Australian agricultural R,D&E systems under scrutiny

Mick Keogh
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Australia’s agricultural research, development and extension (R,D&E) system (also referred to as the ‘agricultural innovation system’) has served the agricultural sector pretty well in the past, but questions are now emerging about its capacity to continually improve the productivity, profitability and competitiveness of Australian agriculture. The system is coming under stress as governments reduce funding for agricultural research leading to staff reductions and research centre closures, and university agriculture faculties are failing to attract students or capture research grant funding. The private sector is becoming increasingly important in delivering technology and information, but will this be enough to compensate for the big losses that are occurring in the public sector? These issues were discussed at a conference held earlier this year by the Australian Farm Institute, and some of the critical issues raised are considered in the following article.

The importance of agricultural productivity growth

The slowing of productivity growth rates in Australia’s agriculture sector is an issue that is attracting increasing attention. High productivity growth rates provide businesses in the sector with the best opportunity to be more profitable, all other things being equal, and hence productivity performance is critical to longer-term agriculture sector growth.

Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) analysis has identified that up until the mid-1990s, Australian agricultural productivity growth was quite high and averaged more than 2% per annum for an extended period (see Figure 1, over page). However, since that time, productivity growth in broadacre agriculture has been quite low, and by some calculations has been negative. The extended drought that occurred across most...
of southern Australia from 2002–09 has been identified as a potential reason why agricultural productivity growth rates have apparently slowed over the past decade, but subsequent ABARES analysis correcting for rainfall anomalies did not cancel out the apparent decline in productivity growth. This trend is not unique to Australia, and many developed nations are also experiencing a slowdown in agricultural productivity. However, the worrying issue for Australia is that lower rates of agricultural productivity growth appear more pronounced than in other nations. Figure 2 provides a comparison of agricultural productivity growth rates in Australia, the United States of America (US) and Canada since 1961. It highlights that while Australia has had comparable productivity growth rates up until about 1997, performance since that time is cause for concern.

It is easy to dismiss concerns about productivity performance as something that is only of interest to economists and policy-makers, but it is useful to remember that every 1% productivity gain is worth A$500 million per year to the Australian agriculture sector, or A$4200 per year to the average farm. The key findings from the analyses and data referred to above is that the Australian agricultural innovation system is no longer producing the benefits that it has in the past, and that change is needed if the desire of industry and government is to encourage the sector to grow and take advantage of accelerating global food demand.

Many immediately point to the static and declining levels of public investment in agricultural R,D&E since the 1970s as the most likely cause of current productivity trends (see Figure 3). Other factors that might be contributing include that Australia has reached the limit of its available good land and water resources, or that the sector is yet to fully recover from the extended drought that commenced in 2002.

Irrespective of the importance of these factors, they simply make it even more important that action is taken to try and address declining agricultural productivity growth rates.

**Government funding declining in real terms**

Of all the different factors potentially contributing to a decline in agricultural productivity growth rates, the decline in real funding of agricultural R,D&E by governments is most commonly identified as the major concern. However, the odds of a big boost to R,D&E funding at the Australian or state government level are not high during these fiscally prudent times. Additionally, if the Australian Government did put more money on the table, state governments are highly likely to cut their funding in response, and transfer more of the funding burden to industry.

Of the groups that provide funding and resources to agricultural R,D&E, the amount that state and territory governments contribute, and how that has changed over time, is a matter of some uncertainty. The Productivity Commission attempted to provide an estimate of state government agricultural R&D expenditure in its error-ridden 2011 report on rural research and development. That report suggested that total state and territory expenditure was about A$416 million in 2008–09, but sloppy
analysis and a decision to use its own definition of what constitutes R&D expenditure meant that the estimate was seriously flawed.

A source of data that appears more reliable is the information that is collated annually by the Australian and state governments as part of the nation’s report to the Organisation for Economic Cooperation and Development (OECD) on subsidies and public funding provided to the Australian agricultural sector. The data is compiled by the Australian Government based on information provided by the respective state agriculture departments, and separates expenditure on agricultural R&D from related agricultural extension.

Figures 4 and 5 show that the states and territories invested just under A$200 million in agricultural R&D in 2011, and just under A$100 million in related agricultural extension activities in the same year, highlighting the major weaknesses in the Productivity Commission’s A$416 million estimate.

What is also obvious from this data is that the commitment to agricultural R&D investment by state and territory governments in Australia has deteriorated significantly over the past decade, particularly when considered in real terms and from the perspective of research intensity. The investment intensity in R&D by the states has halved over the past decade, falling from 0.9% of gross volume of agricultural production (GVAP) in 2001 to around 0.4% in 2011.

