



12 June 2008

Ms Fran Freeman
Head of Secretariat
Quarantine & Biosecurity Review
GPO Box 858
Canberra ACT 2601

Dear Fran

During the meeting with the panel last Friday we briefly touched upon the skills shortage in agricultural science and related disciplines. AIAST is pleased to submit some trend information regarding university enrolment levels in agriculture. Both DEEWR and Universities Australia have released data on student demand at universities for 2008.

Key findings are:

Unmet Demand

- Unmet demand is at lowest level since the current time series began in 2001.
- Unmet demand estimated at 5.8% equating to 12,600 eligible applications (not all applicants are deemed eligible because, for instance, of very low TER scores) - considerably lower than the peak estimate of 15.8% in 2005.
- Unmet demand variable across states ranging from 3.6% in NSW/ACT; WA (4.1%); SA/NT (4.4%); QLD (6.8%); VIC (8.6%) and TAS (9.2%).

Fields of Education

- The highest number of first preferences is society, culture and creative arts with 25.4% (54,945). Natural and physical sciences had 13,795 (6.4%), engineering 14,085, IT 4,978 **Agriculture 4,750** and medical studies 10,274
- Offer rates were Natural and physical sciences 109.4% (highest), **Agriculture 105.1%**, engineering 92.2%; IT (98.9%); Medical studies (27.5%) (lowest); society/culture/creative 89.8% and national average 84.7%. NB: rates of over 100% are because offers are also made on 2nd or lower preferences
- Acceptances were Natural and physical sciences 67.8%, **Agriculture 74.8%**, engineering 71.5%; IT 75.5%; Medical studies 57.3%; society/culture/creative 71.5% and national average 72.4%

- However there are wide variances in acceptance rates between states. In Natural and physical sciences acceptance rates were: NSW/ACT 52%; VIC 82.5%; QLD 84.4%; SA/NT 68.9%; WA 68.6% and TAS 56.0%

(NB: data reported at highest level so cannot unpack disciplines like mathematics, psychology or physics).

Trends in Fields of Education

- **Agriculture** – a strong increase in demand in first preferences (up 28.1% on 2007). 2008 was the first time in this period that acceptance rates have been higher than the national average and show an increase of 34% on 2007
- **Education** – Education is the third biggest FOE for applicants but eligible applicants, offers and acceptances all declined since the peak in 2005 although all higher than 2001. Nevertheless has 2nd highest acceptance rate
- **Engineering** – between 2001 – 2008 eligible applicants has grown from 12056 to 14085. Applications and offers increased in 2008 but acceptances dropped 10% to 71.5% which is still higher than 2006 acceptances
- **IT** – IT remains the FOE declining the most rapidly but rate of decline is slowing – 12056 in 2001 to 6810 in 2005 to 4978 in 2008. Offer rate was high and acceptances (75.5%) are above the national average
- **Natural and Physical sciences** – overall decline of 3.1% of eligible applicants over past 8 years. There was a slight increase in 2008 over 2007 (1.3%) but lower than peak of 15,665 in 2004. Offer rate has exceeded number of applicants with science as first preference every year but lower than last year's peak of 117.9%. The number of offers made this year was the lowest since 2001. Acceptance rates were below the national average at 67.8%. As a share of total eligible applicants, science has dropped from about 6.8% 2001 – 2005 to 6.2 and 6.4% in past 2 years. This equates to about 1000 eligible applicants.

Trends in students with TES >90

- There were 25,293 applicants with a TER over 90. The most popular preferences were society/culture/creative 5293, management/commerce 3678; law 3399; engineering 2805; health (other) 2657 and natural and physical sciences 2386 (9.4%)
- The acceptance rate for high TES were **agriculture 89.7%**; engineering 77.3% health (medical) 75.6%; IT 54.2%; Natural and physical sciences 75.9%; society/culture/creative 75.5% and national total 75.4%
- There were gender differences – female applicants are now over 59%. For students TER over 90 there is the same offer rate 99.6%, females had slightly higher acceptance rate 75.7% to 74.9% but different FOE. Top 3 for males was engineering (21.1%); management/commerce (17.2%) and society/culture/creative (12.6%). Females were Society/culture/creative 27%; law 14.2% and health (other) 13.1%.

