

How is the Agricultural Industry moving Forward with New and Innovative Technologies

By Lloyd Russell

We hear a lot about agriculture technology and innovation (AgTech) and we have seen significant private and public funds injected into Start-Ups and a whole lot of other activities. In addition, we are seeing research institutions (Universities and State Departments) along with RDCs quoting innovation and technology as being the "new agriculture". However when I travel around Australia and globally working with my family business clients in agriculture, agri-business, manufacturing and advanced manufacturing I see a massive disconnect between the rhetoric and the practical commercial applications.

I note with interest a July 2017 report put out by the Commonwealth Bank called "Agri Insights Innovation Report" which is a summary of external research accompanied by some producer case studies. The main insights from Australian producers relating to where they see a good to great opportunity for innovation to add value. The list includes;

- 41% - In production output post farm gate, 51% of grain producers, 50% of dairy farmers.
- 37% - In the on-farm production process
- 34% - In marketing and the organisational structure of the supply chain
- 29% - Of sheep see an increased role for external consultants, advisers and data management specialists
- 46% - Preferred to participate in events that are focused on the commercial application of technology and innovative systems and processes
- 45% - Wanted to collaborate commercially with people and organisations from within and outside the agri-business sector
- 53% - Were conducting their own in-house research

It is the last two insights that are the focus of this article because I have firsthand experience of exactly these two points as a private strategic consultant along with being the Independent Chairman of Conservation Farmers Inc. and of two other Family Business manufacturing companies.

Before I progress, it is critical to stress that these insights are not exclusive to the agriculture industry because the same is occurring in other primary industry segments and in secondary industries.

The issue of collaboration requires a small comment to highlight what it really means. Essentially, business people look across all sectors of their industry to ascertain what innovation is being utilised that they might be able to adapt and adopt quickly. An example of this is the grains sector to see what the cotton industry is doing and adapt it directly into their system.

Collaboration is actually taking place in Australian agriculture. A good example of this is the Australian Department of Agriculture and Water Resources 'Smarter Irrigation for Profit' integration project, which is delivering and increasing extension and adoption of innovation and research across the agricultural sectors. Irrigators from the sugarcane industry in the Burdekin and the broadacre and horticultural industries in southern NSW attended the GVIA grower-led irrigation research field day in Moree earlier this year, to see firsthand how innovations in irrigation were being utilised in the cotton industry. There were presentations on automation of irrigation from cotton and sugarcane producers as well as from researchers at the University of Southern Qld.

Another good example of cross industry collaboration is the "Accelerating Precision Agriculture to Decision Agriculture," which brings together all 15 RDC's to capitalise on the big data opportunities for Australian agriculture and to transition a range of agricultural industries from precision to decision agriculture .

When looking outside the agri-business sector people search the other segments of primary production first (Horticulture, Lifestyle Horticulture and Mining / Resources) then they go into the secondary industries of manufacturing, foundries and other sectors to ascertain what technology and innovative practices they are using that could, with further R&D, be adapted and adopted into agriculture.

The last point around in-house research, is the one that I wanted to place emphasis on in this article because the question is "WHY DO" so many agricultural producers consider it necessary to do their own in-house research. Over the past three years I have asked this question of clients, colleagues and others. I believe it comes back to a few simple answers.

1. Australia has primarily a Research model with a small amount of Development attached, whereas the levy payer requires a Research, Development, Commercialisation (market focused) and Extension model that adds real value to their businesses.

2. The stakes are too high for farmers not to do their own on farm research. A recent article by Tim Burrow from Agribusiness Australia in the Australian Farm Institute Policy Journal; Autumn 2017, Vol. 14, No. 1 'Agribusiness is a Cornerstone of Australia's Future Prosperity' suggests that research is critical to modern Farmers - "because the level of at risk investment is too high".

3. Australian agriculture research is considered to be great research; however, the vast majority is either product-specific or captured by segments that restrict it from progressing into applied research, commercially accessible and of practical use. The levy payer is really seeking a higher level of cooperation and collaboration across the RDCs.

4. Business people are "time poor." There is an abundance of information events on, and unless the event is highly relevant to their businesses and they can obtain new and practical information in a manner that is understandable and accessible then they just do not attend. In this field, there is a need for collaboration between information providers to help reduce the ever increasing number of agricultural information events.

In conclusion, this CBA report along with the collection of formal and anecdotal evidence highlights an increasing trend towards more in-house research. This drive towards more private research based on a research, development, commercialisation and extension model and focusing on practical, commercial outcomes necessitates the need for a higher level of strategic thinking and the development of robust governance systems. It will not be successful, nor will it have the desired industry impact, if it is done in an ad hoc manner void of a clear direction and sound commercial structures.

In addition, I want to highlight a major deficiency in the support provided by professional services across business. That is making people aware of real and financially beneficial support to business from a range of agencies. One such program is the "R&D Tax Incentive" that provides a 150% tax deduction to the business undertaking the research. Another is the "Accelerated Commercialisation Program" that includes funds for a business plan, proof of concept, then first stage commercialisation.

It must be stressed that there are significant conditions attached to these programs, therefore the utilisation of external consultants is absolutely critical. For more information on this please contact the Conservation Farmers Inc. Executive Officer, Bernard O'Brien and he will organise preliminary consultations.

I trust this article has prompted some thoughts on what you might be doing within your business. Please do not hesitate to contact me on 0413 549 748 to discuss how this can be leveraged, on a fee for service basis, inside your individual business or within your grower group.

References

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