These figures highlight the fundamental problem in any efforts that are made to lift agricultural productivity in Australia by increasing agricultural R&D investment from government sources. There is little point in the Australian Government committing to an increase in agricultural R&D investment, if it simply results in the states deciding they can further shirk their responsibilities. A binding funding agreement between the Australian Government and the state and territory governments will obviously need to be an essential component of any future efforts to boost agricultural R,D&E investment, and improve agricultural productivity in Australia.

Universities are becoming the weak link in agricultural R,D&E

The research engine of the agricultural innovation system in Australia includes the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the state Departments of Primary Industries (DPI), universities, and researchers employed in the private sector. However, in many ways the universities play the most crucial role both as centres of research, but also as the training ground for future researchers. Evidence that has emerged over recent years suggests that Australian universities are becoming the weak link in the Australian agricultural innovation system, and without significant change, the situation appears likely to get worse.

Data compiled by the Australian Council of Deans of Agriculture shows that annual enrolments in university agriculture courses have declined rapidly in Australia over the past decade, which raises some questions about the viability of university agricultural faculties as teaching and research institutions.

For university agricultural faculties, a lack of agricultural students means that less fees are generated, and agricultural courses become more expensive to run because staff still need to be paid. Agricultural courses also require laboratories and field stations and do not attract many full-fee paying international students. Contrast an agricultural course with a commerce course that attracts hundreds of student enrolments, many of them from overseas and paying relatively high fees, and requires no more than a lecture hall and a few tutorial rooms, and you begin to understand why Deans and Vice Chancellors are reluctant to give extra resources to agriculture faculties.

A lack of resources and staff, in turn, makes it more difficult for agricultural faculties to maintain research capacity, and to compete for research.
grants. Inevitably, smaller university agriculture faculties need to join with others to successfully compete for research funding, and this increases the cost and complexity of managing research projects.

Research activities of Australian universities are assessed by the Australian Government under the Excellence in Research Australia (ERA) arrangements which are used as part of the assessment process for future research funding. One of the main criteria used to assess research outputs is the number of publications produced, with international publications receiving higher scores. This creates an incentive to focus on research that has the potential for international publications, rather than research into issues that are a real problem for Australian farmers. Unfortunately, the actual impact of research outcomes for Australian industry is not a part of Australian Government research funding decision-making.

Universities have had some success in securing research funding from the Rural Research and Development Corporations (RDCs), but this is typically only available for short-term projects – up to three years – which provides only very limited security of employment for researchers.

A further challenge for university agricultural researchers is that the performance assessment ‘system’ within universities generally discourages researchers from spending time interacting with farmers and the wider agriculture industry. The end result is that university researchers are increasingly remote from the sector they are aiming to service. This creates a greater risk that research may not be relevant to the agriculture sector, and secondly means that farmers are less likely to identify or appreciate university researchers.

Will the private sector pick up the slack in agricultural R,D&E?

In nations such as the US the private sector is becoming a more important source of funding for agricultural R,D&E. What this means for the future of agricultural R,D&E investment in a nation such as Australia is not yet clear, but it certainly means that a change in thinking and policy is required.

Based on the best available estimates, the total public sector investment in agricultural R,D&E in Australia annually is approximately A$1.2 billion, and around half that investment is by the Australian Government with the other half split roughly between the state governments and farmer levy contributions.

The level of private sector investment in agricultural R,D&E in Australia is a lot less certain, with a survey completed by the Australian Farm Institute in 2011 estimating that the total annual investment could be between A$100 million and A$200 million. This means that private sector investment levels in Australia are between 10% and 20% of public investment levels, markedly different to the 50:50 public/private split estimated for the US.

The Productivity Commission somewhat naively assumed that if Australia scaled down public sector investment in agricultural R,D&E, the private sector would pick up the slack. However, that simplistic conclusion ignores the reality that Australian agriculture is not like agriculture in the northern hemisphere, and that the total market for farm inputs in Australia is relatively small. It also ignores that Australian agricultural products are exported globally, and that any innovative farm inputs or systems used in Australia must be acceptable internationally. Given that the minimum cost of registering most new chemical products globally is in excess of US$250 million, it does not make sense for a global agricultural technology company to invest in R,D&E to develop products uniquely for Australian use.

This creates a very real risk that, were Australia to downscale public R,D&E investment, critical R,D&E areas that Australian agriculture needs to invest in would simply be ignored, and Australian agricultural productivity and profitability would further stagnate.

An alternative option that appears more promising is for public sector agricultural R,D&E organisations in Australia to use more of their resources to leverage co-investment from global-scale private sector agricultural R,D&E corporations.

