

# From Classroom to Crop Fields: How Education Shapes Agricultural Careers

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**AGRICULTURAL  
APPOINTMENTS**

Finding the right people since 1979



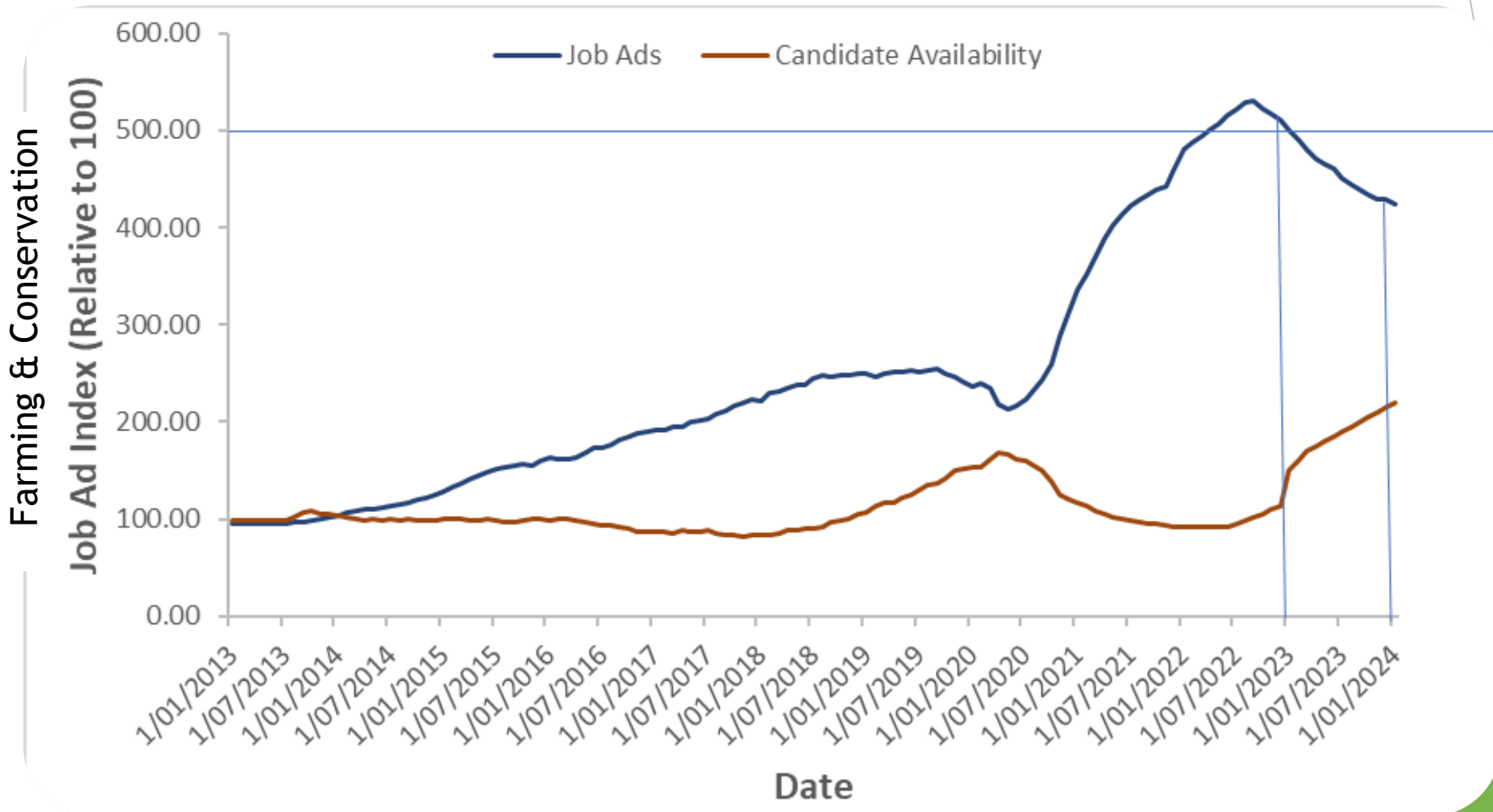
# AGRICULTURAL APPOINTMENTS

Finding the right people since 1979

- A leading agribusiness recruitment company for over 43 years
- Our team all have backgrounds in the agrifood industry
- We support the agribusiness sector, including sponsoring and attending university career events
- We publish regular Agribusiness Salary & Trend Reports that highlight what's happening on the people side of the industry



# There is increasing demand for skilled agribusiness people



(Source: Seek internal correspondence January 2024)

# People in Agriculture -

## Where do they come from and why?

As in any industry, people can come from a myriad of different sources and for a huge number of reasons and “sliding door” moments end up in a particular industry

