

REVIEW OF POST-SECONDARY  
AGRICULTURAL EDUCATION  
IN WESTERN AUSTRALIA

Presented to  
Hon Dr Elizabeth Constable MLA  
Minister for Education; Tourism

by  
Hon Hendy Cowan

21 April 2010

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21 April 2010

Hon Dr Elizabeth Constable MLA  
Minister for Education; Tourism

Dear Minister

I present my report of the review to address the education needs of agriculture.

Agriculture and related industries in Western Australia are entering a challenging but exciting era. With huge worldwide growth in population which will need to be fed, Western Australia's position as the nation's leading agricultural exporter presents great opportunities for the industry. At the same time, great challenges need to be faced such as changing consumer tastes, international competition, climate change, water shortages, land degradation and decreasing energy resources.

To realise our opportunities, Western Australia needs a highly skilled workforce in agriculture, and an increasing supply of graduates from higher education.

This is a time to put much greater effort into skilling our agricultural workforce, boosting the number of graduates and attracting more highly skilled people generally to the industry. This report makes a number of recommendations to those ends.

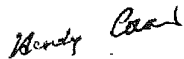
I am grateful to the many people from industry, and the education and training sectors who have sincerely presented their viewpoints on the best ways to build capacity in our agricultural industry.

I acknowledge the assistance provided to me by the Department of Education Services, especially by Mr Mike Helm, Mr Alan Marshall and Ms Meredith Wilkie. Without them, the review would not have been completed in a timely manner.

I appreciate the opportunity which you have given me to make a contribution to this critical challenge for our State.

I commend the report and its recommendations for your consideration.

Yours sincerely



Hon Hendy Cowan

## TERMS OF REFERENCE

### REVIEW OF POST-SECONDARY AGRICULTURAL EDUCATION

Recent events at Muresk Institute have drawn attention to growing concerns that the education needs of Western Australia's agriculture sector are not being adequately addressed. The industry faces unceasing challenges from rapidly changing market and cost pressures, encompassing the need to incorporate new technology and to pursue new opportunities. It is vital that the industry has access to well-trained farmers, researchers and service providers, for without them, otherwise sound policies to support agriculture are unlikely to be effective.

With these concerns in mind the Government has commissioned the Hon Hendy Cowan to prepare a report by the end of April 2010, on the following terms of reference:

1. The current and future requirements of the Agricultural sector in Western Australia for university graduates;
2. To identify areas of agricultural education that are not being fully catered for by the university sector or training sector as presently constituted;
3. To identify the future needs of universities offering agricultural education at all levels and examine the pathways between schools and further education in this area;
4. To explore the need for expansion, rationalisation or restructuring of programs and effective cooperation between the organisations involved and facilities available for agricultural education; and
5. With respect to those government assets dedicated to education at Muresk Institute, particular consideration to:
  - I. Its place in providing a tertiary agricultural program;
  - II. Options which may include combining the tertiary program with educational programs of different disciplines such as business management, natural resource management, climate change research and aviation, and;
  - III. The essential elements, market positioning and internal and external funding requirements underpinning the viability of each of the options analysed;
  - IV. Any other act which may lead to more effective use of physical assets available on the current Muresk campus and its associated property.

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## EXECUTIVE SUMMARY

The agriculture industry in Western Australia is faced by great opportunities to help to feed a fast growing world population. It is also faced by a number of economic and environmental challenges. One of the most significant challenges is the significant skills deficit in the industry, including at the university graduate level. The industry has often spoken of the need to attract more people to the industry and to increase the level of skills. Industry recognises that employment in agriculture must be made more attractive to potential employees by developing career paths and providing needed training. The advantages of working in the industry need to be promoted. This review proposes that these important issues be addressed by the establishment of a cross-sectoral Skilling Agriculture Council with Ministerial leadership.

More students, particularly from rural and regional areas, need to be encouraged to gain qualifications in agriculture. This would help to meet the targets of the Bradley review of higher education to increase the proportion of graduates in the population and to provide more opportunities for economically disadvantaged students.

During the course of this review, many comments were received from the industry about the inadequacy of Commonwealth Government financial support for regional higher education and the level of income support to students. This review proposes Commonwealth support for Muresk as a way of ameliorating past funding deficiencies for regional education in Western Australia. On income support, the Commonwealth Government has recently introduced changes in allowances for higher education students. While these do not appear to go far enough to help rural and regional students, their impact should be monitored by the Skilling Agriculture Council.

The review also considered the position of the Education Department's agricultural colleges which are popular with senior school students who lack sufficient pathways to continue to higher education in agriculture. Pathways to higher education need to be increased.

The review considered the industry discussion about the need for rationalisation of agricultural programs of the three universities in the State but was not convinced there was sufficiently strong justification to call for government action in this area.

With Curtin University proposing to leave the Muresk facility by the end of 2011, the Government needs to consider the future of Muresk. Given the unmet need to significantly

improve skill levels in agriculture, this review proposes that Muresk become a multi-use facility to develop skills in agriculture at various levels of post school education.

The review proposes that Muresk be managed by a statutory board of management

For the new entity to succeed, particularly in its start up years, financial assistance will be required for capital and recurrent funding from the State Government. The Commonwealth Government should also be approached for support, and leadership and financial support is expected from the agriculture industry.

It is also expected that the university and TAFE sectors will take the opportunity to develop joint activities with Muresk for their mutual benefit.

## RECOMMENDATIONS

### Recommendation 1 -

That a Skilling Agriculture Council be established with the aim of ensuring adequate skill development for the agriculture sector. The Council would include representatives of industry, and education and training organisations. The Ministers for Education, Training and Workforce Development, and Agriculture and Food would be ex-officio members and the Council meetings would be chaired by a Minister.

### Recommendation 2 -

That in view of the great potential for the agricultural industry in Western Australia and the need for highly developed skills to realise the opportunities for the State, the Western Australian Government support the retention of the Muresk land and buildings at Northam to provide a multi-use facility to promote skill development in the agrifood industry.

### Recommendation 3 -

Muresk be managed by a statutory board of management to realise the opportunities discussed in this chapter in ways which are sustainable and self financing.

### Recommendation 4 -

A project team be established by the Wheatbelt Development Commission to develop concrete options and a financial plan for Muresk.

Recommendation 5 -

The Western Australian Government allocate \$5 million from the Royalties for Regions program which can be drawn down as needed to fund capital works for Muresk.

Recommendation 6 -

The Western Australian Government make a one-off grant of \$5 million from the Royalties for Regions fund to a fund administered by the new board of management of Muresk to help to meet recurrent costs during the three-year start up period.

## INTRODUCTION

Excellent opportunities await the agriculture industry in Western Australia.

*2050 is the often quoted year we will reach 'peak humanity' - a world population of some 9.1 billion that will demand a 70 per cent increase of food, feed and fibre output. 2030 is now considered the deadline by when existing food production levels must increase by 50 per cent<sup>1</sup>*

As a contributor to almost 40 per cent of the nation's agricultural exports, Western Australia is in a prime position to take advantage of these opportunities.

At the same time, the agriculture and food industries also face considerable challenges. A report to the Primary Industries Ministerial Council last year stated:

*The Agricultural Industry needs to achieve massive increases in productivity, while managing the issues of climate change, land degradation, water scarcity and pest infestations. Increased productivity relies on improved skills in efficient use of land, water, fuel and other inputs. Agriculture businesses are becoming increasingly sophisticated with producers needing to have knowledge across a wide range of disciplines.<sup>2</sup>*

If the agriculture industry in Australia can overcome these challenges, it "is set to afford Australia a remarkable level of economic growth and food security in a world struggling to feed itself."<sup>3</sup>

Added to these challenges is the fact that agriculture in Australia is affected by an on-going shortage of labour and of skills. Labour supply is being adversely affected by an ageing workforce, retirements by baby boomers, seasonal nature of the lower skilled workforce and an inability to attract sufficient young people to work in the industry.<sup>4</sup>

Additional to the issue of labour shortage is the shortage of skills in the agricultural workforce. Recent reports which are referred to in this review have pointed out that technological, scientific and regulatory developments constantly require new skills. New

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<sup>1</sup> Agrifood Skills Australia, 2010 Environmental Scan of the Agrifood Industries, p v

<sup>2</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Section 3.3.6

<sup>3</sup> Agrifood Skills Australia, 2010 Environmental Scan of the Agrifood Industries, p v

<sup>4</sup> Department of Agriculture and Food, *Workforce Issues Related to Western Australian Agriculture and Food Industries: Draft Environmental Scan*, October 2009, p3



skills have been identified as including land and crop technologies to reduce greenhouse gas emissions, managing biosecurity and food safety, product and market development, leadership and management skills.

This review draws attention to significant skill shortages that were experienced in the agricultural industry and low levels of participation in education and training, including low participation in tertiary education courses in agriculture.

Addressing skills shortages is difficult because there is limited data on labour and skills needs. Better coordination across government, industry and educators would lead to greater understanding of skill and labour needs, development of appropriate training programs and reduction of duplication.

This report considers a range of factors affecting the level of skills in the agriculture industry in Western Australia, and proposes ways in which they may be addressed.

## TERM OF REFERENCE 1 – THE CURRENT AND FUTURE REQUIREMENTS OF THE AGRICULTURAL SECTOR IN WESTERN AUSTRALIA FOR UNIVERSITY GRADUATES

### Labour shortages in agriculture

The shortage of skilled labour in agriculture has been the subject of many reports.