To many this might seem like ‘selling out to the multinationals’ or ‘supping with the devil’, but it is something that seems much more common internationally than is the case in Australia. Public sector R,D&E organisations in North America and Europe appear to regularly work cooperatively with private sector organisations, to the mutual benefit of both.

Getting the research mix right

One of the biggest challenges in managing an R&D portfolio lies in achieving an appropriate mix of projects that range from basic research right through to market-ready products and systems. Whether the Australian agricultural R,D&E system has that balance right is an open question, but the indicators suggest that there has been a drift towards short-term applied research activities, and a drift away from long-term basic research activities. While this may deliver some immediate results, it creates the risk that Australian agricultural innovations will dry up over the longer term.

The fact that Australian agricultural R,D&E is a set of activities that are carried out semi-autonomously by a range of different government, industry and private-sector organisations makes it very difficult to obtain a comprehensive overall picture of the complete Australian agricultural R,D&E portfolio. This situation is somewhat different in the US, where the key role of the US Government makes it possible to better coordinate and report on R&D activities. In Australia, the nature of
the agricultural R,D&E portfolio and how it is changing over time can only be surmised, but it is fair to say that there is less funding of basic research, and more funding of applied research and experimental development. This assumption arises from the fact that both Australian and state governments have been reducing funding in real terms, and progressively increasing pressure on their research bodies to secure more of their funding from external sources. The CSIRO, for example, is rumoured to require its research divisions to obtain up to 40% of their funding from external sources, and universities and state agricultural agencies have made a habit of moving research staff onto projects funded from external sources when budget cuts are imposed. The end result is that the Rural RDCs have become more important sources of external funding for government research agencies, as have private-sector companies. Both these funders are likely to place a greater emphasis on short-term projects that deliver commercial benefits.

For a relatively small nation such as Australia, there is some sense in having an agricultural R,D&E portfolio that is weighted less towards basic research and more towards applied research, because there is the opportunity to take advantage of the results of basic research being carried out internationally. However, completely abandoning the basic research end of the spectrum in Australia brings the risk that some of the fundamental areas of high-priority interest to Australian agriculture will not be addressed.

The additional advantage in having basic research projects as part of an agricultural R,D&E portfolio is that these are normally projects that are funded over longer time frames (five to 10 years), which provide more secure long-term employment for some of the best researchers who would otherwise be lost, or not attracted to the agriculture sector.

An additional challenge for the Australian agricultural R,D&E system is the lack of clarity about which agencies or organisations are the natural ‘home’ for the more basic agricultural research activities. Basic research of necessity involves access to expensive equipment, well-resourced laboratories and highly-qualified support staff, all of which should be available at universities with major agricultural faculties. However, the rundown in resources and personnel in university agricultural faculties over the past decade has meant that such resources are becoming a rarity rather than the norm.

**Improving the performance of the Australian agricultural innovation system**

Based on the principal that ‘what gets measured gets managed’ a very basic first step in overcoming some of the apparent weaknesses in the Australian agricultural innovation system is developing a better reporting system, so that funding levels and research activities are more transparent. The USDA’s Current Research Information System (CRIS) is an example of an efficient system that provides a clear picture of what a national agricultural R,D&E portfolio actually looks like.

In Australia, some major changes are also needed in the performance assessment ‘system’ for university agricultural research. A revamp of the ‘Excellence in Research Australia’ system is needed to put much greater emphasis on industry impacts. University researchers should also have much stronger incentives to spend time engaging with industry, and have available longer-term, larger-scale projects that provide better opportunities for career advancement and more secure tenure.

The steady erosion in public sector funding levels clearly needs to be addressed. The recent announcement of extra funding by the Australian Government is greatly welcomed, but the government should insist that the state and territory governments sign up to a binding long-term inter-governmental funding agreement before a single cent of that money gets to researchers employed by state governments.

Finally, it is obvious that the role of the private sector will become more important in the future, as a source of research and development funding, and also as the main provider of extension services. A major challenge will be making sure that there is good interaction between public and private R,D&E organisations, and that contractual arrangements have low transaction costs and avoid unnecessary bureaucracy. Making this happen will be a major challenge due to the different entrenched cultures that exist, but this is a situation where Rural RDCs could play an important facilitation role.

Ultimately, the land and water resources available for Australian agriculture are limited, and most future increases in agricultural output to meet growing world demand will need to be generated through productivity growth. The main way to achieve consistent increases in productivity growth rates is to invest in agricultural R,D&E, and at the same time to take steps to ensure that the agricultural innovation system is performing at an optimum level. Australian agriculture has a lot of work to do to improve the performance of its innovation system, and it is of concern that at this stage there is no obvious leader driving the necessary changes.
The Australian Farm Institute (AFI) FarmGAS Calculator is a tool for assisting farmers, extension providers and researchers to investigate how different farm management practices may alter greenhouse gas (GHG) emissions at an enterprise or whole farm level. The FarmGAS Calculator has been a free service managed by the AFI since 2009.

