

Background to submission

The Australian economy has undergone substantial restructuring since the 1980s. Throughout that change much of the focus has been on service industries. In some quarters, Australia's rural industries have been viewed almost as an anachronism. The rural industries were simply what Australia relied on before it became a developed economy. "Get big or get out" was a familiar cry, as if only by equating themselves with big business could rural industries have a voice in economic development.

But there were two key points overlooked by many in this view of the economy.

The first was the real importance of the rural industries. While agricultural production today contributes only 3.1 per cent of gross domestic product (GDP), the farm-dependent economy – the farm services sector, food and fibre processing, and similar industries – account for a massive 12.1 per cent of GDP. Similarly, while agriculture accounts for only about 4 per cent of employment directly, it keeps 1.6 million people in work nationally – around 17 per cent of the work force. Even more striking is the contribution to export earnings. The latest Australian Farm Institute report shows that the 4 per cent of workers employed in the rural industries contribute as much to Australia's export earnings as the 85 percent of the work force employed in the services sector.¹ Australia may no longer ride on the sheep's back in the traditional sense, but agriculture still more than pulls its weight.

The second point which was overlooked was the adaptability of the farming community. There were many agricultural producers who got big and a number of diversified national and multinational corporations for a time also dominated the 'big' end of agriculture. Few of the big corporations stayed long. As in many other areas, they looked for quick profits and left – sometimes without the hoped-for profits. More than a few of the family-based enterprises also found that being big was not enough on its own to weather the vagaries of Australian climatic conditions. But many family have stuck it out and in Queensland today, the majority of the top ten rural industry operations are family-based enterprises.² They are the high-profile leaders of an industry, the backbone of which remains – as it always has been – the family farm. The family farm did not always get bigger. But many farming families got smarter: big or small, they diversified, they looked for new and better ways of doing things – and they invested in the skills to support their change strategies.

Credit must go to the Australian Government for initiating the Agriculture – Advancing Australia (AAA) package of programs in the late 1990s to help primary producers become more competitive, sustainable and profitable. But credit also must go to the primary producers themselves – particularly the family farm operators – who made the most of the opportunity to explore new ideas, acquire new skills and develop in new directions.

As the organisation directly responsible for coordinating the FarmBis I and II programs in Queensland, the Queensland Rural Industry Training Council (QRITC) has had an unparalleled opportunity to develop an understanding of the types of rural skills sought by primary producers and rural workers in Queensland, and the capacity of existing nationally accredited training packages to meet those needs. QRITC is also of the view

that skilling in the rural industries goes hand-in-hand with community building. Individuals who possess the skills to obtain work in their communities are usually also committed to their communities. Training can thus build communities at the same time that it skills individuals and develops industries.

QRITC believes the Inquiry into Rural Skills should consider this holistic view as part of its deliberations.

This submission will now address each of the terms of reference.

1 The availability and adequacy of education and research services in the agriculture sector

Structured training is a relatively new concept in the rural industries. The states have established and supported agricultural colleges in one form or another for many years, but these have been designed primarily to service the management levels of the sector. Lower level rural employment skills – or what might be termed “entry level” skills” – have not received the same level of attention. To adopt a familiar comparison, there has never been anything the equivalent of an apprenticeship on which a rural worker could build a career. Training tended to be an on-the-job, informal process which turned out good or indifferent rural workers, depending on how well the necessary skills were imparted or acquired.

Training packages have changed that situation. Structured vocational education and training is now available from work-ready Certificate I to Advanced Diploma level. However the training uptake, while it has been satisfying in some ways, could be improved. Part of the reason for the difficulties with uptake lies with the training packages and part with the agricultural industries. These issues will be addressed under the first two of the terms of reference.

As far as the availability and adequacy of vocational education and training goes, while the training packages are good, they do not, and perhaps cannot, anticipate future training needs. A prime example of this is the current identified need for skills in precision farming. This application of new technology to reduce costs and improve yields in grain farming is widely held to be the way of the future (see Case Study 1). But recent research shows that most grain farmers – even those already using the technology – report that they have little knowledge of precision farming.³ They are driven by economic circumstances to convert to the technique and learn by trial and error because there are not sufficient formal training opportunities.

The precision farming example demonstrates shortcomings in both the availability and adequacy of training. But to have prepared for this challenge the training system would have needed to scan forward and identify the emerging training need. It is this aspect of research that needs to be incorporated into the training development or, more precisely, the training conceptualisation process.

