

Graduate Destinations in Agriculture

Jim Pratley^{1,2} and Nigel Crawley³

¹School of Agricultural and Wine Sciences, Charles Sturt University, Wagga Wagga, NSW 2678

²Australian Council of Deans of Agriculture

³Rimfire Resources Pty Ltd, PO Box 50, South Melbourne, Vic 3205

Abstract

Destinations of agriculture graduates from Australian universities and Marcus Oldham College were considered using the database of the GradLink program operated by Rimfire Resources for the period 2004-2014. This accounted for around 1000 graduates or one in six graduates for the period and comprised a gender balance similar to that of enrolled students during the period of study. The employment market was buoyant for the period. Around half the graduates were employed in the country and one third in the cities. Institutions with rural campuses had much higher proportions remain in rural employment. Rural finance and sales were the most common employment categories. Around 10% went back to farm production and 9% left the sector. Both genders were employed in all sectors and no gender bias was identified. Proportions of graduate employment categories varied according to institution although there was reasonable consistency in employment spread.

Introduction

Over the past decade much has been written about the decline in the availability of agricultural graduates in Australia (e.g. Pratley, 2008; Pratley and Copeland 2008; Pratley 2012)) and elsewhere, due in part to the perceptions that career paths were not attractive and that there were limited employment opportunities. This perception was challenged by the presentation of job advertisement data (Pratley and Hay, 2010) indicating that there were at least 6 jobs for every graduate and that the shortfall in the availability was a threat to the sustainability of agricultural and horticultural industries in Australia. Over that period, employers were seeking graduates and there was a significant shift in workplace attractiveness, including salaries, in order to encourage potential employees into the sector.

However, although there may be a relative abundance of opportunities, the linkage between potential employer and potential employee is often not readily made – the employer needs to find the right person and the graduate needs to be mentored to gain the appropriate job. In agriculture this can be facilitated by an employment company with the expertise and networks. Thus the employer engages the company to seek out suitable candidates and graduates seek advice as to how employer contacts can be made that suit them. One of the major graduate employment companies in Australia is Rimfire Resources Pty Ltd. As part of its operation, Rimfire established a program in 2004 called GradLink. The data collected from the GradLink program provide the basis for the study reported here.

What is GradLink?

The GradLink program was launched to meet demand from agribusiness organisations seeking to evaluate candidates beyond the traditional curriculum vitae. The GradLink website provides a virtual

meeting place for graduates to interact with key organisations regardless of distance (see Attachment 1). The purpose of the GradLink program therefore has been:

- to identify and present to Agribusiness organisations, graduating students with the key traits, personal characteristics and skills and experiences that they seek for their business; and
- to provide specialised training seminars and direct access to agribusiness professionals in order to develop in graduating students interested in a career in agribusiness the presentation skills, career pathways understanding and industry networking experience needed for them to secure a position in the agribusiness sector.

The data

Graduates or final year students were interviewed individually by telephone or email and their responses documented. Thirteen institutions, twelve universities and Marcus Oldham College, were represented and all records were included in the Australian analysis. However, for individual institution evaluations, only those institutions with more than 60 records were analysed so as to avoid privacy concerns and misleading outcomes.

Eight institutions had sufficient records – the University of Queensland, the University of New England, Charles Sturt University, the University of Sydney, the University of Melbourne, La Trobe University, Marcus Oldham College and the University of Adelaide. Numbers for University of Western Australia, Curtin University, Muresk Agricultural College, University of Tasmania and Western Sydney University were insufficient to warrant individual evaluation. There was a total of 1317 entries of which only 957 were fully complete. The breakdown of records by institution is shown in Figure 1.

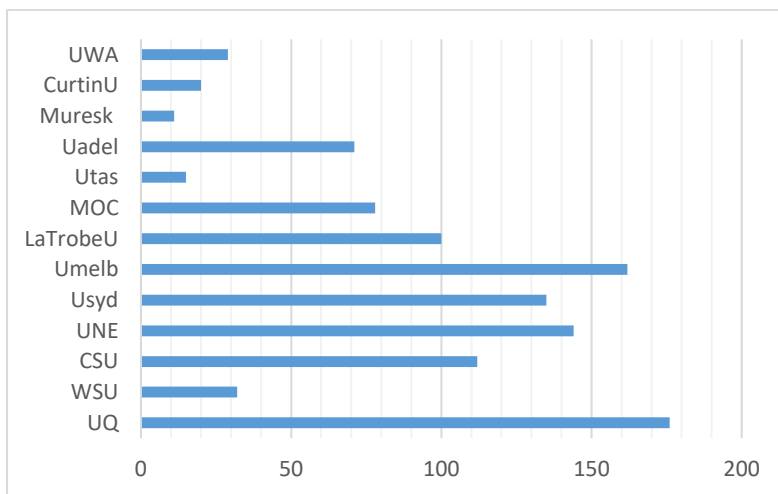


Figure 1. Records of graduates interviewed by institution.