An upgrade of the FarmGAS Calculator (version-4) is currently underway – for public launch in June 2014. Version-4 will offer advanced functionality, such as the capability to assist in the financial analysis associated with farm business GHG emissions management projects – including participation in the Carbon Farming Initiative (CFI).

The CFI is an Australian Government voluntary carbon offset scheme. The initiative allows participants to earn carbon credits by reducing their GHG emissions and storing carbon in the landscape through changes to agricultural and land management practices. The upgrade and development of the FarmGAS Calculator is supported by funding from the Australian Government. FarmGAS version-4 will be a collaborative effort between the AFI and the University of Southern Queensland Australian Centre for Sustainable Business and Development.

**Project Plan**

The updated FarmGAS Calculator will include an online Marginal Abatement Cost Curve (MACC) tool and modifiable Model Farms that can be used by farmers, extension providers and researchers to help assess the financial implications of adopting a range of GHG emissions abatement practice changes and investments. The project’s key activities include:

- To identify, test and review an online decision support tool which is made available to farmers and extension providers. See accompanying Box 1 on MACCs.
- Model Farms will be developed and made available in a way which will allow modification by decision support tool users and will encourage new users to learn more about the FarmGAS Calculator.
- To complete and provide User Guides that assist in the application of the decision support tools.

**Box 1: What is a MACC?**

MACCs were first developed after the oil price shocks in the 1970s, with the initial aim of reducing crude oil consumption and later electricity consumption (FAO 2012). Over the last 20 or so years MACCs have been used to provide quick comparisons of the cost-effectiveness of GHG mitigation and carbon sequestration options between different methods of abatement. McKinsey & Company have been a leading research entity developing MACCs as useful tools for policy-makers and businesses to prioritise carbon abatement methods. The MACC histogram shown below assesses the cost and reduction potential of carbon abatement methods with each methods bar width representing the abatement potential, the height representing the average cost (in €) per unit (tonne of carbon dioxide equivalent: tCO₂e) of abatement and the area of each bar representing the total comparable cost of each abatement method. The cost-effectiveness of the carbon abatement method reduces when moving along the MACC histogram from left to right.

The best use of a MACC however is identifying which abatement method either (1) reduces emissions and saves money or (2) reduces emissions at an indicative cost. For example, the MACC histogram below showed switching to incandescent lighting was the most cost-effective method per unit of carbon abatement. The MACC also showed coal carbon capture storage retrofit is one method that would provide a large amount of carbon abatement, but at a cost of approximately €40 per tonne of carbon dioxide equivalent that was being reduced.

![Figure 1: Global GHG abatement cost curve beyond business-as-usual – 2030.](source: McKinsey & Company (2009).)

**References**


Opportunities to improve Australian agricultural advocacy groups’ effectiveness

‘To speak with one voice’ was written by Tom Connors in 1995 and told the story of the formation of the National Farmers’ Federation of Australia (NFF) in 1979. Over the ensuing 34 years, a great deal has changed in farming and in Australian society which begs the question of whether agricultural advocacy groups like the NFF are successfully moving with the times.

The Australian Farm Institute has recently undertaken research examining agricultural advocacy in Australia in light of these changing conditions with the aim of improving its future effectiveness. The research takes a comparative and objective approach in assessing the effectiveness of advocacy groups in Australia and internationally. Although a wide range of academic literature that explores the drivers of ‘collective action’ or ‘influence’ was covered in this research, there exists only a small amount of literature specific to these drivers in the agricultural sector.

It is generally agreed by academics that both globalisation and the so-called ‘digital revolution’ have modified the ways lobby groups or not-for-profit organisations can influence public policy decisions. When assessing an organisation’s advocacy effectiveness, it is critical that the analysis goes beyond the size or past performance of an organisation. Increasingly, the ability of any group to influence public policy depends on that group’s support within the wider community. In effect, successful lobbying has transformed from the backroom deals of the past to slick public relations and media campaigns.

To obtain a broader perspective on this complex issue of lobbying power and influence, the research investigated the effectiveness of agricultural advocacy groups in New Zealand, Canada and France. It also analysed advocacy groups in other sectors of the Australian economy including the Australian Chamber of Commerce and Industry, and CHOICE. The research does not aim to pick winners or losers but it does look at the factors that contribute to an organisation’s overall effectiveness.