Case Study 1:

K grows wheat and grain sorghum on a Central Queensland property. Responding to the need to develop practices that would lift the performance of his operation, K developed a strategy that would increase profit margins on the same area of land cultivated and at the same time conserve soil structure and promote sustainability.

K has implemented precision farming, adopting controlled traffic and zero-till cropping on his land. Changes that have made this possible and profitable include:

- The development of zero-till practices using herbicides used to kill weeds prior to planting. This removes the need for conventional cultivation.
- The development of GIS (global positioning applications) systems to guide tractors and equipment during planting and spraying operations. This has reduced soil compaction to 7 percent of the land cropped, by ensuring exact placement and that equipment passes down the same tracks on each pass across the land. This increases the storage of soil moisture.
- The development of computer-based mapping and analytical systems that enable seed and fertiliser inputs to be matched to the soil requirements of each part of his property (including automatically varying the inputs within a single paddock).

While some specialised equipment was required to effect the change in farming practices, K reports overall savings in input costs, equipment costs, and reductions in working time and fuel costs (because the GIS controlled navigation ensures that every part of the land is covered once only by each tillage or spray operation). K has also achieved a reduction in maintenance and associated consumables as a result of these efficiencies.

K also uses diversified cropping strategies, planting mung beans on a rotational basis to improve soil nitrogen and reduce expenditure on fertilisers.

Precision farming has made producers such as K much more aware of soil management issues. Among the many benefits are improved soil conservation. Zero-till minimises soil losses through erosion while rotational cropping improves soil health.

K's operation is a good example of "farming smarter" without increasing the production area of a land holding. However, training for precision farming is still in its infancy. The existing training packages lack critical competencies and many farmers who would like to learn more about the practice have no where to turn for the knowledge.

Training to support a change to this style of farming will incorporate sustainability, zero-till, GPS systems, and specialised computer package skills.

The word ‘conceptualisation’ is used here to emphasise that for adequate training programs to be available when needed requires not just the development of the training but for someone to conceptualise that need as a rural industry enters a change phase or a new sector is emerging.

For precision farming, this might have been achieved by research based on a ‘think tank’ incorporating industry leaders, equipment manufacturers and other major stakeholders. While QRITC is conscious of the issues that may be involved in inviting input from equipment manufacturers, we are also aware that it is the technology that is on the horizon that drives future training needs. It is the management of the information input that is the issue rather than the course that the information comes from. A balanced ‘think tank’ should ensure that public training systems are not co-opted for the benefit of a particular manufacturer.

Similar ‘think tanks’ might assist in addressing training needs in areas such as salinity, environmental management, and emerging opportunities such as olives or pharmaceutical crops.

Suggestion:

That consideration be given to developing panels of representatives from different rural industry sectors, whose primary task would be to conceptualise their sector in the future and identify the types of training that will be required to meet future industry needs.

2 The skills needs of agricultural industries, including the expertise and ability of industries to specify skills sets.

The skills needs of agricultural industries, including the expertise and ability of industries to specify skills sets, raises a number of issues.

One issue relates to the earlier discussion on the conceptualisation of future training needs. For example, salinity is a major issue for Australian farmers. It has a high public profile due to the coverage given to salinity issues such as those in the Murray-Darling catchment.

Salinity became an issue just as Conservation and Land Management Training Package (RTE03) was being introduced. While the training package contained a number of relevant competencies, it did not address salinity comprehensively. A closer link between research and training development would have shortened the lead time for the introduction of training. But an outsider might ask (not without some justification) why Australian farmers did not see the issue coming. Here is a case where the ‘think tank’ approach to identifying rural industry training needs might have assisted. It could have brought scientists and environmentalists face to face with industry leaders in a forum where the issue might have been fully canvassed.

However, this does not answer the question of why the agricultural industries often lack the expertise and ability to specify skills sets.

QRITC believes that the answer to this lies in the very attribute that gives the rural industries their basic strength. Farming enterprises are basically family businesses. They are also small businesses. Like many small businesses, the operators of rural enterprises tend to see training needs in terms of their personal needs rather than industry needs. The problem is compounded by the seasonal nature of much agricultural employment. Many enterprises no longer employ permanent staff, by buy in skilled labour when it is needed.

