

DAFF

Agricultural Research, Development and Extension (RD&E) Plan

SEQ Catchments Submission

9th August 2013

It is encouraging that the Department of Agriculture Forestry and Fisheries is conducting a review of its approach to RD&E. As a user of considerable research and development outputs, and a significant contributor to extension networks in South East Queensland, SEQ Catchments has a large interest in the direction and effectiveness of DAFF's RD&E policy and practice. As a partner organisation, SEQC sees considerable opportunity in furthering collaborative linkages with DAFF, particularly in capacity building through extension networks and delivery.

The following sections present SEQC's comments on the RD&E Plan document and some suggested additions, with a focus on the South East Queensland region.

Comments on Agricultural Research, Development and Extension (RD&E) Plan

Generally speaking, the RD&E Plan is a significant advance in progressing toward the State Government's aims of doubling agricultural production by 2040. Overall however, the document does not seem to recognise the role natural resource management (NRM) Organisations play in contributing applied aspects of "R&D" and "Extension" within rural landscapes. We would like to comment on the environmental aspects of the 4 Pathways approach and believe that the NRM sector has relevance and can add considerable value to strategies relating to Resource Availability, Productivity and Production Costs.

Resource Availability

The NRM Regional Bodies deal directly with extension and on-ground project delivery in all aspects of securing and increasing resource availability. Extension services delivered by SEQC are focused on improving whole-farm planning and implementing projects on individual properties within geographically bound areas (e.g. subcatchments) that deal with specific NRM issues in the broader context of property and landscape management. Organisations such as SEQC can add value to DAFF's investments through engaging with landowners and geographic areas as whole-systems, and considering the integration of different farm production enterprises within landscape scale NRM processes.

The most significant omission in the DAFF RD&E Plan in Resource Availability is that multi-agency collaboration and networks are required to balance the availability of resources for increased production and economic growth with resource capability and long-term sustainability of production landscapes. This collaboration and networking is required at the operational and management/policy levels. A key collaborator missing from the document are the NRM regional bodies.

Another omission is the lack of consideration of landscape-scale natural resource attributes, capabilities and processes in determining and ensuring resource availability. Landscape scale planning processes such as 'floodplain planning' or 'subcatchment planning' can add considerable value when matching land capability with coordinated landuse. There is considerable risk associated with sustainable development of the identified land resources within SEQ if agricultural land-use change is permitted without considering landscape-scale natural resource attributes, capabilities and processes (e.g. increasing broadacre cropping land from 35 992 ha up to 160 000+ha and horticultural land from 24 500ha to 172 000ha in SEQ by 2040) (DAFF 2013)¹.

A further omission is reference to knowledge and capacities for maintaining and improving soil health, which is a fundamental requirement for securing resources and sustaining them through time.

The [Property Management Planning](#)² (PMP) program delivered by SEQC and other NRM regional bodies is one example of a long-term engagement mechanism that directly deals with landholders in developing cost-effective ways to build resilience to seasonal changes and enable adaptation opportunities, promote best management practices such as soil conservation, water, nutrient and energy use efficiency, integrated pest and disease management and minimise nutrient and sediment transfer into waterways and coastal systems. PMP is delivered at both the property and landscape scale with groups of neighbours, enabling consideration of individual production needs and landscape impacts. The [Community Partnership Managers](#)³ located across SEQ engage with landholders with a range of programs (including PMP) to enable improved understanding of natural resource processes and improved land management practices.

The landholder networks and extension processes throughout the region provide an enormous asset for DAFF and potential for collaborative RD&E partnerships for securing resource availability.

Productivity

The most significant omission in the DAFF RD&E Plan in Productivity is its failure to acknowledge the fact that achieving productivity in new development areas will require rigorous landscape analysis and multi-stakeholder input to ensure changes in land-use (e.g. from extensive grazing to cropping or horticulture) result in viable production and sustainable landscapes rather than marginal viability and natural resource degradation. RD&E for productivity needs to be strongly focused on long-term farming systems that are not prone to nutrient rundown, soil and land degradation and work in harmony with broader landscape NRM processes such as water runoff, subsurface systems and drainage, weeds, fire and healthy ecosystems.

