Australian farmers could remain years behind global peers due to NBN delays

Adam Tomlinson, Australian Farm Institute

Wouldn’t it be great if everyone had access to a seamless flow of information via the internet. Whether you worked in a metropolitan area or a remote farming region, the software or data needed to keep your business running efficiently could be downloaded quickly and affordably. Although this scenario already exists in some parts of the world, it remains wishful thinking for most Australian farmers. In reality, farmers are frequently forced to use their ingenuity to find their closest internet hot spot, whether it is in a particular position at the far end of the farm or in a distant town.

The key to establishing quick and affordable internet access across the country is the installation of a comprehensive broadband network. Broadband is defined as high-speed internet access that is always on and with a faster data transfer speed than traditional dial-up technology (FCC 2015).

Broadband access allows a farmer to evaluate the precise performance of their farm business’s watering systems, weather stations, field equipment, crops, livestock and employees remotely via the internet. The vast scale of the Australian continent and sparse distribution of communities outside of major urban centres, however, has created substantial challenges for implementing a broadband network capable of servicing the majority of Australian farm businesses.

Successive Australian Governments have found planning and implementing a national broadband strategy extremely challenging due to the ever-changing nature of technology and the large-scale infrastructure spending commitments that go with it. Ultimately, these types of challenges have led to political battles and protracted delays in providing high quality broadband access to all.
Australians. Consequently, Australian farmers have been left trailing behind their peers in countries that have higher quality broadband access.

The Australian Government’s current broadband policy involves rolling out the latest technology via a National Broadband Network (NBN) which will deliver high-speed broadband access to all Australians by the end of 2019 (Department of Communications 2015). Upon completion, the NBN will provide at least 50 megabits per second (Mbps) download rates to 90% of fixed premises and 12 Mbps download rates to those accessing broadband through satellite services.

It is likely that many Australian farm businesses will access broadband (particularly in the field) through satellite services. However, the 12 Mbps download rates offered by satellite services might not be sufficient for Australian farmers as they are already competing with farmers in other nations who enjoy much faster internet access. Essentially, this means that Australian farmers could be at risk of remaining years behind global peers due to NBN delays (continued).

Why broadband access and speed matters

There are various types of broadband-enabled technologies that have the potential to offer unprecedented capital and labour efficiency gains for farm businesses (see Box 1). These technologies generally involve infrastructure for data collection, management, analysis and advice that depend on capable and affordable broadband coverage.

There are information and communication technology (ICT) company that write software and build wireless systems for farmers and land managers to monitor and control infrastructure such as electric fences, water pumps, irrigation channels, centre pivot irrigators; as well as to collect data from soil moisture sensors, weather stations and cameras (Mulcaster 2014). The infrastructure developed by these types of ICT companies largely depends on broadband coverage. Broadband-enabled technologies offered by multinational machinery makers provide another example of where inadequate broadband coverage can limit technology use. Many machinery companies now offer a wide range of in-built precision agricultural technologies that involve collecting data which helps monitor the real-time performance of a machine, field or crop. However to fully utilise this type of technology, a mobile data connection is required to transfer information from the machine to a website (John Deere 2015).

As a consequence, available internet speed is becoming an important criteria for farmers in making machinery purchasing decisions, in cases where those machines involve broadband-enabled technologies. If internet speeds are too slow then most data applications are simply an expensive and useless option. As a general rule, internet connections with data transfer speeds of less than 1.5 Mbps are not able to transmit relatively small yield monitor data files (Griffin et al. 2015).

Box 1: As an example of the benefits broadband-enabled technology can bring, consider the example of a large-scale cattle producing operation in western Queensland. The business normally runs around 10,000 cattle, watered via a network of some 30 bores and associated water tanks and troughs. During the peak of summer, cattle cannot survive even 24 hours without water, so the main job on the property in the past has been a daily 300 kilometre bore run, to check all bores and troughs are fully operational. Installation of a network of electronic bore monitors, all connected via the internet to a mobile phone application that immediately alerts the owner when a change of water flow occurs, has meant the owner no longer needs to spend up to eight hours every day just checking bores and troughs. However, a lack of reliable internet access has meant the technology can only be made workable with the installation of an expensive VHF radio network. Further augmentation of the system via the installation of CCTV monitors could deliver even greater efficiencies by enabling remotely-controlled gates to be used to hold cattle at the water, greatly reducing the time and cost associated with mustering. This technology requires fast and reliable broadband internet access to operate effectively, so is not currently feasible without large capital setup costs in most rural areas.

Australian broadband methods, coverage and adoption

Australian residents and businesses access the internet through a variety of means including the traditional dial-up via a fixed telephone line and broadband systems such as fibre, cable, digital subscriber line (DSL), wireless or satellite (see Figure 1). Mobile wireless and DSL methods are currently the two major types of broadband access available in Australia.

