



**MARCUS OLDHAM COLLEGE**  
Developing Professionals in Agriculture and the Horse Industry

## **Enquiry into higher education and skills training to support future demand in agriculture and agribusiness**

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### **Introduction**

Marcus Oldham College has been concerned over a number of years that there are severe shortages in skilled labour supply available to agriculture. These shortages can be attributed to the aging of the on-farm population, the drought, wages and salaries that are much more attractive in mining than they are in agriculture, and a failure by education authorities at the school level to ensure that agricultural careers are showcased attractively, particularly in a context of increasing urbanization. Finally, the way in which universities have been funded has made sustaining more expensive agricultural courses a less attractive proposition than concentrating effort on cheaper courses that attract overseas fee paying students.

The concern of our Centre has been driven by the aging of Australian farmers together with the loss of their experience and the difficulties of attracting new entrants to farming careers. Additionally, the Centre has been concerned that this loss of knowledge is coming at a time when world food security is emerging as a real concern at a humanitarian level and as an issue of political stability. Agricultural production is crucial to future food security.

### **Marcus Oldham College programs**

#### ***Undergraduate Courses***

Bachelor of Business (Farm Management)  
Advanced Diploma of Farm Business Management

Bachelor of Business (Agribusiness)  
Associate Degree of Agribusiness  
Diploma of Agribusiness

Diploma of Horse Business Management

## ***Postgraduate Courses***

Graduate Certificate in Agribusiness  
Graduate Diploma of Agribusiness

## ***Centre for the Study of Rural Australia***

Marcus Oldham College has also developed the Centre for the Study of Rural Australia, which has a research focus and an industry professional development focus.

## **The decline in education and training provision**

Our comments here are restricted to the higher education sector where we have sufficient expertise to comment. We don't possess a similar level of expertise that would enable us to comment on the VET or schools sectors.

We have already publicly expressed our concerns (Livingstone & Smith, 2011) at the capacity of current higher education arrangements in Australia to support the agricultural industries as they emerge from drought, and as their need to contribute to a hungry world increases. We also note that the decline of manufacturing through currency movements and workplace arrangements may yield a higher expectation on agriculture to deliver export dollars on the commodity markets, in much the same way as mining products.

Our observation in the Livingstone and Smith article were, in summary, that the declining governmental financial support for universities, and the consequent need for their greater commercialization, had resulted in the decline of agricultural course provision. Compared to, say, business courses, agriculture programs cost more to run, attract lower enrolments, and do not attract any sizeable number of full fee paying overseas students. That set of drivers has reduced provision and resulted in the considerable decline of faculties of agriculture, and their integration into other faculties. In our article we point out that only 12 of Australia's 39 universities provide agricultural courses and that these may also have a somewhat gloomy future. We have appended the article to this submission.

Accordingly, while the decline of these programs is a threat, it also represents an opportunity. There is a problem of aging staff of course, but there is also a problem of providing opportunity for younger teachers and academics to enter agricultural education and training. With effective political and institutional policy making and leadership these opportunities can restock and revitalize agricultural education and training, as well as develop the research capacity that is also required.

Our contention here is that agriculture has been the victim of a perfect storm in education and training, with a declining workforce resulting from aging and from industry exits during the drought and in favour of high mining industry wages;

and with a concomitant decline in the provision of agricultural education and training programs that will provide the skills stock for the future.

## **Addressing contemporary needs in agricultural education and training – the widening gap**

To address contemporary needs in agriculture education and training, and to find solutions to the widening gap between skilled labour supply and demand, we contend there needs to be a number of strategy areas:

- Curriculum development
- Course delivery options
- Attraction of young people to the industry
- Remuneration and job security – we have not commented on this since we believe it to be outside the scope of this submission

### ***Curriculum development***

Currently agriculture courses at secondary, VET and higher education reflect the development of either technical/scientific knowledge, or of agribusiness knowledge. The majority of courses are in fact intended towards technical and scientific knowledge of agriculture, including on-farm knowledge and skills. A lesser number of courses, and these largely at higher education level, provide opportunity for specialized agribusiness skills and knowledge formation.

Our main contention here though, with respect to farming is that skills and knowledge need to be formed in both the technical and the business domains of farming. We have recently conducted a number of focus groups with successful dairy farmers. It was clear from this research that successful farmers conceptualise themselves as business people with the technical knowledge relevant to the conduct of their particular business. Knowledge of business structures, finance and equity alternatives, business and strategic planning were valued knowledge by these successful farmers, and it was their business knowledge that defined their success.

It was their technical knowledge that enabled them to be dairy farmers, but it was their business knowledge that enabled them to be successful.