A 2007 report of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry concluded that there are “severe skills shortages in rural industries and significant gaps in our capacity to respond to those shortages.”<sup>5</sup> In its *Labour Shortage Action Plan* in 2005, the National Farmers Federation stated that “there is a national shortage of workers to undertake agricultural employment and this shortage will constrain Australian farmers’ ability to achieve their productive potential ...”<sup>6</sup>

After consulting with a range of stakeholders in the agrifood industry across Australia, the then Department of Education, Science and Training concluded that:

*Across the country, the agrifood industry is facing a critical lack of people. Attracting and retaining workers in the agrifood industry, especially in regional areas, is a priority for the industry.*<sup>7</sup>

Many reports discuss the range of factors causing labour shortages in the agriculture and related industries. These are well represented by a Western Australian Agriculture Department industry workshop in 2005 which listed the major domestic factors as low wages, remoteness of rural living, image of the industry, lack of career paths, low investment in education and training, unstable and seasonal employment, employer resistance to change, competition for labour, lack of industry co-ordination and issues such as attracting quality staff.<sup>8</sup>

Attempts to quantify the extent of labour and skills shortages are not as frequent. The Commonwealth Government has estimated demand for agricultural labour at around 20,000 jobs per annum; Agrifood Skills Australia suggests there will be demand for 10,000 workers

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<sup>5</sup> House of Representatives Standing Committee on Agriculture, Fisheries and Forestry, *Skills: Rural Australia’s Need*, February 2007, foreword

<sup>6</sup> National Farmers Federation, *Labour Shortage Action Plan*, September 2005, introduction

<sup>7</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 6

<sup>8</sup> Department of Agriculture [Western Australia], *Skills Shortage Workshop*, October 2005

per annum for the next five years, while the National Farmers' Federation considers the latter to be an underestimate.<sup>9</sup>

Employment growth for primary industry in Western Australia is expected to improve over the next eight years with an average of 900 new jobs projected per year. The rate of growth is slightly below that for all industries.<sup>10</sup>

Generally, however, a lack of both data and centralised intelligence about labour shortages for agriculture in Western Australia is recognised by stakeholders in the industry<sup>11</sup> and that targeted data would help to develop workforce and training strategies for regions and industries.<sup>12</sup> A 2009 report to Australia's Ministers for Primary Industry stated that the limited availability of labour and skills data to agriculture has been a constraint in responding to labour and skills shortages.<sup>13</sup>

### Demand for graduates

Various indicators point to industry demand for graduates.

The 2005 Productivity Commission research paper points out that while the number of graduates in agriculture is significantly lower than for the workforce generally, in the two decades to 2004, the proportion of graduates in agriculture tripled while for the rest of the workforce it doubled.<sup>14</sup>

The Productivity Commission research paper showed that the strongest employment growth over the two decades from the mid eighties was in services to agriculture. The increased knowledge and skills required by farmers has led to this growth in demand for specialist

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<sup>9</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Section 3.2

<sup>10</sup> Department of Education and Training, *Western Australian State Training Profile 2009 – 2011*, p 152

<sup>11</sup> Department of Agriculture and Food Western Australia, *Agricultural Skills and Labour Shortage in Western Australia – Report to the Rural Business Development Corporation*, June 2007, p 7

<sup>12</sup> Department of Agriculture and Food, *Workforce Issues related to Western Australian Agriculture and Food Industries: Draft Environmental Scan*, October 2009, p 4

<sup>13</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Executive Summary

<sup>14</sup> Productivity Commission, *Trends in Australian Agriculture*, June 2005, p 106

contractors and consultants in areas such as marketing, business management and agronomy, all areas requiring tertiary training.<sup>15</sup>

### **Agriculture courses offered by the universities in Western Australia**

To assist in meeting the demand for graduates, higher education courses in agriculture are offered in three universities in Western Australia – at the University of Western Australia, Curtin University and Murdoch University. A summary of courses at the three universities is included below.

#### *Curtin University*<sup>16</sup>

Curtin University provides an Agribusiness Enabling Course, Associate Degrees in Agribusiness and in Viticulture and Oenology. It provides a Bachelor of Agribusiness degree with six areas of emphasis which include marketing, agricultural technology and viticulture; a Bachelor of Science with five emphases including food science and technology, sustainable aquaculture, and viticulture and oenology; and a Bachelor of Aquatic Science.

At postgraduate level, Curtin provides a Graduate Certificate in Oenology, a graduate diploma in agribusiness and three graduate diplomas related to the wine industry. It also offers Master of Science degrees in aspects of the aquatic industry, seven Master of Philosophy degrees covering agriculture, aquaculture, horticulture, wine production, land and water management and farm management. Curtin also provides a Doctor of Philosophy in agriculture or agribusiness.

This year Curtin has 86 undergraduate students at its Bentley campus, 110 at Northam and 46 at Margaret River, a total of 242 students. Largest undergraduate enrolments at Bentley are in coastal zone management (28), agribusiness (22) and viticulture and oenology (18).

Curtin has 79 postgraduate students in agriculture related courses. Curtin's Bentley campus has 50 postgraduate students of which 29 are enrolled for a Doctor of Philosophy. There are 11 postgraduate students at Northam of which 7 are enrolled for the Doctor of Philosophy, and 18 postgraduate students at Margaret River, 10 of whom are enrolled for the Graduate Diploma in Wine Industry.

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<sup>15</sup> Productivity Commission, *Trends in Australian Agriculture*, June 2005, p 96

<sup>16</sup> Information contained in Curtin University submission to this review

### *University of Western Australia*<sup>17</sup>

The University provides undergraduate programs in agricultural science, agricultural economics, animal science, genetics and breeding, and natural resource management. The university also offers postgraduate programs involving coursework in all of these areas plus horticulture. The university also has significant enrolments in postgraduate research programs in agriculture and related disciplines, with over 180 students studying for a PhD in agriculture, environment and natural resource management.

In addition, the University has 142 students enrolled in its undergraduate programs, 8 in postgraduate coursework, and 10 in Masters by research.

However, student numbers are comparatively low. The faculty enrolling agricultural students was ranked 9<sup>th</sup> out of 10 in student numbers in 2008.<sup>18</sup>

The University is offering courses in which agricultural studies are combined with other areas of study such as natural resource management, economics and commerce to broaden the options for agriculture students in order to attract and retain students in agriculture.

### *Murdoch University*

Murdoch offers the following Bachelor degrees in agriculture related courses – animal science, biological science, biomedical science, biotechnology, environmental management, environmental restoration, environmental science, molecular biology, veterinary science, veterinary medicine and surgery, and veterinary biology.

The University offers graduate and postgraduate programs by coursework in environmental impact assessment, environmental management, veterinary surveillance and plant biosecurity.

Postgraduate research degrees are also available at the Master and PhD levels.

### **Supply of graduates**

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<sup>17</sup> Information contained in University of Western Australia submission to this review unless otherwise indicated

<sup>18</sup> CBH Grower Advisory Council Fund, *Industry Roundtable Report: Priorities for Tertiary Education in Agriculture*, March 2009, p 8

Enrolments in agricultural courses in higher education are, however, insufficient to meet the needs of industry.

The Productivity Commission (2005) drew attention to the level of education in agriculture relative to the rest of the community. It showed that whilst there had been considerable improvement in previous decades, the proportion of people working in agriculture with a degree was around 7% whereas the community as a whole had 22% with a degree.<sup>19</sup>

A 2006 report commissioned by the Grains Research and Development Corporation found a strong decline in student interest in agricultural sciences and a diminishing number of people available for agricultural science positions with many reports of scholarships and vacant positions not being filled.<sup>20</sup> Another study for the GRDC in Western Australia in the same period found a shortage of post graduate students with adverse implications for ongoing research relevant to the grains industry.<sup>21</sup>

The 2007 House of Representatives Standing Committee pointed out that the level of university trained members of the agricultural workforce was three times lower than that of the general workforce; moreover enrolments had declined 19 per cent.<sup>22</sup>

It has been reported that there has been a 30 per cent five-year decline in tertiary agriculture enrolments to 2008<sup>23</sup> and that numbers of students graduating in agriculture from Western Australian universities are low compared with other States.<sup>24</sup>

In 2008, Jim Pratley and Les Copeland of the Australian Council of Deans of Agriculture sought to quantify unmet demand for graduates by farm dependent industries. Their estimate of demand was based on estimates of employees in relevant industries, including estimates by the Productivity Commission report of 2005. Assuming an average 20 year working life in the industries and based on the percentage of university graduates in those industries, Pratley and Copeland calculated a conservative estimate of 2,000 new graduates required annually.

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<sup>19</sup> Productivity Commission, *Trends in Australian Agriculture*, June 2005, p 106

<sup>20</sup> Grains Research and Development Corporation, *A Report on Human Resource Capacity Development for Field Crop Variety R&D*, December 2006, pp 2, 17

<sup>21</sup> Grains Research and Development Corporation, *An Audit of WA Agricultural Tertiary Training and Education Capacity with reference to the Grains Industry*, August 2006, p 14

<sup>22</sup> CBH Grower Advisory Council Fund, *Industry Roundtable Report: Priorities for Tertiary Education in Agriculture*, March 2009, p 7

<sup>23</sup> *The Australian Financial Review*, 12 April 2010, p 27

<sup>24</sup> CBH Grower Advisory Council Fund, *Industry Roundtable Report: Priorities for Tertiary Education in Agriculture*, March 2009, p 12

Graduate completions nationally in agriculture showed a steady decline. With fewer than 800 annual graduates from Australian universities, the writers estimated a minimum annual shortfall of 1,200 agricultural graduates.<sup>25</sup>

The Australian Council of Deans of Agriculture has undertaken other studies of the university-qualified manpower in agriculture and its impact on the future of the industry. Their main conclusions are that the number of agricultural graduates produced nationally falls far short of the estimated needs, possibly by as much as 6-fold; and that too few graduates are taking up the opportunity to study for a higher degree by research in order to enter a career in agricultural research. They have also pointed out that agriculture has a lower proportion of graduates working in it than is represented in the economy as a whole but where agricultural enterprises do employ graduates, they are more productive.<sup>26</sup>

A recently reported analysis conducted for the Australian Council of Deans of Agriculture showed that previous graduate shortages had been underestimated. The analysis revealed that from 2007 to 2009, there were more than 15,000 agriculture related jobs available annually of which 6,000 were in agribusiness and about 70 per cent of these vacancies would require a degree.<sup>27</sup>

Discussing this analysis in an interview on ABC radio's *Bush Telegraph* program on 14th April 2010, Professor Pratley said the agribusiness industry complained that a lot of people being employed in the industry were not trained well enough for the jobs for which they have been employed. He has stated there are currently about 10 jobs for every agronomy graduate in addition to other research and agribusiness graduates.<sup>28</sup>

Submissions from the three universities in Western Australia show a strong uptake of agriculture graduates into industry.

