

Inquiry into growing Australian agriculture to \$100 billion by 2030

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The Committee will inquire into, and report on, the opportunities and impediments to the primary production sectors realising their ambition to achieve a combined \$100 billion value of production by 2030.

The National Farmers' Federation (NFF) 2030 Roadmap is underpinned by four values: Smart; Profitable; Sustainable; and Unified. This submission focusses on the first of these. According to the Roadmap, "Smart" represents "an industry focused on innovation and improvement" and one that will "attract, train and retain the best people".

It is well observed and documented that improving knowledge and capabilities levels of owners and employees in a business will improve productivity levels. This maxim also holds true when extrapolated across sectors and industries, including industry specific and general service providers.

Skills Impact is in a unique position to be able to report on primary industry experiences and views on skill development current and future through its work as a skills standards service organisation covering the following industry sectors:

- Agriculture and Production Horticulture
- Amenity Horticulture, Landscaping, and Conservation & Land Management
- Aquaculture and Wild Catch Fishing
- Food and Beverage
- Animal Care and Management
- Forestry, Timber, Wood and Paper Operations and Products
- Meat and Seafood Industries
- Racing and Breeding
- Pharmaceutical manufacturing.

Skills Impact personnel and contractors work daily with people in agricultural, horticultural and allied industries. These stakeholders share with us their views about their industry, workforce skill challenges and opportunities, what is working regarding training, what needs changing, and possible avenues for improvement.

The observations and suggestions that follow are drawn from our stakeholder interactions.

Note the term "**industry**" as used in this submission is an inclusive one that covers all sectors, businesses small and large, public and private, that grow or create a particular set of products or services to agriculture and horticulture. Industry includes business owners, investors, staff and customers, and collectives such as cooperatives, industry associations and advocacy groups.

Skills Impact proposes that capacity building, particularly through upskilling of the existing agricultural workforce, is critical to achieving the National Farmers Federation's 2030 target of \$100 billion.

The Roadmap is self-described as "gutsy". We wonder what might the future look like if industry applied that same approach to capacity building in primary industries? And imagine the alternative, if industry accepts a business as usual approach to capacity building while trying to achieve a headline growth target.

The industry cannot rely on new entrants, migrant workers or young leaders' programs to provide the capacity lift needed within 10 years. This is not to say that new entrants are not important, but the current focus should be on those people already in the industry and who may, with the right industry conditions, be part of the industry for the next 10 to 30 years.

The value of upskilling and cross-skilling existing workforces is well recognised and in agriculture the workforce includes business owners, employees, contractors, and service providers, the majority of which are situated in regional Australia.

Industry groups and agribusiness are already doing what they can to provide the higher order skills for future agriculture, and well-developed policy that supports this development over the next decade is welcomed by all.

To help achieve the 2030 target within the next decade we recommend a significant, consistent and focused approach to capability building in agriculture. This approach may include some or all of the following recommended actions.

The first four recommendations relate to the development of an agriculture workforce strategy, as proposed by the Department of Agriculture.

1. Build on the work already carried out to develop a **workforce strategy** that underpins and supports industry participants to navigate the future described in the Roadmap.
2. From the strategy, develop a capability framework that helps to identify the **key, or focus, capabilities** most needed to achieve the Roadmap targets, the levels at which these are needed, and mapping them to industries, occupations and where possible, regions.
3. Set **5 year and 10 year horizons** for the outcomes of the plan to give it longevity, and milestones for monitoring progress against the framework.
4. **Conduct an urgent review of the ANZCO list** in regards to agricultural occupations.

The next three recommendations address how to implement capacity building as part of the strategy.

5. Develop tools for both businesses and individuals to help **identify capability gaps**, and focus delivery, based on the key skill areas identified in the workforce development plan.
6. **Support development initiatives** to train existing workers in key skill areas, aligned to the findings of the workforce development strategy.
7. In areas of capability seen as urgent and critical, **develop national resources** so that providers challenged by remoteness and thin markets have an opportunity to "kick-start" and support RRR delivery.

Then we look at what might need to be done to improve delivery, particularly in the vocational sector.

8. Raise the **issue of high cost of delivery and thin markets** requiring an increase in levels of funding for rural, regional and remote delivery with the Minister for Employment, Skills, Family and Small Business
9. Invite the **National Skills Commissioner** to visit regional Australia to report first hand on issues of training delivery in rural and remote areas in non-trade occupations, and the impact of past funding policies.