The Regional Australia Institute (RAI) has analysed the quality of broadband coverage for 564 local government areas (LGAs) across Australia. RAI analysis shows that less than 13% of the Australian population lives in regions that are considered rural or remote (see Figure 2). Based on the most recent RAI quality ratings for broadband coverage, the heartlands region, where the majority of Australian farm businesses are located, has the lowest quality broadband access on average and the largest variance in broadband quality across Australia (see Figure 3). Nearly all businesses in Australia access the internet using a broadband connection (see Table 1). However, businesses in the agriculture, forestry and fishing industry lag behind other industries when it comes to accessing broadband, building a web presence, placing orders via the internet and receiving orders via the internet. There is no doubt that the relatively low
The quality of broadband coverage in rural and remote regions is a major reason for the slow adoption of internet functions by these businesses.

**Australian government policy on broadband access**

In 2004, the Australian Government recognised the need for a national broadband strategy, with the aim of achieving fair and reasonable access to broadband and its benefits for all Australians. Subsequently, major telecommunications providers, such as Telstra and Optus, put forward proposals for establishing broadband networks. These proposals were later rejected by the Australian Competition and Consumer Commission (ACCC) due to several key issues such as the proposals for recovering the actual costs incurred in providing the service (Department of Communications 2013).

It was not until 2009, that the Australian Government established the NBN Co for the purpose of funding the installation of national broadband infrastructure. The argument for the government to establish the NBN Co was based on the likelihood that private sector enterprises would not have otherwise considered broadband solutions feasible for all Australian businesses.

### Table 1: Australian business use of information technology.

<table>
<thead>
<tr>
<th>Industry by employment size (2011/12)</th>
<th>Businesses with internet access</th>
<th>Businesses with internet access that have:</th>
<th>Businesses that:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internet access</td>
<td>Web presence</td>
<td>Dial-up or ISDN* as main type of internet connection</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>83.3</td>
<td>5.1</td>
<td>1.5</td>
</tr>
<tr>
<td>0–4 persons</td>
<td>85.5</td>
<td>18.1</td>
<td>3.0</td>
</tr>
<tr>
<td>5–19 persons</td>
<td>85.6</td>
<td>24.5</td>
<td>0.0</td>
</tr>
<tr>
<td>20–199 persons</td>
<td>90.1</td>
<td>80.3</td>
<td>0.0</td>
</tr>
<tr>
<td>200 or more persons</td>
<td>91.9</td>
<td>44.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>84.2</td>
<td>10.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Total all industries</td>
<td>90.2</td>
<td>34.1</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>93.7</td>
<td>57.0</td>
<td>0.5</td>
</tr>
<tr>
<td>5–19 persons</td>
<td>98.3</td>
<td>75.7</td>
<td>0.6</td>
</tr>
<tr>
<td>20–199 persons</td>
<td>99.9</td>
<td>97.0</td>
<td>0.2</td>
</tr>
<tr>
<td>200 or more persons</td>
<td>91.9</td>
<td>44.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>

### Source:


---

**Figure 1:** Internet subscribers by type of access connection in Australia.

**Figure 2:** Population distribution in Australia by regional type.

**Figure 3:** Quality ratings for broadband coverage in different regions across Australia.
citizens, particularly those in rural and remote areas.

The development of the NBN offers a unique opportunity for the Australian Government to be involved in helping people in rural and remote Australia to access e-health, distance education and entertainment on demand. The development of the NBN also offers support to businesses in these areas by potentially increasing productivity, reducing costs and accessing new markets.

Nevertheless, satisfying the majority of voters while fulfilling the commitment to improve internet services to every Australian citizen has been a major challenge for the Australian Government. According to World Bank statistics, Australia is one of the most urbanised nations and has the fourth lowest national population density at just three people per square kilometre of land area. This means that large public spending projects like the NBN, which involve significant spending in rural and remote areas, need to garner support from a majority of voters living in urban electorates. Inevitably, this generally leads to prioritising services in urban areas before delivering these services to the people living in rural and remote locations.

The initial development plan for the NBN relied on a fibre to the premises (FTTP) model, which involved nearly all Australians being able to access fibre optic technologies for internet services. Although this type of infrastructure is well suited to urban areas, it is relatively expensive in rural and remote Australia, where the cost and time required to install fibre-optic cables over long distances can be prohibitive. Hence, following a strategic review of the NBN in 2013, the present Australian Government decided to change from the FTTP model to one that diversifies and expedites (in relative terms) internet access through an optimised multi-technology mix.

According to NBN Co, this model involves selecting which broadband infrastructure will be rolled out on an area-by-area basis. Besides FTTP infrastructure, this model includes broadband access technology such as:
- fibre to the node (FTTN) and fibre to the building/business/basement (FTTB)
- hybrid fibre-coaxial (HFC) cable
- fixed wireless footprints
- satellite broadband.

For many parts of rural and remote Australia, broadband access will be based on the development of a long term satellite service administered by the NBN Co. Two new satellites are being launched which will make broadband services commercially available to some parts of rural and remote Australia by 2015/16. The NBN long term satellite service is also being supported by the development of 10 ground station sites.