# My Origin Story

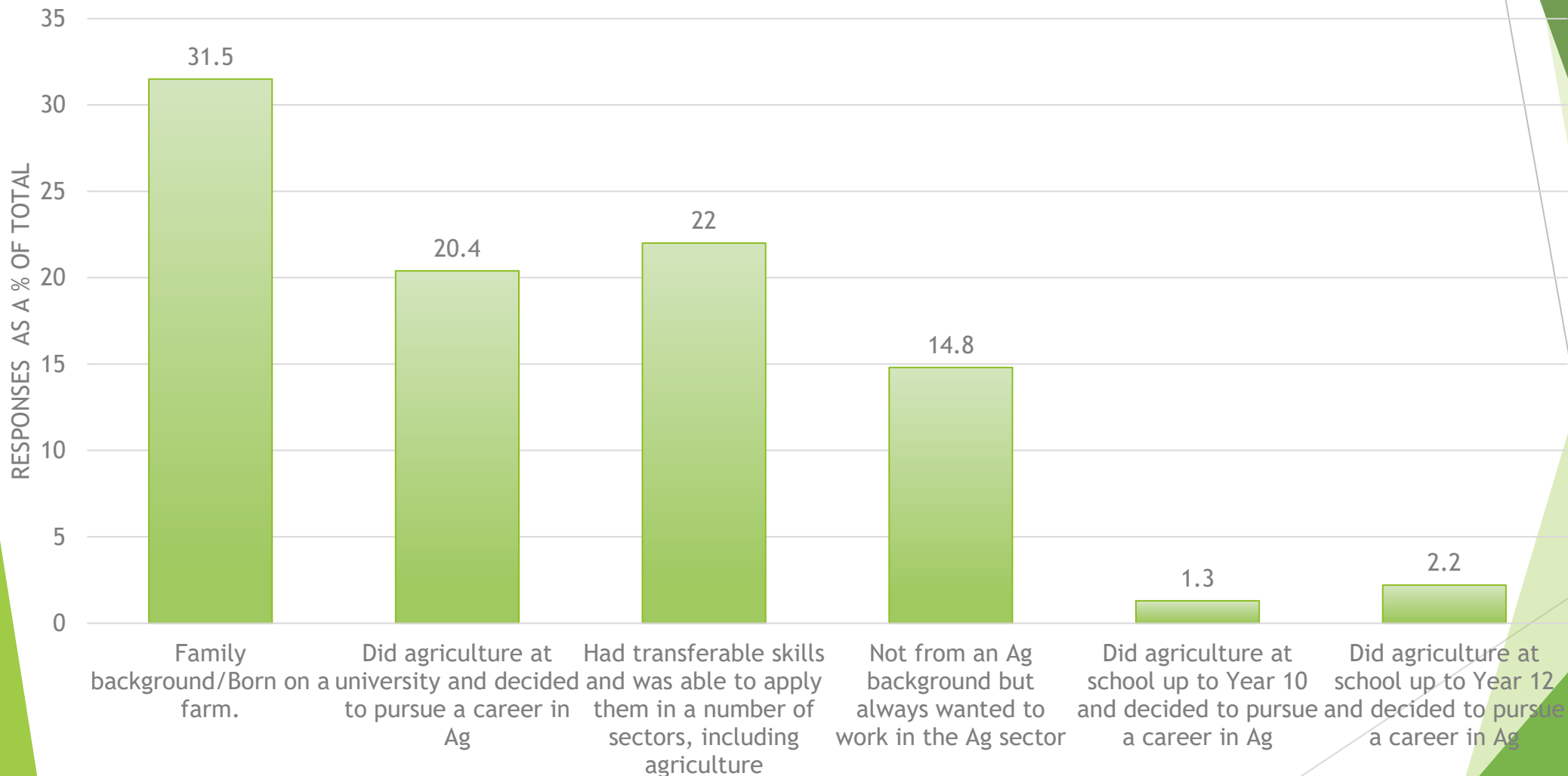


- ▶ Grew up on a farm near Parkes, NSW
- ▶ Worked on the farm every day of all my school holidays
- ▶ Mum did not want me to become a farmer
- ▶ Had an excellent Ag Science teacher in Year 11 & 12, which spurred me on to do First Level Ag for the HSC
- ▶ Did well and went off to Sydney University to do Ag Science, albeit without any great career objective in mind

# Factors that could influence a decision to have a career in agriculture

- Farming background
- Studied agriculture at school up to Year 10
- Studied agriculture at school up to Year 11/12
- Studied Ag Science or related at University
- Transferable skills
- Not from a background in ag but always wanted to work in this sector

# Industry survey - Motivation for pursuing a career in agriculture



Online agribusiness client survey conducted by Agricultural Appointments in April 2024 n=400

# Imminent agricultural education crisis

Livingstone and Smith (2010) summarised the issue of declining agricultural education and training in Australia, and the number of students interested in these courses. They concluded that **“there is an imminent agricultural education crisis, which is already apparent”**.

The went on to say “the agricultural education sector is witnessing a largely unplanned and ad hoc rationalisation of providers across Australia, at a time when farmers and graziers need to be highly qualified to effectively manage complex businesses and environments” (Livingstone and Smith, 2010).