The last recommendation will help to communicate the strategy and its implementation and put capacity building on the agenda of all who work in agriculture.

10. Identify, celebrate and **give a voice to industry participants who play a significant role in developing, supporting and promoting capacity building activities.**

The remainder of this submission provides further explanation about why each of these recommendations have been made.

Agricultural workforce strategy

Skills Impact strongly support the initiative to develop an agricultural workforce strategy that includes the “role of agricultural education in meeting Australia’s current and future workforce needs in food and fibre industries”. The focus of the strategy is to be on “developing a skilled, future workforce the industry requires”.

We expect to see a very strong and clear connection between the agricultural workforce strategy and the 2030 roadmap.

From the Roadmap document, and in subsequent public discussions and reports about the aspirational plan, there appears to be general and enthusiastic agreement that the target will not be met by a “business as usual” approach, and this includes capability building.

Pillar 4 of the Roadmap, titled “Capable people, Vibrant communities” directly addresses workforce matters, skill development, regional communities and safety. Item 4.1 aims to provide a clear career pathway for attraction and retention of workers by developing their skills with “tailored streams, from new entrants through to seasoned professionals”.

But skills are not only part of Pillar 4. The Roadmap could be represented in a 3-dimensional manner or as a matrix, showing the critical role that capabilities and their development play in the achievement of most of the other items. Examples of this approach are:

- To achieve Pillar 2 Growing Sustainability many workers will need to develop new capabilities and techniques in sustainable farming, environmental stewardship and carbon management.
- The need for a broad range of new skills to achieve Pillar 3 Unlocking Innovation is well documented in the *Growing a digital future in agriculture* report.
- Pillar 5 Capital and Risk Management requires significant expertise in business planning, valuing natural capital and risk assessment and management.

The need for a workforce strategy was central to the 2012 NFF publication “National Agricultural Workforce Development Plan”, to help “increase the competitiveness of Australian Agriculture by delivering the future labour, skills and education needs of the industry”. In the report they described the agricultural workforce at the time, the challenges presented by demographics, culture, policy and training delivery, and proposed a 10-point plan to address the issues and improve competitiveness. They referenced work that prioritised building capabilities within the existing workforce and leveraging off these to build regional skills eco-systems. Five years on, many of the points in the plan still resonate and are well-worth considering when developing a new strategy.

It is not just agriculture that needs to develop the capacity of their existing workforce. Our daily news often cites reports that identify the skills that will be needed by Australian businesses, to be successful in the future, and many of these are needed right now. They include digital information and data, global economics, business, risk identification and management, communications and environmental sustainability.

Recommendation 1

Build on the work already carried out to develop a **workforce strategy** that underpins and supports industry participants to navigate the future described in the Roadmap.

Focus with a framework

2017 Productivity Commission report *Upskilling and Retraining, Shifting the Dial* states that “Improving the employability of workers through upskilling and retraining is a necessary response to the combined effects of an ageing workforce and technological change”.

While the report goes on to identify significant barriers to upskilling existing workers it also proposes a range of solutions including a framework that recognises new types of learning and engenders trust in that learning and more adaptable training systems.

For the “Growing a digital future in agriculture” project <https://www.crdc.com.au/growing-digital-future> a framework of digital capabilities was developed to provide a common understanding of the quality and the extent of a perceived shortfall. With the framework in place, industry participants and training providers can identify whether individuals or businesses skill gap is basic digital literacy skills or for example, advanced data management and visualisation.

This framework has been made accessible through the development of a self-assessment tool, recognisable icons, and interpretative documents for training delivery. The framework provides the flexibility and tools needed to make this analysis at business, local and regional levels, allowing for direct benefits at all levels from farm to national, and for any person or organisation to make the decision to use it.

Instead of creating more new frameworks, Skills Impact suggests looking at the components of the vocational system as a framework.

The vocational education and training (VET) sector provides a robust framework of work skills tailored to the agricultural sector. <https://training.gov.au/Training/Details/AHC> The AHC Agriculture, Horticulture and Conservation and Land Management Training Package is one of the most complex, diverse and largest in the Australian VET system. This complexity was recognised by the Australian Industry Skills Committee, which appointed two, instead of the usual one, Industry Reference Committees (IRC) to oversee ongoing industry-driven review of the sectors.