The long term satellite service will enable NBN Co to offer wholesale services configured for a planned 12 Mbps download and 1 Mbps upload speed to premises outside the NBN fibre and fixed wireless footprints (NBN Co 2014).

Satellite broadband services in Australia can be limited by factors including the weather and an internet subscriber’s line of sight to the orbiting satellite. These issues can lead to intermittent internet access which slows down data and information sharing between devices and storage services. Ultimately, these issues can potentially lower the performance of broadband-enabled technologies which are based on real-time, uninterrupted data and information processing.

NBN Co satellite broadband services are also expected to have monthly download limits of 60 gigabytes per internet subscriber. This could potentially lead to farm businesses incurring penalties for exceeding monthly download limits or farmers signing up to multiple internet packages to ensure they have adequate internet capacity. Consequently, these issues could discourage farmers from adopting technology that could have otherwise enhanced productivity.

### Broadband advantages and the current limitations for Australian farm businesses

Historically, farmers have used the internet primarily for tracking commodity prices, accessing weather forecasts and trading relatively low-value farm items. However, farmers who presently have sufficient broadband access are now able to transfer data between their equipment and machinery and cloud-based storage services, push cropping prescriptions to applicators and monitor real-time alert systems for immediate pest threats (Griffin et al. 2015). These types of new technologies, which involve collecting and processing farm data via the internet, are part of a broader digital phenomenon principally known as big data.

Although there are some Australian farmers who are lucky enough to be able to take full advantage of the productivity gains available through big data developments, there are many more that are not so lucky. In many cases, Australian farm businesses are currently operating with broadband connections that are slower and more costly than those available in other nations that compete for similar agricultural export market opportunities, such as Denmark, the United States (US) and Canada (see Table 2). As a result, there are many Australian farmers who could remain years behind global peers in technology adoption due to inadequate internet access.

As noted earlier in this article, farm businesses have the lowest quality broadband access (on average) in Australia. The low quality broadband coverage generally reflects slow internet speeds which are well below Australia’s average connection speed of 7.4 Mbps. Farmers typically rely on wireless broadband access from mobile phone networks to assist with transferring data from different parts of their farm. Based on Telstra’s latest data on mobile network coverage, a relatively large proportion of Australian farmers in the major grain growing
regions have mobile broadband access with download speeds between 550 kilobits per second (Kbps) and 3 Mbps (see Figure 4).

In comparison, much of the rural area in the US has access to faster internet, with a relatively large proportion of US grain growing regions having available broadband speeds above 25 Mbps (see Figure 5). Effectively, the relatively faster broadband speeds in US grain growing regions place US grain farmers at a comparative advantage for optimising broadband-enabled technology to achieve productivity gains.

**Broadband improvements needed to get Australian farmers up-to-speed**

The Australian Government has committed to delivering high-speed broadband access to all Australians by the end of 2019, however these services may not provide sufficient broadband quality affordably to most Australian farm businesses. Many Australian farm businesses are likely to depend on satellite broadband services that can be impacted by weather events and geography. Satellite broadband services will also involve monthly download limits which may increase the costs for internet subscriptions substantially.

For Australian farmers to catch up to their global peers who already have better broadband access, there will need to be more satellites in orbit or satellite ground stations that offer faster data transfer speeds and higher monthly capacities. Inevitably, Australian farmers will continue to use their ingenuity to shape their future. However, as farmers increasingly see the potential benefits that faster and higher capacity broadband could offer their business, they will likely place further pressure on government and industry bodies to help install better broadband infrastructure that is more competitive globally.

References


---

**Figure 4**: Telstra’s mobile network coverage across Australia.


**Figure 5**: Quality of broadband access in the US, with a focus on major grain growing regions.


---

**Table 2**: Average internet connection speeds and utilisation rates for selected countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Global rank</th>
<th>Average connection speed (Mbps)</th>
<th>% above 4 Mbps</th>
<th>% above 15 Mbps</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>1</td>
<td>22.2</td>
<td>95.0%</td>
<td>61.0%</td>
</tr>
<tr>
<td>Japan</td>
<td>3</td>
<td>15.2</td>
<td>88.0%</td>
<td>34.0%</td>
</tr>
<tr>
<td>Denmark</td>
<td>11</td>
<td>11.9</td>
<td>92.0%</td>
<td>21.0%</td>
</tr>
<tr>
<td>United States</td>
<td>16</td>
<td>11.1</td>
<td>74.0%</td>
<td>18.0%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>18</td>
<td>10.9</td>
<td>83.0%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Canada</td>
<td>20</td>
<td>10.7</td>
<td>85.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Russia</td>
<td>27</td>
<td>9.0</td>
<td>82.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Germany</td>
<td>29</td>
<td>8.8</td>
<td>80.0%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Australia</td>
<td>42</td>
<td>7.4</td>
<td>69.0%</td>
<td>6.5%</td>
</tr>
<tr>
<td>France</td>
<td>44</td>
<td>7.1</td>
<td>70.0%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Thailand</td>
<td>45</td>
<td>7.1</td>
<td>86.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td>China</td>
<td>82</td>
<td>3.4</td>
<td>27.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Brazil</td>
<td>89</td>
<td>3.0</td>
<td>26.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>India</td>
<td>116</td>
<td>2.0</td>
<td>7.8%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

