

## **Wheatbelt NRMs draft submission to**

### **Modernising the Research & Development Corporation System**

#### **Discussion Paper 2019**

The following response is offered by Wheatbelt NRM to the discussion paper “Modernising the Research & Development Corporation System”

#### **Background**

Wheatbelt Natural Resource Management Incorporated (Wheatbelt NRM) is an independent, not for profit community-based organisation. We have over 20 years’ experience working with the Wheatbelt community to deliver sustainable land management and community development outcomes. With more than 1600 associate members, we have a proven history of success in project management and outcomes based performance.

Currently, we are contracted to deliver over \$3.5M in projects funded through Commonwealth and State government sources. Projects in the agriculture space include maximising summer ground cover to improve soil health and fill feed gaps in mixed farming systems, investigating the effectiveness of local sources of organic composted waste to build soil carbon and a nation project looking at how carbon functions in regenerative agriculture systems.

The Wheatbelt covers 12M hectares and represents one of the Nation’s most significant grain producing regions. Agriculture is the region’s dominant industry and landuse. As a consequence Wheatbelt NRM works closely with farmers to encourage the adoption of sustainable landuse practices.

Primarily we achieve this through working with the community to develop sustainable agriculture projects that are consistent with the Regional Natural Resource Management Strategy for the Avon River Basin as well as meeting the needs of industry. Projects are largely based on demonstration of innovative practices extended through the broader farming community to encourage adoption.

Wheatbelt NRM projects are anchored in peer to peer to learning principles and we use the ROGERS adoption continuum to move farmers toward adoption.

We work closely with both individual farmers and grower groups and often partner with them to deliver extension outcomes. The primary RDC’s we work with are GRDC, MLA and AWI.

#### **Introduction**

Wheatbelt NRM has a strong interest in the R&D activities of the RDC’s to support economic productivity as well as social and environmental outcomes. Wheatbelt NRM does not undertake research so we rely upon RDC’s and academic institutions to provide the science that we then extend to the broader farming community.

Climate change and consumer market trends that include an increasing desire for end-users to know where their food comes from and how it is produced represent both challenges and opportunity for Regional NRM Groups and farmers alike.

These challenges are driving a focus on environmental stewardship more than ever before as farmers are under increasing pressure to improve farm resilience, reduce the use of chemicals and demonstrate that they are caring for the land.

### **General Comment on the RDC Model**

The RDC model works best when achieving a 'bottom-up' approach. That is, when producers are actively engaged in setting the research priorities. This ensures that research undertaken meets the needs of the people contributing via their levies.

Wheatbelt NRM is broadly in agreement with the key focus areas outlined by the Discussion Document as needed to support a modern RDC system defined as:

- Delivery of value for money to levy and tax payers funding the system
- Collaboration and participation across the agricultural innovation system, with a focus on better cooperation and improved adoption of R&D
- Long term cross-sectoral and transformative R&D
- Improved levy payer representation and advocacy

We believe that to meet the needs of both climate change and consumer trends, research must be anchored in natural resource management and able to demonstrate that farm practice improvements are not only profitable but they are able to contribute to resilience and are actively seeking to lighten their environmental footprint.

Continued government investment is essential to ensure that the 'public good' is protected, that is that research undertaken is good for people and good for country. Wheatbelt NRM believes that moving forward, consumers will need to see evidence of this in order to trust our agriculture industry and give them social license to operate.

An opportunity for this is in the management of carbon emissions. Agriculture is under scrutiny for its carbon emissions and research has a role to play in reducing these emissions as well as in developing strategies to offset them through sequestration. The commercial drive is not yet there, providing an opportunity for government to lead by influencing the research agenda to ensure Australia is at the forefront of emission management at the global scale.

### **What are the cultural changes necessary in RDC's to achieve a modern, fit-for-purpose RDC system?**

Wheatbelt NRM sees significant value in the R&D activities of the RDC's within our sector however, the area where we see need for change is the current commercial focus of research that gives little regard to environmental stewardship.

The GRDC, for example, defines its purpose as “To invest in research, development and extension to create enduring profitability for Australian Grain growers Key performance indicator 6.0% rate of return by 2023”.

Its key investment targets are:

1. Improve yield and yield stability
2. Maintain and improve price
3. Optimise input costs
4. Reduce post-farm-gate costs
5. Manage risk to maximise profit

Looking at this, it is very clear that the current system is driven by increasing profit within the sector. There is no mention of sustainability, social or environmental responsibility. A sector driven entirely by profit, unable to demonstrate environmental stewardship, will not meet the needs of an increasingly conscious consumer market.