(Dr. Simon Livingstone was the Principal of Marcus Oldham College)



# The Australian Agricultural College System today

Agricultural College	State	Now
Tocal	NSW	Still going - part of NSW DPI since 1975
Yanco	NSW	Now part of Tocal
Emerald	Qld	Closed 2019
Longreach	Qld	Closed 2019
Longerenong	Vic	Still going strong
Roseworthy	SA	Now Uni of Adelaide
Dookie	Vic	Now Uni of Melbourne
Burnley	Vic	Now Uni of Melbourne
Hawkesbury	NSW	Now Uni of Western Sydney since 1989
Marcus Oldham	Vic	Completely independent from a bequest in 1962. Continual expansion.



Rosemary Champion, daughter of one of the original founders, says the closure of the colleges has left a hole in the communities that had once thrived

# The School System



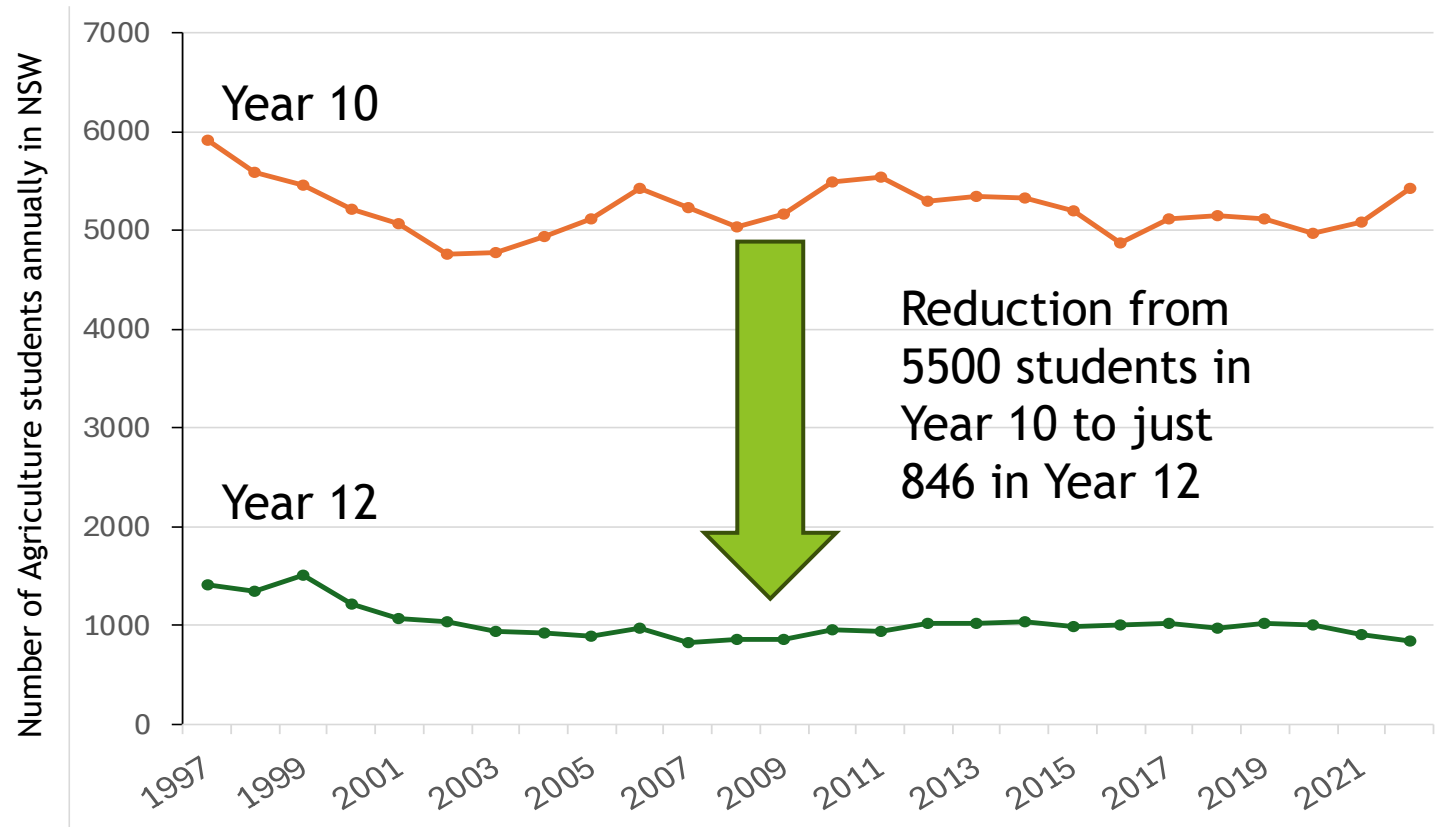
# Post-high school pathways

Destination	Year 12 completers	Non-completers
In education or training	72.2%	49.0%
Bachelor's degree	52.3%	1.6%
Apprenticeship/traineeship	10.2%	35.4%
Certificates/diplomas	9.7%	12.0%
Not in education or training	27.8%	51.0%
Deferred*	10.3%	N/A
Employed	24.3%	37.8%
Employed full-time	10.6%	17.4%
Employed part-time	13.7%	20.4%
Looking for work	2.7%	9.7%
NILFET	0.8%	3.4%