In this situation, QRITC has found that individuals connected with the industry – training providers, consultants, community representatives – are often better able to identify training needs and skills requirements than farm enterprise owner/managers. QRITC has been active in promoting the Skills Passport concept in Queensland as a means of preparing workers to take advantage of the diversity of agricultural employment opportunities that arise, generally on a seasonal basis. QRITC notes that no single industry sector could specify the skills sets required for this type of employment. As a related observation, QRITC would also like to emphasise that there are many opportunities for semi-retired individuals to find work in this environment. A training initiative that takes older workers ‘back to the bush’ may have much to recommend it, as Case Study 2 demonstrates.

Case Study 2:

D grew up on a farm but spent his working life in the city, first as a boilermaker and later as owner-manager of a convenience store. In 2004, D sold the store and retired to the bush, about 200 kilometres from Brisbane. He bought some on land on which he intends to run a few cattle. D is building a house on the property, as an owner-builder.

D had planned to work a couple of days a week if he could, to help his retirement funds go further. But as he put it recently: “There is more work here than you could poke a stick at.” D has been working 7 days a week and up to 16 hours a day for a contract hay baler. The contractor employs several locals while the season is on. The summer of 2004-05 was only average but there was still plenty of work.

D is not concerned that the work only lasts for the hay season. He can catch up with work on his house when the hay stops. But he knows that there is plenty more work around for someone with the right work ethic – mustering, shed hand for shearing, shed and yard building. Some of it is hard labour and suited to a younger person. But many of the equipment operating jobs can be handled by an older worker.

D and many like him are probably counted as “retired” when the workforce is assessed. But they are working for a good part of the year. If it is to be Government policy to encourage people to continue working longer and to work part-time in retirement, individuals like D will need to be supported with appropriate training.

The Skills Passport approach provides D and others like him with the skills they need to keep working in the rural industries.

Significantly, QRITC has found that many smaller industries have a better grasp of their required skills and industry issues than larger industries. This may be because smaller industries need to work harder to maintain their markets. They also need to think more about succession planning in their industries.

The bee-keeping industry is one such example.

Most people can relate to honey as an output of the bee-keeping industry. But few would know that the bee-keeping performs a valuable service to the wider community via pollination to agriculture and horticulture. The contribution is estimated to amount to \$1.6 billion across Australia. In addition, there are important medical and therapeutic industries associated with the honey industry.

Unfortunately, the bee-keeping industry is faced with an aging workforce. To meet the challenges of the future, the Queensland Beekeepers Association has formulated Skills Formation Strategy as a tool to identify skilling in all areas of the industry and its supply chains (See Case Study 3). Few industries have contextualised their training needs so comprehensively.

Case Study 3:

The beekeeping industry in Queensland and nationally faces many challenges including:

- Securing access to melliferous resources
- Controlling diseases
- Developing new markets and products.

In late 1997, working with the Queensland Department of primary Industries, the Queensland Beekeepers Association (QBA) began to develop a strategic plan. The starting point was a vision for the industry, followed by goals, key issues and, finally, objectives associated with each key issue.

One of the identified key issues was training, both formal and informal. To further its goals in this area, the QBA sought to become more involved in the delivery and/or provision of technical training for apiarists and their employees, either alone or in conjunction with other agencies.

The QBA has since been involved in developing a Beekeeping specialisation within the Rural Production Training Package, with qualifications ranging from Certificate 1 to Advanced Diploma (Level 6). Due to the QBA's involvement, the qualifications have been tailored to address the unique needs of an industry in which skills and knowledge may vary significantly between regional locations and in which the beekeeper often needs to "migrate" long distances with his or her bees.

The training is also designed to preserve the accumulated history and knowledge of generations of beekeepers before it is lost.

Emerging industries also often have a better grasp of their skills sets than the established industries. This may be because individuals entering emerging industries need to do more research if they are to succeed. They do not have examples to follow.

The wild game harvesting industry provides a good example.

The macropod and wild game harvesting industry is worth about \$40 million a year to Australia. The industry is assessed as having considerable growth potential. But that is not the most important reason for it to be supported.

The macropod and wild game harvesting industry is an important source of employment for many individuals in small inland communities. The industry is aware of the difficulties it faces from animal rights groups and misinformed members of the public. Partly because of that, the industry is highly conscious of its needs to maintain standards and not to permit situations to arise which might jeopardise export markets. Consequently, there is a strong emphasis on training and on bringing the many casual wild game harvesters into an accredited harvesting system. Case Study 4 illustrates the typical pathway of entry into the macropod and wild game harvesting industry.

Case Study 4:

G is 22 years old and lives in a small town in western Queensland. He is employed by the local stock feed supplier where his duties involve loading and unloading feed, and performing some deliveries. G takes home a little under \$400 a week. This is the first fulltime job that G has had since he left school. His past employment has covered a range of rural jobs – mustering work, shed hand, and off-siding on cattle transports. G and his mates have hunted wild pigs on weekends since leaving school.