Consultations undertaken for this review have made it clear that there is unmet demand for graduates to work as consultants in both scientific and business areas. Organisations consulted for the review advised that more agriculture and agribusiness graduates would be employed if they were available. It was also made clear that practical experience with farm operations is a definite advantage.

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<sup>25</sup> Pratley, Jim and Copeland, Les, "Graduate Completions in Agriculture and Related Degrees from Australian Universities, 2001-2006", *Farm Policy Journal*, Vol 5 No 3, August Quarter 2008, pp 1-10.

<sup>26</sup> Capacity in agriculture – a matter of national concern

<sup>27</sup> *The Australian Financial Review*, 12 April 2010, p 27

<sup>28</sup> Gardiner report p 12

## Need for a proactive approach

It is not acceptable to take the annual graduation levels as a given. A proactive approach is needed to identify the need for graduates in the industry and to increase the output of graduates. Enrolments in higher education in agriculture should be driven by the demands of the industry rather than be supply driven.<sup>29</sup>

One difficulty of accurately estimating future supply and demand for graduates in agriculture is that they are not recruited exclusively from the pool of graduates from agriculture courses. A report by Agrimark stated that employers in the commercial sector of agriculture have reported a preference for graduates in commerce or marketing degrees in preference to agriculture graduates who have limited understanding of commercial realities, and many employers in research and development expressed a preference for graduates with specialist degrees such as biology and chemistry rather than agricultural science.<sup>30</sup>

Despite the anecdotal and limited quantitative evidence currently available, it was rightly concluded by Pratley and Hay that the job market in agriculture is nebulous and that concrete evidence on vacancies and areas of demand is needed to develop policy and promote careers in the industry.

It is recommended that a major role for the Skilling Agriculture Council proposed later in this report is to develop robust projections of future demand and supply of graduates in agriculture, as well as strategies to meet the demand.

## The Bradley Review

The 2008 Bradley review of higher education recommended that:

*the Australian Government set a national target of at least 40 per cent of 25- to 34-year-olds having attained a qualification at bachelor level or above by 2020.*<sup>31</sup>

This is a commendable goal and its implementation in rural and regional Western Australia would ensure a significant increase in university educated members of the workforce and

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<sup>29</sup> CBH Grower Advisory Council Fund, *Industry Roundtable Report: Priorities for Tertiary Education in Agriculture*, March 2009, p 20

<sup>30</sup> Agrimark Consultants, *The Private Sector and Agricultural and Related Education* [commissioned for the 1991 McColl review of Agricultural and Related Education], undated copy, p 2

<sup>31</sup> Australian Government, *Review of Australian Higher Education: Final Report*, p xviii



the community, with immense benefits for the agricultural industry, other industry sectors and the community. Achievement of this goal for rural and regional Western Australia will be an enormous challenge. Because of the benefits for agriculture, it is recommended that the proposed Skilling Agriculture Council work with other Western Australian authorities to encourage the Commonwealth Government to assist to meet the policy and financial obligations arising from this goal.

## TERM OF REFERENCE 2 – TO IDENTIFY AREAS OF AGRICULTURAL EDUCATION THAT ARE NOT BEING FULLY CATERED FOR BY THE UNIVERSITY SECTOR OR TRAINING SECTOR AS PRESENTLY CONSTITUTED

### The need for skills in agriculture

In a number of workforce reports in agriculture, the concept of skill shortages is interchanged with labour shortages. There is a difference. When a position is filled by a graduate or other employee, a labour shortage has been overcome but the recruit may have a deficiency in required skills; hence there is still a skills shortage. Applying the analogy industry wide, the Rural Industries Research and Development Corporation stated that:

*In considering skilled labour shortage in rural Australia it is probable that simply using the basic definition related to 'hard-to-fill' vacancies would result in an underestimate of skills shortages. Indeed, with many rural areas experiencing difficulties in attracting and retaining staff... it is probable that numerous employers are employing staff with lower than desirable skills.*<sup>32</sup>

A recent report by Access Economics stated that over the longer term technology will be the key growth driver for agriculture. This means that jobs will not necessarily increase but will become more highly skilled.<sup>33</sup>

Managers in the agrifood industry have expressed concern about the inadequate skills of recruits in key technical or skilled jobs, and have focussed on retaining skilled staff.<sup>34</sup>

A number of industry organisations consulted as part of this review talked about the need for graduates to be work ready which was not necessarily the case of agriculture graduates from urban universities. A Grains Research and Development Corporation report on graduate scientists noted a widespread view that universities do not provide vocational training so this must be conducted on the job.<sup>35</sup>

Driving future skill needs is the changing environment of the agrifood industry. At a broad level, the industry itself has identified as key factors changing customer tastes, the need for

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<sup>32</sup> Rural Industries Research and Development Corporation, *Australia's Rural Workforce: An analysis of labour shortages in rural Australia*, 2009, p 4

<sup>33</sup> Department of Agriculture and Food, *Workforce Issues Related to Western Australian Agriculture and Food Industries: Draft Environmental Scan*, October 2009, p 7

<sup>34</sup> Department of Agriculture and Food, *Workforce Issues related to Western Australian Agriculture and Food Industries: Draft Environmental Scan*, October 2009, p 10

<sup>35</sup> Grains Research and Development Corporation, *A Report on Human Resource Capacity Development for Field Crop Variety R&D*, December 2006, p 2

innovative products, increasing environmental awareness and increasing awareness of food safety.<sup>36</sup>

A large number of factors affect skill needs. Examples of those influences are “development of regions, worker attraction and retention, demographic change, consumer and customer service demands, competitive and productivity demands, business compliance, innovation/technological advancement and globalisation.”<sup>37</sup>

Based on feedback from the industry, a Commonwealth Government report concluded that current training models are inflexible and there is a need to fund short courses driven by industry needs<sup>38</sup> and that industry believes the current training options are “not meeting the critical long-term development needs of regional Australia.”<sup>39</sup>

In its environmental scan of stakeholders, Agrifood Australia pointed out that while the education and training institutions seek to impart qualifications, the industry talks about adding building blocks of skills to update skills of employees and to enable fast re-skilling of new workers entering agriculture from other industries.<sup>40</sup>

The industry advises that rural industries are becoming more complex and require an increasingly skilled workforce.

*In addition to traditional farming skills, workers must now have broader knowledge and higher level skills across a wide range of associated factors that impact on their direct job role. Skills in water management, information technology, natural resource management, risk management and in the use of increasingly sophisticated equipment, are all paramount to enhancing productivity and sustainability.*<sup>41</sup>

Another report listed specific skill needs for the main sectors of the agrifood industry – food processing, wine production, growing and harvesting, horticulture, meat, seafood and racing. For example growers needs’ include multi-skilled farm hands, business management, leadership skills and machine operators. The wine industry has identified key skill needs as

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<sup>36</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 33

<sup>37</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p vi

<sup>38</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 8

<sup>39</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 22

<sup>40</sup> Agrifood Skills Australia, *2009 Environmental Scan of the Agrifood Industries*, pp 3, 26

<sup>41</sup> Agrifood Skills Australia, *2009 Environmental Scan of the Agrifood Industries*, p 5

“logistics, engineering, production management, technical operations, management skills, wine operations”. The horticulture industry has listed skill needs as “base-line employability skills, technical development, strategic planning, performance management, change management and retail development.”<sup>42</sup>

Farm managers also need to upgrade their skills in business planning, financial management, marketing, negotiation skills; and familiarity with a wide range of technology, agronomy and farm techniques.<sup>43</sup> Accredited courses supported by the Commonwealth and State authorities are considered to be important to develop managers in the agrifood industry.<sup>44</sup>

### The agrifood chain

Agriculture today is involved much more with the whole agrifood chain. This has been widely recognised. For example, a 2005 Productivity Commission research paper pointed out that an increasing proportion of farm output is supplied directly under contract to processors or retailers.<sup>45</sup> The Australian Council of Deans of Education has pointed out that the agrifood chain “is more than on-farm production, and includes natural resource management and agribusiness”.<sup>46</sup>

Agrifood Skills Australia found that with increasing consumer focus on quality of the final product, primary producers will need to focus more on quality assurance, hazard analysis, quality handling and risk management.<sup>47</sup>

Education and training in agriculture needs to develop a broad range of skills to enable successful participation by farmers in various stages of the agrifood chain. This development and updating of skills can occur through upskilling modules which could be provided by a multi-use facility at Muresk. With access to an on-site farm, Muresk would also be an ideal place to conduct residential training for participants in the various stages of the agrifood chain and to facilitate greater links between those training courses.