The implications of big data for Australian farmers

The development of farming machinery and technology that utilises global positioning system (GPS) information – combined with other objective data and digitised imagery to generate objective information about the status of soil, water, crops and pasture – are quickly changing the ways that farm businesses can be managed in Australia. The implications of these developments are the subject of research being conducted by the Australian Farm Institute, in conjunction with the Cotton Research and Development Corporation, Dairy Australia, and GrainGrowers Limited.

The initial development of digital farming involved the use of GPS-enabled machinery to implement systems such as controlled-traffic farming by crop producers. Subsequent developments included the use of GPS and enhanced harvester monitoring technology to produce digital crop yield maps.

More recently, the development of variable-rate planting and fertiliser broadcasting equipment has enabled some crop farmers to increase yields and reduce crop inputs by using variable application rates across a paddock. The latest developments in this area include harvesting equipment that is constantly connected to the internet and which can relay crop yield and machinery performance information in real-time via the internet, and variable rate planting technology that can modify planting ‘recipes’ and fertiliser application rates on a sub-paddock basis. Related developments include the utilisation of unmanned aerial vehicles and satellites to monitor crop or pasture performance remotely, and which have also been used to monitor flowering and fruiting in orchards and vineyards.

While much of the development that has occurred involves applications utilised for crop or plant production, digital technology is also increasingly used in the livestock industries. Applications include electronic livestock identification systems, and the use of these in conjunction with satellite monitoring and robotic meat processing systems to more efficiently manage livestock and to provide much more precise feedback information for individual animals. Data about the performance of animals from specific herds or flocks, and the genetic potential of specific breeds or bloodstock lines is also now being collected, and can potentially be distributed widely.

The most recent international developments in digital agriculture involve the utilisation of data derived from a large number of individual farms in centrally-managed ‘expert systems’ which are used to prescribe very specific crop planting and management programs on a field-by-field basis. Historical weather, soil and previous years’ production data are used in combination with information about the performance of particular crop varieties to formulate the optimum crop planting strategy at fine detail within a single field, and this information is then utilised in conjunction with digitally-enabled machinery to plant a crop based on that prescription. The crop is then monitored throughout its growth and the expert system can be used to make decisions about fertiliser or pesticide applications. Finally, data obtained from harvest equipment is fed back into the system to ‘close the loop’ and enable further enhancements to performance in subsequent years.

While still at a development stage, the implementation of robotic technology in the dairy and meat processing sectors is also creating the potential to develop similar closed-loop systems, whereby genomics, on-farm production data and milk and carcass data can all be integrated into a single system and used to identify opportunities to enhance productivity or to focus production on specialised market opportunities.

These developments provide the potential for individual farmers to achieve substantial productivity improvements. However, the development of digital agriculture also raises a number of issues in relation to the ownership of data; the rights that farmers hold over data obtained from their farm; the extent to which data held by machinery, farm input suppliers and processors can be sold or transferred to third parties; the uses to which data from individual farms can be put; and even the legal status of that data in the event of litigation or a demand by a government authority to obtain access to that data.

The aim of this project is to gain a clear understanding of the potential for digital agriculture to enhance productivity growth in Australian agriculture, and to detail some of the legal and other implications of this development. The project also aims to assist the agriculture sector in developing a collaborative framework that clarifies all the associated legal and other implications under Australian law of the development of digital agriculture, and works towards achieving common agreement about issues that may impede the widespread adoption of these technologies in Australia in the future.
Animal welfare matters to Australian farmers, but current policies hinder its improvement

Australian farmers working with animals have been under increasing scrutiny in recent years. Some sections of the Australian population have developed a very high degree of sensitivity towards animal welfare issues, to the extent that more and more animal welfare decisions are being made hastily, with these decisions having little real impact on farm animal welfare.

The Australian Farm Institute has recently completed a research project evaluating whether current Australian farm animal welfare policies effectively improve farm animal welfare. The project included a review of scientific literature on farm animal welfare as well as a historic perspective on the way community and policy-makers have defined farm animal welfare, including meeting with key stakeholders of farm animal welfare policies and science, in Australia and overseas. In order to evaluate the capacity of the current policy system to improve farm animal welfare, the research focused on three Australian case studies: the exporter assurance system for livestock exporters, supermarket programs regarding free-range pork, and the Australian Competition and Consumer Commission’s (ACCC) role in defining layer hen welfare.