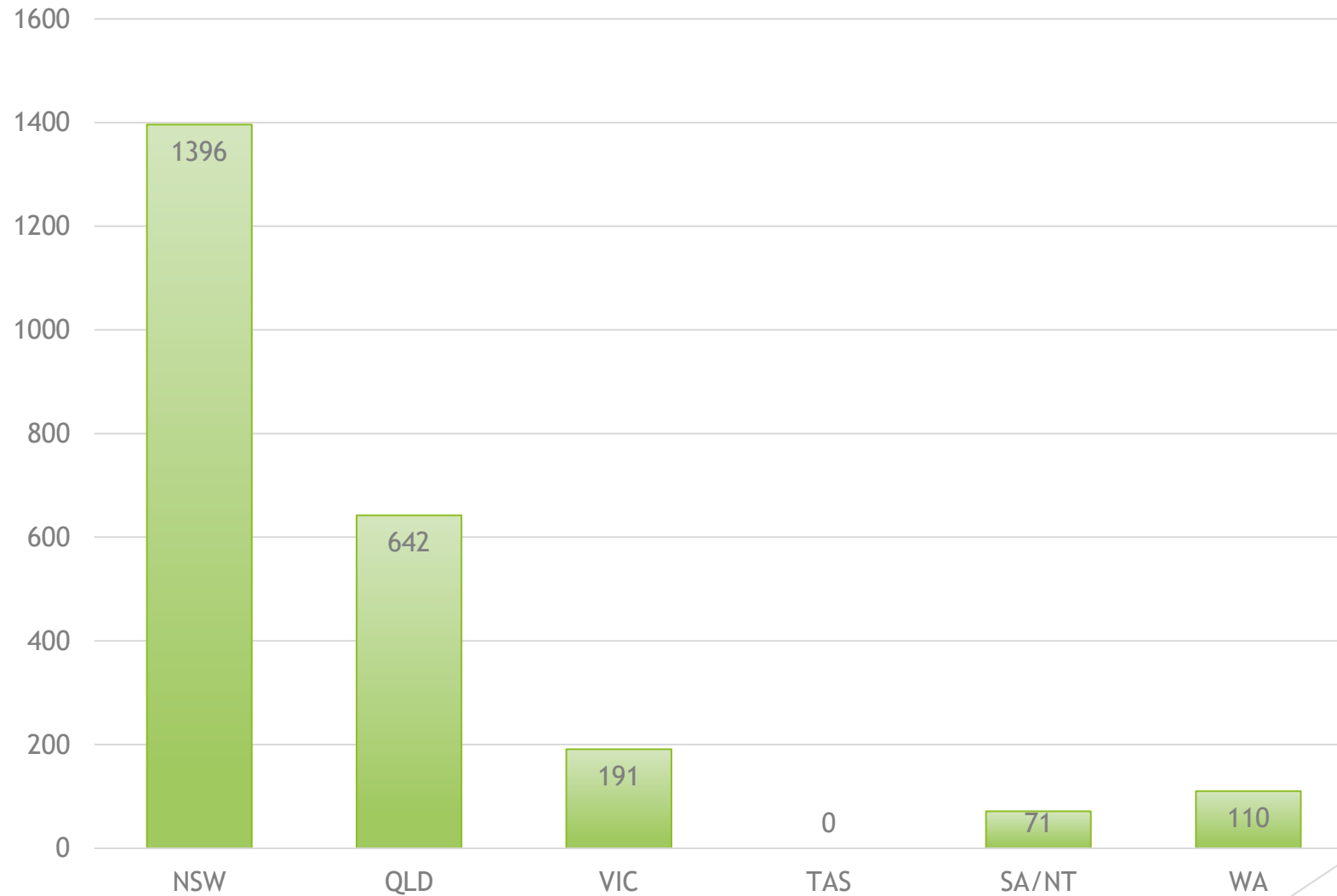
Destinations of Year 12 completers & non-completers, Vic 2022

# Agriculture in NSW schools

There are four specialised agricultural schools in NSW, and approximately 300 NSW government and non-government schools offering agriculture and Vocational and Educational Training (VET) primary industries elective subjects.

