The View from the Ground – Lucinda Corrigan
“What do Redmeat Customers Want or Need?, ”

1. Investment:

At the strategic level of Research, Development and Extension, where is the market failure? Are there significant spillover benefits that give a road map for investment. The Australian Bureau of Statistics reporting system defines the following categories, or horizons:

i. Strategic Basic Research
ii. Strategic Applied Research
iii. Development
iv. Capability Building
v. Adoption & Commercialisation

The livestock producer needs investments across those categories in the on-farm sector, and off-farm further along the supply chain to maintain profitability. There are decreasing market failure (and spillover benefits) between i. and v., although that varies between industries.

Government’s role is crucial in the big picture investments in strategic research and development. For example we would not have the success today of Meat Standards Australia without the support of the government through 20 years of Beef CRCs.

The key investment themes are:

i. Animal Genetics
ii. Pastures and Soils
iii. Animal health and welfare
iv. Capability, labour efficiency, GPS for livestock

Each investment theme appears in each horizon.

For example in Genetics & Genomics: gene discovery is strategic basic and applied research, the development of algorithms to successfully deliver these into genetic improvement systems (as has occurred in the poultry and dairy industries) is development, the on farm uptake measurement of phenotypes and genotypes to ‘train and validate’ the algorithms is in horizons iv. and v.

The proportions of the benefits from adoption of new technology or marketing have been recently reestimated across the beef value chain (Mounter et al, 2012). The 2006-2010 period showed that farmers capture between 25% and 33% of the gains, domestic retailers 4-6%, overseas consumers between 9-10%, and domestic consumers between 46 and 50%. Analysis suggests that the costs are being met 60-75% by taxpayers, 20-30% by breeders and 4-7% by levy payers (R. Woolastion 2011)

Similarly the area of pastures and soils has pure science and discovery, from plant species, (native and exotics) and soil properties, such as the current research interest in the rhizosphere. This leads to the integration, modelling and trailing required to build systems that more sustainably deliver economic and production outcomes, such as the work in Evergraze. Finally regional delivery packages are enabling adoption, building on over 40 years of research.
2. **Adoption:**

Livestock producers are willing to adopt technology if there is proof that it works (achieve its goals of more productivity, reduced cost of production etc.) and that it will be profitable.

In the recent publication sponsored by the Gardiner Foundation, “Shaping Change”, David Pannell et al discuss some of the literature with relation to adoption. For an technology or practice to be successful two factors drive its adoption or non adoption, its relative advantage and its trialability.

Understanding and improving our capacity to adopt complex technologies is critical for the future.

Wilkinson and Dolling (ibid), describe a complex innovation as “not only difficult to use and understand, but also the nature of the innovation’s effect on the culture to which it is introduced, the innovation’s divisibility into different components that can be adopted separately, and the flexibility of the innovation to be used in different ways”.

3. **Business Innovation:**

In addition to the investment and adoption of technical improvements, there is the opportunity to invest in Systems Innovation Capability. As family farming businesses increase in scale, it becomes increasingly important to engage everyone in the business, in innovation. It can be at the strategic, organizational, cultural, product, process or marketing parts of a business, innovation can occur anywhere, led by anyone in the business.

The great businesses do this instinctively, there are many leading examples in agriculture and food in Australia. The Mackay family who produce 10% of Australia’s bananas and are planning for succession to generation four are a great case study. The Mushroom industry provides an interesting example of an industry that has transformed from a backyard, small grower basis in the 1970s, to a professional and profitable industry today.

Aside:

Since 1974 Australian mushroom consumption has jumped from 0.6 kg to 3.2 kg in 2009/10 (per capita consumption). While this level of consumption is low when compared to China, per capita consumption of the most common white Agaricus mushroom is on par with several European countries and is over double that of the United States.

Some 65,000 tonnes of white Agaricus mushrooms were produced during 2009/10 with a farm gate value of $310 million and with an overall gross value of production of $385 million. At a retail level the overall value of the industry – which includes imported product and other value added products – is almost $0.7 billion.

In terms of production, Australia has 77 commercial Agaricus growers. The benefits of scale of production can be seen in the fact that just three companies produce over half the total production, with the top 15 companies responsible for nearly three quarters of all Agaricus mushrooms grown in Australia. The current level of
production has made mushrooms the sixth most valuable horticultural crop grown, and the third most valuable local fresh produce item in the supermarkets today\textsuperscript{1}.

What is government’s role in assisting industry transformation?

4. **New Models:**

On a trip to South America in April, we visited AACREA the national, but privately owned technology transfer organisation that exists and is funded by its members. The model is underpinned by the fact it is driven by farmers for practice change, rather than by a government funding model which invests in consultants to form groups. It has lasted for 50 years, with between 6 and 20\% of production in various commodities. The Argentinian government set up Cambio Ruale to mirror the AACREA success but the groups did not survive after the 3 years of funding. This failure has been mirrored many times in Australia where subsidised programs have failed to meet the goal of becoming self funding at the end of the funding period.

In Australia, the most successful practice change organisations have this unique farmer leadership at their core, Birchip Cropping Group, WANTFA, SANTFA etc. There are less of these regional technology transfer groups in livestock, although some successful groups are located in the sheep/wheat zone. The Holbrook Landcare Network has remodelled its role on the BCG and is expanding its services to cover all areas of sustainable and productive agriculture in a predominantly livestock area.

Government’s role in assisting this is strategic investment in capability, in collaboration with the key industry partners.

There is another opportunity for SMEs, as they grow and that is effective collaboration with the research organisations. In the national innovation budget, the tax concession proportion is the largest slice of the budget and one which the farming community has largely ignored. In our business we are currently setting up an ATO accredited R and D company after approaches for collaboration from Universities and the CSIRO. For this to be successful, it will require coinvestment from other SMEs in the sector, and a new model of working together.

5. **Top Three on the Wish List for Government Investment**

Investment in genetic improvement gives an ROI through the supply chain. The 3 Beef CRCs and the Sheep CRC have underpinned the strategic research to deliver cumulative and permanent gains in the red meat sector. Top priorities are to continue to fertility and efficiency work in Northern Australia, multibreed analysis and incorporation of genomics in the delivery system.

Adaptation to climate change has been underpinned by long term work in State Departments around Australia. Recent work in perennial based pasture systems has been carried out by the Future Farm CRC. Long term vision and investment is fundamental to improving dryland farming systems in a drying climate, and to give sustainable and economic outcomes. Strategic research in supplying key nutrients is a fundamental part of this (NPK etc).

\textsuperscript{1} Source: ABS
The third area is animal health and welfare, to protect Australia’s biosecurity, control zoonoses, and meet the ever changing public good interests. The benefits are spread throughout the community and are a sound target for government investment.

References:


Wilkinson R., Dolling P.(unpublished); What happens when a complex Innovation meets an existing production system? Case studies of Lucerne growers in Western Australia.

Wolloostan R (2011) Presentation to Beef Genetics Workshop MLA

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