New Zealand has an almost unique farm lobby group structure. Farmers who choose to belong to Federated Farmers of New Zealand can expect both their specific commodity and general issues to be heard. These New Zealand farmers know that they belong to one of the most respected lobby groups in Wellington and hear consistent messages at both the local and national levels.

In France, as in most other developed nations, the level of engagement of farmers in voluntary collective organisations has decreased. French agricultural advocacy groups counteract this declining trend (to some degree) by providing a range of services in addition to public policy lobbying, and play a particularly important role in the governance of the local Chambers of Agriculture, which deliver public services to farmers. Interestingly, despite perceptions that French farmers have a strong national voice, there are at least three different French agricultural lobby groups each with independent values. This fragmentation can create noisy public policy discussions at times, but also allows for clearer and consistent strategic goals for each group.

Canada’s agricultural lobby group structure is another very interesting example which has many similarities to the structure of Australia’s agricultural lobby groups. Agricultural advocacy groups in Canada are fragmented along commodity and provincial lines. This fragmentation is also impacted by different funding models, with advocacy groups in some provinces able to use levy funding while other provinces are restricted. The Canadian Federation of Agriculture is one group that is conscious of its limitations and focuses on areas where it can claim a degree of legitimacy, such as drafting the National Food Strategy or developing the Canada Brand.

In Canada, this model avoids the challenges and inefficiencies of trying to represent every commodity group and every farmer.

The results of this research will be detailed in a forthcoming Australian Farm Institute report. This research report will be discussed at the seminar: ‘Effective Agricultural Advocacy’, in Sydney on the 8th of November 2013.
Potential and limitations of northern Australia as a future food bowl

Hon Brendon Grylls, MLA
Western Australian Minister for Regional Development and Lands, and Parliamentary Leader of the WA National Party

The vexed question of a northern food bowl will not be resolved until federal and state governments direct time, energy, financial resources and political willpower to where the possibilities are greatest.

Government green and red tape are some of the biggest threats to ensuring productive and sustainable agriculture across our expansive North.

I believe most Australians remain bemused that we are still struggling over a national land use blueprint and foreign investment formula that will allow us to use the high rainfall zones and river aquifers of northern Australia for agricultural enterprise.

The ever-growing stockpile of non-committal technical reports, lukewarm water and environmental assessments, and confusing land use profiles has tended to firewall governments and the private sector from the opportunities.

Upon winning office in September 2008 the new Liberal-National Government in Western Australia (WA) resolved to cut through pervading negative sentiment to fund the exciting Ord Stage Two expansion. The funding was delivered through the Royalties for Regions program which quarantines 25% of royalties for non-metropolitan projects.

Royalties for Regions, the WA National Party’s core 2008 election strategy, provided foundation capital of $311 million to ensure farmland could be doubled to almost 30,000 ha. The Federal Government provided an additional $195 million to revitalise Kununurra’s community and social infrastructure.

In May this year, Kimberley Agricultural Investments (KAI), an Australian entity wholly-owned by the Shanghai ZhongFu Group, won the opportunity through an expression of interest process to commit an estimated $700 million to develop 13,400 ha of new irrigated farmland on leasehold title. More than 1000 ha of new farmland has already been cleared.

The need for scale is the biggest factor in growing the North into a resilient and productive agricultural region. While diversity is important, it is critical for the agricultural industry to be underpinned by anchor crops that are of sufficient scale and profitability.

The WA Government’s Ord Stage Two strategy focused on the provision of multi-user infrastructure and land availability, but the task of winning Commonwealth environmental approval for the initial 7400 ha Goomig area of expansion was extremely arduous and at times daunting.

Kimberley Agricultural Investments will require similar approvals to open up the remaining 6000 ha Knox Plain area. Northern Australia’s agricultural prospects will be further enhanced if the Ord scheme can be expanded into the Northern Territory, with 14,000 ha soils suitable for a range of broadacre crops.

Kimberley Agricultural Investments will require similar approvals to open up the remaining 6000 ha Knox Plain area. Northern Australia’s agricultural prospects will be further enhanced if the Ord scheme can be expanded into the Northern Territory, with 14,000 ha soils suitable for a range of broadacre crops.

The Northern Territory Government is working with WA and the Commonwealth to progress this objective. The development of northern Australia as a future food bowl will take many forms and face many challenges.

Sustainable large-scale mosaic farmlands using water harvesting from ephemeral rivers and tapping aquifers will only occur, however, if potential private investors are not summarily dispatched by vested interest groups and government regulation. The national intent should be an approvals pathway to assist private capital through the maze of environmental, native title and tenure issues.

Underpinning productivity gains in general agriculture and drought-proofing the increasingly important Australian beef industry, is critical if we are to take advantage of emerging export opportunities.

Targeting groundwater opportunities in northern Western Australia is a priority for Royalties for Regions.