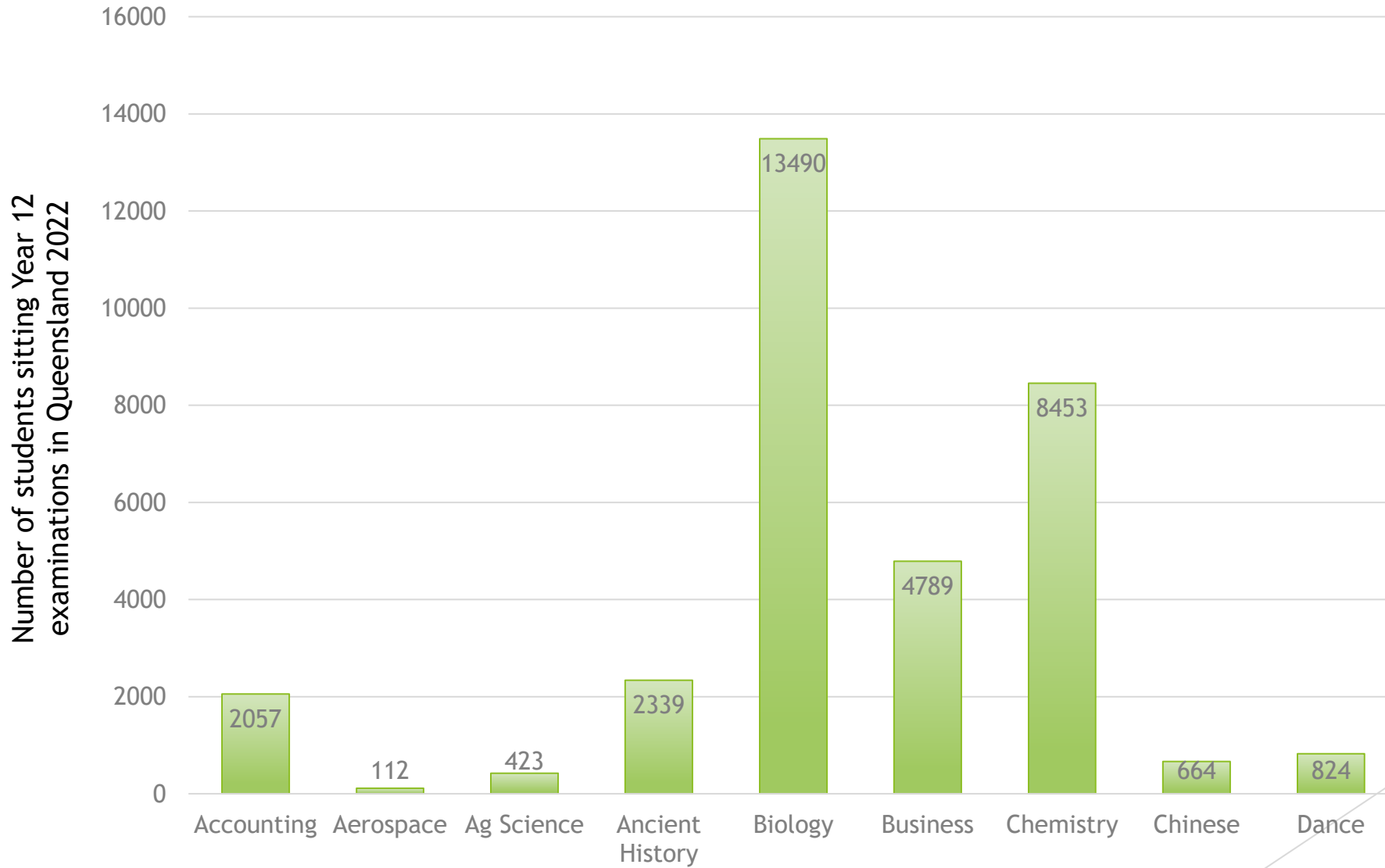


# NSW leads in Year 12 Agriculture completion (Randall, 2019)



Number of students sitting Year 12 Ag examinations in Australia by State (Randall, 2019)

# Agriculture is disappearing as a subject in QLD 2022



# The National School System is Failing the Agriculture Industry

- ▶ The efforts of NSW are laudable and, despite some issues, are delivering Year 12 completers in Agriculture
- ▶ In NSW a major review was conducted by Professor Jim Pratley in 2013, and after 4-5 years of planning and consultation, the NSW Government commenced the roll out of compulsory ag units in Primary school in 2018/2019
- ▶ The initial roll-out of the new syllabus includes kindergarten to year 8, but the idea is to set those kids up to choose agriculture and related subjects as electives later in high school, with the syllabus for those later years already being planned.
- ▶ States other than NSW do not appear to have any similar plans in place

# Some of the over-arching issues in NSW

1. There are only ~300 NSW high schools that teach agriculture beyond Year 10, severely reducing the opportunity for students to select agriculture in Year 12
2. There is an acknowledged shortage of qualified agricultural science teachers
3. Student subject choices for the HSC are geared toward university entrance, eg: Maths, Science (Biology, Chemistry, Physics), History and English.
4. Students are not fully aware of the available careers in agriculture and agribusiness, and there is still a perception that it is production-based rather than supply chain based (Graham, 2021)
5. There is continued urbanisation of the Australian population with the resultant ongoing disconnect from food production. Accordingly, it is not viewed as a “normal” career choice (Graham, 2021)
6. Glamorous highly paid jobs are not typically associated with agriculture
7. A general unawareness of the relevance of STEM-related skills in agriculture and agribusiness
8. Lack of understanding of the critical importance of agriculture in food security and the highly complex issues facing the sector into the future (e.g., carbon abatement, water usage, environmental programs, and land management etc)

