

## Low Rainfall Farming Systems Groups Submission to Productivity Commission

The Low Rainfall Farming Systems groups (LRFS) are pleased to have the opportunity to respond to the Productivity Commission into the Australian Government Research and Development Corporations Model. Having studied the Issues Paper, it is not our intention to respond to all questions but rather describe our role, the strengths and weaknesses of the current system from our point of view under a few key questions from the issues paper. We will attempt to include what might be done to improve the system in terms of achieving best value for money, regardless of who contributes the resources. This submission has been drafted by the Low Rainfall Collaboration Project (LRCP) Management with input and review by each of the five participating LRFS groups.

These farming systems (FS) groups are regionally based and exist to improve the profitability and sustainability of local farm businesses and the vitality of the local community by validating and integrating practices and technologies into local farming systems through participatory RD&E. They are similar in that they have very strong support and membership by local farmers, consultants and businesses, are incorporated bodies with farmer dominated boards, conduct their own R,D&E activities in collaboration with partners and have RDCs as important income streams in their operations. They differ in the scale and shape of their activities because each is a unique development of resources from the local community with the private sector, state and federal agencies and RDCs.

The GRDC funded Low Rainfall Collaboration Project (LRCP) aims to foster greater sharing of knowledge and ideas between a number of farming systems groups in south-eastern Australia. All of these groups normally receive less than 450 mm of rainfall per year and the groups involved formally in this project are Eyre Peninsula Farming Systems (SA), Upper North Farming Systems (SA), Mallee Sustainable Farming (SA, Vic, NSW), BCG (formerly Birchip Cropping Group, Vic) and Central West Farming Systems (NSW). The LRCP also maintains contact with like groups in WA, especially in the Esperance and Geraldton areas.

The project is funded by GRDC and runs until 2012. The Project Manager is Geoff Thomas and Dr Nigel Wilhelm is the Scientific Consultant, both of whom have spent most of their careers doing extension and research with groups, especially in low rainfall areas.

### **Why have the LRCP:**

- The low rainfall areas have enormous untapped potential for improvement in productivity and sustainability. They have attracted relatively less research and extension resources in the past than their higher rainfall cousins.
- Farmer groups are widely recognized as an essential component of the validation and integration of new technologies into farming systems.
- There is a shortage of experienced scientists and extension specialists working in low rainfall areas, which makes the need to share expertise and information with and between groups even more important. Whilst individual environments may be different the principles are similar.
- There is a need to reduce duplication and fragmentation. Everyone is short of resources, a situation unlikely to improve in the short term. It is essential to share R,D&E resources not only between the groups themselves but also with Universities, CSIRO and State facilities plus human resources.

- The existence of a strong network is attractive to funding bodies who can easily lock into existing groups to ensure that the results of their investments have greater impact.
- Teamwork between the groups provides mutual support and satisfaction and more efficient and effective RD&E outcomes.

*Is there a sound case for government funding support for rural R&D around notions of private/industry benefits vs wider benefits? Are there particular features of the rural sector, or parts of it, which provide the basis for a significantly higher level of public funding support for R&D than in most other areas of the economy?*

We submit that this is a very clear Yes.

- Farms occupy 54% of Australia's land mass and farm businesses undertake about 90% of current natural resource management. By and large, farmer decisions drive Natural Resource Management (NRM) outcomes. NRM is a whole of community issue and it is thus appropriate that government support R&D through agriculture to facilitate improved NRM outcomes for the nation.
- Activities on farm also affect the environment beyond the boundary fences (eg waterways, air quality, spread of pests and weeds) so supporting agriculture will also directly affect NRM by influencing the source of many issues.
- Viable and productive farm businesses are vital to improve NRM outcomes and this is an important reason why the government should continue to support agricultural R&D; for the better NRM spin offs it generates.
- Agriculture is a major source of greenhouse gases but reductions in their levels have whole of community benefits so it is only fair that the whole community support agriculture to reduce their production in a sustainable way.
- Food security – Australia, as a steward of large tracts of arable land, has an important role to play in the feeding of not only our own population but that of the whole world. Farming in the next generation faces a new paradigm which will require smart research and development with increasing pressures on land, air and water resources and diminishing supplies of non-renewable energy and agricultural inputs such as phosphorus and potassium fertilisers.
- Agriculture generates 1.6 million jobs within the industry and in related areas; 51% of these are in cities. Agriculture also underpins the economy of most rural communities. Both features justify government investment in agricultural R&D because it generates improved employment and social outcomes for the whole community, especially in rural areas.
- Agriculture exports \$39 billion of produce every year – this is vital for the health of the Australian economy and is another reason why the government should support agricultural R&D; to protect and improve these export earnings.
- In the lower rainfall, more isolated areas of the agricultural zone, there is widespread market failure in R&D, with the private sector not being able to profitably provide services. FS groups have played an important role in filling this gap, but are struggling with the decline in support from state governments.