The framework is made up of thousands of units of competency (that describe tasks as industry would want to see them performed in the workplace) and qualifications (discrete bundles of units of competency that reflect job roles). All elements of the framework are regularly updated.

The units of competency form a significant body of intellectual property, available for free on a searchable government website, and could provide a meta-framework against which to plan for industry wide development at all levels, foundational or developmental.

We are not suggesting that all delivery should be provided by the vocational system, but that the framework of training packages can provide the workforce strategy with all the elements of a national, industry- agreed capacity building framework, as it describes many of the capabilities needed within each industry sector, and at what level they are required.

This will help to identify the key skills needed so that the implementation of the strategy can focus on what is important.

It is also useful to align skill needs to regions so that there can be an additional focus at a local level on delivering the workforce developments needed for the specific industries operating in that region.

All training providers, informal and formal, could use the framework to identify and deliver the skills that are wanted and needed for each industry sector and region.

Recommendation 2

Within the strategy, develop a skills framework that helps to identify the **key, or focus, skills** most needed to achieve the Roadmap targets, the levels at which these skills are needed, and mapping them to industries, occupations and where possible, regions.

Monitoring and evaluation

To be successful, capacity building is a long-term activity.

Time is needed to able to identify the skills needed in agriculture, and establish effective delivery mechanisms.

The Roadmap aims to meet its targets in a decade from now, so any workforce development activities need to follow a similar timeframe. We suggest setting goals for at least 5 years and 10 years, with the ability to review and modify the key skills at 5 years.

Recommendation 3

Actively monitor and evaluate implementation of the workforce strategy and report at 5 years and 10.

Occupational classifications

In 2014 the NFF developed an agricultural workforce development plan which included a 10-point plan to address workforce development matters. It called for the Australian and New Zealand Standard Classification of Occupations, or ANZSCO, to appropriately recognise industry skills and qualifications.

There has been no significant improvements made to the classifications since that time, and at Skills Impact we too struggle to work with effectively with the ANZSCO classifications when compiling skills forecasts for agricultural and allied industries, largely due to lack of granularity and failure to recognise the evolution of occupations in the sector.

Recommendation 4

Conduct an urgent review of the ANZSCO list in regards to agricultural occupations.

Tools to help identify gaps

During 2019 Skills Impact was a partner in a team led by KPMG, investigating ways to improve the digital capability of Australian agriculture. The project was managed by Cotton Research and Development Corporation on behalf of 11 other Research and Development Corporations. This research identified a delivery shortfall in digital skills and made recommendations to help lift the digital maturity of the industry.

A self-assessment tool was developed for individuals to assess their training needs against current capability. This tool is complemented by a handbook to help training providers to identify what part

of the framework they could deliver against. Note that providers for this project include formal providers as well as agribusiness and industry associations.

As part of the same project CSIRO developed a complementary assessment tool to test a rural business's digital capability. Both of these tools help individuals and businesses to celebrate their strengths and identify areas for improvement. In this way the task of building capability becomes more focused and manageable, once the gap is recognised, appreciated and responded to.

These types of self-assessment tools are very useful in encouraging people to consider their current and desired capabilities and help to direct them to the right development activities.

The KPMG-led project calls for 50% of industry participants to complete the self-assessment on the assumption that a proportion of these will be motivated to address their knowledge gaps. However, if delivery options are not available, even motivated industry personnel as learners will not be able to address the gap.

Recommendation 5

Develop assessment tools for the other key focus areas identified in the workforce development plan, for both businesses and individuals.

Supporting development initiatives

Informal professional development

Capability needs to be developed and improved at multiple levels, for example:

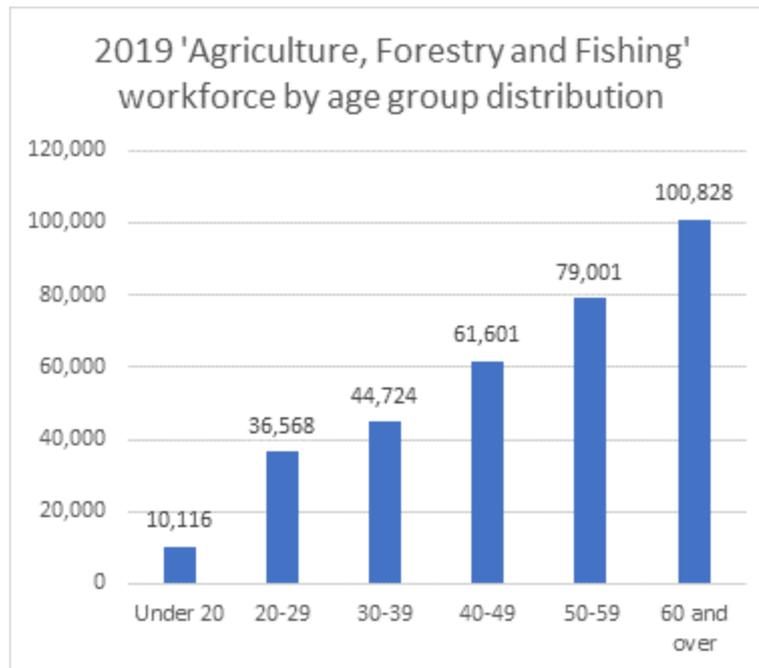
1. Foundation skills for new entrants
2. Upskilling and cross skilling of existing industry personnel.

Existing industry personnel in this case includes property owners, farm workers, rural contractors, agribusiness and a broad range of service personnel in regional rural Australia.

Helping existing industry personnel improve their capability in focus areas is critical to achieving the 2030 vision. The industry cannot rely on new entrants, migrant workers or young leaders' programs to provide the lift needed within 10 years. This is not to say that new entrants are not important, but that a focus is needed on those people already in the industry and who may, with the right industry conditions be part of the industry for the next 10 to 30 years.

It is only when the decision makers of today and the next few years embrace new technologies will we see an increase in adaptive capacity and the ready adoption and effective use of new techniques and approaches.

The ABS data shows over 100,000 people in the 60 plus age profile, it is important to recognise the almost 140,000 people in the in the broader agricultural workforce in the 20 to 50 year age group who are most likely to need access to capacity building over the next decade.



There are numerous informal ways for industry participants to build capacity. The Productivity Commission observes that non-formal and informal education will in future play a larger role in the future development formation of workers. On farm, skills and knowledge have been traditionally handed on from employer to employee, from employee to employee or in the case of family farms, from parent to child. This is a valid, significantly large body of learning that is never recorded or recognised and ignored by policy makers and economists. However, in the current ever-changing work landscape, this method alone is unlikely to provide workers with the higher-order or new capabilities they need for the future.

Primary industries use peer learning through farmer groups, industry group functions, and group extension programs for passing on knowledge and testing and learning new ideas. This is a home-grown response to lack of access to learning and learning resources and unlike the above, does attract some informal recognition. This model will continue to provide some of the development needed.

There are many well-tried interventions that encourage more of the above forms of professional development.

Agribusiness continues to help customer learn new techniques where this is necessary to operate new equipment, system or tools.

Similarly, there is an enhanced role for research bodies to provide professional development to help business owners adopt and use research findings and new tools and techniques. It could be useful if the various levy funded industry research and development bodies and CRC's across all sectors could broaden their activities in human capacity building to address workforce development needs as well as developing graduates and post graduates.