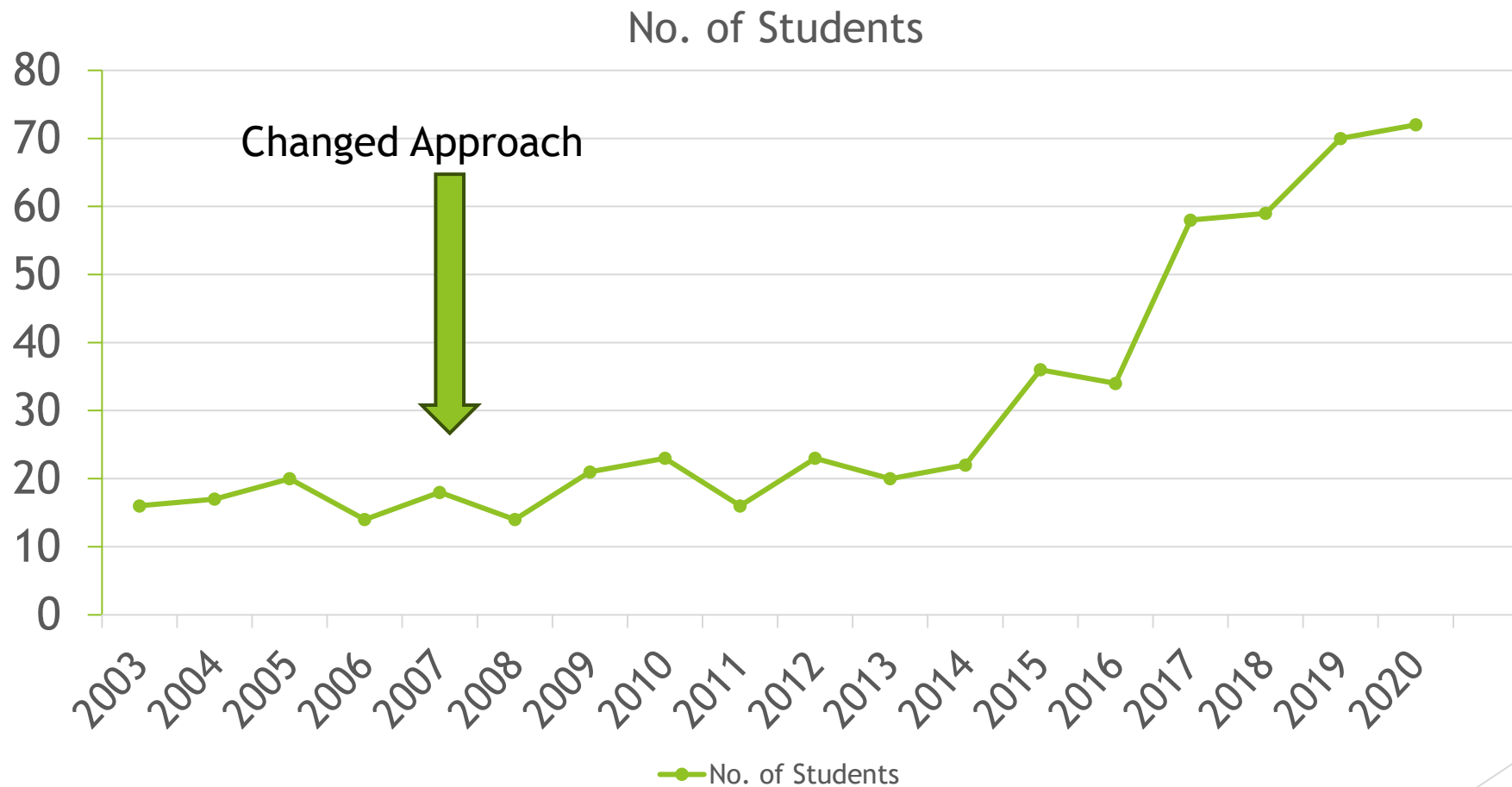


# Untapped Potential: The Neglected Urban Interest in Secondary Agriculture



- ▶ Scott Graham is the Ag Science teacher at Barker College in Hornsby NSW (independent school, 2,400 students)
- ▶ He did agriculture in Years 7 and 8 at school and was influenced to continue this in secondary school, then did Ag Science at Sydney University
- ▶ During Secondary School he was continually asked “Why would you study agriculture if you are not going to be a farmer”?
- ▶ When he became an ag science teacher at Barker he found that there was a deep unmet need to re-engage students and parents in the processes that occur “paddock to plate”
- ▶ He moved student and parent thinking from a production-focus to a science-focus in teaching agriculture. He stopped things like on-site livestock breeding and showing animals, as this emphasised the production facets of agriculture
- ▶ He “normalised” agriculture within the school, shifting school plots to where the general student population was
- ▶ He promoted heavily the high number of jobs graduates had available, as well as promoting the “future” jobs with an emphasis on technology and STEM-related skills
- ▶ Showed students the challenges faced by the global population with regard to agriculture and food production - found this to be a strong motivator
- ▶ Worked with the parents as well to educate them in modern agriculture (he found parents were a major influence)

