

## SUBMISSION TO HIA GREEN PAPER ON STRATEGIC RESEARCH

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I am writing in respect of the HIA Green Paper call in respect of the Pool 2 Strategic investments. I make a particular plea for one of the strategy areas to be in ***horticultural education and training***. There are several aspects to this and I hope to highlight some.

### 1. Prospects

It is clear that the future provides great opportunity for the horticulture industries. The evidence is contained in the HIA document created by CIA a few years ago. It is highlighted at ABARES Outlook Conferences every year. The warning in this year's Conference was that while the opportunities exist through population growth, free trade agreements and increasing affluence of the middle classes, the challenge will be the grabbing of those opportunities. A concern is that Australia is underprepared. This is a message for the Horticulture sector in particular. Those opportunities are a function of the market, being quality, quantity and reliability of supply. Increased access will need to be driven by a workforce who is committed, well trained and educated. It is true that labour is being replaced by labour saving devices including robotics but the workforce that is in place for those changes will need to be more highly trained than before and comfortable with the technology at all levels. Business acumen and environmental stewardship are increasingly important.

### 2. Capacity

It is clear from the work undertaken by the Australian Council of Deans of Agriculture (ACDA) that the availability of courses in horticulture in Australian universities is cause for great concern. Figure 1 shows the decline in graduate completions this century. Numbers are compared with those from University of Melbourne where the instruction is for amenity horticulture. This suggests therefore that there is very little production horticulture now taught.

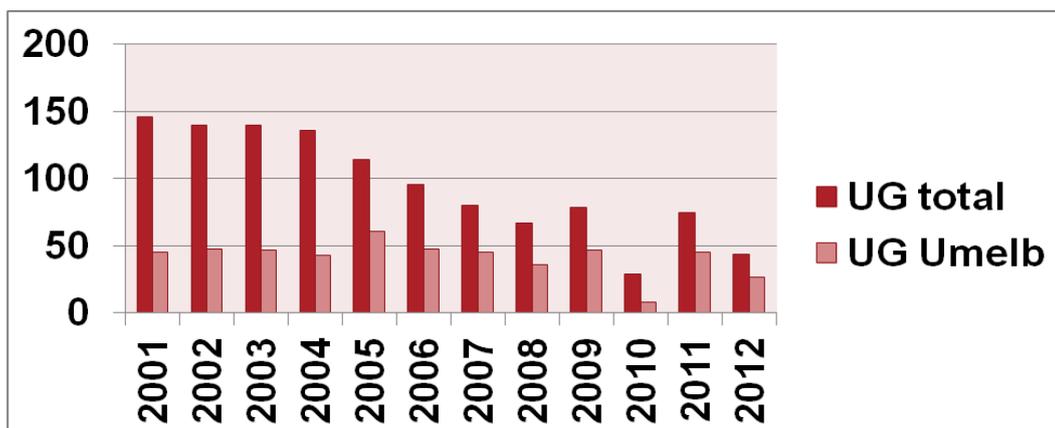


Figure 1 Graduate *completions* in Horticulture from Australian universities 2001-2012

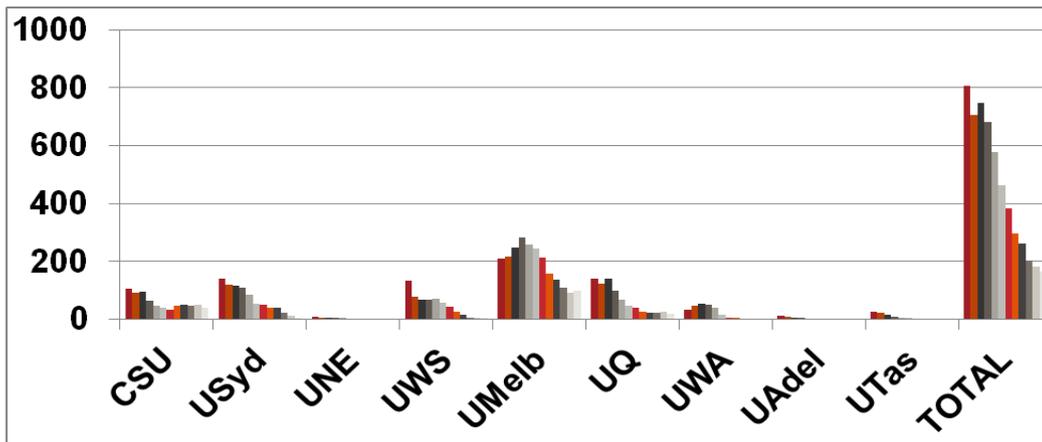


Figure 2 Student enrolments in Horticulture in Australian universities 2001-2012

Figure 2 shows the enrolment data in horticulture at Australian universities. The data show that over the course of the years 2001 -2012, there has been a decline of 75% in student numbers in horticulture, including amenity horticulture. As enrolments are the basis for university funding this decline represents a loss of \$18.6 million in 2012 relative to what would be funded for 2001 enrolment levels in the same year. The impact on teaching staff and course sustainability is clear and so it is no surprise that universities have terminated courses to the extent that CSU is the only university remaining with a horticulture degree containing production horticulture.

