Making a national RD&E strategy work for Australia

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Look at life through the windshield, not the rear-view mirror.
Australia vs the world in R&D

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Technology is changing the way we look at R&D

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How to approach R&D and innovation

• What is needed?
• Has it been done before somewhere else?
• Can we facilitate the solution?
• Is invention (via R&D) required?
• Who is best to undertake the invention work?

World view

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ANZ Insight Paper: Greener Pastures

- National agricultural RD&E strategy is integral to Australia capturing the Asian opportunity

Agricultural competitive advantage

- Robust & Cost-Competitive Supply Chain
- Strong Access & Management of Resources
- Exposure to High-Value Markets
- Targeted R&D Investment
- Effective Adoption of Tailored Knowledge
- Sufficient Access to Capital

Realised through lower cost or differentiation
Current RD&E environment

↑ Pressure on public funding
↑ Capability constraints (infrastructure and people)
↑ Privatisation and globalisation of RD&E (e.g. biotechnology, extension)
↓ Investment from traditional public sector partners
↓ Ability to maintain required R&D capacity in regional Australia
The national RD&E framework: what has worked so far?

- In some areas it has:
  - facilitated increased collaboration and cooperation
  - led to more effective use of resources
  - broken down state barriers
  - reduced duplication and allocated resources to areas of priority
  - created greater understanding of national capability.
National RD&E framework strategies

Industry sector
• Beef
• Cotton
• Dairy
• Fisheries and Aquaculture
• Forests
• Grains
• Horticulture
• Pork
• Poultry
• Sheep (meat)
• Sugar
• Wine
• Wool
• New and emerging industries

Cross-sector
• Animal biosecurity
• Animal welfare
• Bio-fuels and bio-energy
• Climate change and variability
• Food and nutrition
• Plant biosecurity
• Water use in agriculture

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AEGIC – Australian Grains Export Innovation Centre

- National centre of research capability
- For growers, agribusiness and the customers of Australian grain
- Not-for-profit company
- Independent board of directors
- Market intelligence, requirements and opportunities
- Export grain quality and processing technologies

“WA government’s flagship contribution to the National Grains RD&E Strategy”
Australian Grains Genebank

• Preservation of genetic resources to protect the industry from changes in climate, pest and pathogen diversity … … and untapped quality characteristics
• 180,000 accessions of extremely valuable genetic diversity
• Online searchable database for the whole of the Australian grain collection
National Pork Strategy

- A more competitive and sustainable RD&E model for the Australian pork industry
- RD&E focus on key industry drivers
- RD&E program approach (versus a project approach) to increase collaboration and allow for young and mid-career scientist succession planning
- Significant cost savings of base facility cost (>50%) but guaranteed funding model
- Key RD&E facilities (Government and private) utilised throughout the year
- Enhanced technology adoption by industry

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Vasse Research Dairy

- Recognised nationally for the high-quality dairy research, but industry is small on a national scale
- Leased out in 2012 as part of rationalisation of research stations across Australia and DAFWA’s agreement to act in ‘Support’ role
- Still available for research relevant to state and national industry
- WA now working closely with Victoria on dairy research
National RD&E framework: where to now?

- National or International
- Regional, National or International
- Local, Regional, National or International

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Barley genetic improvement

• Taking advantage of China’s knowledge and resilient barley
• Have identified resilient barley breeding lines to improve production in Australia
• Data already being shared with the Australian barley breeding community
• Outcome: improved research efficiency for Australia through international collaboration

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E-extension

- Delivery of research outputs to growers
- Data and knowledge exchange, learning networks, communities of practice
- Web-based / mobile device apps
- Solving real problems in real time

Grains pilot e-extension project:

- National crop pathology and crop nutrition learning networks
- Endorsement from PISC R&D Committee and Grains Industry National RD&E Strategy Committee
- GRDC/ DEPI Vic/ DAFWA
- Pilot trialled using the United States’ eXtension model (extension.org)
Need to change behaviours

- Organisations need to understand their roles better, and to demonstrate commitment to the framework
- Individuals also have a responsibility to work in national interest

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This is the end of the beginning

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