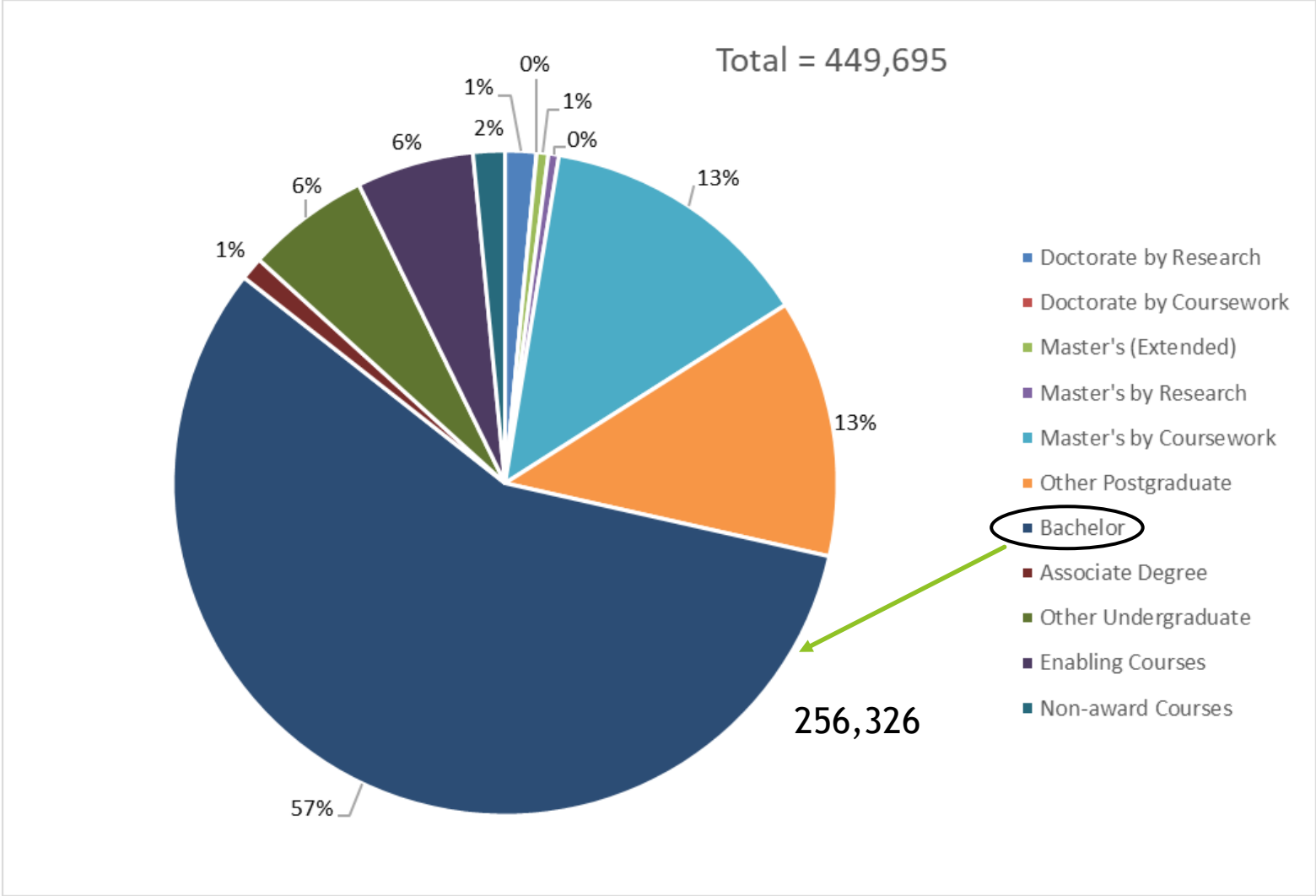
# Student Enrolments in Agriculture at Barker College In Year 12 - more than tripled