### Need for career paths

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<sup>42</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, pp 10-12

<sup>43</sup> Agrifood Skills Australia, *2009 Environmental Scan of the Agrifood Industries*, pp 5, 7

<sup>44</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 35

<sup>45</sup> Productivity Commission, *Trends in Australian Agriculture*, June 2005, p xxviii

<sup>46</sup> Australian Council of Deans of Agriculture, *Communique*, June 3 2007

<sup>47</sup> Agrifood Skills Australia, *2009 Environmental Scan of the Agrifood Industries*, p 5

The absence of clear career paths for employees in agriculture works against attraction of employees to the industry.<sup>48 49 50</sup> Work in agriculture is often seasonal and the industry has recognised that in many workplaces, there are “lack of discernible career path, poor remuneration and a lack of emphasis on human resources skills, training opportunities and occupational health and safety obligations”; and indeed the need to provide a career structure for employees has not aroused strong interest.<sup>51</sup> A recent report to the Primary Industries Ministerial Council suggested that the agriculture industry has had little interest in education and training.<sup>52</sup>

A Western Australian industry roundtable last year identified the need to improve the human resource management skills of farmers of managers in the agriculture industries as well as attitudes to industry and lifelong learning.<sup>53</sup>

The importance of attractive careers was emphasised by Agrifood Skills Australia:

*With margins [for attracting new employees] traditionally slim in several sectors, we must ensure that our jobs are attractive in far more than monetary terms, we must skill our enterprises and managers to use good job design and work organisation as a means of becoming ‘employers of choice’. Sustainability of a skilled workforce will require an uninterrupted focus on building the capability of individual enterprises.*<sup>54</sup>

To reinforce this point, negative perceptions of career opportunities have been identified by employers and rural communities as a significant barrier to attraction and retention of labour in agriculture.<sup>55</sup>

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<sup>48</sup> Department of Agriculture and Food Western Australia, *Appendix 6: Labour and Skills Shortages in the WA Agricultural Industry*, 2007, p 61

<sup>49</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Executive Summary

<sup>50</sup> Grains Research and Development Corporation, *A Report on Human Resource Capacity Development for Field Crop Variety R&D*, December 2006, p 17

<sup>51</sup> Department of Agriculture and Food Western Australia, *Agricultural Skills and Labour Shortage in Western Australia – Report to the Rural Business Development Corporation*, June 2007, pp 21, 22

<sup>52</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Section 3.3.1

<sup>53</sup> CBH Grower Advisory Council Fund, *Industry Roundtable Report: Priorities for Tertiary Education in Agriculture*, March 2009, pp 2, 5

<sup>54</sup> Agrifood Skills Australia, 2010 Environmental Scan of the Agrifood Industries, p vi

<sup>55</sup> Rural Industries Research and Development Corporation, *Australia’s Rural Workforce: An analysis of labour shortages in rural Australia*, 2009, p xvi

The industry is increasingly talking about sharing skilled labour across industries in regional locations. This will assist in providing more secure careers.<sup>56</sup> There is a need for greater emphasis on multi-skilling and portability across the industry.<sup>57</sup> Multi-skilling is not a new concept for people in rural and regional areas who combine farm work with other jobs. However, the amount and quality of opportunities can be improved with more access to training.

Graduates in agriculture, agribusiness and similar disciplines are not subject to the same career uncertainties than less skilled employees since farm technology and the commercial operations of farms are year round activities. Graduates have greater opportunities to move to related work outside agriculture, hence reducing the risk of working in the industry.

In conclusion, the absence of career structures in agriculture is an issue which must be addressed by the industry if it wishes to attract staff and achieve a productive and sustainable workforce. This issue should be addressed by the Skilling Agriculture Council proposed below.

### **More flexible delivery**

To meet the changing skill needs of the agricultural industry in the future, education and training systems need to be responsive and fit for purpose. Completion of a qualification will not mean that the graduate is adequately prepared for a long term career in the industry.

The industry needs to have a focus on continual skilling of its workforce. This will include short skills development courses, on-site training, and on-line delivery. Those with technical skills might wish to upgrade their skills by enrolling in tertiary level courses, including through non traditional pathways. Those with tertiary qualifications may wish to improve their technical and practical skills through vocational education and training programs.

There also needs to be recognition of informal training and learning of skills on the job to contribute towards accreditation.<sup>58</sup>

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<sup>56</sup> Agrifood Skills Australia, *2009 Environmental Scan of the Agrifood Industries*, p 7

<sup>57</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 27

<sup>58</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Section 3.3.4

A report to Agrifood Skills Australia found that research organisations do not see education and training playing an important role in knowledge adoption.<sup>59</sup> There needs to be a strong link between research and development organisations and education and training systems and to ensure that the latter are delivering the most up to date skill development.<sup>60</sup>

### The image of agriculture

The Rural Industries Research and Development Corporation recently identified barriers to attraction and retention as the major factors responsible for labour shortages. Its report identified these barriers as negative perceptions of rural employment and lifestyle, limited health and education provision, inadequate housing supply and quality, low wages and high costs.<sup>61</sup>

Numerous reports have referred to the poor image of agriculture as a career as a factor deterring students from enrolling in tertiary level courses in agriculture. Reports have also identified the positive aspects of rural life which need to be promoted to counter this negative image.

The submission to this review by Curtin University illustrated the attractiveness of modern agriculture:

*The image of the single male farmer in a harvester spending long hours driving around in circles at the mercy of the weather, pests and other vagaries of...nature remains dominant in the urban cultural landscape of today's youth. Agricultural education needs to be recast in terms of food security, water security, environmental management, sophisticated small business management aligned with business schools, carbon economy and fibre production.*<sup>62</sup>

A number of programs have been developed by the universities, the Department of Agriculture and Food and educational bodies to publicise the value of agriculture and to encourage interest in agricultural studies.<sup>63 64</sup> An example is funding by the University of Western Australia of the Primary Industry Centre for Science Education, a nationwide

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<sup>59</sup> Department of Agriculture and Food, *Workforce Issues related to Western Australian Agriculture and Food Industries: Draft Environmental Scan*, October 2009, p 8

<sup>60</sup> Agrifood Skills Australia, 2009 Environmental Scan of the Agrifood Industries, p 11

<sup>61</sup> Rural Industries Research and Development Corporation, *Australia's Rural Workforce: An analysis of labour shortages in rural Australia*, 2009, p xiv

<sup>62</sup> Curtin University submission to this review, p 12

<sup>63</sup> Department of Agriculture and Food [WA], *Project Brief: Education Initiative*, March 2010

<sup>64</sup> CBH Grower Advisory Council Fund, Background Paper: Tertiary Education in Agriculture, December 2008, pp 16-18

initiative supported by the Commonwealth Government and primary industries. The project includes residential camps, industry experience placements and scholarships.<sup>65</sup>

The Primary Industries Education Foundation is a collaborative exercise of the Commonwealth Government, primary industry organisations and the education sector formed to provide information relating to agriculture, fisheries and forestry for Australia's teachers, students and the community.<sup>66</sup>

Greater effort needs to be put into marketing agriculture as a career in Western Australia. Members of Generation Y need to be significantly targeted. Information needs to meet the requirements of young people today.<sup>67</sup> A comment at a Western Australian industry workshop on skills shortages reflected a view which has been echoed in a number of discussions and other reports about engaging with Generation Y:

*Has anyone actually asked them how we do this [attract labour to agriculture]? What do they think of our industry? We need to ask them at the right stage...We need to understand their thinking to encourage industry renewal.*<sup>68</sup>

### **The need for coordination**

Attempts to improve the supply of skilled labour to agriculture are hampered by the lack of a coordinated approach. This is not uncommon in Australia as noted in the 2007 House of Representatives Standing Committee report:

*A more coherent approach needs to be taken to the provision of rural skills training and education. The committee recommends the development of a national strategy on rural skills training, encompassing the school, vocational education and training, and higher education sectors.*<sup>69</sup>

The same sentiments were expressed by the National Farmers Federation in its 2005 report on the national scene:

*We seek the ownership of industry with the assistance of governments to focus on implementing the solutions [to the labour shortage problem] in a coordinated fashion to obliterate the silo effect and the duplication of resources to combat labour shortages in the agriculture industry.*<sup>70</sup>

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<sup>65</sup> University of Western Australia submission to this review

<sup>66</sup> <http://primaryindustrieseducation.com.au/>

<sup>67</sup> Department of Education, Science and Training, *Industry Skills Report: Agri-Food Industries*, June 2006, p 32

<sup>68</sup> Department of Agriculture and Food Western Australia, *Appendix 6: Labour and Skills Shortages in the WA Agricultural Industry*, 2007, p 56

<sup>69</sup> House of Representatives Standing Committee on Agriculture, Fisheries and Forestry, *Skills: Rural Australia's Need*, February 2007, foreword



A report to the Ministers for Primary Industry in 2009 stated that while there is a clear commitment by industry and government to addressing skills and training issues , “the work is fragmented and disjointed and involves multiple stakeholders, strategies and advisory groups without any obvious coordination between them.”<sup>71</sup>

In Western Australia an extensive consultation with stakeholders revealed that lack of leadership and communication within the industry has prevented the industry from strategically addressing skills and labour shortages.<sup>72</sup> It is also hampered by a lack of centralised data about the extent of skills and labour shortages.

Western Australian organisations involved in the analysis, development or delivery of education and training to the agrifood sector include:

- farming and other private businesses
- organisations representing the industry
- the Department of Agriculture and Food
- the Department of Education
- the Department of Education Services
- the Department of Training and Workforce Development
- the Primary Industries Training Council
- the State Training Board
- Curtin and Murdoch Universities and the University of Western Australia
- the proposed Muresk multi-use facility, and
- individual TAFE colleges.

It is important that the work of all these bodies is coordinated to ensure the best education and training opportunities are available for students to meet the demands of the agricultural industry.

It is therefore recommended:

**Recommendation 1 -**

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<sup>70</sup> National Farmers Federation, *Labour Shortage Action Plan*, September 2005, introduction

<sup>71</sup> Industries Development Committee Workforce, Training and Skills Working Group, *Workforce, Training and Skills Issues in Agriculture: Final report to the Primary Industries Ministerial Council*, August 2009, Conclusion

<sup>72</sup> Department of Agriculture and Food Western Australia, *Agricultural Skills and Labour Shortage in Western Australia – Report to the Rural Business Development Corporation*, June 2007, pp 6, 17

That a Skilling Agriculture Council be established with the aim of ensuring adequate skill development for the agriculture sector. The Council would include representatives of industry, and education and training organisations. The Ministers for Education, Training and Workforce Development, and Agriculture and Food would be ex-officio members and the Council meetings would be chaired by a Minister.

The recommended tasks for this Council include:

- developing and regularly updating an analysis of labour and skill requirements at all levels for the agricultural sector
- advising education and training providers, government and private, of the emerging needs of industry for long and short courses in agriculture
- advising on the need for collaboration between education and training providers
- supporting the development by industry of career structures in agriculture which will encourage people to enter the industry
- encouraging education providers to develop clear and accessible education and training pathways for students in agriculture
- promoting the benefits of a career in agriculture, and
- ensuring adequate skills to maintain a high level of agricultural research.

