

## Agricultural Competitiveness White Paper April 2014

### A Case for Centres of Excellence in Agricultural Education and Training

AJ (Sandy) MacKenzie \* and Peter F Ryan \*\*

A response to the term of reference *"The efficiency and competitiveness of inputs to the agriculture value chain - such as skills, training, education and human capital, research and development.."* for the 2014 Agricultural Competitiveness White Paper

#### Back Ground

- Economic development through agriculture is dependent on research, technology, innovation, managerial capability and a skilled workforce
- Competitive agriculture is currently constrained in all of the areas mentioned above.
- The 1990 McColl review of agricultural education and training highlighted the declining capacity of providers to meet the demands for skilled professionals in agriculture at all levels. More recent reviews in Vic, NSW and SA and the Senate Rural and Regional Affairs Committee have demonstrated that the gap between supply and demand has widened.
- Of the 39 Australian universities only 9-12<sup>1</sup> now offer courses that have a primary focus on agriculture compared to 23 universities a decade ago.
- A number of agricultural colleges have closed or have headed in other directions. Others that were established as colleges to provide agricultural production and farm management training and which are now university campuses, have seen their focus "diluted" as enrolments declined and other programs were given priority.
- There has been some resurgence of interest amongst the current agricultural tertiary providers (and in some cases non-traditional providers) in the opportunities that may arise from the "Global Food Security" and "Food Bowl of Asia" messages that have developed in recent years.

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\* A J (Sandy) MacKenzie , MRurSc (UNE)

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\*\* Peter F Ryan, BAgSc (Melb), DipEd, MAdmin (Monash)

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<sup>1</sup> depending on the interpretation of primary focus. Some 300 tertiary students graduate in agriculture (not including those where agriculture is only a component of environmental/NRM programs) yet estimates of the professional agricultural workforce required are in the order of ten times that number.

- The majority of this interest however is not related to productive agriculture but appears to be more directed to agribusiness, food science, international marketing and other areas of the agriculture value chain.
- School leavers and their career advisors remain unconvinced that productive agriculture is a worthy and rewarding career pathway.
- Skills, training and education in agriculture for school leavers is primarily provided by the University, TAFE and VET sectors.
- Developing the knowledge and skills of the current agricultural workforce provides an accelerated and more cost effective means of improving Australia's productive and competitive agriculture sector. Current farmers are already producing food and fibre and gaining knowledge and experience in the skills required
- In the past, agricultural extension was an appreciated and well regarded profession. Some universities had "outreach" programs that provided both extension and research opportunities. Most agricultural colleges had farms, some universities had field stations eg Mt Derrimut, Badgerys Creek, some had rural extension services eg UNE and agencies like CSIRO had numerous field research stations eg Chiswick, Gilruth Plains, Ginninderra. A number of institutions offered structured short courses of some 3-5 days (some "in residence") where current farmers could learn from specialists and, most importantly, learn from each other eg Marcus Oldham College. The profession of farm consulting also developed quite rapidly in the 60s and 70s.
- These programs were complemented and enhanced by government extension services eg agriculture, soil conservation, specific agricultural industries and extension officers developed a close relationship with farmers
- Most of these extension services and activities have gradually declined or terminated. Virtually all of the extension officers of that era have retired or passed on and much of their knowledge has gone with them
- In more recent years the extension role has been taken up by the commercial agricultural supply sector and farmer-instigated groups eg Birchip Cropping Group and Southern Farming Systems. Despite some state departments of Agriculture/Primary Industry being substantially down-sized or merged with environment/NRM departments, various forms of agricultural extension services have been maintained but these have been primarily confined to field days and discussion groups especially in times of uncertainty or natural crisis eg drought, rabbit plagues
- In the last 10 -15 years there has been a renewal of interest in agricultural extension especially utilizing on-line delivery eg ProFARM and more specific interest groups eg EverGraze, BestLamb BestWool. Government agencies, NRM organisations and industry groups have continued to offer field days, farm walks and one-day workshops but the professional model of agricultural extension has yet to return.