The situation with VET training provides a similar tale (Figure 3). Whereas amenity horticulture has embraced training, the numbers are very thin for production horticulture. This likely reflects the sector's high dependence on the 457 and 417 international work visas. Thus, should the political climate change to restrict such visas the production horticulture labour force will be at risk.

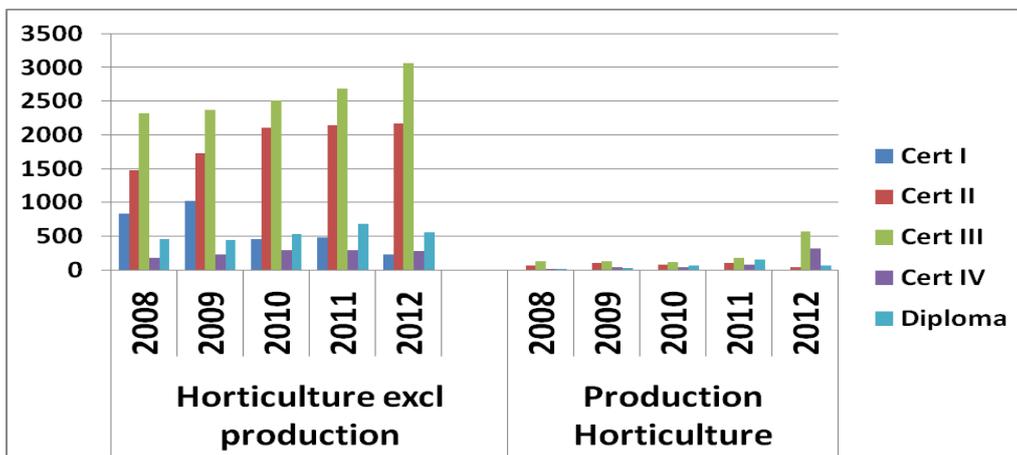
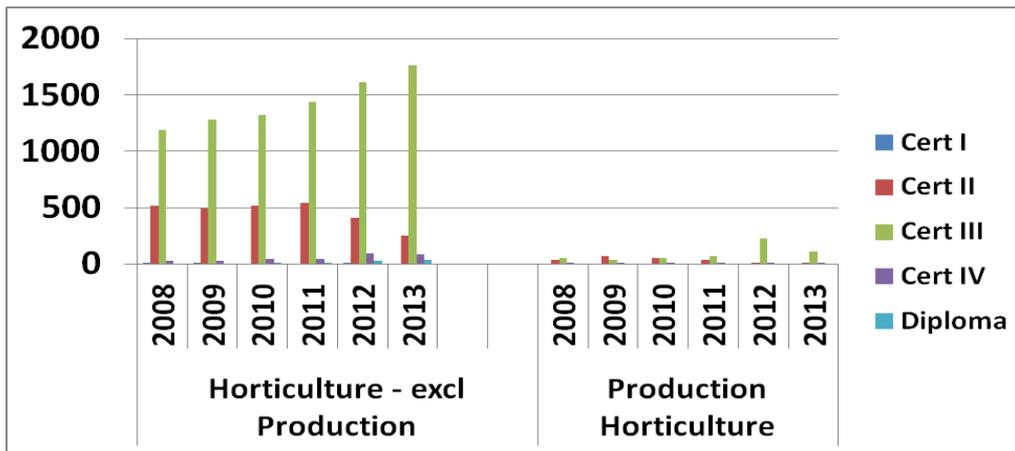


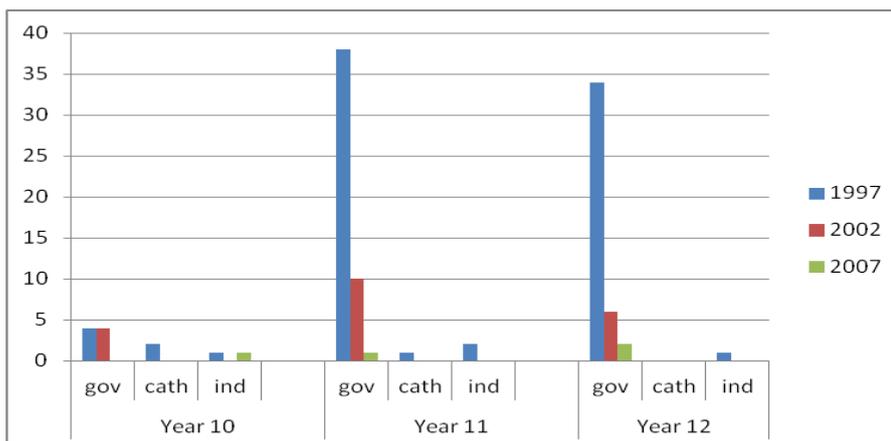
Figure 3 Vocational education and training (VET) completions in horticulture in Australia 2008-2012

Consideration of the extent to which the horticultural industry embraces apprenticeships and traineeships is shown in Figure 4. The numbers are very low and reflect the industry's reluctance to embrace any qualification levels in its workforce, likely because qualifications mean higher wages, regardless of capability.