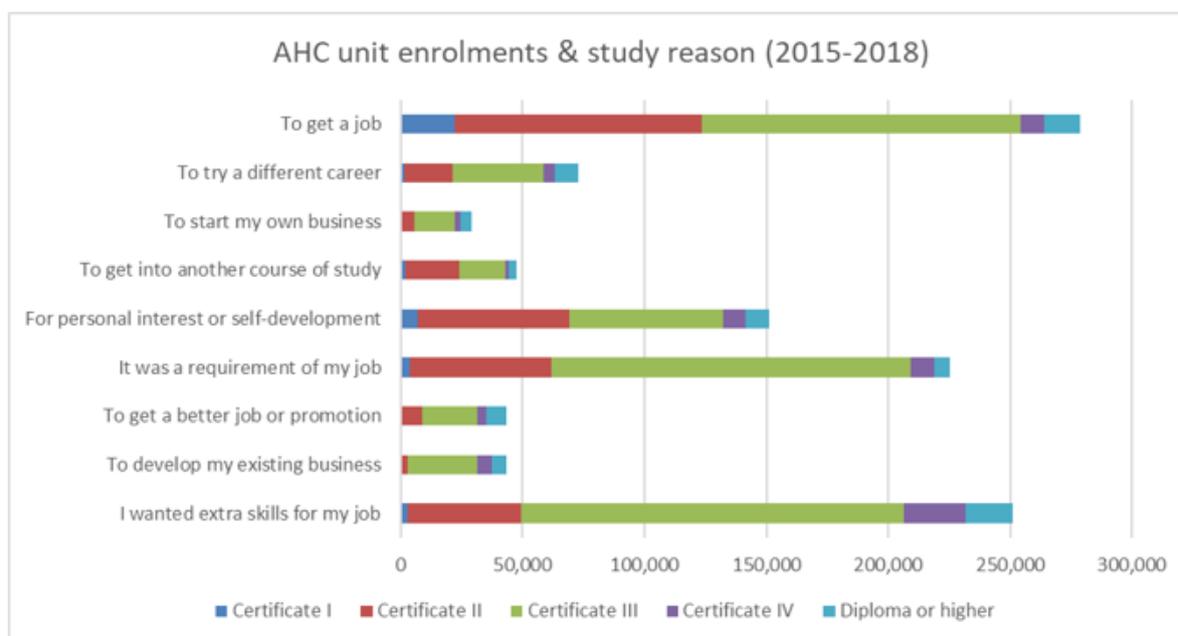
This significant body of capacity building in agriculture should be nurtured to help achieve the development required to reach the 2030 targets.

Recommendation 6

Support initiatives to develop existing workers in key areas, aligned to the findings of the workforce development strategy.

Formal training

The most significant opportunity to lift the current skill levels are through the training delivered by formal providers such as Registered Training Organisations, including TAFE and universities. A barrier to this is the traditional thinking in industry that this type of training is aimed at new entrants. The following table illustrates that VET training is used equally to gain additional skills as to undertake entry level training.



Source: NCVET VOCSTATS, TVA subject enrolments 2015-18

It is possible that with the current suite of changes mooted for the vocational education sector, that the workforce strategy can be better supported by VET in future. The Federal government is working to implement improvements out of last year's review of the VET sector, conducted by Stephen Joyce, such as connecting better with industry, help current workers to update their skills to achieve a "skilled and flexible workforce that can reap the benefits for the business from technological advances, while supporting business growth". There is much discussion about increasing delivery of micro-credentials, short courses and skill sets so that people can gain just the skills they need when they need them.

Recommendation 7

In skills areas seen as urgent and critical, develop national resources so that providers challenged by remoteness and thin markets have an opportunity to "kick-start" and support RRR delivery.

Rural, regional and remote delivery

One of the greatest barriers to capacity development in agriculture are the three RRRs of rural, regional and remote, and the resultant problem of thin markets.

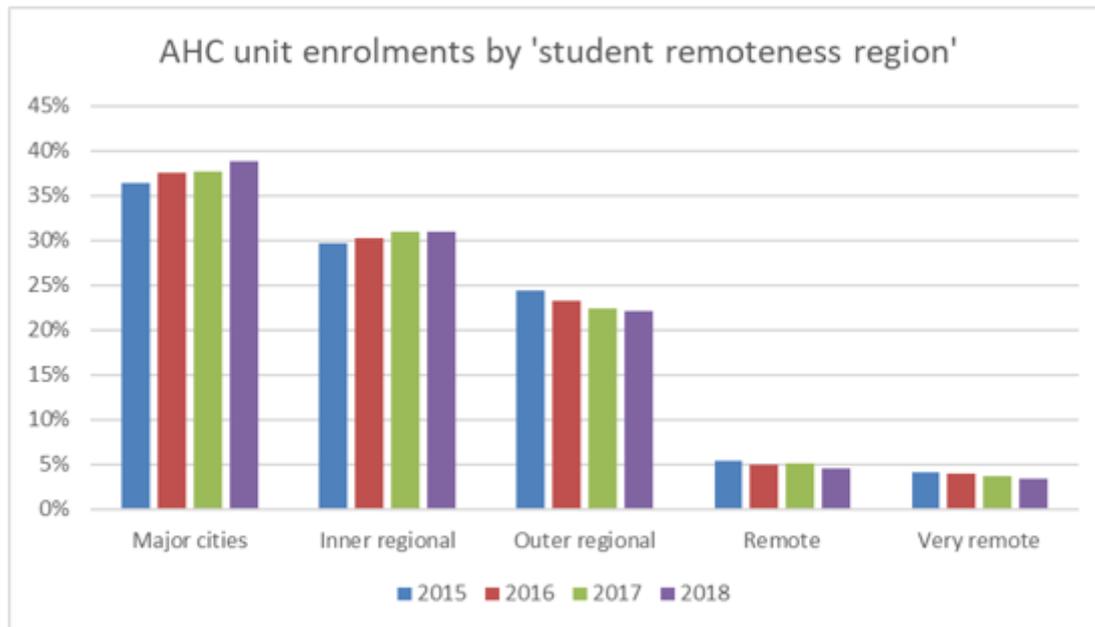
This is true for all types of employment and development activity – informal and formal, vocational and tertiary.