In other work we have done with the agricultural industries other skills sets are identifiable. The use of *the internet as a professional information resource is important* for any person in contemporary life, but for people geographically removed on farms it assumes a crucial importance. The skills of identifying required material, and discerning high quality reliable sources from less useful sources is an important skill.

There are other new opportunities emerging as Australia moves towards an emissions trading scheme. *Farms and other agricultural enterprises will form part of carbon dioxide reduction strategies*, and the capturing of carbon to enrich agricultural soils will also become an available strategy. Recognising these

opportunities and harnessing them into an effective business plan will form a part of farm business thinking in the future.

In a globalised world where agricultural commodities are now traded outside previous aggregated national marketing structures, agricultural managements and farmers need to be more aware of international business and opportunities. *The need for agricultural courses to include components of international business and cultural awareness* has never been greater.

Accordingly, it is our contention in this submission that there is a need for an increased number of courses that provide *a combination of knowledge from both the technical and the business domains*. We also suggest that these courses be available at the formal levels of secondary, VET and higher education; but also available in the more informal sector of adult and continuing education.

### ***Course delivery***

Together with campus based formal courses there is a clear place for flexibly delivered programs using ‘traditional’ higher education web platforms. But there is also an argument for making use of social media software (eg Facebook) to deliver program material but, more importantly in our view, to assist in professional networking and the development of communities of practice among people who typically work in rather isolated contexts.

The provision of community based programs delivered into local communities on a face to face basis are also important in rural areas where the opportunities to meet and construct knowledge through discussion and demonstration are not great but are, nevertheless, highly valued.

Finally, with family farms we suggest there is an argument to consider the family (rather than an individual) as the learning unit such that different parts of curriculum can be provided and credentialed to different family members as they relate to the family member’s role on the farm.

### ***Attracting young people***

In our view the attraction of young people to the industry is such a pressing need that we have devoted a section of our submission to it.

Underpinning our nation’s capacity to maximize agricultural gain for ourselves and for humanity at large is the development of skills and knowledge, and our capacity to attract new and young people into agricultural production and agribusiness. As we see the graying of the farmers of Australia and their consequent retirement we need to be seeing young people coming in to replace them, To do that we must do a number of things.

First, *we need to communicate the business opportunities to young people* so that they recognize agriculture as an industry where they can prosper. Second, *we need to identify and develop financial pathways into farming that enable*

*youngsters to enter the industry at professional levels* without first having first to accumulate a level of assets more usually associated with much older and more established farming people. *We also need to project an image of agriculture as the complex and sophisticated enterprise* that it is to ensure that intelligent young people who need a challenging career can see that agriculture can provide just that.

A bright future for agriculture will rely on attracting sufficient numbers of young people to work in the industry. However, a recent major study showed that production in the agriculture sector is at risk of being severely inhibited by an undersupply of appropriately skilled labour. Over the next 10 years this will become a crisis if no concerted measures are undertaken to attract young people into the industry and, most particularly, into farming. The 2010 Australian Farm Institute report into human resource needs for Australian agriculture warns that 30 per cent of the existing labour supply is likely to exit the industry by 2018.

The loss in skilled labour outlined in the AFI report will mean there will be a requirement for increased entry of skilled labour directly from the education and training sectors. However, enrolments in agricultural courses at universities have been declining over a number of years and this situation is likely to continue well into the future. Although agriculture offers a wide range of occupations and career opportunities it is arguable that these opportunities are not being showcased adequately for young people.

There are plenty of employment opportunities and career paths in the agribusiness and service sectors to agriculture, and these are attracting healthy numbers of rural students, probably due to the more urbanised lifestyle afforded by those occupations, and a perception of higher salary offerings. The real concern is the declining number of youngsters who are seeking on-farm occupations.

At the Centre for the Study of Rural Australia there is recognition that *the issues surrounding attracting young people to agriculture, and particularly to on-farm occupations, are more complex* than what have been previously thought. It is not only salary comparisons and the attraction of employment in the cities or in the extractive industries that entice labour away from the rural sector. We need to consider why agriculture doesn't successfully compete with other academic disciplines as an attractive course of study. For example, offerings in law, accounting and engineering attract strong enrolments at universities, yet enrolments in agriculture continue to decline.