An important finding of this research was that farm animal welfare science has come a long way since its birth in the 1960s, and animal confinement is no longer seen as the single cause of farm animal pain. Much of what was perceived as cruel then is now understood in much greater detail. One of the first scientific committees to address farm animal welfare was created by the United Kingdom Government in 1965, following a public uproar triggered by the release of the book *Animal machines* in 1964. The author, Ruth Harrison, published a book containing emotionally loaded pictures and detailed descriptions of chickens’, pigs’ and cows’ living conditions in modern farms. The great majority of readers were city dwellers who had never visited a commercial farm. They were understandably shocked on learning that laying hens were kept in individual indoor cages, and that sows were kept in sow stalls. The scientific committee gathered researchers from different fields, including veterinary and animal behaviour science, most of whom didn’t have a clear definition of animal welfare.

At that time, the scientific committee couldn’t really define farm animal welfare but agreed on some key principles, known as the five freedoms. After almost 40 years of research into the topic of animal welfare, it is clear that these principles cannot suffice to scientifically define farm animal welfare. Although all those five characteristics (requirements for food and water, prevention of injury and disease, provision of comfort, freedom from fear and ability to express innate behaviour) contribute to animal welfare, science can only measure the extent to which they can be achieved in a given context. Fear drives animals to find shelter and hunger pushes animals to seek food, which is provided in commercial farms. In addition, as most scientists would agree, once a list of contributing factors to an issue has been identified, science is there to quantify the impact of those factors.

Unfortunately, although farm animal welfare science has become a well-organised and robust field of research, the general public still thinks that farm animals can only be happy if they are unconfined. There are many more solutions to reduce pain and improve farm animal welfare than changed housing conditions. Those include selective breeding, genomics, pharmaceuticals for pain reduction, herd management, and digital assistance. Improving farm animal welfare is far more complex than taking a ‘let them fly’ posture.

This research demonstrates that the fragmented way farm animal welfare policies are designed in Australia doesn’t allow for long lasting farm animal welfare improvements. In the absence of a national leader or decision-maker, private retailers are deciding which policies should satisfy consumer expectations, whether or not they improve on-farm animal welfare. In the absence of a clear distinction between criminal cruelty cases and welfare practices implemented by industry, progress is blocked each time an individual commits a crime, often bearing little relation to farm animal welfare. There is an urgent need for strong principles, superseding the dated ‘five freedoms’, that apply consistently across all Australian states, as a first step to reducing consumer and community confusion.

The report proposes clear recommendations on how to address those shortfalls and how to create a policy system aimed at improved farm animal welfare.
Informative or confusing: judging the effectiveness of current country of origin labelling requirements

The Institute interviewed two industry experts, with differing policy viewpoints, to gain their opinions on this issue

Richard Mulcahy
Chief Executive Officer
AUSVEG

Gary Dawson
Chief Executive Officer
Australian Food & Grocery Council

Richard Mulcahy, AUSVEG

The current system is ambiguous and has the potential to mislead consumers. AUSVEG has particular concerns about the term ‘Made from local and imported ingredients’, which provides no real information to consumers about the origins of various ingredients, and can be used to obscure the true proportion of imported produce in a product. We would like to see this term banned for use on labels.

We also have concerns about the term ‘Made in’, which identifies where processing costs were incurred, but can create the impression ingredients were grown in a particular country. In a 2014 Choice survey, only 12% of respondents were able to correctly identify the meaning of ‘Made in Australia’. This clearly shows that use of the claim is ineffective and is outright counterproductive in attempts to inform consumers. AUSVEG strongly supports the blanket removal of the term ‘Made in’, and would instead like to see the term ‘Manufactured in’ used to represent where the product has been processed.

AUSVEG would also like to see a simple visual form of positive differentiation on the front of food packaging to establish what percentage of a food product is sourced from Australian ingredients. The country of origin statement should be moved to the front of the pack and increased in size, with the countries of origin of the ‘characterising’ ingredients detailed.

Gary Dawson, AFGC

There is no doubt that there are ways of improving the clarity of information to consumers about the origin of the food they are eating. In this respect the overarching requirement in consumer law that companies ‘don’t mislead’ is just as important as the specific origin requirements. Consumers already access a wide range of information beyond the regulated origin labelling requirements outlined above – via avenues including company websites, social media reviews and endorsements, front-of-pack logos like ‘Australian Made Australian Grown’, point-of-sale displays, smartphone apps, QR codes and so on. Generally, where provenance is a selling point for a product, companies are quick to provide additional information over and above what is legally required. The recent SPC campaigns covering labelling, social media and mass media focusing on the source of their ingredients is an example.

The current regulations attempt to cover two important but quite separate aspects of food origin – where the ingredients are grown (Product of / Grown in) and where the processing or manufacturing took place (Made in). Both are important. Place of manufacture communicates jobs, economic value add and safe processing; origin of ingredients communicates farm provenance and producer value.

Confusion often arises because consumer perception of what ‘origin’ means shifts according to the product – for fresh food ‘origin’ is about where it is grown, whereas for highly processed foods ‘origin’ is about where it is manufactured. This is borne out in research by Choice and in consumer research undertaken by Catalyst in 2014 which found Australian consumers regard place of manufacture to be just as important as origin of ingredients.