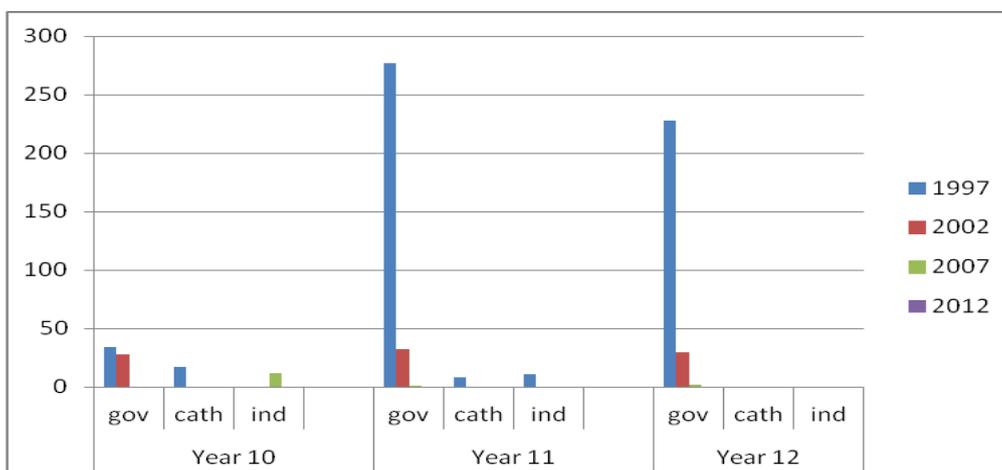


**Figure 4 Apprenticeship/traineeship completions in horticulture in Australia 2008-2013**

At the primary and secondary schools levels there is great opportunity to acquaint students with the horticultural industries and inspire career choices in that direction. Data (Figures 5 and 6) show that since 1997, horticulture has virtually disappeared out of the school system, at least in NSW. In 1997 some 34 high schools offered horticulture in Year 12 but this had declined to just two schools in 2007. By 2012, there were no students studying horticulture in Years 10, 11 or 12.



**Figure 5 Number of NSW schools offering horticulture courses in years 10-12, 1997-2012**



**Figure 6 Number of student enrolments in horticulture courses in NSW schools in years 10-12, 1997-2012**

Any examination of these data would indicate that there has been little attention paid to the education needs of the horticultural industries. It has reached crisis point and there needs to be a serious strategy area to ensure the viability of the sector going forward.

### **3. Respectability and attractiveness**

Horticulture needs to be attractive to new entrants, particularly those young people looking for a career. They will want to see career prospects and encouragement to gain skills and qualifications. Unless that happens then they will choose alternative options. Currently young people are not enticed into horticulture. There are several measures of concern.

One area is the overall level of education in the horticultural sector. Data suggest that the level of university education in the horticulture sector is about only 20% that of the Australian community. Further it is about 17% that of competitors like the US. If this discrepancy perpetuates, it will be difficult to make horticulture attractive to those with ambition and talent.

Secondly, the image of horticulture needs to become modern, sophisticated and positive. This new image needs to be promoted as early as possible in the minds of school children so that it is seen as a clear option for a respectable and rewarding career. Collaboration with the Career Harvest website to achieve this is recommended.

Thirdly, secondary and particularly primary schools need smart teaching resources that meet the curriculum needs, are easy for teachers to use, and exciting and engaging for students. Currently these materials do not exist and some investment is needed to address the inadequacy. It is suggested that the sector work with the Primary Industries Education Foundation Australia to ensure that the materials are compatible with curricula and that other conditions are met to have the materials within the education system.

### **CONCLUSIONS**

All advice suggests that the market prospects for horticultural products are very positive for Australian producers. However there is much concern about the readiness of the sector to take advantage of the opportunities. The horticulture education system has lost its way and the sector will have to help rebuild it. Education without attention to career options and a more positive image will not bring the desired dividends.

This brief paper hopefully emphasises the importance of having an education and training strategy in Pool 2. Without it, the sector runs the risk of being unable to optimise the capacity to take advantage of the wonderful opportunities that lie ahead for horticulture.