## The Goulburn Valley Region Case Study

- The recent Victorian Government Taskforce has found that the Goulburn Valley region is a significant economy based on agriculture dominated by the dairy and horticulture industries<sup>2</sup>. Demand from Asia provides the opportunity for massive growth in these industries and the Taskforce developed the Goulburn Valley Industry and Employment Plan<sup>3</sup>. This work identified significant constraints to competitiveness including research and development, biosecurity issues around pests and diseases in horticulture, market access, technology development and adoption, understanding and meeting market demands, business structures and most importantly managerial and skill availability.
- Over the last decade or so the Goulburn Valley region has seen the winding back of tertiary education delivery for agriculture as Melbourne University consolidated to Melbourne Parkville as enrolments dropped during period of serious drought. It has effectively closed the former Dookie Agricultural College with now a modest research program on site and the College is only used occasionally for student instruction.
- Research and development and extension programs out of the DEPI Research Institute at Tatura have also significantly reduced over the last decade<sup>4</sup>.
- Both the Commonwealth and the Victorian Government have invested in the order of \$2.5 billion into the region through the upgrade of the Goulburn Murray irrigation system and grants to farmers for on-farm efficiency projects. This is a massive injection into the productive, long term and sustainable agriculture production base for the region.

## How can research, extension and tertiary/skills education improve the competitiveness of Australian Agriculture

- Recognise that the world has moved on from the past where there were numerous agricultural colleges, many universities with agriculture faculties, government priority funding for rural research and development and extension programs. Now most extension is carried out by commercial companies (dairy field officers, private consultants, agronomy services from fertilizer, seed and rural retailers) and the industry corporations such as Dairy Australia and MLA.
- The big sleeper in all of the new arrangements is that much of the talent that is now employed by the private sector have been trained by the former agricultural colleges or universities that no longer exist or have cut back drastically and many agriculture professionals were developed in the employ of the Departments of Agriculture which have also cut back significantly. Where will these professionals come from in the future?

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<sup>2</sup> The northern region of Victoria comprising mostly the Goulburn Valley produces 22% of Australia's milk and has potential to be much larger. The Goulburn Valley is the dominant location Australia wide for many horticulture outputs -see also the Goulburn Valley Fruit Growing Industry Roadmap, Nov 2013. DEPI Vic.

<sup>3</sup> See Goulburn Valley Industry and Employment Plan at [www.rdv.vic.gov.au/GV-Fund](http://www.rdv.vic.gov.au/GV-Fund)

<sup>4</sup> The Victorian Government has recently announced that the Tatura Institute will become a Centre of Excellence for Horticulture Research that will boost the resources available to the industry in the region and beyond.

- The need for such talent is now obvious and the demand for agriculture graduates now outstrips supply by around 10 to 1. Yet there remains reluctance for school leavers to study agriculture and this will not change without some sort of intervention by both the broader industry itself and by Government if it is serious about taking advantage of the economic boom opportunity that agriculture in Australia presents.

#### A Case for Centres of Excellence in Agricultural Education and Training

- Revisit the McColl and other reviews to consolidate the provision of tertiary and vocational providers of agricultural education and training to a small number that are committed to rural industry and have the expertise and critical mass of staff and students to be viable in tough financial and market driven times. Such provision should be located in the regions of Australia where agriculture is the dominant economic driver. As such the staff and students should be immersed in that region. We know that when country students study in the cities most are unlikely to return to their region.
- A new model of developing skills in the regions to meet the demand of rural industry requires that there must be a partnership approach to achieve the desired outcome. This means that rural industries, most likely through their R&D corporations, businesses such as Elders, Landmark, Coles, Woolworths, and government through state and commonwealth departments of agriculture would partner with the education providers at the University, TAFE, VET and school levels to consolidate a focussed effort into a single Centre of Excellence in each state.
- A partnership of multi-level providers could provide a comprehensive suite of programs tailored to industry requirements both now and into the future. The Centres of Excellence would be guided and supported by the various industry bodies. Industry and government could have an important role in stimulating the supply for students to enter the programs through scholarships, internships and employment offers. The Centre of Excellence could also accommodate teaching research and extension programs somewhat akin to the Land Grant College system in the USA. As such partnerships with CSIRO, other R&D corporations and state department research programs could be integrated and where possible co-located.

#### Recommendation

The Australian Government urgently establish a small taskforce to:

- Review the outcomes of the previous enquiries and report on what progress has been achieved in implementing the recommendations.
- Provide an assessment of the current providers of agricultural education and extension programs - public, private and corporate/commercial and at all post-secondary levels - with a clear focus on those programs that relate to productive, competitive and sustainable food and fibre production.
- Propose options, including the establishment of Centres of Excellence in Agricultural Education and Training, and specific courses of action that may be considered for further discussion and possible implementation with governments, providers and the industry.