There are currently two types of country of origin labelling sanctioned by the Australian Competition and Consumer Commission (ACCC) in Australia. These are:

• ‘Product of’ and ‘Grown in’
  ‘Product of’ and ‘Grown in’ means that each significant ingredient or part of the product originated in the country claimed and almost all of the production processes occurred in that country. ‘Product of’ is often used for processed food and ‘Grown in’ is mostly used for fresh food.

• ‘Made in’
  ‘Made in’ means that the product was made (not just packed) in the country claimed and at least 50% of the cost to produce the product was incurred in that country. These products could contain ingredients from other countries. A product with a ‘Made in Australia’ label won’t necessarily contain Australian ingredients.

Do you think these provide adequate information to enable consumers to make informed choices about the origins of the foods they are purchasing?
Do you think a labelling system that requires manufacturers or retailers to identify the country of origin of the main ingredients in food products would be more informative for consumers?

Richard Mulcahy, AUSVEG

We are strongly of the view that by providing consumers with more information about the country of origin of the food they are buying, they will be better informed. Importantly, taking this step would provide consumers with information that research has long indicated they desire, and would allow them to exercise their well-documented preference for purchasing Australian produce. Including the country of origin of characterising ingredients on a product’s label will benefit consumers by providing them with both useful information and genuine choice.

As food manufacturers are already required to identify characterising ingredients (by including the percentages of these ingredients as a proportion of the overall food product), and regularly change labels to promote events and campaigns, we do not believe introducing additional country of origin labelling requirements would result in significant increases in compliance costs.

Gary Dawson, AFGC

Information about the source of major ingredients would, by definition, provide more information to consumers, but the extent that consumers value or respond to such information would vary according to the particular food item. For example, there is little or no evidence that consumers of Australian made chocolate want to know the origin of the cocoa beans even though they are all imported. The closer the product is to ‘fresh’ or less processed, the more consumers are likely to value information about the source of key ingredients.

By way of context, an AFGC review in 2014 of five major food and grocery manufacturer customer call centre logs over a one year period found that out of nearly a quarter of a million customer initiated contacts only 0.39%, or less than half of one percent, were about origin. Claims that customers are generally confused and demanding more origin information must be tested against these facts.

Do you believe the majority of consumers will preferentially buy food products that are grown in Australia, and what should Australian farmers and food manufacturers do to enhance the perceived value of Australian products?

Richard Mulcahy, AUSVEG

There has always been strong demand for locally-grown vegetable and potato produce, with consumer research regularly showing the vast majority of Australians prefer to buy Australian-grown wherever possible.

In a 2014 Choice survey, 85% of respondents said it was crucial or very important for them to be able to identify if the food they buy has been grown in Australia. This clearly displays the importance of a clear, well-structured country of origin labelling system, and the value it could provide to Australian growers and food manufacturers.

The recent hepatitis scare linked to imported berries has further reinforced in the minds of the Australian public the superior growing practices and higher standards employed by Australian growers, and galvanised demand for local product.

As evidenced by the groundswell of public support for an improved country of origin labelling system, consumers want to know where the food they are buying comes from so they can make an informed purchasing decision.

The stellar reputation of Australian produce presents genuine opportunities for growers, manufacturers and retailers, which could only be enhanced by a clearer, more transparent country of origin labelling system.

Better labelling requirements would encourage food manufacturers and retailers to source Australian product, as advising consumers of this fact would provide them with a premium selling point.

Clearer labelling laws will ensure that we continue to have free trade but that it is also ‘fair trade’, providing local producers with a platform to compete on their merits against international products, without having to overcome ambiguous or confusing labelling such as ‘Made in Australia from local and imported ingredients’.

Gary Dawson, AFGC

Consumer surveys consistently find that the key drivers of purchase decisions are price, quality, brand and habit, with country of origin an important but secondary consideration. This was borne out by the Catalyst research in 2014 which found that between one in nine and one in six consumers cite country of origin or ‘Australian’ in the top three drivers of their purchase decisions.

It is actual consumer purchase behaviour (as opposed to stated intentions) that will have a lasting impact on manufacturer and retailer sourcing arrangements. Where Australian provenance is a driver of sales, food producers, processors and retailers tend to call it out strongly in their labelling and promotion. Understanding consumer preference and willingness to pay a premium for Australian sourced product, and responding to it through the provision of information across multiple channels, is the key insight that Australian food producers and processors need to respond to in order to enhance the perceived value of Australian sourced products. This will have a greater impact than changes to origin labelling regulation.
Divided attitudes to the welfare of pets and livestock

The RSPCA is an organisation with a long history of caring for animals in Australia, and which in the past has been actively engaged with the farm sector in efforts to improve the welfare of farmed livestock. However, in recent times there has been a marked change in the direction of the organisation at the national level, a change that is perhaps best exemplified by the policy position of the RSPCA towards livestock exports from Australia.