For example, we want to use for agriculture the estimated 190 gigalitres of surplus freshwater licensed for discharge annually from mines operating below the water table in the arid Pilbara region.

At Woodie Woodie manganese mine, 120 kilometres east of Marble Bar, a trial plot funded through Royalties for Regions in 2012 produced sorghum yields of 240–300 tonnes per hectare using surplus fresh water from an operating manganese mine pit.

Woodie Woodie is licensed to discharge up to 60 gigalitres annually from large, shallow aquifers across its mining precinct and offers an amazing opportunity to farm the desert for fodder and other crops at commercial scale.

Rio Tinto currently uses water from its Marandoo iron ore mine near Tom Price to produce more than 30,000 large baies of hay per annum from 14 centre pivots for its Pilbara beef enterprise. It proposes a farm operation treble that size at its new Nammuldi mine west of Tom Price.

I’m excited about the potential for northern Australia to become a future food bowl for the nation, but unnecessary green tape is the biggest risk factor in preventing positive outcomes.

In 2013, the Hon Brendon Grylls MLA contested the North West seat of Pilbara, with a plan to increase focus on the north of the state. He is in his second term as Minister for Regional Development and Lands, and remains a passionate advocate for making regional Western Australia a better place to live, work and invest.
A future for northern Australia without intensive agriculture

Senator Rachel Siewert
Australian Greens spokesperson on agriculture and natural resource management

The Greens want a broad based sustainable economy for northern Australia that supports the diverse people, cultures and communities across the region. Any development in our North must be based on a set of key principles to protect this precious and unique part of Australia.

These principles recognise:

• the need for an economy to serve the people and the community
• that the natural environment and Aboriginal culture are the region’s greatest assets and that local communities must be empowered to make decisions about the future of the region
• that Aboriginal people have a right to live on their country and enjoy economic opportunities
• the importance of multiple small, locally owned businesses to help create a diverse and strong regional economy
• development must be subject to thorough assessment including cumulative effects on the environment and community.

We are concerned that the Government sees northern Australia as the last frontier for development and exploitation, through large-scale agriculture and industrial and resource development projects that are unsustainable and threaten to irreversibly damage the region.

Large-scale agriculture across Australia’s North remains a pipedream for some, but the evidence doesn’t support such development. The CSIRO has demonstrated that the water for large-scale, intensive agriculture does not exist in the North. The water that is present in the North plays a crucial role in the region’s ecosystems, and the impact of removing or redirecting it will be significant.

We are conscious of ensuring past mistakes, both in northern Australia and other parts of the country are not repeated. Unsustainable development has caused land degradation and species loss. The North already faces a number of serious and cumulative pressures such as climate change, changing weather patterns and more extreme weather events, large wild fires, weeds and other invasive species, degradation and an extinction crisis.

Instead of rushing into developing large-scale infrastructure that may not be environmentally or economically sound, we should be investing wisely in truly sustainable agriculture and sustainable development of northern Australia. Investments should be respectful, long term and sustainable, so as to support communities, rather than just delivering on the demands of big business. Agricultural development should be innovative, mosaic and adaptive. More funding needs to be directed to research and development to support this type of agricultural development.

We also need to consider other industries for the region that can operate alongside sustainable agriculture. Sustainable fishing industries with management and practices in place allow for stocks to be protected into the future. Tourism, Indigenous Rangers and carbon farming all exist and can be operated in ways that benefit communities and do not damage the region’s environment.

Ensuring Australia’s food security means investing in sustainable agriculture and helping farmers and growers around the country deal with the increasing threats they face from declining returns, resource development such as coal seam gas, climate change and extreme weather. The idea of a food bowl in the North may be appealing, but it isn’t realistic.

WA Senator Rachel Siewert is the Australian Greens Whip and Chairs the Senate Community Affairs References Committee.

Coming from an agricultural science background, Rachel worked for the WA Department of Agriculture and spent 16 years as the Coordinator of the Conservation Council of Western Australia before entering the Senate.

Rachel is the Australian Greens spokesperson on a number of critical issues, including agriculture, natural resource management and fisheries.
Media attention on the issue of overseas farmland ownership in Australia has spurred a great deal of debate, with arguments from either side growing progressively one dimensional. Opinions have tended to swing between those that are xenophobic and those that are overtly liberal. With no government record keeping on overseas farmland ownership established at this stage, the media is playing an important role as the interim gatekeeper. However, media have tended to miss some of the more crucial issues, and have failed to scrutinise the current quality of information and data. Foreign direct investment (FDI) has always been a strategic driver of growth for parts of Australia’s economy, including agribusiness, infrastructure and consumer goods manufacturing. The Australian agricultural landscape has also benefited from FDI for more than 100 years. The recent move by the Indonesian Government to back the purchase of one million hectares of Australian farmland has revived the longstanding debate about the role of FDI.