For example, *the Longitudinal Study of Australia Youth* (available at data.gov.au) shows only 18% of university students come from regional areas as the additional financial and emotional cost of a move away from home prevents participation.

The ABARES 2018 Farm Survey found that farmers further from large population centres generally had more difficulty recruiting.

Primary industries are central to local economies and essential to the Australian way of life and prosperity, yet have difficulty attracting and retaining the labour, skills and training required. Rather than being treated as essential industries in the training context, they are often under-served due to the business issues related to delivering dispersed delivery and assessment in remote areas.

The following graph illustrates how delivery of agricultural training in the VET sector declines with distance from major cities.



Source: NCVET VOCSTATS TVA subject enrolments 2015-18

Skills Impact has examples showing where industry sectors could not access development for their workers in regions, despite being prepared to pay student fees, when either educational resources or student numbers or both were limited.

The following discussion about the problems of delivery of vocational training in regional Australia can be extrapolated to other types of capacity building activities. Whoever the provider, good quality development activities require specialist resources and expertise, and critical participation numbers to be viable, and where there is no viability, there can be no delivery.

One of the key problems of thin educational markets is the VET model, that funds on a per head basis, so training providers everywhere, by necessity, focus on delivering course that will attract high numbers of students. This model fails almost completely in RRR areas, especially under the current regulatory regime that specifies all training must be delivered to certain often unspecified levels.

Viability can be improved in the VET sector through a higher level of funding in RRR areas. In addition, the traditional approach of adding a loading (often 10 or 20 percent) is clearly not effective or sufficient, as higher operating and capital costs combined with lower student numbers means delivery costs may often be double or triple that of urban environments to make delivery viable.

This could be helped with an increase in student numbers, but it is hard to generate numbers with the options or lack of options being offered.

This situation is exacerbated by inconsistencies in training markets across jurisdictions. Confusion around various State and Federal requirements is a direct impediment to the delivery of cross-border VET programs for new capabilities such as precision agriculture into widely-distributed industries such as cotton and grains.

These are issues that appear to be growing as increased competition in the formal training sector pushes providers towards cost-effective delivery of high-volume programs. The closure of agricultural colleges across the country that traditionally provided training to young entrants is a direct result of economic rationalism in the education sector.

Recommendation 8

Raise the issue of high cost of delivery and thin markets requiring an increase in levels of funding for rural, regional and remote delivery with the Minister for Employment, Skills, Family and Small Business

Some of the expense of preparing for delivery can be off-set if national training material were developed against the key skills from the strategy.

It is disappointing that primary industries are absent from the Additional Identified Skills Shortage list that provides additional Skill Shortage Payments as well as the wage subsidies available for specific occupations in rural and regional areas. It seems absurd that a hairdressing employer in a RRR area can attract double the standard employer apprenticeship incentives, an additional payment to the apprentice and wage subsidies, when other rural employers and employees are ignored, particularly in difficult and challenging time of continuing drought.

In addition, there are real concerns that the current review of the National Skills Needs List and the streamlining of apprenticeship incentives may deliver more significant and unwanted consequences for rural and related industries.

RRR delivery suffers more than most when training initiatives change in short cycles, they find it harder than better funded organisations to “turn the tap on and off”. Capacity building does not happen quickly. Learning and mastering a new skill can take many hours over weeks and months of practice and refinement.

The idea of a workforce development strategy would be well received by training organisations as it allows them to develop and build capacity over time.

Recently there have been a number of Government announcements about ways to improve the vocational training sector, most of which reference trades and apprenticeships, which currently make up only 7% of vocational education delivery. These trades and apprenticeships are commonly found in sectors that are highly regulated, such as construction and utilities.