One area we suggest needs investigation fairly early is the *current disconnect between agriculture as an area of study, and professional recognition and status in the wider community*. Young people searching for a future career have a clear enough idea what lawyers, nurses, teachers and engineers do. They are also aware of the education and training required for those wishing to enter those occupations. But when it comes to agriculture, we suggest there is less understanding what a farmer is and does, and what education and training is necessary to enter the profession and to be successful. Positioning farming as a

profession and building an image for it that reflects its professionalism is probably going to be important. There is widespread understanding that a leading farmer requires the competence in a broad range of manual skills, but there is probably less understanding that successful farming also requires a vast array of sophisticated theoretical knowledge as well as advanced cognitive capabilities to handle the complexities of changing business and technological environments.

It is anticipated *there will be fewer farm managers in the future, but they will be highly skilled and degree qualified*. In other words, the professionalisation of farming is happening whether we plan for it and educate for it – or whether we don't. Clearly, it is better if we do plan and educate for it, and ensure that we do secure a flow of young people ready to enter the profession as the departures from the industry predicted in the Farm Institute report march inexorably onwards.

The shift towards corporatized farming also means that young people can enter the industry without having to either inherit a farm or have a very large amount of money that will enable them to purchase one. That trend will enable entry to on-farm professions by youngsters otherwise not able to join the industry, and also brings with it the possibility of a broader range of young people who can participate. We need to be making these trends and opportunities very clear to youngsters if we are to interest them in the industry.

We need to clearly show young people that agriculture provides enormous professional and business opportunity, and that a vibrant and productive agricultural industry is the only way we are going to feed a growing population in a reliable way. Selling essential product that people need to eat and to live is the basis for about as good a business plan as can be imagined – and will become even better.

## **Impacts on agricultural research**

Our observations as an education provider on the shortage of personnel in agricultural research leads us to identify several areas of difficulty.

### ***University research and doctoral outputs***

While the statistics on these matters will be available elsewhere to the inquiry and will no doubt be addressed by university providers, our experience has been that there has been a decline in the number of peer reviewed papers available in agriculture and agribusiness as well as a decline in applied research output.

We also observe a decline in the number of doctoral graduates in agriculture who are able to move at post-doctoral level into meaningful research and teaching positions. Building a career on a basis of 'soft money' and a constant search for grants in order to remain employed is not an inviting prospect, nor one that results in long-term focus on research output, as opposed to a focus on the need to survive. We contend this is a totally unsatisfactory situation for the

individuals involved, and equally unsatisfactory as a national strategy to support a major domestic and export industry.

### ***Government operated research establishments***

Our understanding and observation is also that there has been a decline in State and Commonwealth government commitment to research through funded organizations such as Departments of Agriculture. Apart from a certain hijacking to political interests of the serious research on agricultural production and business the number of people involved and the financial commitment has declined. Accordingly we have seen less output from these organizations but, at the same time, organizations such as the Australian farm Institute continue to publish high quality and industry-relevant reports.

### ***Securing research-experienced staff***

Although Marcus Oldham is primarily an education provider, it does have a commitment to research and has developed the Centre for the Study of Rural Australia to carry the College's research effort. The shortage of research personnel has been evident to us in our recent recruitment of personnel to the Centre. The field from which we could draw was disappointingly small and, perhaps more tellingly, some applicants were motivated by a need to escape from other institutions where they felt unwanted as agriculture specialists.

### ***Outlets for published research***

While there has been no identifiable decline in the number of peer reviewed academic journals that focus on agriculture and agribusiness, neither has there been any growth in the number of titles. More importantly, from our point of view as a consumer of research and provider of knowledge to the industry, there is an exceedingly small number of commercial applied industry magazines that are able to publish research in an accessible form that industry people will read. While there are magazines such as The Australian Farm Journal and racetrack that do carry such articles on an occasional basis, there are too few magazines to support vigorous research output of an applied nature.

## **Agriculture as export business**

### ***Agricultural education as a contributor to the national economy***

Agriculture must be at one of its most exciting periods in recent history, and at one of its most sensitive times.

Exciting because as a business proposition things can hardly look better than they are. Sensitive also because with the United Nations predicting we need to increase food production by 70 percent by 2050, there is no shortage of growth in the demand for food and fibre in a world that is growing hungry for new food sources. In Australia we are witnessing the end of the drought that has been so

damaging to agricultural production and financial well-being. Australia currently produces sufficient food to feed around 40 million people, but as our own population grows we need to substantially increase the number we can feed to ensure we contribute to world food supplies and earn foreign exchange in our agricultural industries.

From a national export perspective, agricultural commodities are affected by foreign exchange movements in the same way as mining products. A strong dollar will impact negatively on other export earners such as manufacturing, tourism and education, but positively on agricultural and mining exports.