¹ DAFF, 2013, Queensland Agricultural Land Audit – Chapter 13, Queensland Government. See: http://www.daff.qld.gov.au/_data/assets/pdf_file/0011/74000/QALA-Ch13-SEQ.pdf

² <http://www.seqcatchments.com.au/services-property-management-planning.html>

³ <http://www.seqcatchments.com.au/contact-CMP.html>

A major omission is evident where the Horticulture section ignores the resilience issue despite the impact of recent major floods in areas of intensive horticulture production such as the Locker Valley and Warrill Creek Valley.

A further omission is reference to knowledge and capacities for maintaining and improving soil, vegetation and pasture health, which are fundamental requirements for improving and sustaining agricultural productivity through time.

As mentioned above, SEQC engagement programs and extension resources directly support (sustainable) productivity growth on agricultural lands, uptake of best practice including measures such as conservation cropping techniques, improving irrigation efficiency, machinery adaptation and sustainable grazing land use. Specifically, SEQC has engaged with landholders in delivering over 1,000 projects improving natural resources, have engaged with over 2,000 graziers and completed detailed Grazing Management Plans (PMPs) with around 500 of these and delivered over 80 detailed Land and Water Management Plans with irrigators in the Mid-Brisbane (between Wivenhoe Dam and Mt Crosby) and Lockyer valleys and another 800 PMPs with Periurban landholders, many of which produce some primary commodities.

A significant learning from SEQC's Grazing Management PMP engagements is the need for grounding the research data from grazing trials conducted at Biloela Research Station with producers in the SEQ region. The use of data provided by the then Grazing Management unit within DAFF was found to be overly conservative, to the point where graziers were condemning the data outright (based on long-term experience) and finding little justification in using it to calculate their sustainable stocking rates. This example highlights the need for collaborative RD&E to get these production figures right. The loss of grazing management extension staff in SEQ has been a significant issue for the region which SEQC has been able to take up, however effective ongoing linkages with DAFF R&D staff will be essential into the future.

In a further example, the effective collaboration between SEQC and Growcom in the delivery of Land and Water Management Plans saw there was a gap in the availability of research and extension staff for working directly with irrigators in workshops and field days.

SEQC landholder networks and extension processes throughout the region provide an enormous asset for DAFF and potential for collaborative RD&E partnerships for increasing productivity.

Production Costs

The longer term economic benefits of improved natural resource resilience are well documented, but often not well integrated within whole-farm management, particularly on more intensive agricultural properties. The focus of SEQC engagements with all landholders is on the incorporation of the economic consideration of natural resource stability and health, and incorporation of NRM activities as essential costs within farm budgets. A major omission throughout the RD&E Plan is the mention of investment in whole-farm RD&E that targets economically viable production systems that do not degrade landscapes that are currently, or are intended to be used for doubling agricultural production. Environmental sustainability needs to be an explicit component and 'key performance indicator' of RD&E within every industry, not

just an overall ideal that is included as a token paragraph within research or extension programs.

Neglecting the real costs of effective and sustainable NRM practice may see reduced production costs in the short to medium term, however the costs of losing Good Quality Agricultural Land in the long-term through nutrient rundown, topsoil loss, weed infestation, urban sprawl and other forms of degradation will far exceed any short-term cost savings.

SEQC landholder networks and extension processes throughout the region provide an enormous asset for DAFF and potential for collaborative RD&E partnerships that enable grounded long-term views of sustainable production costs of primary production systems in the SEQ region.

Recommendations

Within the SEQ region (and in other regions):

- DAFF's RD&E Plan should spell out the direct role that NRM Regional Bodies have in supporting collaborative RD&E implementation and outcomes.
- RD&E for improved primary production requires collaboration amongst government, industry, NRM, university and landholder representatives. NRM regional bodies need to assist DAFF with citizen science and the grounding of agency RD&E processes.
- DAFF's RD&E Plan should outline mechanisms for bringing together and facilitating an 'operational working group' consisting of State Government, Industry, University, NRM Regional Body and landholder stakeholders involved with service delivery to landholders. A coordination group of operational level staff will enable grounded sharing of ideas on primary production RD&E and synergies in strengthening effective relationships with primary producers. Past experiences have demonstrated that the State Government (ideally DAFF) would be the best organisation to lead an 'operational working group', as an unbiased stakeholder.
- DAFF's RD&E Plan should outline mechanisms for bringing together and facilitating a 'policy and management leaders group' consisting of State Government, Industry, University, NRM Regional Body and landholder stakeholders involved in leading the policy directions and management of RD&E resources to improve primary production outcomes. A leaders group can work directly between the operational working group and meeting the needs of political and industry imperatives.