The national office of the RSPCA has launched an online campaign calling for an end to livestock exports, replete with infographics about the industry, and quick links to enable supporters to send emails to the media and politicians. The thrust of the campaign material is that livestock exports subject animals to highly stressful sea journeys, cruel treatment in destination markets, and unacceptable slaughter practices. The campaign material argues that processed meat exports deliver greater national economic benefits for Australia, and these should replace live exports.

There are several major flaws with the RSPCA campaign. The first is the assumption that if Australia did not export livestock, overseas markets would be forced to switch to processed meat imports. Given the steady and continuing growth in the global livestock trade, and Australia’s declining global market share, this assumption is absolutely unfounded. Australia’s withdrawal from these markets would simply benefit alternative suppliers, which include a large number of developing nations which do not have Australian-equivalent animal welfare standards either in their domestic market, or as a requirement associated with their livestock exports.

A second major flaw is the assumption that all of the stock currently exported live could simply be diverted to an Australian processing facility and economically converted into processed product. This is clearly not the case, even though the newly commissioned Darwin abattoir has finally added some cattle processing capacity in northern Australia. In the case of both live sheep and live cattle exports, the presence of the live export market provides important additional competition for Australian livestock, especially during drought periods when a large proportion of sale stock are not at normal slaughter weight.

A third major issue with the RSPCA campaign concerns the major contradictions that are evident in the approach the organisation takes to different animal welfare issues. The contrast in the approaches the RSPCA takes to the mistreatment of domestic pets and the live export industry are an obvious example.

A great deal of the RSPCA’s resources in Australia are directed towards the management of lost, abandoned or injured domestic animals. According to annual statistics published by the RSPCA, in 2013–14 the organisation took care of 127,304 lost or abandoned animals, of which 36% were dogs, 39% were cats, and 25% were other animals. Of these, approximately 38,000 or 30% were in such poor condition that they had to be killed.

In 2014, by comparison, there were 389 shipments of livestock exported from Australia, involving a total of 3.56 million head of livestock. According to statistics compiled by the Department of Agriculture, there were a total of 17,805 mortalities during these voyages (a mortality rate of just 0.5%).

These statistics highlight that the number of animals that the RSPCA had to kill in Australia in 2013–14 as a consequence of mistreatment or lack of care was almost twice the total number of livestock that died during live export shipments.

If the RSPCA believes that, as a consequence of the number of deaths that occur during shipment, livestock exports should be banned, then logic suggests that a proportionate response is also required in relation to pet ownership in Australia. A proportionate response based on the above data would be for the RSPCA to call for the ownership of domestic pets in Australia to be banned, or at the very least subject to much more stringent controls including all breeders being registered and having lifetime responsibility for the welfare of their animals; mandatory accreditation and annual licences for pet owners; mandatory microchipping of all pets; and heavy penalties for both breeders and owners in the event that those animals end up being cared for by the RSPCA.

The fact that this is not the case suggests that the RSPCA national office has other motives in calling for the banning of live exports, which are possibly more related to the increased competition for public support and revenue that has arisen between different animal welfare or rights groups in Australia, than they are to animal welfare concerns.

Irrespective of the reason, the approach that is being taken by the RSPCA, despite the significant animal welfare improvements the live export industry has made, will increase the divide that exists between that organisation and the farm sector, and will also alienate the RSPCA from policy-makers. This will reduce the potential for future cooperation between the RSPCA and farmers, cooperation that in the past has resulted in significant improvements in farm animal welfare in Australia.
Glass half empty for EU milk producers

With European Union (EU) dairy producers hit by low prices and climbing input costs, Copa-Cogeca, the main EU farmers’ advocacy group told EU farm ministers that additional action must be taken to help producers adapt to the new EU milk policy framework. The end of the EU quota system in April this year has some concerned that it will bring greater volatility to the sector. With supply projected to increase as producers aim to boost revenues after the quota system ends, a milk oversupply could mean lower prices for farmers. The Commission’s ‘soft landing’ approach has been carried out over the last six years where the quota was incrementally increased between 2008 and 2014. This program aimed to help farmers prepare and adjust for its total abolition this year. EU Commissioner for Agriculture and Rural Development, Phil Hogan, believes the ending of quotas is both a challenge and an opportunity for the EU. However farmers’ advocacy groups say the Commission has played down concerns about a slump in prices. Copa-Cogeca Secretary-General, Pekka Pesonen, stressed:

Other tools for risk management are needed and could include encouraging the development of futures markets to take some volatility out of the market. Income/margins insurance could be investigated or better adapted in order to help farmers manage the multiple risks.