The commercial and business opportunities for individuals are strong in agriculture right at the moment and, similarly, so too are the political and trade opportunities for our nation. With effective leadership at industry and government levels Australian agriculture has an extraordinarily bright and profitable future, and our nation has the opportunity to play an important role in food security and political stabilization. Coupled with effective leadership needs to be, of course, effective skill and knowledge levels provided through education and training. Replenishing the stock of people, skills and knowledge that drive agricultural outputs is essential to leverage this bright future. The impact of labour shortages on exports has not been felt to date as painfully as we believe it will be felt in the next several years as more farmers retire from the land and less youngsters come in to replace them.

### ***Making agricultural education an attractive personal investment***

Farming is a business. If it is to be successful and productive it needs to be conducted as a business. Additionally, it needs to be business that is not only owner-operated if it is to attract youngsters who will not inherit a farm, or do not have the capital to acquire one. Our observations here are consistent with the broader research and literature, and reflect the findings of our own research at the Centre for the Study of Rural Australia. Providing attractive and accessible financing arrangements and capital accumulation arrangements is an important component of attracting youngsters to the industry.

The opportunities resulting from the corporatization of farming form an important pathway for talented young people to enter the industry, but these opportunities are not profiled sufficiently. Indeed, in Australia it does seem remarkably difficult to obtain reliable data on corporate farming and its career opportunities; and also remarkably difficult to get information on new and different forms of farm ownership.

As long ago as 2005 the Productivity Commission paper *Trends in Australian Agriculture* noted the increasing importance of large-scale commercial farms. The same report also noted the increasing complexity of agricultural business and management through the management and marketing by farmers of their product for direct sale into the agri-food chain. More recently, the 2010 IBISWorld report *Blooming Business: Growing corporate interest is set to push productivity higher* has argued that agribusiness has developed into an industry



through the integration of previously fragmented groups such as farmers, wholesalers, processors and retailers. Farms, IBISWorld observes, are increasingly being run as businesses rather than just being focused on production.

Data from the Australian Bureau of Statistics (Hui Wei, 2010) indicates the private return on investment in a bachelor's degree is 15.3 percent for males and 17.3 percent for females. Without being quite so precise with the estimates of returns, the OECD (2003) has shown that incomes levels increase as the education level of an individual increases. These are across the board figures and not specific to agriculture – and it is difficult to assess what these figures may be for agriculture.

However, it is likely that different sectors of agriculture may enjoy different outcomes since, for example, the Australian Farm Institute report (2010) reports some radically different education, training and skill profiles for different sectors of the industry. It is likely that there are similar variations in the returns to personal investment, and the contribution of skills and knowledge to productivity and farm output.

## **Animal welfare – the basis of effective livestock production**

Animal welfare embraces both the physical and mental well being of the animal. Efficient, sustainable and economic livestock production depends on a state of complete mental and physical health where an animal is at harmony with its environment.

Managing animals in the least disturbing manner with consideration for their normal species specific behaviour ensures optimum levels of livestock production. Undergraduate students studying Farm Business Management at Marcus Oldham College generally come from a background of involvement in the management of livestock for the production of food and fibre – as such, they have an affinity for livestock production and an understanding of the well being of the animals they manage.

This provides a platform for their understanding of the principles associated with efficient and productive animal production systems including the key principles of animal behaviour and their welfare. Students approach this subject from a basis of knowledge, understanding and practice rather than some esoteric principles.

The principles of animal welfare in our program are based around the RSPCA – 5 freedoms for animals – these include adequate provision of feed and water, ability to perform natural activities including association with other animals, freedom from pain, injury and disease, freedom from discomfort – shelter, freedom from fear and distress.

These 5 elements form the basis of sound management practices in the livestock industry and underpin the technical aspects of both intensive and extensive

livestock production which are taught in the animal production units of the course. In addition to the RSPCA guidelines students are also informed about the role of industry accepted Codes of Practice for livestock production.

Specific units of tuition include:

1. *Intensive animal production systems* – this includes feedlotting of beef and sheep , pig production and poultry production and in addition to technical issues of production and management incorporates facility design, animal welfare and industry codes of practice
2. *Agricultural Engineering* – Livestock structures and facilities – provides a focus on the design of animal handling facilities to minimise the stress on livestock during routine handling
3. *Animal production for profit* - including a topic on animal behaviour and animal welfare with emphasis on the operation of production systems based on the principle of low stress stock handling. This unit of study also includes the debate regarding the place of animal welfare and animal rights and the impact this issue may have on consumer perception of livestock production systems.

Our program aims to train managers of livestock production systems who are aware of consumer requirements for livestock products and can manage livestock production systems which are both economically viable, environmentally sustainable and meet ethical standards of animal welfare.

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