Last year G completed a TAFE course to obtain a commercial wildlife harvesting licence. This enables G to sell pig carcasses over 30 kilograms to the local chiller box. At \$1 per kilo, a couple of pigs returns \$60 for an afternoon shooting. G's TAFE course also gave him the necessary qualification to harvest kangaroos and G has recently taken up part-time macropod harvesting. G has learned the hard way. Initially, some of his carcasses were rejected for reasons of quality. But prices for wild game are high at the moment, and G has decided to invest in the racks to equip his utility for macropod harvesting. He now earns around \$350 on a Saturday night, harvesting kangaroos, plus a bit more if he happens to pick up a pig.

The economics of macropod harvesting compared with G's day job are appealing and he is now considering switching to working as a fulltime harvester. If prices drop, he will revert to the kind of rural work that he did in the past and continue with part-time harvesting.

G knows that the industry association encourages all operators to complete the relevant competencies and that it runs training programs when funding is available. G has already learned that success as a wild game harvester depends on delivering carcasses under conditions requiring him to meet strict quality and health requirements.

As with issues affecting the availability and adequacy of training, it is the management of information inputs that will assist agricultural industries to better specify their required skills sets. Industry representatives need to be exposed to outside views and concerns to view their industry from a perspective other than that of their own business.

The Report of the High Level Review of Training packages (April 2004) flagged this issue under the heading of market intelligence. As the report observed: “The capacity of Training Packages to adapt depends on a range of factors including a collaborative culture, clear authorities, enlightened leadership and excellent market intelligence and predictive capacity”.⁴

The above quote underlines the close relationship between the issues under this item in the terms of reference and the previous item.

Suggestion:

That as part of the development of panels of representatives from different rural industry sectors to conceptualise the future of their industries, consideration be given to the way market intelligence for the rural industries is managed, particularly as it applies to future training requirements, and how that information is packaged for dissemination back to industry to assist in the formulation of skills needs.

The provision of extension and advisory services to agricultural industries

An important issue that comes through from the concerns we have noted with the availability and accessibility of training is the need for a better understanding of the barriers to participation in learning opportunities. This issue was noted by the RIRDC in its report “Agricultural Extension, Learning and Change” in 2003.⁵

Under the previous point, we outlined how the small business enterprise structure tends to focus attention on the training needs of the business operator. Acting in this way, it also acts as a barrier to the provision of extension and advisory services to base level workers who might benefit from such services in formulating personal development plans and accessing training. The FarmBis programs made these services available mainly to management levels in rural industry. QRITC has worked to bridge the gap for rural workers by championing Skills Passport programs in Queensland and acting to facilitate the development and delivery of appropriate training programs (see Case Study 4).

The RIRDC⁶ also suggested that it was difficult for the research or extension practitioner to determine what processes are most appropriate for their situation, and thus how they should design their extension effort, and be more efficient.

Case Study 4:

At a recent QRITC Facilitated Forum for Industry in Charleville, Queensland, participants identified among the main issues facing them in employing staff:

- Limited availability of entry level staff
- Lack of skills, and
- Lack of understanding by the education system of the variety of agricultural/horticulture careers.

Training to develop the rural workforce was seen as an essential part of the complex problem presented by the rural employment environment. The type of employment on offer in rural communities is not necessarily employment as it may be envisaged by city dwellers. These are small jobs that offer a couple of days work here, three or four weeks there, maybe something more substantial if a big project comes along – for example if a local council implements a major works project .

However, it should not be assumed that, because it does not fit the form of a “regular” job, this work is in any way demeaning. This way of earning a living holds a great deal of appeal for some people. The freedom to choose type of work and employer is an attraction to some. The variety and mobility is an attraction to others. But to turn such opportunities into a viable employment stream, an individual must be multi-skilled and flexible.

QRITC has supported the delivery of the **Certificate II in Rural Operations (RTE20703)** to meet the requirements of individuals working in this style of rural employment. The qualification allows individuals to acquire relevant competencies from the national training packages RTE03 Rural production, RTF03 Amenity Horticulture, and RTD02 Conservation and Land Management and apply them to assemble a skills profile for work in a variety of rural employment contexts.

This qualification is well matched to meet the needs of rural workers and the environment in which their work opportunities present.