Data were collected over the period 2004 to 2014 and while they were a small proportion of the total graduate cohorts in the early years they were a significant proportion up to 25% of the annual cohort in the latter period (Figure 2). Overall the study cohort represented over 14% of graduates from agriculture and related courses for the period. While the cohorts are not random samples due to their involvement with the GradLink program, their proportion is sizeable enough to be indicative of outcomes more generally. Figure 3 indicates that the gender makeup of the cohorts overall and of the main individual institutions was balanced with males being at least 0.43 of institutional totals and 0.46 overall for the study data for the period of study. The proportion of males for all graduates in agriculture and related courses for the period was 0.45 and is itemised annually in Figure 4.

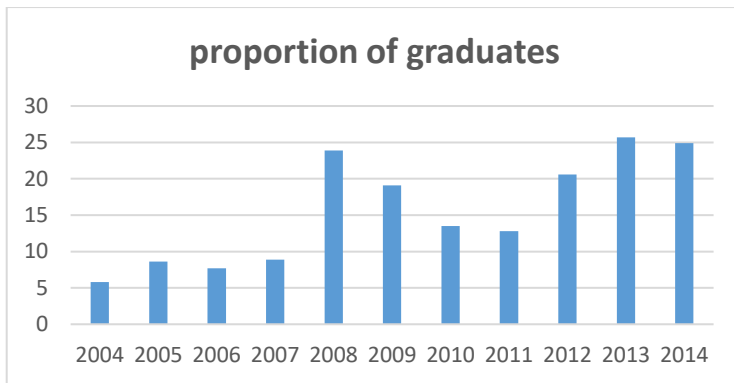


Figure 2. Sample proportions of the total graduate populations in agriculture and related programs over the years of coverage

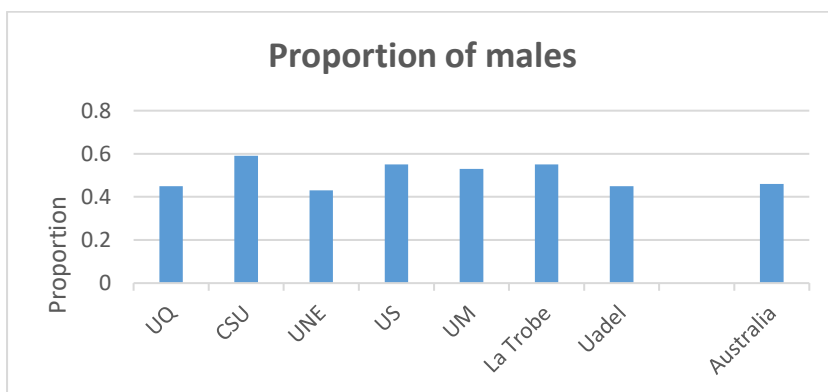


Figure 3. The proportion of males in the study for the main institutions and in total

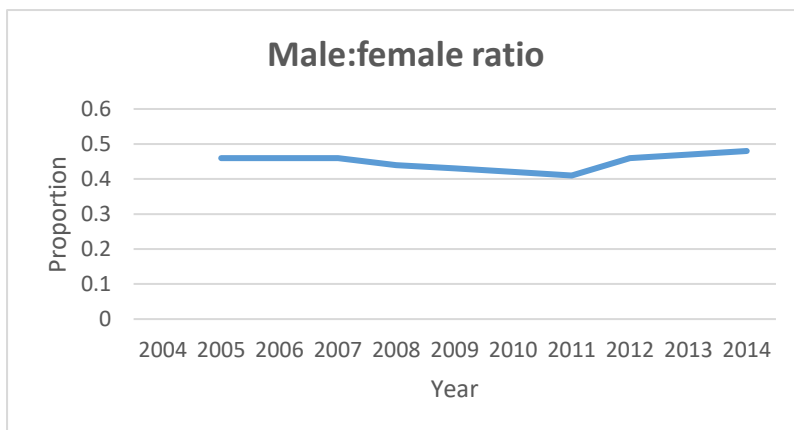


Figure 4. The male:female ratio for enrolments in agriculture and related courses, 2004-2014

The participants were asked for:

- gender;
- the institution at which they studied;
- the industry they had entered;
- the type of job being undertaken; and
- the location of their employment.

During the period of study there was a surfeit of jobs available based on the number of advertisements in papers and on the internet. Figure 5 shows at least 4000 advertisements in agriculture in each year from 2009 to 2014. Thus there were potentially 5 jobs per graduate although it is recognised that some would be filled by non-graduates. Figure 6 shows the range of jobs available over the same period with opportunities spread across the range. With the exception of education, and in finance in 2014 (140), there were at least 200 advertisements per year in each category so there was ample choice.

