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Australian Women in Agriculture

Submission Agricultural Innovation | Issues Paper

Background

Australian Women in Agriculture (AWiA) was established in 1992, in response to a demand by rural women to enable advocacy and to promote their advancement. It has a broad national membership, is managed by a Board of Directors, and is an incorporated body under the ASIC framework. AWiA has an international profile and in recognising the important role women play in global and subsistence/small-scale farming is connected to other national women's representatives in countries such as Papua New Guinea, New Zealand, USA, India and South Africa.

It is specifically charged to:

- Uniting and raising the profile of women in agriculture;
- Addressing rural and agricultural inequities;
- Working to ensure the survival of agriculture for future generations;
- Securing local, regional and international recognition;
- Achieving the status of a political and economic force.

AWiA core values are:

- Caring for people, the environment, rural families and communities;
- Ensuring the viability of future agricultural production;
- Respecting the culture, beliefs and philosophies of other people;
- Communicating to enable women to share their experience and develop effective networks;
- Providing leadership to facilitate change in the community.

AWiA ensures that women influence the agricultural agenda by;

- Ensuring our Members and wider network are aware and well-informed
- Ensuring women are consulted, considered and influence decision-making
- Ensuring that we innovate and are a dynamic, sustainable and progressive organisation
- And that we invest in women, creating pathways for learning and leadership

Acknowledgement

AWiA acknowledges the importance of investigating and reporting on the role of technology in increasing agricultural productivity in Australia and congratulates the Minister for Agriculture, the Hon Barnaby Joyce MP for undertaking such an important initiative.

Preparation of this response

This response was prepared following a broad consultation process through various mediums such as social media, focused discussions, AWiA's national conferences, community forums, emails and other national conversations.

Scope of this response

Although there are many issues pertinent to this very important conversation to be had, this submission will focus only on the five key issues that are intrinsically intertwined, being:

- Communications Infrastructure and Service Availability
- Technologies to improve sustainability
- GPS and mobile technologies
- Training
- Native Foods

Issue 1. Communication Infrastructure and Service Availability

Farmers and rural communities have available a wide array of exciting new apps that deliver forefront technology in areas of telematics, mobile computing, Irrigation, GPS, soil profiling, social media, big data and pest and disease management just to name a few, yet can't access them, as they don't have the communication infrastructure required to access them. A bit like having a car supplied without wheels. It's available, yet can't be driven therefore won't get you from A to B.

According the World Economic Forum's "Global Information Technology Report 2013", digitization has a measurable effect on economic growth and job creation, lifting people out of poverty and transforming many sectors from healthcare to farming.

"Communications technologies, along with transportation technologies, are seen as "enabling technologies" for rural communities in terms of reducing the effects of distance". (Dicken 1992) In rural Australia the magnitude of its impact is likened to the introduction of telephone services as a means of reducing the tyranny of distance' (Simpson 1999). The Internet provides access to a vast amount of information, with potential to help overcome the social and economic inequalities (Digital Opportunities Task Force 2001).

Yet, farming (an underlying economic lynchpin vital to Australia's prosperity), is not adequately supported to embrace the digital age. The farming sector that helps connect all Australians, both urban and rural, through what it does and what it provides, remains "disconnected" with lagging NBN technology.

"The current NBN plan outlines that 3% of Australian communities will only have access to relatively slow internet services via satellite" (Brennan. E, 2015).

"Many rural women are capable of doing a range of activities, even running a business from a rural, regional or remote area except they are let down by our telecommunication systems - which lacks the capacity and capability to service those of us in regional and rural Australia"(Parker, S. 2015).

Recommendations for Issue 1:

1.1 Create a fair and level international playing field for Australian farming and remote communities by building telecommunication infrastructure in Australia.

1.2 Make the funding commitments to ensure the required infrastructure is built as a matter of priority, even IF it means introducing a "digital tax".

1.3 Provide clear mapping and costings of the extent of remote and regional areas that actually need mobile coverage and clear plans of how and when this infrastructure will be built.

The Agricultural Competiveness White paper highlights that $100 million has been committed through the Mobile Black Spot program to extend mobile coverage throughout *regional* Australia and $29.5 billion of equity towards constructing the NBN without clear mention of the remote farming communities.

1.4 Provide Australians with the necessary training (see below) required to use the technology.

Issue 2. Technologies to improve sustainability

Modern agricultural technology allows a small number of people to grow vast quantities of food and fiber in the shortest period of time. Current international innovation is showcasing amazing developments in the field of telematics, pest and disease management in crops and livestock, drought resistance crops, computer irrigation, field documentation, soil profiling and precision agriculture just to name a few.

However due to the lack communications infrastructure, training and affordability without government support, these technologies may only be available to an elite few.

Recommendations for Issue 2:

2.1 Encourage ongoing R & D for around important technologies that improve sustainability (environmental, financial).

2.2 Support farmers to access existing technologies that can demonstrate a clear national/international benefit.

2.3 Develop first class communications infrastructure that can support these existing and emerging technologies.

2.4 Support farmers with training to learn about, and implement these technologies.

Issue 3. GPS and mobile technologies

Precision agriculture: Farming management based on observing (and responding to) intra-field variations. With satellite imagery and advanced sensors, farmers can optimise returns on inputs while preserving resources at ever larger scales. Further understanding of crop variability, geolocated weather data and precise sensors should allow improved automated decision-making and complementary planting techniques (Business Insider Australia, 2015).