*How important is it that government contributes to the cost of maintaining core rural research skills and infrastructure?*

Agriculture requires continued improvement in productivity, profitability and sustainability to not only produce goods but to protect and improve natural resources, support communities (both rural and metropolitan) and generate major export earnings. This has never been more critical as agriculture approaches an uncertainty that it has not had to face for 200 years. This uncertainty is a future with a climate which will be different to the past, more risky than the past and otherwise more difficult to predict.

Climate change will affect the whole of the community, directly and through impacts on food production and natural resources. The government has a central role in predicting and ameliorating these impacts for the Australian community and economy and exploiting any opportunities which may arise. Many of these impacts will manifest through agriculture and NRM.

Investment in core research skills and infrastructure by the private sector will never meet the scale necessary to maintain the industry's viability because the size of the market is too small. For example, Australia's largest crop, wheat, is less than 5% of the world market, making it too small to develop specific R&D programmes by multi-nationals.

Expenditure by government on research skills and infrastructure is a sound investment in the nation's future, not a cost to the budget. The issues paper cites some of the many studies which clearly show the substantial and direct economic returns from agricultural R&D, while most concede that the flow on benefits to the larger economy and to the community at large have not been fully captured.

A model which has been very successful for many FS groups is one in which they partner with state governments. The state provides valuable infrastructure and some continuity of human resources (through tenured positions and the scope to manage short term positions more effectively) while the FS group provides effective networks into the farming community, energy and commitment to the region. As a package, they effectively attract industry funding. However, as the states continue to withdraw resources, especially from the regions and from D&E activities, this model is breaking down. FS groups are spending more and more time managing their business, seeking funding and shoring up short term positions, and are thus losing capacity and effectiveness. None have the scale to manage a suite of short term projects in such a way that they can maintain a continuity of staff.

*How effective is the current rural R&D and extension framework?*

Rural R,D&E networks have been effective to the extent that the productivity of agriculture has increased by 2.8% per year over the last 30 years. However, recent data suggests this productivity curve is flattening. We have been living on the borrowed intellectual capital of previous decades when public support for agricultural R,D&E was much stronger, especially by the states. And this at a time when agriculture and the community face increasing pressures; declining terms of trade, increasing demand for food by a growing world population, a looming energy shortage and climate change. The ability to respond to crises in the future will be severely inhibited.

Every new issue in agriculture will sit somewhere on a continuum from basic research (no existing knowledge about this issue exists) to extension (the solutions have been developed but the farming community and agricultural industry needs to be made aware of them, with all the risks and social impacts identified). Correctly identifying exactly where each issue sits is crucial to moving closer to a solution and its adoption. In particular, it is to correctly

identify whether the problem is one which still needs to be better understood and new solutions developed or is it a problem which has been largely solved but development of appropriate local strategies is required. This is a very important consideration for the groups because in simple terms, the first scenario is the realm of research while the latter is more appropriately regarded as development. A mismatch in approach can lead to inefficient use of scarce and expensive resources in the case of research or poor progress because of poorly defined outcomes in the case of development and extension.

R&D is of little worth without strong, credible and sustainable extension networks. These networks and infrastructure are vital for driving change and adaptation. Farming systems groups are a proven, effective way to stimulate on ground change and improvement in agriculture practices as they are mostly farmer driven and are therefore trusted sources of information. However, these five FS groups are also right at the leading edge of the skills problem facing agriculture; they find it very hard to attract and retain experienced, professional staff to their remote regions. This has become increasingly difficult as their partners, the state governments, continue to withdraw resources, support and infrastructure from their regions. Government agencies can provide extra security and tenure beyond the resources of the small incorporated bodies such as FS groups.

State governments have been the major supporters of development and extension for agriculture but are increasingly withdrawing from D&E (as well as many areas of R). Private consultants and farming systems groups have partly filled the vacuums being created but neither sector has the capacity to completely replace government investment. They simply don't have the funds nor infrastructure and have difficulty retaining the scientific expertise required due to location and short term funding sources. In addition, the cost to individual growers and their businesses when supporting R,D&E can be considerable and should not be underestimated. This support can include hosting activities on their own farms, contributions to FS groups and research organizations as well undertaking their own D.