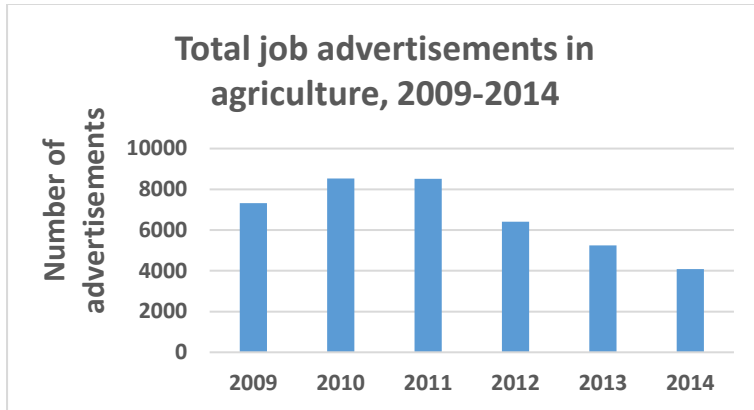


Figure 5. Number of job advertisements in agriculture for the period 2009-2014

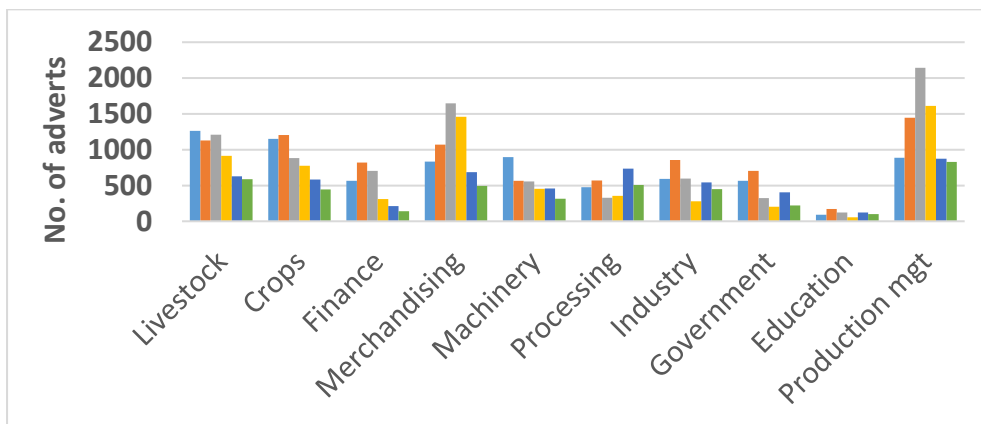


Figure 6. Number of advertisements by job category in agriculture for the period 2009-2014

1. Location

In most cases the participants responded to location by indicating the town or city where they were employed. For the purposes of this study those responses have been described initially as metropolitan or rural and then further refined as interstate, overseas or local or non-local relative to their institution of study,. The most useful analysis was the initial simple category. For Australia, Figure 7 shows that about half the participants were employed in rural locations, and 37% in metropolitan locations. A small fraction (2%) had gone overseas and around 9% had left the agricultural sector for their jobs.

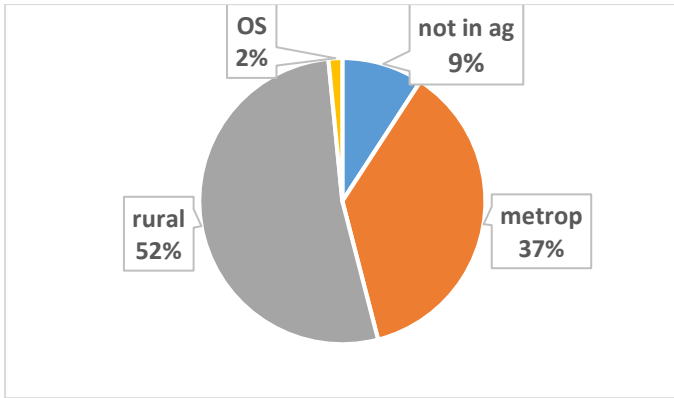


Figure 7. Location of first employment for agriculture graduates in the GradLink program, 2004-2014