A recent Ballarat Courier article titled, ‘Land ownership impacts on its inhabitants’,1 is an example of the media playing on the fears of what is foreign more than analysing the facts. In the article, the journalist manages to draw a relationship between FDI and terra nullius in 1871, when the British crown settled in Australia and deprived Aboriginal people of their land, to infer what could potentially happen if Australia were to continue to let Chinese investors buy Australian land. The article implies there is a risk of a possible invasion using as a starting point the recent closure of a McCain’s potato factory. Everybody is entitled to their opinion, but comments like this are better suited to fiction writing. Media reports on the issue of overseas land ownership in Australia don’t have to be a caricature to be misleading. In January 2012, the Australian Financial Review (AFR) published an article entitled ‘Chinese want slice of rural Australia’.2 The article reports on a group of Chinese companies with a shopping list of Australian agribusinesses and farmland they wish to purchase. Although this story appeared to comment mainly on competitor’s interests and some hypothetical deals, it was actually about a meeting between Chinese investors and representatives of Austrade. It is the role of Austrade to ‘help companies around the world to source goods and services from Australia’ and there is nothing unusual or exceptional in Austrade meeting with overseas companies to discuss hypothetical deals. However, the article doesn’t provide any details about the proposed deals or the targeted businesses. It provides a list of ‘overseas farmland deals’ and mentions a review process into foreign ownership by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) and the Rural Industry Research and Development Corporation (RIRDC). If the media had taken the time to look at this review process more closely, they would have probably found information for a more complete story, although that may have been less ‘newsworthy’.

The data on foreign ownership released by ABARES and RIRDC was sourced from an Australian Bureau of Statistics (ABS) survey into FDI in 2011. At that time the government was trying to appear ‘proactive’ in the midst of a heated and xenophobic debate about the purchase of Cubbie Station by Chinese investors. The most recent statistical survey on foreign land ownership was conducted in 1983. That survey was quickly updated by the ABS with 11,000 agricultural businesses surveyed out of a total list of 165,000. The survey found that about 5.8% of Australian farm land was held under majority foreign ownership, and a further 5.3% of land had some level of foreign ownership. More than half the foreign owned land was either in the Northern Territory or Western Australia.

The data about foreign ownership of agricultural land is also of limited value, because most foreign ownership of agricultural assets in Australia is actually in the processing and marketing sector – which are not classified as agricultural businesses by the ABS.

In summary, the issues surrounding FDI in Australian agriculture are much more complex than portrayed in the media. It is evident that significant discussion needs to occur by government, media, and industry and much better information needs to be made available, so that debate on this issue is pertinent, factual and helps Australian agriculture move forward.

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US farm bill still undecided
The US$500 billion US farm bill, a 1000-page document that sets out the nation’s food and nutrition policy, has been caught up in partisan gridlock for nearly two years. The indecision is fuelling uncertainty across farming communities. Washington’s stalemate over the federal budget and national debt has done nothing but exacerbate concerns for farmers.

The next version of the US farm bill was debated in the US Congress in September, 2013. The House of Representatives proposed one version and the Senate proposed another, but neither could agree on the version proposed in the other chamber. Over the next decade, depending on which version of the farm bill becomes legislation, there will be either a US$23 billion cut to food stamps by the Senate or an estimated US$5.5 billion cut to the food stamps program by the House of Representatives.

The House wants the new farm bill to expand the taxpayer-subsidised crop insurance program by 10%. However, the Senate has stated that if this increase were to go ahead those farmers making US$750,000 or more in adjusted gross income per year would need to pay for increases to the crop insurance program. The Senate’s proposal would also require all farmers to adopt soil and water conservation measures to qualify for subsidised crop insurance premiums.

The US$1 billion per year expansion of the federally subsidised crop insurance program, which now costs around US$9 billion annually, has proven to be more negotiable than the proposed cuts to the food stamps program. However, the Senate has reiterated the critical importance of placing stricter limits on farmers who are eligible for subsidy payments, as the Senate feels that payments proposed by the House appear to be far too generous and could possibly distort prices in the marketplace.

It has been stated that with the current deadlock in the US Congress, a two year extension on the existing farm bill is most likely to occur if both chambers cannot come to a consensus about the national food stamp program.

Woolworths phasing out caged eggs
Woolworths recently announced that it will be phasing out the sale of eggs from caged hens by 2018. Woolworths has also stated that it will not use caged eggs in any of their home brand products.