The DEEWR report (the source of the above) is available at:

http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/Undergraduate_App_Offers_Acceptances_2008.htm

The Universities Australia report is available at

<http://www.universitiesaustralia.edu.au/2008places>

Also enclosed are two media releases from the Australian Council of Deans of Agriculture relating to the same subject. According to a study by the Council, there is a yearly gap of about 1,200 graduates, between demand and supply!

Kind regards



Claude Gauchat
National President, AIAST

Australian Council of Deans of Agriculture

Communiqué

Thursday, 3 April 2008

Australian Agriculture at risk from shortage of Uni graduates

Agriculture in Australia and around the world is experiencing a boom in demand, with food prices increasing due to growing world population, more demand for animal protein in diets, and the use of agricultural crops for biofuels.

Agriculture also faces great challenges due climate change and increasing costs of energy, crying out for more high tech solutions.

However, a recent study by the Australian Council of Deans of Agriculture (ACDA) has shown that the supply of agriculture graduates to meet these opportunities and challenges is falling way behind the demand for such graduates.

The study has shown that there is a market for about 2000 graduates within Australia, but the 12 universities teaching agriculture are only providing about 800 graduates between them per year.

ACDA President Roger Leigh notes that "The predictions are for substantial growth in the job market but the number of students choosing an agricultural degree continues to decline and so the situation is set to become worse.

"Further, training in agriculture is so comprehensive and integrative it enables graduates to gain jobs outside agriculture. This leakage also adds to the problem" Professor Leigh continued.

One of the problems facing the industry is the often seen negative image portrayed in the media.

"We don't have enough students enrolling in our programs.

"This is unfortunate because agriculture is an exciting and challenging career involving a high degree of technology. There are endless opportunities for agricultural graduates", Leigh added.

Based on feedback received by Deans, these results will come as little surprise to recruiters in consulting and supply companies in agriculture and forestry, who are often forced to employ underqualified candidates or leave positions unfilled.

The ACDA has called for all sectors of the industry to promote careers in agriculture as it is in everyone's interest to ensure there are enough highly qualified professionals for the challenges ahead.

The Australian Council of Deans of Agriculture represents all 12 Universities across Australia that offer significant training in agriculture.

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Australian Council of Deans of Agriculture

Media Release

Monday 5 May, 2008

Research students need better pay

The Australian Council of Deans of Agriculture (ACDA) today called on government and research funding agencies to provide research students with remuneration that is comparable with workforce salaries, and places a proper value on their skills and contribution.

The Deans emphasise that Australian agriculture is amongst the world's leaders and it has gained and maintained that position through the adoption of research findings often generated by postgraduate scholars.

President of ACDA, Professor Roger Leigh, said that the system of funding for these scholars pre-dates the substantial changes that have taken place in the Australian economy.

"In the last 10-15 years, there have been radical changes in superannuation, taxation thresholds and salary levels. The increase in HECS for undergraduate students is also having an effect in respect of accumulating debt," Professor Leigh said.

An evaluation of the level of remuneration undertaken by the ACDA showed that Australian average weekly earnings since 1994 have increased by over 100% compared to only 37% for stipends in Australian postgraduate awards. These stipends are unattractive as they are less than half the starting salary for new graduates.

"We need to recognise," said Professor Leigh, "that the economy is in full employment and there are many exciting prospects in the agricultural labour market. We need to ensure that we attract the best of the best into the innovation option by making the monetary rewards at least competitive in the market place. The salary levels and conditions need to be brought into the 21st Century".

The Deans have noted that some funding agencies and cooperative research centres provide scholarships around \$25000 to \$28000, but that is still only around the minimum wage and uncompetitive with the salary market place.

"If we really value innovation in this country we should provide proper support and incentives for those who will be the innovators of tomorrow. In agriculture we need to encourage such people so that we can meet the exciting challenges that lie before us," Professor Leigh said.

The ACDA have also highlighted that the level of research funds provided to these scholars has also not kept pace with research costs. The full cost of research needs to be recognised by funding bodies.

Contact persons for the Australasian Council of Deans of Agriculture:

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