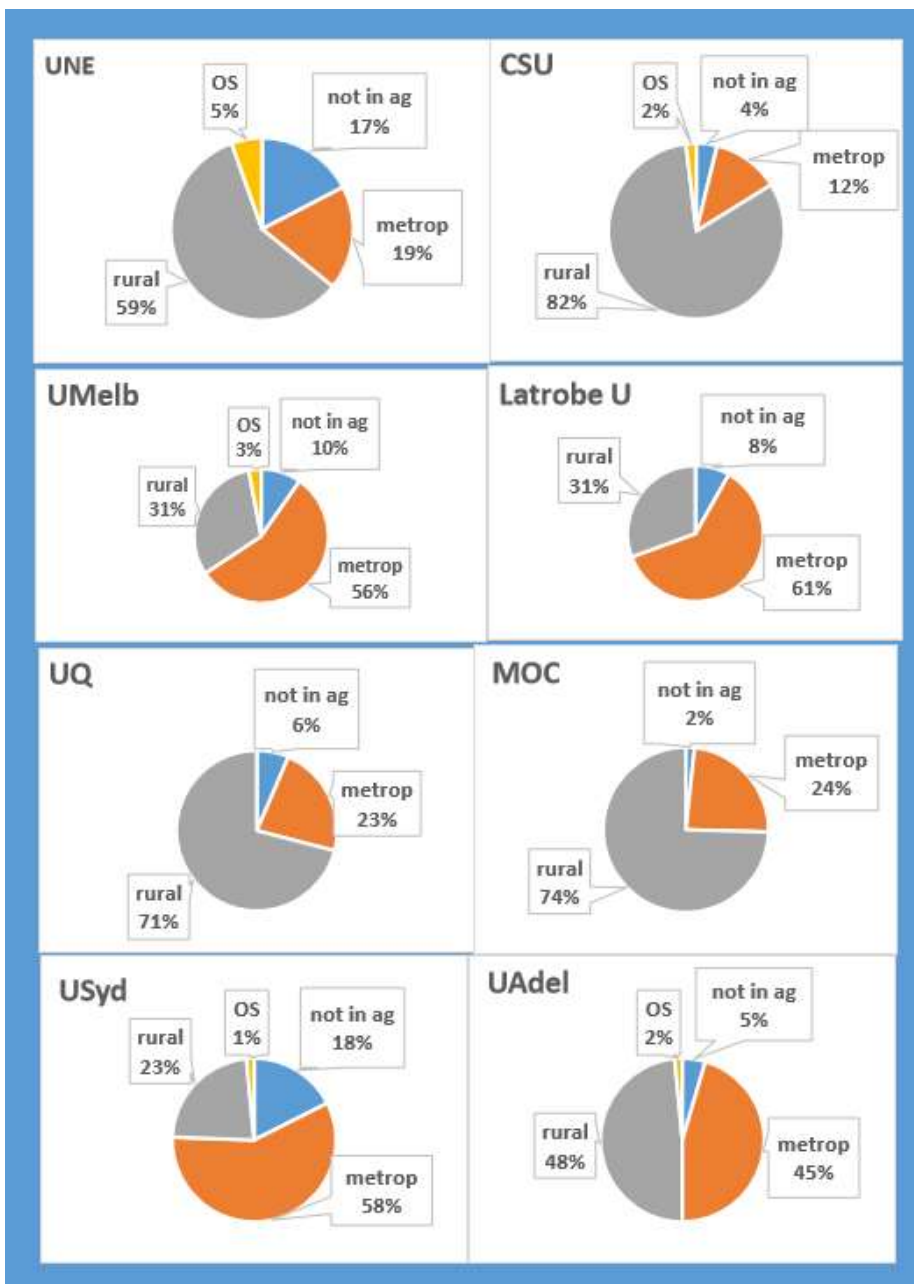


Figure 8. Employment location of graduates of agriculture programs by institution

More interesting perhaps are locations of graduates from the individual institutions (Figure 8). Charles Sturt University (82% rural) provided the greatest proportion of graduates to rural area followed by Marcus Oldham College (74%), the University of Queensland (71%) and the University of New England (59%). The Adelaide University had roughly even proportions in the rural and metropolitan regions while La Trobe University (31% rural), the University of Melbourne (31%) and the University of Sydney (23%) supplied a minority of their graduates to rural areas. The common factor is institution location with Charles Sturt University, Marcus Oldham College and the University of Queensland through its Gatton Campus delivering the programs in a rural setting. The remainder are based in metropolitan areas.

There is also variation in the proportion of graduates that had left the agriculture sector for employment. While overall the proportion was 9%, most institutions were lower or equal in proportion with the University of Sydney (18% not in agriculture) and the University of New England (17% not in agriculture) the outliers in this respect.

Comparison of location by gender (Figure 9) did not show any major differences. There were around 500 of each in the data used and so the outcomes are not affected by the size of respective cohorts. Females were more likely to be in regional areas and less likely in metropolitan areas than males. No difference was observed in respect of proportion leaving the agriculture sector.