Once funding has been obtained, QRITC initiates the training program by securing delivery of the compulsory (work ready) component of 4 competencies to each participant, plus a further two competencies in rural work procedures or competencies relevant to skills needs identified by local employers. By tracking the individual through the Skills Passport Program, the individual can be assisted to plan and complete a full qualification over a number of years and employment in various roles. Such programs, however, are largely dependent on a continuing flow of funds for training.

QRITC believes that this difficulty is related to the finding, as long ago as 1996, that while 80 per cent of farmers may participate in field days, courses, seminars and workshops in any year, only 3 per cent will attend accredited training courses in the same period.⁷ There is something of a culture among rural industry operators that they prefer “hands on” learning experiences and information which can be acquired quickly.

The realities of farming also intrude here. Some farmers are not in a position to commit to a long-term, regular training schedule. If it rains, they need to be on the tractor, not attending the next stage in a training program.

FarmBis went some way to addressing this culture, at least to convincing farmers that formal training could be worth the effort it required.

Research has found that participation in formal learning tends to be self-reinforcing.⁸ The more formal training that farmers complete, the more they are likely to seek. But in difficult climatic conditions, where successful harvests may be few and far between, uncertainty still makes it difficult to make long-term commitments.

More widely recognised barriers such as uneven access to information technology (including internet) are diminishing but still relevant in some areas.

QRITC believes that underlying issues are best addressed by ensuring that advisory service operators are attuned to the needs of farmers rather than the priorities of government or even industry groups. Extension services and formal training also need to be packaged and delivered to meet the time and place constraints of rural enterprise operators and employees.

Suggestion:

Industry and community groups need to be formally linked into the government processes that develop the agendas for extension and advisory services. Community groups in particular can advise on the packaging and delivery of training to meet their industries' needs. Government needs to bring the rural community into these processes because the communities are the backbone of the industries.

4 The role of the Australian Government in supporting education, research and advisory programs to support the viability and sustainability of Australian agriculture.

The Australian Government has made an extremely valuable contribution in fostering rural education, research and advisory programs through the Agriculture – Advancing Australian initiative. However, as suggested under the previous point, the role of rural communities should not be overlooked when considering what needs to be done to support the viability and sustainability of Australian agriculture.

The training needs of rural communities are particularly important because their members provide the pool of labour that services rural industries. Many rural workers who shift through a variety of jobs emphasise that they value the lifestyle, no matter how unorthodox it may seem from the 9-5 perspective. For these workers, the uncertainty is balanced by the independence. But there are also many who would value the opportunity to build a career in a local enterprise if the opportunity presented.

In recent years, the removal of many services from rural areas has made living in rural communities more difficult and has probably contributed to some loss of labour from those areas. However, this trend is now being reversed, with governments recognising that “sustainability” does not stop with the environment. It extends to communities. For Australia to build on the strengths of its rural industries, it will need to invest in its rural communities. Training in the right place and at the right time should be an important plank in the community building program. As pointed out in the introduction to this submission, training will bind individuals to a community at the same time that it builds an industry.

With this in mind, QRITC can only reiterate the need to bring rural communities into the process of determining rural training needs and training delivery requirements. Communities bring much more insight to these issues than simply the collective views of community members or their representatives. And communities have much more at stake than individuals. It may seem a trite point, but if an industry disappears (as, for example, the tobacco industry has from some areas) individuals may take their investments elsewhere. But a community dies. A community’s investment is always in the place where it is planted. A community has a great deal of incentive to take the long-term view in many things, training included.

Suggestion:

That the Australian government give serious consideration to more direct incorporation of rural community advice and perspectives into its education, research and advisory programs to support the viability and sustainability of Australian agriculture.

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 - 2 Condon, J. 2005. “Families buy back the farm”. *Queensland Country Life*, 28 April.
 - 3 Graham, V. 2005. “Precision farming gears up”. *Queensland Country Life*, 28 April.
 - 4 Australian National Training Authority. 2004. *Moving on*. Report of the High level Review of Training Packages. Melbourne,
 - 5 Fulton, Annabel; Fulton, David; Tabart, Tim; Ball, Peter; Champion, Scott; Weatherley, Jane; and Heinjus, David, 2003. “Agricultural Extension, Learning and Change”. Report for the Rural Industries Research and Development Corporation, RIRDC Publication No 03/032, Canberra, May.
 - 6 Ibid.
 - 7 Kilpatrick, S. 1996. *Change, training and farm profitability*. National Farmers’ Federation, Canberra.
 - 8 Ibid.