TERM OF REFERENCE 3 – TO IDENTIFY THE FUTURE NEEDS OF UNIVERSITIES OFFERING AGRICULTURAL EDUCATION AT ALL LEVELS AND EXAMINE THE PATHWAYS BETWEEN SCHOOLS AND FURTHER EDUCATION IN THIS AREA

**What do the universities identify as their needs?**

As part of the review, the three universities providing agricultural education were asked what were their needs with respect to the provision of agricultural education.

In attempting to provide the highest quality education for a practical discipline like agriculture, Curtin University identified infrastructure needs as a significant part of the teaching input. These included “having access to a diverse range of practical examples, access to modern laboratory facilities [such as chemistry laboratories] ... and access to modern business techniques such as Trading Floors and Futures markets simulations.” Curtin also expects of all students an awareness of Australia’s immediate region, which is assisted by the number of international students at Curtin. The University is also concerned that education experiences at regional campuses are at least equivalent to those of students at Curtin’s other campuses.

Curtin is also concerned about the low and declining demand for agriculture courses, the need for sustainability of student enrolments and the cost of duplication of campus facilities at Northam. The University also wishes to develop a significant research reputation in agriculture, aligned to State and national priorities. The University’s decision to relocate agriculture teaching and research to the Bentley campus was cited as fulfilling the University’s aims to remove duplication, ensure adequate student demand and improve the quality of student learning,<sup>73</sup>

The University of Western Australia identified its needs in agricultural education as diversifying its student base by attracting city students into agricultural sciences, attracting some of the very best science students, overcoming negative perceptions of agriculture, attracting the best staff at a time when PhD graduates in agriculture are declining worldwide, and ensuring an environment which encourages research in agriculture.

The University believes that its work with schools demonstrates to school students that agriculture is an exciting field of study. It also believes that its new course structure to be

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<sup>73</sup> Curtin University submission to this review, pp 6-7

introduced in 2012 will address the needs of a modern agricultural industry by maintaining an applied focus and opportunities for students to gain field experience.<sup>74</sup>

Murdoch University believes that to achieve the State's potential to capitalise on its agricultural strengths, there is a need to overcome the fragmentation of resources and expertise in the State. Murdoch sees the need for the Department of Agriculture and Food (DAFWA) and the leading agricultural research institutions to increase their collaboration and expand research capabilities.

Murdoch believes that the co-location of DAFWA's research capabilities at Murdoch will lead to the creation of new businesses in agriculture, attract people to careers in agriculture and provide increasing education and training opportunities for the agricultural workforce.<sup>75</sup>

In summary, the main needs seen by the universities are to promote agriculture as a career, provide the highest quality education, provide a variety of opportunities for practical experience, and develop a high level research capability. Apart from the efforts of the individual universities, these objectives should be pursued collaboratively with education and training organisations by the Skilling Agriculture Council proposed by this review.

### **Major influences on tertiary agricultural education**

During the course of this inquiry, two major issues were brought to the attention of the review which have a significant impact on the participation in tertiary education of young people from regional and remote areas of the State. These are the attempt by the Commonwealth Government to provide financial assistance for the provision of tertiary education in regional areas by the regional loading, and Commonwealth student allowances which provide income support for students in tertiary education.

### **The Commonwealth Government's regional loading funding scheme<sup>76</sup>**

A regional loading is distributed to regional higher education campuses throughout Australia to compensate for some of the additional costs of providing tertiary education in regional areas. In 2009, there was a pool of \$31 million available nationally to fund the loading.

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<sup>74</sup> University of Western Australia submission to this review

<sup>75</sup> Murdoch University submission to this review

<sup>76</sup> This section was compiled with information from the Department of Education Services

Under the scheme, universities have received a loading based on the number of students attending campuses in regional areas. This has favoured the eastern States where there are universities headquartered in regional areas and because some universities were designated as regional.

Western Australia has a geographic population profile which is distinct from that of other States. It has a lower proportion of its total population in regional areas and, of that regional population, a significantly higher proportion live in remote areas. Thus, the State lacks the critical mass of people to support a regionally based university. The current loading criteria also do not take into account that the population in regional areas is often subject to social and economic disadvantage.

In 2006, although Western Australia had 9.3 per cent of the national population living in regional or remote areas, Western Australia received \$738,086 or 2.4 per cent of the total funding. Even if Western Australia received regional loading funds commensurate with its population share, the level of funding would still be inadequate and it would not provide the State's universities with the incentives to deliver the level of higher education required in regional and remote parts of the State, nor to meet the legitimate education needs of regional communities.

The rate of participation in higher education is significantly lower in regional Western Australia in comparison with that of the Perth metropolitan area. Despite the comparative success in terms of year 12 completions in regional and remote areas, there are issues affecting young people in these areas who are making the transition to higher education. In 2009, 1,536 year 12s from regional areas were offered a higher education place, but only 558 accepted (36%). In contrast, 7,610 metropolitan students were offered a place and 5,953 accepted (78%).

The 2008 Bradley report on higher education in Australia also noted that its greatest concern with the regional loading funding scheme is that it provides no clear incentive to any institution or provider to set up new programs in areas of need nor to work collaboratively with others to address the real problems of provision in localities where there are not enough people to support a viable campus.<sup>77</sup>

The proposal in this report for a multi-use education facility at Muresk to provide for the education and training needs at all levels in the agriculture, agribusiness and agrifood

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<sup>77</sup> Australian Government, *Review of Australian Higher Education: Final Report*, p 110

industries, creates an excellent opportunity for the Commonwealth Government to ameliorate the shortcomings raised in the Bradley report (see previous paragraph). It is recommended under Term of Reference 5 that the project team established to develop a detailed plan for the proposed multi-use facility at Muresk approach the Commonwealth government for an appropriate level of financial assistance.

### **Income support<sup>78</sup>**

The financial costs of studying at university, particularly accommodation and living costs, are a major influence on student participation in higher education.<sup>79</sup> The provision of income support by the Commonwealth Government plays a key role in enabling students to participate in higher education. Historically, between 40 and 50 per cent of the student population has relied upon some level of income support to enable them to participate in higher education.<sup>80</sup> The Senate Inquiry on *Rural and Regional Access to Secondary and Tertiary Education Opportunities* reported evidence “that the cost of students living away from home for study is so expensive, that many rural and regional students are unable to afford to relocate without some form of financial assistance, usually the Independent Youth Allowance”.<sup>81</sup>

There are several forms of income support available to students; in particular, the Youth Allowance which assists young people aged 16 to 24 years who are studying full time in undergraduate and some postgraduate courses in higher education, Abstudy for indigenous students and Austudy for full-time students 25 and older.

In 2009, the Commonwealth Government announced changes to the Youth Allowance, prompted in part by the recommendations of the Bradley Review, which asserted that the current student financing system is poorly targeted to assist students in genuine need and that the financial status of Australian higher education students had declined between 2000 and 2006.<sup>82</sup> The reforms, announced in the 2009/10 Commonwealth Budget, included progressively lowering the age of independence from 25 years to 22 years by 2012, relaxing the parental income test and introducing a modest scholarship program and relocation allowance.

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<sup>78</sup> This section was compiled with information from the Department of Education Services

<sup>79</sup> Access Economics, *Future demand for higher education*, November 2008, p 35

<sup>80</sup> Australian Government, *Review of Australian Higher Education: Final Report*, p 47

<sup>81</sup> Rural and Regional Access to Secondary and Tertiary Education Opportunities, December 2009, paragraph 3.60

<sup>82</sup> Australian Government, *Review of Australian Higher Education: Final Report*, p 49

However, it was also announced that an important criterion would be tightened so that students under the age of independence must work for a minimum of 30 hours per week for at least 18 months over a two-year period in order to establish their independence. This was to replace the previous options in which students simply needed to earn approximately \$20,000 in a gap year before starting university or could establish independence by working part-time for two years after leaving school.

In regional and remote areas, many students finance their university studies by taking a gap year and qualifying for the Youth Allowance at the independent rate.

Overwhelming feedback from a diverse range of stakeholders indicates that the greatest barrier to regional and remote students pursuing higher education is the financial cost if the student is required to move away from home to study. Estimates of this cost range from \$15,000 to \$25,000. Students in the metropolitan areas who can continue to live at home while studying do not face this cost.

There is substantial evidence that the Independent Youth Allowance is extremely important to regional and remote students as a means of accessing higher education. However, the limited availability of unskilled work in rural and regional areas to meet the requirement of 30 hours work per week for 18 months means that this is not a viable option for many rural and regional students.

Further, an estimated 30 per cent of students who formally defer a university offer to take a gap year never return to study. There is concern about the impact of a two year deferral on a student's likelihood of commencing tertiary study.

The tightening of eligibility criteria for Youth Allowance and Abstudy due to commence in July 2010 was criticised for disadvantaging rural and remote students<sup>83</sup> with the result that the Commonwealth Government has relented and exempted many such students (outer regional and remote students who must relocate to study and whose parents earn less than \$150,000 per annum) from the new rules for establishing independence and leaving the previous rules in place. This concession is welcomed. Yet inequities remain, particularly in

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<sup>83</sup> Professor Margaret Alston, Monash University, quoted by Andrew Trounson, 'Rural students hit by youth allowance crackdown', 14 May 2009 *The Australian*.

the distinction between inner and outer regional areas, which might be described as arbitrary.

### *Scholarships*

Under the new arrangements, two scholarships are available to provide assistance with relocation for study (Relocation Scholarship) and with buying books and other study equipment (Student Start-Up Scholarship). These replace the defunct Commonwealth Accommodation Scholarship.

The Relocation Scholarship provides \$4,000 for the first year of study and \$1,000 for subsequent years. The Student Start-Up Scholarship is valued at \$1,300 in 2010 and \$2,128 in 2011.<sup>84</sup>

The Relocation Scholarship is intended primarily for regional and remote students on the dependent rate of Youth Allowance who choose to move away from home to study. Those on the Independent Youth Allowance will only be eligible if they are “disadvantaged by personal circumstances”. It is unclear at this stage what this will mean in practice.