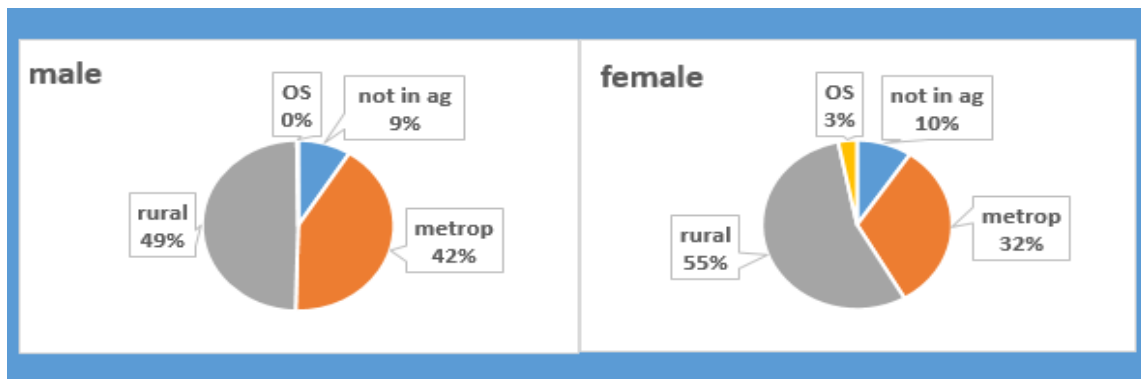


Figure 9. Employment location of graduates of agriculture programs by gender

2. Industry of employment

Participants were asked to nominate the industry they had entered for employment. The range comprised not-in-agriculture, university (e.g. further study), government, commodity trading, rural finance, agricultural consulting, food processing, livestock(including feedlots), stockfeed/animal nutrition, animal health, retail and merchandising, horticulture, agronomy (crops, chemicals, fertilisers), farm machinery and farm production (family and corporate). Outcomes for Australia are shown in Figure 10.

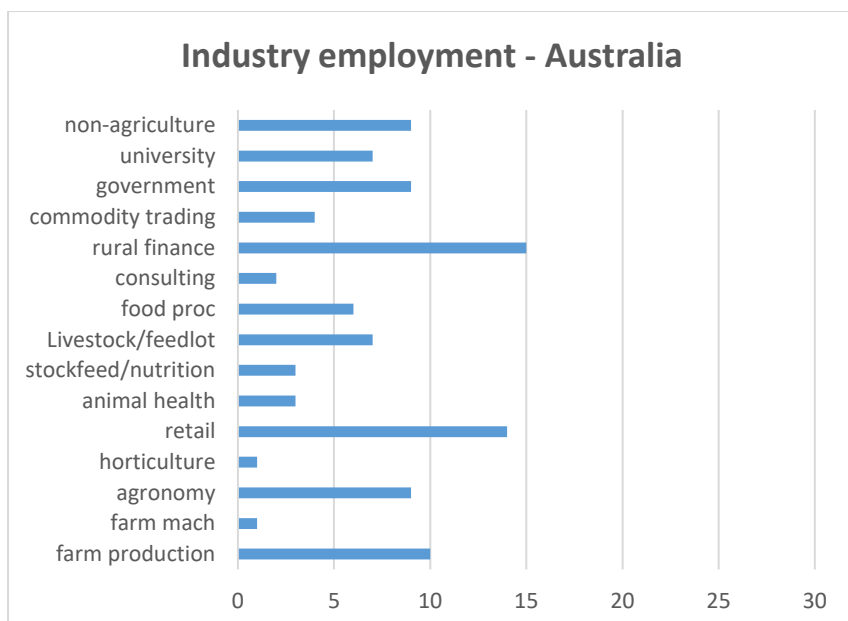


Figure 10. Proportion of total respondents by employing industry

Very small proportions of graduates entered farm machinery, horticulture and agricultural consulting employment. Rural finance (15%) and retail/general merchandise (14%) were the main employing sectors. Around 10% of respondents went into farming while 9% joined government agencies and 7% were in the university system either as employees or in further study.

Different patterns of employment were observed depending on the institution that provided the qualification (Figure 11). Marcus Oldham College (28%) had by far the highest proportion of graduates entering farm production. By contrast the University of Sydney only had 1% of its graduates enter farming. Charles Sturt University (12%) and La Trobe, Queensland and Adelaide Universities (all around 10%) also significantly provided to farm production. Except for Marcus Oldham College, all universities had strong employment of graduates in government departments (range 7-13%). Involvement in the university was strongest at the University of Sydney (12%) but strong also at the University of Adelaide (10%) and La Trobe University (9%). Retail and merchandising were strong in all institutions with the University of Adelaide having 27% of its graduates in that role. Rural finance was a big employer from all institutions with notably Marcus Oldham College (26%) well in front of leading universities Charles Sturt University, the University of Melbourne (18%) and the University of Sydney (17%). In the livestock industries Charles Sturt University (14%), the University of Queensland (10%) and the University of New England were the main providers. La Trobe was a significant provider of agronomists (20%) as were the University of Melbourne (12%) and the University of New England (11%).