Common herbicide potential cause of cancer, says WHO

A new report from the World Health Organization (WHO) published in the journal The Lancet Oncology, recently claimed the most common chemical used by Australian farmers ‘probably’ causes cancer. Glyphosate, invented by Monsanto in 1974 and sold under the Roundup brand, is one of the most widely-used herbicides in the agricultural industry, as the patent is now in the public domain. The WHO’s International Agency for Research on Cancer (IARC) declared it is a ‘probable’ cause of cancer, citing studies of exposure to glyphosate in Canada, Sweden and the United States (US). However, Monsanto said the research agency didn’t establish any link between glyphosate and an increase in cancer, and that IARC researchers ‘disregarded dozens of scientific studies that showed glyphosate poses no human-health risk’. A statement made by Philip Miller, Vice President of Global Regulatory Affairs for Monsanto, expressed the company’s great scepticism about the findings; ‘We don’t know how IARC could reach a conclusion that is such a dramatic departure from the conclusion reached by all regulatory agencies around the globe.’ Australian Agriculture Minister Barnaby Joyce proposed to seek advice from the Australian Pesticides and Veterinary Medicines Authority (APVMA) about the new report, and suggested that the IARC findings ‘would appear to be a re-identification of a small number of old research papers.’ Nevertheless, it is possible the incident will spark a review of the pesticides approval process in Australia.

California drought sways rice price

California recorded its warmest winter in 119 years, 4.4 degrees (Fahrenheit) above average, and is now preparing to enter into its fourth year of drought. A recent study released by the University of California Davis estimated the total state-wide economic cost of the ongoing drought is $2.2 billion. Of that, the direct cost to agriculture totals $1.5 billion and is likely to climb further with predictions of the drought continuing through 2015, regardless of El Niño conditions. It’s been particularly challenging for the state’s rice and medium-grain farmers. The US is Australia’s main competitor in medium-grain markets. SunRice CEO, Rob Gordon, indicated California’s drought could help drive up rice prices for Australian growers, anticipating returns to be over $300/tonne for 2015.

Beef slaughter ban in India

On March 2, the President of India approved the bill which bans the slaughter of cattle in Maharashtra, India’s second most populated state. Almost 20 years after it was first passed by state legislature, the law now bans the slaughter of cows, bulls, bullocks and calves. Other states are likely to follow suit, with Jharkhand and Haryana also tightening restrictions on beef trading. India’s current Prime Minister, Narendra Modi, heavily criticised the previous government for promoting beef exports. Interior Minister Rajnath Singh hinted in a recent speech to spiritual leaders that India will use all its ‘might’ to impose a national ban on cow slaughter. Indian beef exports earned US$4.4 billion in 2013–14, representing 20% of the global market.1 India is also the world’s fifth largest beef consumer. Despite the multi-billion dollar beef industry, the Modi Government aims to clamp down on beef trade and says the sacred animal needs greater protection.

---

1 Agricultural & Processed Food Products Export Development Authority (2015).
Out and about

Recently the Institute’s Executive Director, Mick Keogh, has spoken at:
- Australian Wool Exchange Strategic Planning Conference, Melbourne
- Presentation to the Senate Rural and Regional Affairs and Transport References Committee Agricultural Levies Inquiry, Canberra
- NSW Department of Primary Industries Biosecurity Planning Workshop, Orange, NSW
- Department of Industry and Science – Environmental Change Science and Research Priorities Working Group participant, Canberra
- Megatrends Future Agriculture session, ABARES Outlook Conference, Canberra
- The CEO Institute, Sydney
- Grain Trade Australia Strategy Day, Melbourne
- Victorian Department of Economic Development, Jobs, Transport and Resources Livestock Industry Forum, Bundoora, Victoria

Institute staff, Adam Tomlinson and Mick Keogh, have recently completed six Kondinin Group ERF Business Awareness Workshops. The workshops on: ‘The business case for carbon farming: improving your farm’s sustainability’, were in Bordertown and Jamestown (SA), Euroa and Yarrawonga (Vic), and Dubbo and Forbes (NSW).

In the news

The Institute released its latest research, Designing balanced and effective farm animal welfare policies for Australia, at a seminar in Canberra on Wednesday 29 April. The research garnered wide media interest, including the article, ‘Federal animal welfare laws needed: AFI’, by Colin Bettles, in The Land (22/04/2015); two articles by Anna Vidot, on ABC Rural, ‘Australian Farm Institute with new push for national approach to welfare standards, policy’ and ‘Renewed call for national welfare approach’; and a Beef Central opinion piece by Gaétane Potard, ‘Consumers say they want better animal welfare, but they won’t pay’.

Design and Production: Australian Farm Institute
Printing: J.A. Wales Printers, Alexandria
Contributing Authors: Sally Beech, Lily Clifton, Mark Henry, Mick Keogh, Gaëtane Potard, Adam Tomlinson
Images: Australian Pork Limited, Clare Bellfield, CAFNR, CeBIT, CSIRO, dale.rogers.sparky, Deniliquin Newspapers, EIFL Panguipulli Public Library, hello-julie, IRRI, Ken Hodge, Kerwee Professional Photos, Barry Skeates, Vijay Sonar, Gavin Tapp, United Soybean Board, USDA, Vanguard Visions
© 2015 Australian Farm Institute