failure in the provision of extension services;
- e. Co-ordinate and align the activities of public- and private-sector providers in order to increase consistency and minimise duplication in extension services;
- f. Foster a “best fit for purpose” approach to extension that accommodates variations in delivery capacity (availability and quality) between different states and regions; and,
- g. Promote consistency in the measurement of, and accountability for, monitoring and evaluating the efficacy of extension activities.

Importantly, the principles are not designed to enable RD&E providers to divest in extension activities, but rather encourage them to concentrate their efforts and resources in those areas to which they can best add individual - and better leverage collective - value. Along these lines, and in reference to Figure 1, the principles form a template in which:

1. Private-good activities (i.e. those that benefit a individual enterprise) will be increasingly undertaken by the private sector on a user-pays (cost plus) basis;
2. Industry-good activities will continue to be co-funded by industry bodies and state/territory governments;
3. Public-good activities (i.e. those that benefit the community) will remain a primary responsibility for government and, while the delivery of such activities may be outsourced to the private sector, these will be primarily funded by the public sector; and

4. Beyond points (1) to (3) above, public and/or industry funds will – at least in principle - only be used in instances of an imbalance between supply and demand for extension activities (i.e. market failure).

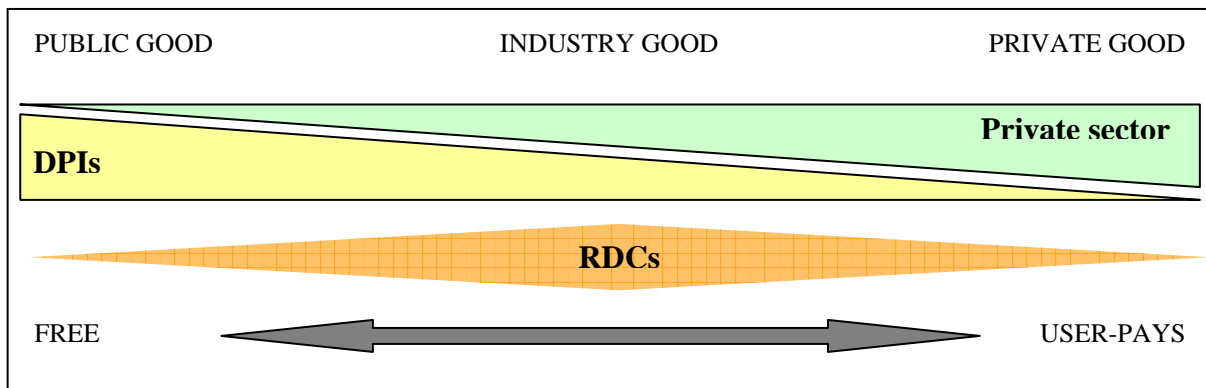


Figure 1. Schematic overview of relative investment levels, and products and services pricing for public-, industry- and private-good activities.

The C&RA platform structure, and co-investment principles that underpin it, represent just one mechanism to help foster a more collaborative and structured approach to deploying and leveraging resources across the multitude of RD&E providers engaged – formally and informally – in the National RD&E Strategies. Importantly, these initiatives are derived through extensive consultation with agency and industry stakeholders and are in themselves an example of effective collaboration

Ultimately it is a willingness to review, and where necessary change, the culture, policy and priorities within those agencies contributing to the National RD&E Strategies that will determine their final success. In particular, and as evidenced by the challenges highlighted in the preceding discussion, the reprioritisation and/or reapportionment of public and industry (RDC) resources and foci has significant room for improved alignment. Likewise, the private sector will need to accommodate a more collaborative and integrated approach to RD&E delivery, especially in regards to extension. Critically, this sector must be engaged in the process of structural change in order to ensure consistency and a level of ownership in C&RA framework.

As the lead RDC for the National Beef and Sheepmeat production RD&E Strategies, Meat and Livestock Australia is in a unique position to facilitate and drive mechanisms for improved co-ordination and resourcing of activities across the spectrum of public-, industry- and private-good RD&E activities. This is an essential role and will make a critical contribution to the success of the National RD&E Strategies, and ultimately the efficacy of the RD&E sector in an increasingly challenging landscape.

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