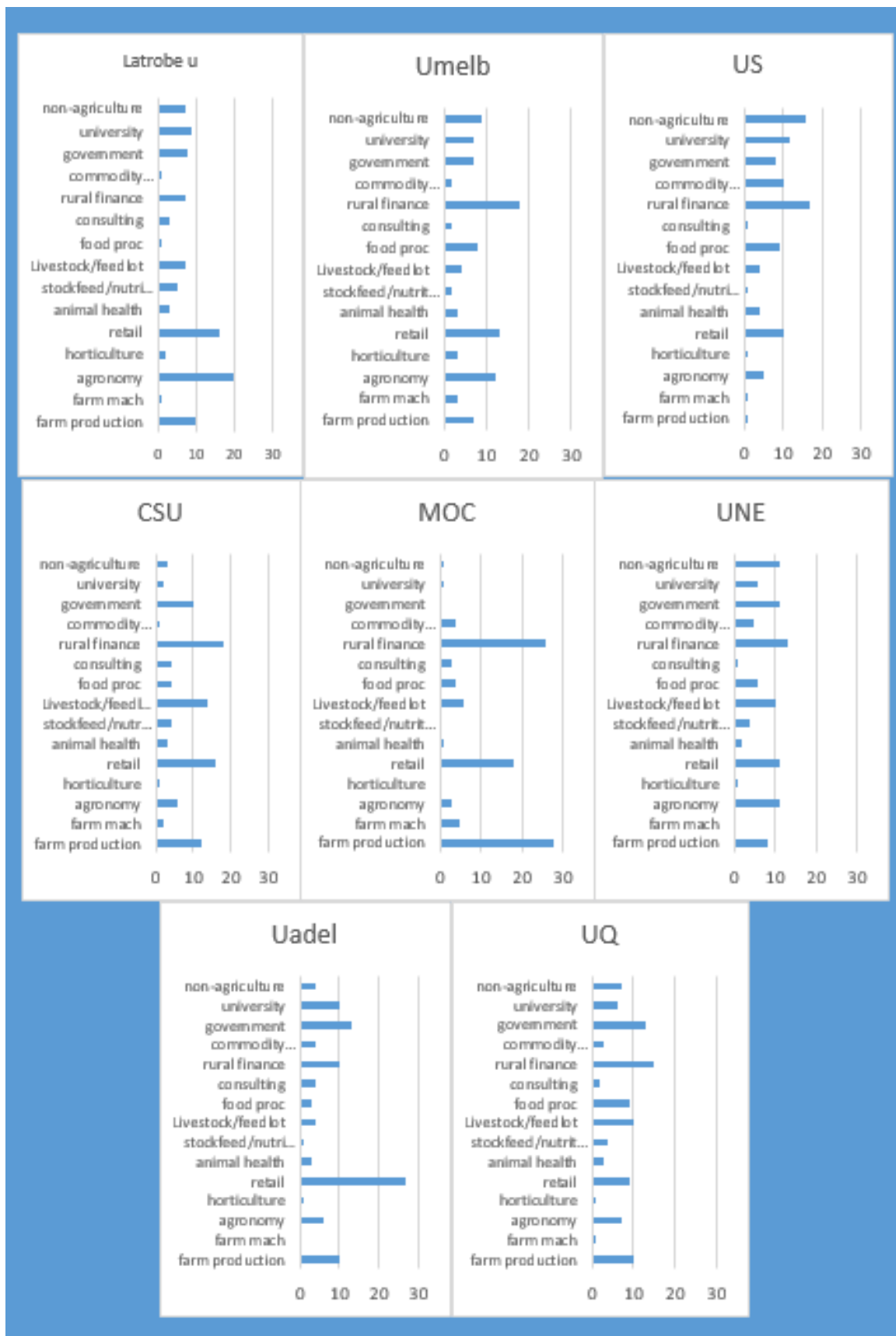


Figure 11. Proportion of respondents in employment by industry and academic institution

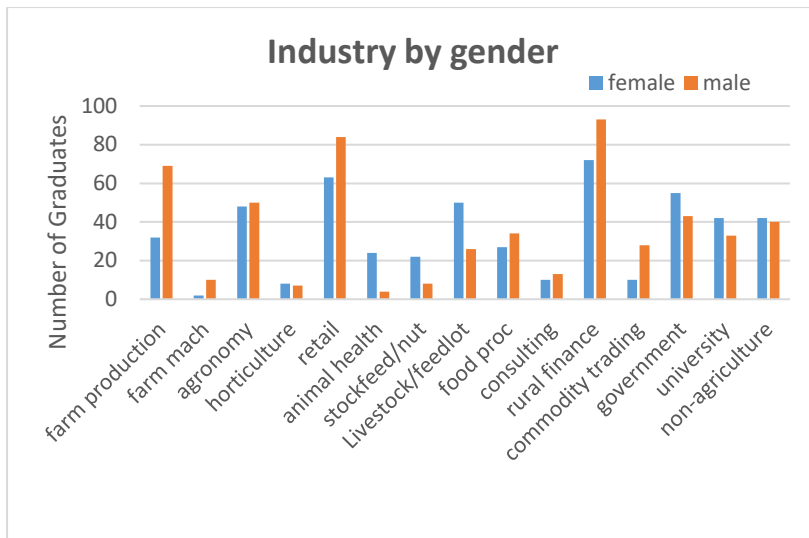


Figure 12. Comparison of employment options by gender

A comparison of the industries employing male or female employees is provided in Figure 12. There is no standout industry where bias is evident in employment as both genders are widely represented. However there is a stronger representation of males in farming and in the financial areas of rural finance and commodity trading. Females however dominate in the animal areas of health, stockfeed/nutrition and livestock/feedlot activities.