In formal training terms, primary industries are considered an unregulated area. Consequently, they do not have century-old cultures of formal classroom and workplace learning programs like the traditional construction trades. As such and without intervention they may miss out on any of the benefits of changes to the VET sector currently being promoted. The appointment of Scott Cam, former tradesman, as the National Skills Ambassador only strengthens the perception of a focus on traditional apprenticeships such as carpentry.

Recommendation 9

Invite the National Skills Commissioner to visit regional Australia to report first hand on issues of training delivery in rural and remote areas in non-trade occupations, and the impact of past funding policies.

In August this year CoAG provided a new vision for vocational training that relates directly to this submission such as matching skills to the “modern economy”, providing skills at all points in a career cycle by upskilling or re-skilling, and most importantly, a sector that “delivers ... regardless of geographic, social or personal circumstances. This includes access for learners in regional, rural and remote areas”.

Leadership

In the recent Acil Allen report for Agrifutures, titled “Agriculture - a \$100b sector by 2030?”, when “skills and capability” was listed as an issue alongside items such as market access, social licence and climate change, it ranked as one of two lowest priorities confirming that capacity building is not seen as a big ticket problem in agriculture. However, we note that [a lack of] skills and capability is cited later in the report as one of the common barriers to adoption of technology. While most people in agriculture will say that a skilled workforce is necessary for the future, many would not think of putting themselves forward as candidates for upskilling. However, a small lift in skills across the whole of industry could make a big difference.

The development of the workforce strategy could be an important conversation starter about what capabilities are needed and by whom, and where. This conversation would be richer by the identification of industry participants who play a significant role in developing, supporting and promoting capacity building activities.

Skills Impact regularly have these conversations when we develop our annual skills forecasting documents and can help to identify some of these people.

Recommendation 10

Identify, celebrate and give voice to industry participants who play a significant role in developing, supporting and promoting capacity building activities.

Conclusion

The Roadmap and associated documents identify a general range of non-traditional skills needed by the sector in the future. However, these will not just develop without a program in place. Adoption of new work practices and technologies have significant barriers if an investment is not made in delivering inputs to support the existing workforce and new entrants. Change can be achieved most effectively if there is a focus on building identified key skills over the next decade. This represents a significant shift from the current discussion about generic unidentified skill needs to one where specific capabilities are identified and delivery mechanisms developed and funded.

The 2030 Roadmap provides an important context for Government to fund and support activities that forge stronger links in regional, rural and remote areas, in conjunction with the NFF and its member bodies, to bring together producers, training providers of all types, and the different levels of government to devise local solutions to identified capability gaps and rural employment pathways across rural and regional areas.

The value of having a framework to guide and focus action cannot be underestimated. We offer the following case study of an industry that found that focus and leveraged it to their advantage.

There are well-documented case studies of industry sectors that have been provided the leadership to guide their industry along a journey to a better future.

For example, 20 years ago there were no qualifications in irrigation in Australia, and a small number of workers in the sector were university trained in subjects such as engineering, agriculture or hydrography, with many of the remainder having skills in allied fields, were unskilled, or learned their skills on the job.

In the late 1990's the then Irrigation Association of Australia (now Irrigation Australia) advocated for a national vocational training package in irrigation. The training package development project required the industry to describe its occupations in detail, the key skills needed by each, and the possible career paths. Over ten years ago Irrigation Australia built a credible industry certification program that recognises capability and experience for a range of industry-defined irrigation occupations and mapped these directly to skill sets from the national training package.

The demand for training in the skill sets and qualifications was such that the organisation became a Registered Training Organisation (RTO) in its own right, and now delivers qualifications nationally using industry expertise and workplace practice.

Certification has subsequently been used as a requirement in state funded programs related to water and water use, where public funds can only be directed to applicants who are certified by irrigation Australia or use certified personnel. More lately, the association has successfully advocated for the first trade qualification in the sector for an Irrigation Technician.

Over the last 20 years the irrigation sector has changed significantly and is now viewed as highly skilled and professional, offering solid career paths, all due to visionary leadership throughout the supply chain and two decades of hard and focused work.

Skills Impact can provide clarification or more information on any of the content of this submission.

We are very interested in the development of the agriculture workforce strategy and offer our expertise to assist with the scoping and/or the implementation of any of the above recommendations.

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