One of the weaknesses of the current R,D&E structure is that they are defined along commodity lines but many farms in Australia combine several enterprises in the same business. The current R,D&E structure does not address these mixes very well, despite recent attempts (eg Grain & Graze programme of GRDC, LWA, AWI and MLA). This weakness is particularly acute in the wheat/sheep zone where the grain and livestock enterprises occupy the same land and provides a farm income diversity that has proven to be crucial for survival during the recent drought years.

The current R,D&E structure also does not adequately address the need to identify the risks of new technologies and management options. Much R&D in recent decades has been focused on production increases to improve the viability of farming businesses. However, with shrinking and uncertain profit margins and an increasingly variable climate, reducing risk is also a high priority. Many farmers and advisers lack the business skills to analyse their businesses sufficiently to identify areas of high financial risk and how best to adopt new technologies without further exposing the business. These skills need to be developed widely across the industry if it is to cope with the pressures of the future while protecting natural resources. A new generation of simple, practical decision making tools needs to be developed and people trained in their application, to assist advisers and consultants guide their farmer clients through this new capacity building process. These tools will also be useful for industry funding bodies to help set directions for their investments.

*If state governments continue to wind back their role in R&D and extension, should the RDCs be seeking to fill the gap?*

The reality is that the private sector of consultants/agronomists, FS groups and RDCs have reacted to replace the withdrawal by state governments but can not hope to replace them fully. RDCs are already seeing substantial cost shifting as States demand greater recovery of their inputs into projects.

One of the critical impacts of state governments withdrawing from agriculture has been a loss of training/mentoring capacity. State governments in the past have had the capacity and ethos of developing and training graduates and new people for the industry. This role has been slashed in recent times and agriculture now faces a dearth of competent, skilled and experienced research and extension resources to replace the current generation. Companies, RDCs and FS groups do not have the capacity to fully replace this training and development role, much less build on it. Private consultants are barely training sufficient staff at present to cover succession of their own positions. Private companies and consultants have tended to employ young research and extension staff only once they have gained several years of work experience, usually gained in the government sector. With the decline in young graduates being employed by governments this pool of trained professionals is drying up.

*How effective are current industry consultation protocols? Are all of the key stakeholders routinely consulted, or at least provided with adequate opportunity to make their views known?*

The effectiveness of industry consultation protocols varies widely. Some of the RDCs are very good at maintaining open communication networks to the grass roots and supporting R,D&E organisations for two way flows of information. GRDC is an excellent example of such a RDC. Some of the worst examples are those managed by federal government departments, eg Caring for our Country. However, with such diverse enterprises within the industry, conducted in vastly different regions and environments, eg sheep are produced from the semi-arid saltbush country of the pastoral zone to the alpine reaches of Tasmania, it is hard to maintain satisfaction in equal representation at all times.

Implementation of regionally based panels which have expertise in all enterprises, R,D&E skills, NRM and marketing/value-adding would substantially improve the effectiveness of consultation and identification of priorities. These panels would be linked directly with RDCs relevant to that region as well as local producers and agencies due to their regional focus. They would act as review panels for issues coming up from the industry and from science and matching them with appropriate resources and priorities from the RDCs and R,D&E resources. With wide representation from farmers, R,D,E and marketing, they would be well placed to identify where issues fit on the R to E continuum.

A key role for these panels would be to not only collate and rank issues for priority, but also identify the appropriate course of action to address the issues. Not all issues will require instigation of new research because solutions have already been developed elsewhere or in analogous situations. In these cases, D and/or E programmes would be more appropriate to solve the issue for that region. This activity setting process is summarised in the attached document.

*...using RDCs, funded solely by levies and other private sources, to deliver industry-specific R&D, and reallocating their current public funding for broader research to a new body, or to other research programs — such as those run by CSIRO or the universities.*

We see no value in transferring the current treasury allocation from RDCs to federal agencies and universities to administer for three reasons:

1. These sectors already have representatives in the current priority setting processes overseen by RDCs so we can not see how the situation would improve.
2. Their track records for being in touch with industry issues are poor. Those we come into contact with now (eg Caring for Our Country programme) often seem to be based around responses to policies of the day and don't necessarily relate to what is important on the ground. Such programmes are frequently poorly informed, established in haste, often lack clear and measurable goals and are cumbersome to apply to and administer. The timing often does not reflect the farming season and causes inefficiency.
3. These organisations also have other priorities (such as academic publications and performance) which take resources but do not necessarily improve conditions in the industry or for the environment.

*Should processors generally pay a levy for R&D?*

We submit that this is a very clear Yes.

Processors benefit from improvements in production, quality or stability of supply so it seems logical that they should make some contribution back to the RDCs which have been at least partial sponsors of the activities which generated the improvements. This would need to be levied in such a way that the cost was not just passed on to the farmer.