The move is said to be a costly one for farmers, as they are being forced to change their systems. The change is likely to also be more costly for consumers, with eggs potentially becoming more expensive.

A report by CHOICE found that the average cost of cage eggs was 43 cents per 100 grams, while the cost of barn laid eggs was approximately 80 cents, and free-range eggs was around 93 cents. The report indicated that free-range eggs cost nearly double caged eggs, imposing a financial burden on consumers.

The requirement of all chicken meat producers to meet minimum RSPCA standards, will also impact on-farm operations. These standards include adequate access to water and food, adequate space, and freedom from ‘discomfort, pain and distress.’

A free trade agreement (FTA) with Korea high on the agenda
Australian Prime Minister, Tony Abbott has declared that he wants all three of Australia’s lingering free trade deals with countries in northern Asia to be signed within the next 12 months. The Republic of Korea is one of the northern Asian nations that play an important role in Australia’s beef trade and policy-makers have been discussing a Korea-Australia FTA since 2007.

Korea wants to include dispute resolution provisions in the agreement that would enable Korean firms to legally challenge Australian Government decisions. This has been a sensitive issue, which has held up negotiations and one that is currently the focus of discussion.

Despite Korea’s requirements, an FTA with Korea has become imperative to Australia’s future trade opportunities in high value products like beef. Many of Australia’s competitors such as the US already have FTA’s with Korea, and therefore enjoy a competitive advantage in beef trade over Australia. Australia is Korea’s third biggest beef export market, accounting for 123,000 tonnes of beef valued at 572 million in 2011–12.

A recent study on the issue found that Australia’s gross domestic product (GDP) would grow by A$23 billion by the year 2020 if it were to engage in an FTA with Korea, and Korea would reap the benefits of a A$28 billion growth in GDP from the trade deal.

Genetically modified organisms (GMOS) in the EU
European Academies Science Advisory Council (EASAC) recently determined that GMOs were safe for the environment and human health, a claim backed by Anne Glover (the EU’s chief scientific advisor) and the national science academies of all EU member states.

The published report concluded that Europe needs to question the widespread rejection of genetically modified crops, and details serious scientific, economic and social consequences of the current policy.

Anne Glover declared that there was no evidence supporting claims that GM technologies are riskier than conventional breeding techniques, with this view supported by thousands of research projects.

Research leaders were also careful to avoid bias from literature closely linked with industry, and to ensure accurate results. Approximately 80% of the literature used in the study was non-industry funded.

The report also drew attention to issues that need addressing within GM policy. Some newer technologies are being classified as GM and have therefore been banned, when there is no evidence that they contain foreign species in the genes used.
In the news

The Institute has recently been interviewed by ABC Rural’s Country Hour on the unwillingness of Australian super funds to invest in agriculture and concerns about levels of foreign investment. Mick Keogh was interviewed by Warwick Long on the topic: ‘Foreign Investment: what should the rules be?’ (14/10/2013); and Sam Hunt and Michael Condon on why, ‘Super funds don’t invest in agriculture’ (13/9/2013):

‘Over the last 20 to 30 years, Australian superannuation investment managers have tended to be very focused on investing in equities in the stockmarket in Australia. In general terms, that’s provided a pretty good return, so it’s been quite a convenient investment vehicle for them. Agriculture doesn’t fit the bill the same way.’

Mick Keogh says foreign companies are keen to invest in something tangible, like land. They take a much longer-term view – they take the view that investors want to be paid out in 15 or 20 years’ time and they want to make sure their assets are secure.

The Institute has just launched a Newsroom page on the AFI website, bringing together recent media articles and interviews. For timely updates go to: www.farminstitute.org.au/news-and-events/newsroom.html

Out and about

Recently the Institute’s Executive Director, Mick Keogh, has spoken at:

- Australian National Fodder Conference, Palm Cove, Queensland
- Rural Innovation Research Group Annual Symposium, Melbourne
- Queensland Farmers’ Federation Energy Forum, Brisbane
- PPB Advisory National Agribusiness Conference, Melbourne
- Agriculture Kangaroo Island Conference, Parndana, South Australia
- Harden District Rural Advisory Service AGM, Harden, New South Wales
- Western Australian Division of Ag Institute Australia ‘Busting the Productivity Barrier’ Forum, Como, Western Australia
- Woolworths’ Agricultural Business Scholarship Program ‘Future of Agriculture in Australia’ Panel Discussion, Bella Vista, New South Wales
- NSW Farmers’ Association Executive Council Workshop, St Leonards, New South Wales
- Monsanto Australia Annual Conference, Port Douglas, Queensland
- Trade and Investment Queensland Lunch Forum ‘The Dining Boom – Beyond the Hype’, Brisbane