3. Job type

The graduates were asked to indicate the type of job that their employment involved. Options canvassed were sales, operations (administration), marketing, trading, analysis, on-farm, technical and further education. The breakdown of job type for the total cohort is given in Figure 13. Sales (25%) and technical (24%) dominate with operations (14%) and analysis (13%) also being strongly represented. Some 7% were in further studies.

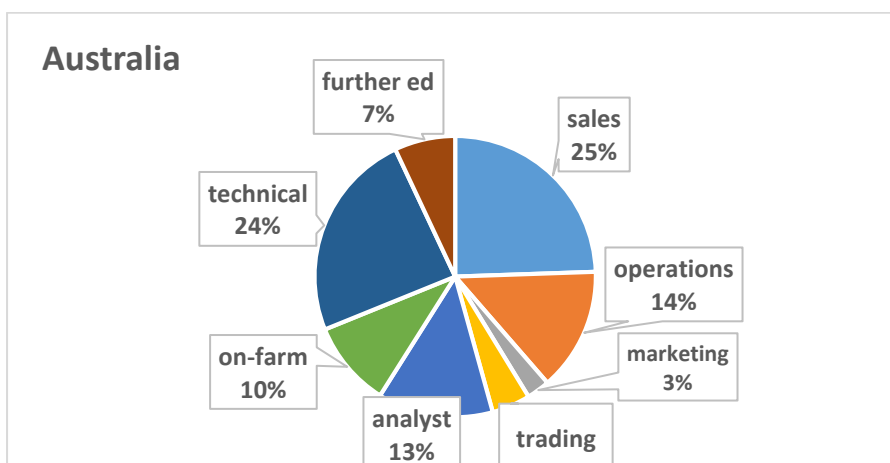


Figure 13. Proportion of total respondents by job type

All institutions had a strong component entering the sales area being about 15-30% of the cohorts (Figure 14). The largest proportions were from Marcus Oldham College, the University of Adelaide, Charles Sturt University and the University of Melbourne with 25% or more. Technical jobs were also common being more than 20% of jobs for university graduates but only around 6% for Marcus Oldham College. On-farm jobs were most common with Marcus Oldham College (27%) and Charles

Sturt University (14%) but least common with the University of Sydney (3%). Analysts, likely representing the financial industries, were common in all institutions at between 10 and 20% but highest at Marcus Oldham College (22%). Further education was most common at La Trobe University (13%) and the University of Adelaide (10%) and least at Charles Sturt University (5%), the University of Queensland (3%) and Marcus Oldham (1%).