Concern has been expressed about the replacement of the Commonwealth Accommodation Scholarships with new scholarships which are worth much less. Based on 2008 figures, over a four year degree this could mean a reduction from \$17,296 to \$7,000.

### **Conclusions on income support**

The income support arrangements described above need to be further liberalised to provide more support for regional and rural students. However, the new arrangements which are now in place resulted from lengthy negotiations between stakeholders over a long period of time and it would be fruitless for this review to propose further changes at this stage. It is recommended that in the future the proposed Skilling Agriculture Council review the participation rates of rural and regional students in higher education agriculture courses to monitor the impact of the new arrangements.

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84 Department of Education, Employment and Workplace Relations website, accessed 16 April 2010:  
[www.deewr.gov.au/HigherEducation/Programs/YouthAllowance/Pages/default.aspx](http://www.deewr.gov.au/HigherEducation/Programs/YouthAllowance/Pages/default.aspx)



The review was told by principals of agricultural colleges that the criteria for the Commonwealth Government's Assistance for Isolated Children's Allowance (almost \$7,000 per annum) for secondary students disadvantages some students who do not satisfy the current geographical isolation requirement. Students who live within 56 kilometres of any senior high school are not eligible for the Assistance for Isolated Children's Allowance. This does not acknowledge the specialist program offered at the agricultural colleges and also means that any student from the metropolitan area or a large country town is not eligible. This anomaly requires further attention.

### **Pathways between schools and further education in agriculture**

An essential precondition to upgrade the skills of the agriculture industry is to enable pathways for students who have achieved a level of competence to progress seamlessly to higher levels of learning. Skill development is hampered when barriers exist between institutions.

A significant example of the need to develop pathways to higher learning in agriculture is the case of Department of Education agricultural colleges.

There are five residential agricultural colleges at Cunderdin, Denmark, Harvey, Morawa and Narrogin with a total enrolment of 513 students in Years 10, 11 and 12. The colleges provide a mixture of agriculture and relevant trade studies and each is located on a commercial sized farm. The colleges have proven very popular with students and the combined enrolments of the five colleges have risen from 402 in 2002 to 513 this year. The colleges are full to capacity and have waiting lists indicating the interest in the agricultural studies programs offered by the colleges.

About 20 per cent of students are from urban areas with an interest in agriculture. The remainder are from country towns (approximately 40 per cent) and from family farms (approximately 40 per cent).

Senior Department of Education officials advised the review that Western Australia's agricultural colleges are the most successful in Australia. That success is attributed to four major factors. Firstly, the agricultural colleges are included in the State's school education system, secondly the colleges have adapted their courses to meet the needs of industry, thirdly the colleges are strongly marketed; and fourthly the Department recognises that

services to regional areas are relatively more costly but is prepared to provide sufficient funds to maintain quality agricultural education services for regional Western Australia.

Ironically, the demand for places in the agricultural colleges contrasts with the declining demand for agricultural education at the tertiary level. In particular, only a small minority of agricultural college graduates opt to go on to university. Most will enter apprenticeships, traineeships and TAFE, return to the family farm or gain employment in agriculture related businesses. Employment in the mining industry has also been popular in recent years.

In the past graduates enrolled at Muresk via an alternative matriculation agreement without the need for a Tertiary Entrance Score. Recently, with the changes to senior schooling in Western Australia, students at the agricultural colleges can now achieve a Tertiary Entrance Score and the alternative matriculation arrangement has lapsed.

In terms of other tertiary institutions, entrance is difficult because it requires a scaled mark of at least 50 in an English subject, either stage 2 or 3. The agricultural colleges offer stage 2 English in Year 12, which may be scaled down by as much as 30 marks.

The universities have limited entrance arrangements specifically for school leavers from regional areas. Year 12 students from agricultural colleges can enter Muresk Institute courses by graduating and obtaining 50% or more in an English subject, the latter being difficult for reasons given above. Curtin also offers an agribusiness enabling course as an alternative pathway to Institute courses. This comprises twelve weeks of study at Northam campus and six months' full time work experience in an agribusiness organisation.

Under the University of Western Australia's Country Way program, students from rural high schools with a tertiary entrance score of 75 or above can enter the University's agricultural programs. This is a daunting requirement given the course structure at agricultural colleges.

It is essential that alternative avenues be made available for graduates of agricultural colleges to continue agriculture studies at a tertiary institution. It is recommended that this issue be raised with the universities at the proposed Skilling Agriculture Council.

TERM OF REFERENCE 4 – TO EXPLORE THE NEED FOR EXPANSION,  
RATIONALISATION OR RESTRUCTURING OF PROGRAMS AND EFFECTIVE  
COOPERATION BETWEEN THE ORGANISATIONS INVOLVED AND FACILITIES  
AVAILABLE FOR AGRICULTURAL EDUCATION

**Rationalisation of courses**

The case for expansion of agricultural education programs in higher education was made under Term of Reference 1.

The issue of rationalisation of tertiary agricultural education programs, the focus of this term of reference, has long been discussed.

The national McColl report in 1991 drew attention to excessive fragmentation of agriculture courses and concluded that "many faculties are below what might be regarded as their minimum size for providing effective education."<sup>85</sup> . It is interesting to note that since the time of the McColl report the size of agriculture faculties has declined further.

The McColl report proposed that agricultural education be restructured to achieve a limited number of large faculties.<sup>86</sup> Also, Recommendation 5.6 proposed that:

*Institutions should have more regard to whether intended new courses overlap or duplicate existing offerings by other institutions, and seek to minimise such duplication.*<sup>87</sup>

With respect to Western Australia, Recommendation 10.5 of the McColl report proposed that the governments of New South Wales, Victoria and Western Australia urgently establish a task force to address the issue of a single provider in their regions.<sup>88</sup> As a consequence, some rationalisation of course provision occurred with horticulture being transferred to the University of Western Australia, having been a joint program of Murdoch University and the University of Western Australia.

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<sup>85</sup> Department of Employment, Education and Training and Department of Primary Industries and Energy, *Report of the Review of Agricultural and Related Education*, February 1991, p xix

<sup>86</sup> Department of Employment, Education and Training and Department of Primary Industries and Energy, *Report of the Review of Agricultural and Related Education*, February 1991, p xix

<sup>87</sup> Department of Employment, Education and Training and Department of Primary Industries and Energy, *Report of the Review of Agricultural and Related Education*, February 1991, p xxii

<sup>88</sup> Department of Employment, Education and Training and Department of Primary Industries and Energy, *Report of the Review of Agricultural and Related Education*, February 1991, p xxvi

Agricultural education is currently provided by three universities in Western Australia – at the University of Western Australia, Curtin University and Murdoch University. However, the three universities provide undergraduate courses and research programs with a separate focus, as recently summarised in a paper by the Department of Agriculture and Food:

*The University of Western Australia offers a broad agricultural science degree with courses with an opportunity to specialise in a range of areas (Agricultural Science, Agricultural Economics, Animal Science, Genetics and breeding and Natural Resource Management) across the schools of Agricultural and Resource Economics, Animal Biology, Earth and Environment, and Plant Biology, within the Faculty of Natural and Agricultural Sciences; Curtin University offers agribusiness, applied agricultural science, viticulture and oenology, equine studies and environmental studies; and Murdoch University offers courses relevant to agriculture in the schools of Animal Science, Plant Biology and Biotechnology, and Environmental Science.<sup>89</sup>*

In summary, Curtin specialises in agribusiness, the University of Western Australia in agricultural science and Murdoch in animal and plant sciences.

Is rationalisation of agriculture courses in Western Australian universities needed?

A 2006 audit of agricultural tertiary training conducted for the Grains Research Development Corporation concluded that “there are not significant duplications across the universities at the undergraduate level both in the degree programs on offer and in the supply of new graduates in areas relevant to the grains industry. In WA it is evident that there are 3 institutions producing different graduates to meet different industry needs.”<sup>90</sup>

The 2008 CBH commissioned report concluded there was little overlap in the courses taught at the three universities. Individual academics in agricultural studies, however, were quoted in the report as saying that the small numbers of agriculture students at the three universities led to high overheads and pressure on all courses; and that rationalisation of staff and facilities made sense but it would be difficult because there are issues related to course equivalency and student and staff movement between campuses.<sup>91</sup>

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<sup>89</sup> Department of Agriculture and Food [WA], *Project Brief: Education Initiative*, March 2010, pp 13-14

<sup>90</sup> Grains Research and Development Corporation, *An Audit of WA Agricultural Tertiary Training and Education Capacity With Reference to the Grains Industry* (conducted by Rural Research), August 2006. p 8 CBH Grower Advisory Council Fund, *Background Paper: Tertiary Education in Agriculture, December 2008*, pp 16-18

<sup>91</sup> CBH Grower Advisory Council Fund, *Background Paper: Tertiary Education in Agriculture, December 2008*, p 13

The 2008 Muresk review found strong support for rationalisation but the concern was with the fragmentation of agricultural research.<sup>92</sup>

### Views of the universities

The University of Western Australia reported to this review that it collaborates and cooperates with other universities. The new course structure to be introduced in 2012 includes a second cycle during which students specialise in a particular field of study. The second cycle offers the opportunity for co-delivery of Masters programs with other local providers.<sup>93</sup>

Curtin University also reported a high level of cooperation between the local universities in agricultural education. However it could see opportunities for further cooperation through the reduction of duplication and focusing on the strengths of each institution. Internally, Curtin embarked on a program of rationalisation and restructuring of its agricultural education programs several years ago, reducing the number of courses to a lower number of high quality core offerings to better reflect the needs of industry and students. Curtin expressed the view that a similar focusing by the other universities may lead to a reduction in duplication.<sup>94</sup>

Murdoch University considers it vital that the Department of Agriculture and Food and leading agricultural research institutions increase their levels of collaboration to maintain and expand research capabilities. Murdoch and the Western Australian Government are planning to construct an agricultural research precinct on its South Street campus, which currently houses the State Agricultural Biotechnology Centre.<sup>95</sup>

It is encouraging that while specific opportunities for rationalisation have not been identified, the three universities have expressed a commitment to cooperation.