Thanks to GPS tractors, combines, sprayers and more can accurately drive themselves through the field. Guidance is great for tillage because it removes human error from overlap, saving fuel and equipment hours. Swath Control Building on GPS technology will provide savings for farmers from using less inputs (like seed, fertilizer, herbicides, etc) by shutting off sections of the applicator as it enters the overlap area, saving the farmer from applying twice the inputs on the same piece of ground, mostly where the size and shapes of fields are irregular and one is bound to overlap to some extent in every application (Scott, B. 2012).

However, due to the lack of on-ground base stations GPS and other precision farming technologies still have a 10% variance. According to broad acre grain growers in QLD who currently use GPS and other precision technology, improving the amounts of base stations on the ground can improve this variance to just under 2%. This will allow the planting of crops in-between rows of stubble without disturbing the stubble, minimizing soil erosion, and potentially the use of chemicals and sprays by 8%, saving time and overlap, increasing the farmers bottom line and decreasing environmental impacts.

Recommendations for Issue 3:

3.1 That the government (and industry) invest in more on ground base stations that support and improve efficiencies on current GPS and precision agriculture technologies.

3.2 Farming sectors be supported to embrace new technologies that will support overall financial and environmental sustainability.

Issue 4. Training

Solid concerns linger around whether our workforce has the capacity to support agriculture currently and into the future. Entry level jobs right through to management positions remain vacant on farms and in the agricultural support and technical industries. We simply do not have the people who are capable of filling these positions or who want to work in these positions, particularly those at entry to mid-level (Brennan, E. 2015).

Farming communities, in their attempt to decrease technology phobia and increase social participation have expressed their need to improve their technology skills to help them understand the tools available to them, the capabilities of these technologies and where and how they can use them to communicate, share and gain information, broaden their networks, tell their stories to thousands of people, market and promote their cause, influence and inform the masses and leverage leadership to influence public support.

Although rural and remote communities are encouraged to uptake and use these technologies that are an excellent form of "green communication" (as they limit travel), can connect rural/urban communities, are time and cost effective (saving on travel, accommodation, hire costs), convenient, easy to use, need limited resources to run (a computer and fast speed internet), can reach national and international audiences, build up business contacts and help individuals maintain close communications with clients and networks, they are not genuinely supported to do so.

When it comes to the digital world, there is a clear divide between rural/remote and their urban counterparts. Views also shared by Ag Chat Oz who state "even though social media has become the new "Bush Telegraph', only 18% of farmers use social media" (Leys, D. 2013) compared to the national average of 52% (Qualmann, 2014).

With many rural families and primary producers struggling to get service for internet, there may be a gap in the capability of people to use the internet, when it finally arrives. They have lived so long without it, that they will have not developed or may have lost the skills needed. Training will be needed to increases capacity of people to take advantage and utilise the new technologies.

Although The Agricultural Competitiveness white paper (2015) states the importance of developing a skilled and available workforce as critical to the prosperity of Australian agriculture, and recognizes that skilled labour is vital to ensure the agriculture sector remains internationally competitive, Rural remote farming sectors are not supported to undertake such important training.

For example, the Government has committed $664 million in the Industry Skills Fund aimed at boosting business productivity and increase competitiveness across the economy, only offers up to 250,000 training places, in a nation that has 2,100,162 actively trading businesses in 2014 (Skutenko, D. ABS 2015). Although agribusiness has priority access to this program, many other business are not excluded, making it a very slim percentage of actual individuals supported.

Rural/Remote: The lack of available communications infrastructure to rural and remote Australia will be a significant barrier that excludes rural and remote Australians from benefiting from this training "support" as many RTO's require students to have access to a computer and internet as a pre-requisite on enrolling in the training.

Age: Our farmers are old, and getting older, with the average age of Australian farmers at 52, twelve years above the national average for other occupations (Deloitte, 2013). This may also pose another barrier, as many older farmers have not grown up in the "digital era" therefore may not be able to participate in on-line training even IF the infrastructure was there. This issue has also been raised by the DERA (2014) who highlight that "the level of access increases with farm size and decreases with farmer age (Dept for Environment and Rural Affairs 2014). In general, the younger the farmer or the higher the economic performance of the business, the more likely the business was to have proficiency in these skills".

Finance: Furthermore, under the Industry Skills Fund business must financially co-contribute to the proposed project. This can be difficult in a time when Australia is experiencing one of the worst and most prolonged droughts in its history.

Recommendations for Issue 4:

4.1 That training funding offered represents a fairer percentage of actual Australian business (in particular farming sectors) to actually make a difference.

4.2 That funding is also made available to communities to deliver customized training that they need through a range of mediums (online, print, face to face training with small groups, electronic on CD's where internet is not available) to support diverse sectors (eg older farmers, rural/remote, farming families who can't leave the farm to access training) and diverse needs.

4.3 That the co funding model be assessed with each individual application and allowances made to support exceptional circumstance declared regions and/or businesses who cannot afford co-contribution, yet will benefit greatly from the training.

Issue 5. Native Food

At our annual Conference in Alice Springs in August several guest speakers spoke about and demonstrated the research being done into native plants as a viable food products in the retail market. These women talked enthusiastically about the emerging small businesses that they hope to grow.

Many multi nationals have also honed in (and continue to capitalize) on the significance and importance of Australia's native food industry – its' future potential still to be completely unearthed.

Recommendations for Issue 5:

5.1 That R&D funding be allocated to research the technologies required to develop this important emerging industry, that can become an economic linchpin for rural/remote and indigenous communities.

5.2 That measures and technologies are implemented to ensure that the Australian Native Food Sovereignty is protected and supported, after all, these unique species are part of who Australia is.

END

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