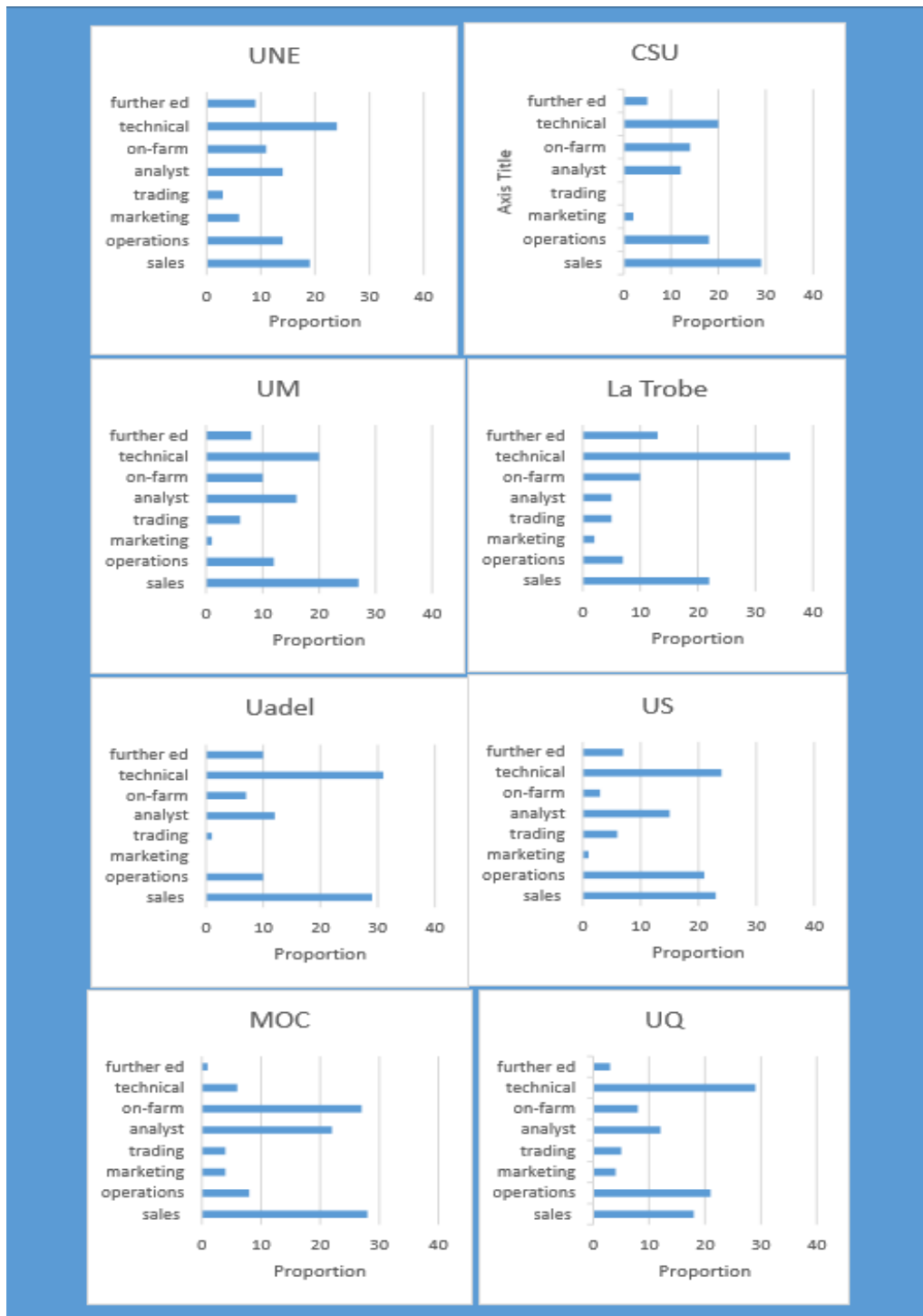


Figure 13. Proportion of respondents by job type and institutions

Conclusions

This study has considered the destinations of graduates involved in the GradLink program offered by Rimfire Resources. As such it is not a random sample but it does capture the activities of around one in six graduates in agriculture and related studies. The gender make-up of the cohort is also consistent with that of enrolled students of the period of study. Care was taken not to analyse small cohorts separately from both privacy and bias perspectives. The authors are unaware of other data that could provide such guidance to the destination of agriculture graduates and given the high representation of the sample to the population the outcomes are considered reasonable in general terms. Such outcomes of this investigation are listed below.

- Around half the graduates gain employment in rural areas, about one third in the cities and about 10% leave the sector. There was considerable variation between institutions however, with rural campuses having a strong bias towards rural employment and metropolitan institutions producing graduates more likely to have metropolitan-based employment. There was little difference between genders with females slightly more likely to be employed in the country than were males.
- Rural financing and retail/merchandising were the main employment sectors. Farm production captured around 10% of graduates while government departments and universities combined to attract around 16%. There was a noticeable difference between institutions in terms of industry employment.
- Technical and sales were the two main types of employment reflecting the sectors previously described. Operations and analysis were also important job types relating particularly to the finance sector. Variation occurred between institutions.
- No gender bias is evident in employment of agriculture and related graduates as males and females were employed in all categories. Males were more likely than females to be employed in finance and trading areas and to go farming. Women were more likely to be employed than men in animal industries.

References

Pratley, JE (2008) Workforce planning in agriculture: agricultural education and capacity at the crossroads. *Farm Policy Journal* 5(3), 27-41

Pratley J and Copeland L (2008) Graduate completions in agriculture and related degrees from Australian universities, 2001-2006. *Farm Policy Journal* 5(3), 1-11

Pratley J (2012) Professional agriculture – a case of supply and demand. Australian Farm Institute Occasional Paper 12.01 (AFI, Surry Hills)

Appendix 1. The GradLink Program

PROGRAM PARTNER INVOLVEMENT

The three main activities involving Program Partners are;

1. **GradLink Website** – This includes an interactive site and mobile app, accessed by secure login for both companies and students. The site contains the following functions accessible only by registered students including;

- Company overview;
- Business objectives – their proposition and products /services;
- Information on where graduates can enter the business;
- Videos- either from graduates telling their story and/or from a key business leader (e.g. CEO);
- Ability to post jobs specifically to students; and
- Ability to review a student’s profile including CVs and videos and have direct contact with the student.

2. Networking Events

Rimfire runs a series of GradLink networking events for program partners who want to interact face to face with graduates.

3. Career Builder

Career Builder Topics are a resource for students to gain knowledge and guidance in order to help

Thus a platform is provided for agribusinesses to showcase their brands and businesses to students from leading institutions offering tertiary agribusiness disciplines across Australia.

Representation on campus: Rimfire has developed relationships with universities and educational institutions specialising in agribusiness over the last decade. Through these relationships, Rimfire is able to ensure contact with students who seek work in the sector.

Student Assessment: Rimfire assesses students based on their behavioural characteristics and personal values, in addition to academic merit and achievements. Employers comment that they seek graduates in their business with the right attitude and commitment to work.