### Review comments

The inquiries conducted by this review have not established a case for rationalisation which is sufficiently strong to call for government action. However, changes in courses, enrolments, staff and facilities occur regularly and there is a need to keep the issue of rationalisation and

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<sup>92</sup> Curtin University, *External Review of Muresk Institute*, October 2008, p 7

<sup>93</sup> University of Western Australia submission to this review

<sup>94</sup> Curtin University submission to this review, p 12

<sup>95</sup> Murdoch University submission to this review, p 3

collaboration under consideration. The proposed Skilling Agriculture Council will provide a forum to encourage collaboration and avoid duplication in the provision of tertiary agriculture courses.

One issue which did come to the attention of the review was the current and future need of universities for field trials. An opportunity exists for the universities to use the farm at Muresk and avoid separate land acquisitions.

### **Internal restructuring of university programs**

In its submission to the review, Curtin University advised that it had conducted a comprehensive review of its agricultural courses in 2008 and 2009 with changes introduced in 2010 to reflect industry needs, enhance the quality of the curriculum, and to attract future students.<sup>96</sup>

The University of Western Australia has decided to introduce a new course structure for the whole University from 2012, a two-tiered structure similar to that of leading universities around the world.

Undergraduate degrees in Arts, Commerce, Design, Science and Philosophy will include breadth and depth, allowing students to study in a range of areas keeping their options open for future study and work. This will be followed by a second cycle postgraduate degree after completion of the bachelor's degree.<sup>97</sup> The second cycle will give students an opportunity to specialise in agriculture and related disciplines.<sup>98</sup>

A recent report suggested that similar changes at Melbourne University have had a negative impact on the agriculture faculty; but it has been claimed that the new structure at the University of Western Australia will allow marketing of agricultural studies within a broad degree, expose general undergraduates to agricultural studies and encourage agriculture students to complete a Master's degree.<sup>99</sup>

It will be some time before the outcomes of the new and proposed course changes will be able to be assessed, so findings on the changes will not be made by this review.

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<sup>96</sup> Curtin University submission to this review, p 12

<sup>97</sup> <http://www.newcourses2012.uwa.edu.au/courses>

<sup>98</sup> University of Western Australia submission to this review

<sup>99</sup> CBH Grower Advisory Council Fund, *Background Paper: Tertiary Education in Agriculture*, December 2008, p 8

## TERM OF REFERENCE 5 – CONSIDERATION OF GOVERNMENT ASSETS DEDICATED TO EDUCATION AT MURESK INSTITUTE

### **Muresk’s place in providing a tertiary agricultural program**

The Muresk Agricultural College was established by the Government of Western Australia in 1926. For decades its main focus was animal husbandry. In the 1960s, Muresk moved towards taking in students qualified for tertiary entry. In 1969, Muresk was the first agricultural college in Australia to become part of a tertiary institution, the then Western Australian Institute of Technology (WAIT) and placed a strong emphasis on farm management training, conducting a number of extension courses for industry. In 1977, Muresk introduced the first undergraduate agribusiness course in Australia, and soon after introduced courses in horse management and rural journalism.

In 1985, Muresk became an autonomous Muresk Institute of Agriculture within WAIT with an emphasis on farm management and applied research; and providing short courses for rural industries. WAIT became the Curtin University of Technology in 1986. In 1994, four-year degrees were instituted for agriculture. The move of some programs to the University’s main campus at Bentley began in 1999 and agribusiness has been increasingly provided at Bentley. In 2003, the Muresk Institute became part of the Division of Resources and Environment. It now constitutes the School of Agriculture and Environment.

Muresk has produced outstanding graduates who have filled important positions in business, government, education and the community. Its graduates are well regarded and popular with industry because they have special skills in agribusiness and are work ready. It would be difficult to fill the gap if Muresk closes its doors.

### *Land and buildings*

The Muresk Institute buildings are located on Lot 301 comprising of 828.5 hectares and subject to a management order with the primary interest holder being Curtin University of Technology. The land is reserved for the purpose of “Agricultural College Muresk” and the management order contains conditions to be observed. The southern boundary is the Avon River. A smaller piece of land south of the river, Lot 300 (70.1 hectares), is subject to the same ownership and conditions. Both parcels of land remain under the control of

the State. There is adjoining land to the west which Curtin University holds in fee simple under a multi-lot title described as lots 28377 and 28582. Its total area is approximately 900 hectares and is generally referred to as “The Muresk Farm”.

#### *Declining fortunes of Muresk*

From around 2004 there has been a decline in demand for courses provided by the Muresk Institute, accompanied by a decline in finances. An external review of Muresk Institute was conducted in 2008. Whilst noting the high esteem with which Muresk and its graduates were held, the review identified a fundamental problem of decline in demand for its courses, which is an Australia-wide phenomenon. The review pointed out that if the decline continued, Curtin may have no option but to close the School of Agriculture and Environment. The review supported Curtin’s continuing presence at Northam, specialising on the Bachelor of Agribusiness, and use of the land for collaborative research projects. The reviewers provided a confidential business case and implementation strategy to increase enrolments and restore the School to financial health.<sup>100</sup>

After considering the recommendations of the review, Curtin concluded that the serious decline in enrolments was unlikely to be reversed.

While about 50 new students commenced at Northam at the beginning of 2010, indications are that the students will be transferred to the Bentley campus by 2012.

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<sup>100</sup> Curtin University, *External Review of Muresk Institute*, October 2008



The decision with respect to the Muresk campus is one for Curtin University to make based on its business planning. The purpose of this review is not to analyse Curtin's decision but to develop options for the future of Muresk.

### Options for Muresk

With the withdrawal of Curtin University from Muresk from the end of 2011, the only options available to the Western Australian Government are to sell the land and buildings or to find an on-going use for them.

### The case for retaining Muresk

The strong conclusion arising from this review is that Muresk should remain as a higher education and training precinct in agriculture and in allied regional industries and professions.

At a time when the world's demand for food is due to expand strongly, when significant challenges face the future of agriculture and there is widespread concern about unmet demand for skilled managers, graduates and other employees in agriculture, it would be a backward step to close a facility with the potential to develop skills in agriculture at all levels.

Muresk has always offered a practical component for its courses in agriculture and agribusiness, and Muresk graduates are highly regarded by employers as "work ready". The facility should continue to provide this practical component to urban universities as courses in agriculture will in future will be provided significantly in the Perth metropolitan area.

The Muresk farm also provides opportunities for agricultural field-based research in the future for both government and educational institutions. The proximity of Muresk to the Avon and contributory rivers offers excellent opportunities for research and training in water management, and in particular salinity.

The 2008 Bradley report on Australia's universities paid considerable attention to the availability of higher education in regional Australia. It would be premature to close a facility which has the potential to extend quality education and training to Western Australia's regional population.

Muresk is part of the cultural heritage of regional Western Australia and loss of this cultural icon through a premature sale could never be put right.

Every opportunity should be considered to continue to use Muresk for high quality skill development for the agriculture industry.

### **Proposals by the universities**

As part of this review, education and training institutions with potential interest in the facilities at Muresk were canvassed for their views on the potential future of the Muresk land and facilities.

The three universities were asked for their views and in particular whether they may use the facilities at Muresk for a short term practical component of courses in agriculture and other occupations relevant to regional areas.

While Curtin University does not see the provision of entire higher education courses as viable at Muresk, Curtin sees potential for Muresk facilities to be used for short term live-in programs as part of a multi-purpose educational facility used by the secondary and TAFE sectors as well as the tertiary sector.

Murdoch University supports the continuation of Muresk as an agricultural training facility. While this may not be a facility for university level training, Murdoch regards it as well positioned to provide a range of agricultural vocational programs which can result in qualifications and also articulate into university programs.

The University of Western Australia would use Muresk to offer short course components if such course components were cost effective and could not be done better on its city campus. However, the University pointed out that it currently conducts workshops and short courses for international students and researchers and that a value of these courses is exposure to a research intensive environment and the Perth city experience.

In summary, to attract university students and other university clients, the programs offered at Muresk would need to be of a very high standard and complement rather than compete with existing university programs. There is a place for Muresk as a well resourced multi-level centre committed to excellence in education and training in agriculture, and supported by government and industry.

Assistance should be sought from key private sector supporters and national research organisations such as the Grains Research Development Corporation to invite highly competent national and international educators in agriculture to conduct short programs at Muresk on cutting edge issues in agriculture and agribusiness .

### **Options presented by TAFE institutions**

The Managing Directors of Polytechnic West and CY O'Connor College were interviewed as part of this review.

Polytechnic West advised that most of its training takes place at workplaces and there is not currently a strong need for the facilities at Muresk. Large plant students could usefully undertake an intensive short course at Muresk (and use its residential facilities) if Muresk had the most up-to-date farm machinery. Residential block releases for apprentices are also a possibility. There may be other opportunities in the future if Polytechnic West introduces courses such as water management.

CY O'Connor College is contemplating the establishment of a Centre for Agribusiness and Farm Technology. Two streams of particular relevance to Muresk are the farm technology stream and the higher education stream. Muresk would be well suited for the former because it has the space for machine testing. This could be facilitated by establishing an independent testing facility for farm machinery.

The higher education stream would commence with a one-year diploma leading to a two-year associate degree in agribusiness, and a third year provided by a university partner to gain a full degree.

CY O'Connor proposes to attract 100 students in the first intake with the majority of these students attending Muresk. The advantages of the Muresk campus to CY O'Connor College are access to paddocks and crops for assessment purposes, monitoring of livestock, operation of farm machinery, access to the river frontage for natural resource management activities, and the opportunity to live on campus.

### **Other proposals for the future use of Muresk**

Since the intention of Curtin University has become known, a number of organisations have given serious consideration to the programs which could be offered at Muresk.