As a case in point, in February 2016 a report was published in a GRDC update on research commissioned by the GRDC. It was titled Herbicide Residues in Soils – Are They an Issue? Author Lukas Van Zwieten, Mick Rose et al.

<https://grdc.com.au/resources-and-publications/grdc-update-papers/tab-content/grdc-update-papers/2016/02/herbicide-residues-in-soils-are-they-an-issue-northern>

This report is available on the GRDC website at the link above. The findings of the report indicate that residues of certain herbicides, including glyphosate and its metabolite AMPA, trifluralin and diflufenican, frequently persist at agronomically significant levels in soils prior to the winter cropping season, particularly in the Wheatbelt.

The primary focus of the research was to determine whether phytotoxicity is contributing to loss of yield. While some evidence of this was identified, the linkages are complex. In the Wheatbelt however of 12 paddocks surveyed, 10 exceeded the trifluralin lower phytotoxicity threshold for oats and wheat. The research did not extend to measuring any effects upon soil health or its impact on the grain produced.

As far as Wheatbelt NRM is aware, no extension of this research has been undertaken in the Wheatbelt. Unless a farmer was looking for it, it would be highly unlikely that they would know it existed.

Such an example, we believe, is symptomatic of a culture where profit is the key motivation for research. To respond to the modern global setting, Wheatbelt NRM believes that social and environmental impacts will need to be considered in the context of all agricultural advancement.

In terms of Government funding to support the RDC's, taxpayer funds should ensure that research delivers on public good which in the agricultural setting we believe means that our food is produced ethically, free from chemical residue and not at the expense of our natural resources.

## **Where should the balance of investment between R&D and extension lie?**

R&D supports industry innovation while extension supports industry adoption of that innovation. The relationship between the two is symbiotic, one cannot exist without the other if change is to be achieved.

The question of the optimum ratio of investment between the two has been the subject of numerous studies but Wheatbelt NRM has yet to find a model proven to work in all settings. Extension is however core to how we achieve our strategic objective to actively engaging farmers in sustainable agriculture practice. For us it is core business.

In general the RDC's within our experience commit too few resources to extension, they predominantly see their role as R&D and find it difficult to allocate precious funds away from the research effort to fund extension. This assertion is based upon observation and anecdotal evidence as there are no public reports we have found that separate investment in R&D from extension activity.

It would make an interesting study in itself to audit the RDC's to determine the ratio of R&D to extension they fund. This could be the basis of a benchmarking exercise to determine the ratio of extension required to optimise the value to levy and ratepayers alike.

In decades past the WA State Department of Agriculture was the primary provider of extension services in the industry. Over recent years we have seen grower groups increasingly come to prominence to broker on-farm research trials and provide extension for RDC activities.

Recent reports such as the Ernst & Young March 2019 summary report *Agricultural Innovation – A National Approach to Grow Australia's Future* identify that a lack of coordinated extension limits the speed with which industry takes up innovation. It also identifies the Grower groups as key providers of extension going forward.

Another study reviewing the value of Grower Groups in WA by Agknowledge September 2017 found that farmers are influenced most by grower groups when it comes to innovation and best practice change, exerting more influence than R&D organisations.

The Agknowledge report also found that while grower groups are best placed to deliver extension, they are under-resourced to do it.

## **How could the RDC's play a stronger role in extension service delivery, in light of existing private and state government extension efforts?**

It is the view of Wheatbelt NRM that the RDC's are not the right fit for the delivery of extension services and that better outcomes would be achieved if extension activities were coordinated and funded via another mechanism into the Grower Groups and Regional NRM Groups.

Researchers are typically not trained in extension and again grower groups and Regional NRM Groups are better placed to deliver effective extension.

The Regional NRM Groups are trusted advocates of sustainable practice and can play an important role in encouraging consumer trust around environmental and social stewardship which will become increasingly important in decades to come.

Private extension services work well for driving the adoption of technologies with clear commercial interest. For example the marketing of a new product. In the case of product development, that extension happens as a part of the business model of the commercial entities. What is lacking is extension of research that is creating public good, or dissuading the use of a commercial product. Where there is no custodian nor commercial model for adoption then the justification of the use of public funds is high, and the use of an extension service (like Regional NRM Groups or Grower Groups) that sit outside pure commercial interest is recommended.

State Government extension services have dwindled over the last two decades in Western Australia. Renewed investment in this area is applauded, however the 'trusted advisor' status of Regional NRM Groups and Grower Groups has yet to be re-established by the Department.

**How could RDC's help researchers, entrepreneurs, and others better engage with producers to accelerate uptake?**

Grower groups and Regional NRM Groups are better equipped to broker these partnerships as that is what they do as core business for the reasons outlined above.