The review is indebted to the committee headed by Hon Philip Gardiner MLC for its thoughtful and comprehensive report, published in February this year, on a range of relevant issues and specific proposals for the future of Muresk.

The Gardiner report proposed five education and training streams for Muresk in the future. These are:

- a high level short program addressing major issues affecting agriculture led by internationally recognised lecturers and appealing to university researchers and executives from corporations and governments
- continuation of an agribusiness diploma and degree program conducted at Muresk campus by selected tertiary institutions
- technical courses complementary to agricultural business delivered by CY O'Connor College
- location of a private aviation instruction school at Muresk, and
- relevant short courses by Muresk or corporate organisations.

In support of the first proposal above, a 2006 audit of Western Australian tertiary training for the grains industry suggested that gaps in knowledge of both graduates and post-graduates could be addressed by master classes with the support of Grains Research Development Corporation.<sup>101</sup>

Other options discussed during the course of this review include:

- providing a practical on-farm component for city based courses in agriculture
- regional provision of appropriate tertiary level courses on contract from universities as is occurring in other regional centres such as Geraldton
- attracting overseas students to courses with the benefit of campus accommodation
- continuation of Curtin University's equine studies at Muresk
- a short term regional experience for students in tertiary courses other than agriculture who are likely to gain employment in regional areas

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<sup>101</sup> Grains Research and Development Corporation, *An Audit of WA Agricultural Tertiary Training and Education Capacity with reference to the Grains Industry*, August 2006, p 23

- opportunities for short term residential training to provide a practical background for staff at various stages of the agricultural production chain such as transport, handling, storage and processing
- short residential visits by school students to promote interest in agriculture
- continuation and expansion of the use of the Muresk farm for research in agriculture and agribusiness by universities and government organisations.

In common with other State Governments, the Western Australian Department of Agriculture and Food has closed its rural extension services and private companies have moved in to fill the void.

The House of Representatives 2007 report expressed a concern that the transition of extension services from governments to private operators has created gaps in services. These services are considered by the report to be essential to the progress of rural and regional Australia.<sup>102</sup>

Muresk could provide extension programs to make up for current gaps in services.

### Proposals by this review

It would be difficult to sustain a single course institution at Muresk. This review supports the restructuring of Muresk as a multi-use facility to promote skill development in the agriculture, agribusiness and agrifood industries.

Given that there were 47 new enrolments for Muresk at Northam this year at a time when uncertainty surrounds the future of the facility, it is reasonable to assume that an ongoing annual intake of at least 50 students per year for an agribusiness qualification is possible. Currently a number of young Western Australians each year enrol in agribusiness courses in other States. If Muresk can establish a national reputation of excellence in agribusiness training, students previously enrolling in interstate institutions would have an option closer to home.

An agribusiness program at Muresk may lead to an associate degree with arrangements negotiated with universities to provide the opportunity for graduates of the associate degree

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<sup>102</sup> House of Representatives Standing Committee on Agriculture, Fisheries and Forestry, *Skills: Rural Australia's Need*, February 2007, foreword

to be admitted to studies to complete a full degree. CY O'Connor TAFE has expressed an interest in providing an associate degree course. It is recommended that an associate degree program be developed in partnership with a university which, because it is self accrediting, has the power to create an associate degree without the time consuming processes required of a TAFE institution.

An associate degree part hosted by a university with a likely substantial intake of students from lower socio-economic areas would assist a university to meet its quota of low SES enrolments proposed by the Bradley Review. To select a university and/or TAFE institution to be involved in this program, the proposed board of management of Muresk would seek expressions of interest for the purpose of recruiting providers which would ensure a high quality program and be committed to the sustainable future of the program, and be enthusiastic supporters and marketers of such a program at Muresk.

The review has also been convinced that there would be demand for a Year 13 course for graduates of the State's five government agricultural colleges who wish to continue with their studies in agriculture but may lack university entrance requirements. The Year 13 could be offered at certificate levels 3 and 4 and/or diploma level which are levels not widely provided at present in agricultural studies. A one-year course could lead to the award of a certificate or diploma which could be a pathway to employment or to year 2 of a Muresk associate degree in agribusiness.

Also strongly recommended are a master class program, short term training programs supported by employers across the agrifood chain, and use of Muresk facilities for research by the universities and other agricultural research bodies. The campus would be meeting place of agricultural students and researchers as well as industry practitioners at all levels. This would be of enormous benefit to students in the certificate/diploma and associate degree streams.

The establishment of a multi-use facility at Muresk is compatible with the views of the Bradley report on regional higher education:

*Australia needs a sustainable system of higher education provision in regional and remote areas. Provision needs to be flexible and innovative. It must anticipate and respond rapidly to local needs. Providers in regional and remote areas need to be encouraged and supported to build upon partnerships with local communities, providers in other sectors of education, business and industry.*

*Such arrangements will involve institutional cross-collaboration and partnerships, including sharing the use of facilities and resources.*<sup>103</sup>

These are all exciting proposals for the future use of the Muresk buildings and farm. However, the feasibility of these options cannot be adequately assessed in the time given for this review. It is recommended that a dedicated project team be established to develop concrete options and a financial plan for Muresk, aiming to commence operations by 2012. The project team should be led by the Wheatbelt Development Commission.

The review also recommends that a statutory board of management be established with responsibility for the development and management of Muresk. The objectives of the board would be to develop and manage education and training programs which are sustainable and self financing. The board would be headed by a high profile proactive leader from the agricultural sector and supported by an outstanding chief executive officer and a board of management representing industry and agricultural education and training.

This review recommends:

**Recommendation 2 -**

That in view of the great potential for the agricultural industry in Western Australia and the need for highly developed skills to realise the opportunities for the State, the Western Australian Government support the retention of the Muresk land and buildings at Northam to provide a multi-use facility to promote skill development in the agrifood industry.

**Recommendation 3 -**

Muresk be managed by a statutory board of management to realise the opportunities discussed in this chapter in ways which are sustainable and self financing.

**Recommendation 4 -**

A project team be established by the Wheatbelt Development Commission to develop concrete options and a financial plan for Muresk.

**Financial support**

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<sup>103</sup> Australian Government, *Review of Australian Higher Education: Final Report*, p 111

An injection of finance will be needed to establish Muresk as a modern functional multi-use facility. This will require capital funds to undertake necessary maintenance work as well as to upgrade the buildings. The project team to establish the new facility will need to conduct a detailed needs analysis and costing of the capital works required.

To ensure that needed capital funds will be provided, it is recommended that:

**Recommendation 5 -**

**The Western Australian Government allocate \$5 million from the Royalties for Regions program which can be drawn down as needed to fund capital works for Muresk.**

The new Muresk institution will also require start up funds to help to meet recurrent costs. This would be a short term measure as Muresk should aim to be self funding after three years.

Curtin University has estimated that \$2 million will be required per annum for ten years to maintain an agribusiness education program at Muresk. However this review does not recommend a long term subsidy by the State Government.

It is recommended that:

**Recommendation 6 -**

**The Western Australian Government make a one-off grant of \$5 million from the Royalties for Regions fund to a fund administered by the new board of management of Muresk to help to meet recurrent costs during the three-year start up period.**

The Commonwealth Government's Bradley report recommended increased participation in higher education by economically disadvantaged students and those living in regional areas. It is important that the Commonwealth Government demonstrate its commitment to these goals by making capital and recurrent funding available to ensure the success of this unique regional multi-use facility dedicated to capacity building for the agriculture industry. The Muresk project team should work with the State Government to pursue Commonwealth support.

Representatives of the agribusiness industry presented their strong views to the review in support of Muresk. It is expected that the industry will make a strong commitment to achieve that objective. The survival of Muresk will depend in part on the preparedness of industry to get behind it with leadership and financial support.



Already one agribusiness company has discussed a financial contribution to the proposed Muresk programs, for purposes such as scholarships or establishing a professorial chair. It is expected that when the new board of management approaches industry for support, strong support will be forthcoming.

National bodies which are funded by industry levies to support agriculture should also fund this proposal for Muresk. As part of this review, discussions were held with officials of the Grains Research Development Corporation which is committed to increasing capacity in the industry and has expressed interest in supporting suitable proposals, such as scholarships, at Muresk.

### **Support from the education and training sectors**

The success of Muresk as a multi-use education and training facility will depend on how the existing education and training bodies work with the new institution. During the review, it was proposed to the universities that practical aspects of their agriculture courses could be satisfied by including short term residential experiences at Muresk. The Muresk farm should also be used for some of the universities' agricultural research activities.

The review believes that programs at Muresk will benefit from retaining the current farm. It is expected that there will be a sympathetic response from Curtin University to a proposal to continue to include the land currently owned by Curtin in the Muresk farm. The review also expects fruitful discussions with Curtin to continue to locate Curtin's equine studies in the new multi-use facility.

Discussions have been held so far with two TAFE colleges - Polytechnic West and CY O'Connor College - to locate suitable training programs at Muresk. Based on these discussions it is expected that good working relationships will develop between Muresk and the TAFE colleges.

It is also expected that the Department of Education's agricultural colleges will form a strong working relationship with Muresk to develop, and actively market to agricultural college graduates, a one year accredited program in agricultural studies (Year 13) at Muresk as a pathway to further studies.

## ACKNOWLEDGEMENTS

The following organisations were consulted as part of this review and their constructive contributions were greatly appreciated:

Australian Association of Agricultural Consultants

CY O'Connor College of TAFE

Department of Agriculture and Food

Department of Education

Friends of Muresk

Curtin University of Technology

Murdoch University

Pastoralists and Graziers Association

Polytechnic West

Rabobank

University of Western Australia

Western Australian Farmers Federation

Wheatbelt Development Commission

Discussions were also held with the Hon Dr Elizabeth Constable, Minister for Education; Tourism and Hon Terry Redman, Minister for Agriculture and Food; Forestry; Minister Assisting the Minister for Education.

Written submissions were received from:

Australian Association of Agricultural Consultants

Friends of Muresk

Curtin University of Technology

Murdoch University

University of Western Australia.