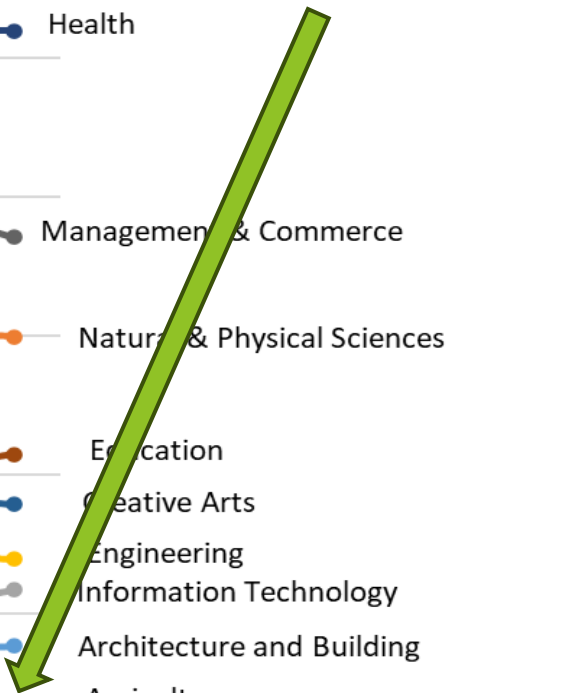
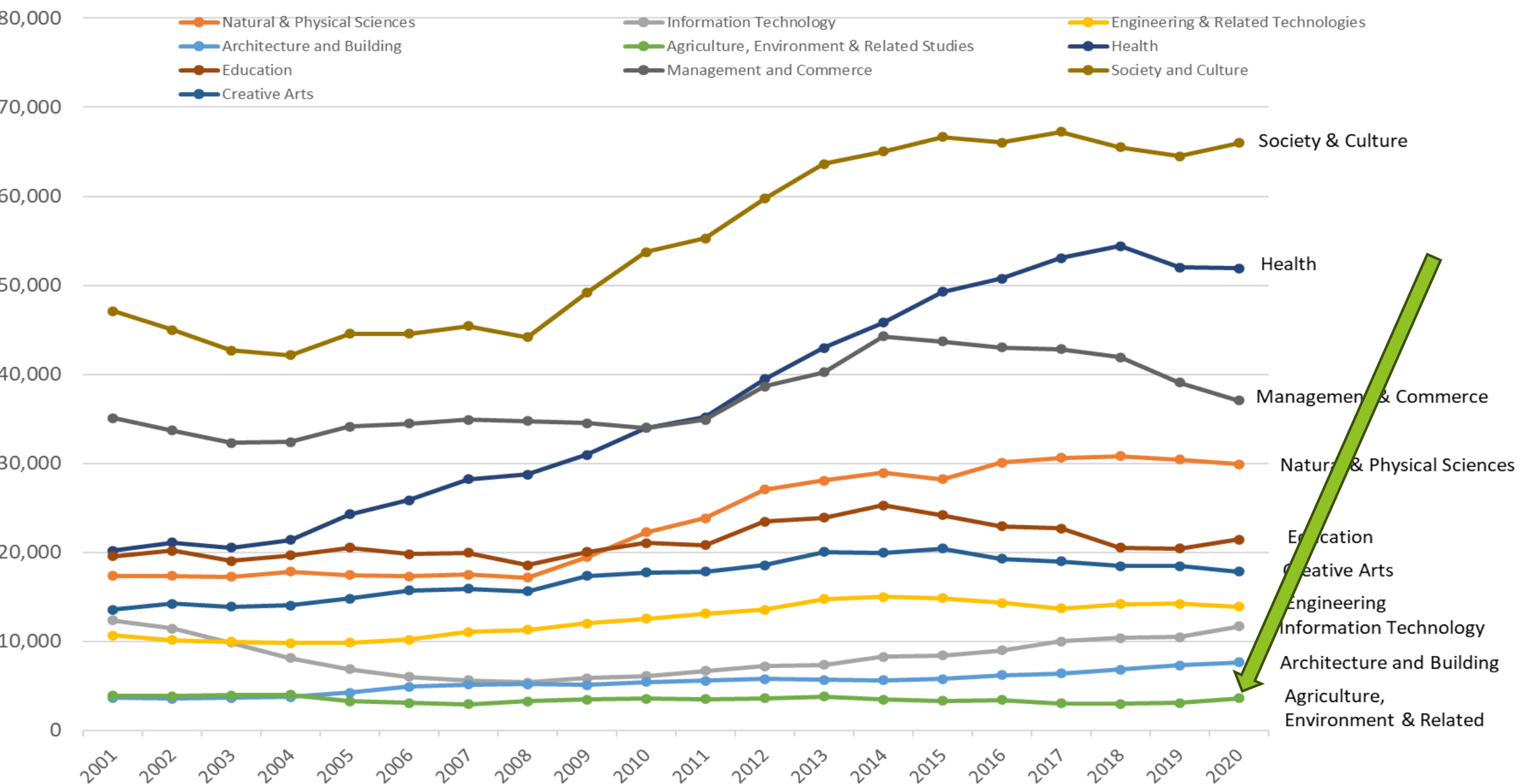
# The University System



# Commencing Domestic Students by Age Group and Broad Level of Course, Full Year 2020



# Bachelor Degree Commencing Domestic Students by Field of Education 2001-2020



Actual Student Load (EFTSL) for Bachelor Degree  
Commencing Domestic Students for **Agriculture**  
2005 - 2022



(<https://www.education.gov.au/higher-education-statistics/>)

# Agriculture at Universities

1. For the last 10-15 years there has not been any increase in students wishing to take Agriculture as a degree course across Australian Universities
2. It is clear that there have been major changes in the course selection of young domestic students choosing their first undergraduate Bachelor's degree course
3. Society & Culture and Health have been the big movers over the last 20 years
4. The number of ag science graduates is well below the number required to drive continued expansion of the agriculture industry
5. I've seen estimates of anywhere from 2,000 to 4,000 ag science graduates/year are required
6. The great issues of our time such as food security, carbon abatement, water usage, drought management, environmental programs, and land management, and the rapidly evolving digital revolution in Australian agriculture, requires a major increase in ag science graduates

# Conclusions

1. State School education systems other than NSW are not effectively working to increase the number of students studying agriculture in Years 11 and 12
2. There are no significant increases over the last two decades in university domestic students enrolled in graduate Agricultural Science degree programs across Australia
3. However, the agricultural college and VET programs appear to be going very well and are making a significant contribution to the skills base for agriculture in Australia
4. It is apparent that the continued urbanisation of the Australian population, rationalisation of farming properties and the massive generational changes underway (Gen Y & Gen Z) in the workforce are strong negative forces to a higher number of school and university students studying agriculture
5. Without strong intervention the disconnect between people in cities and agriculture/agribusiness will continue to worsen



# Where to from here?

- ▶ Industry must continue to communicate well with the NSW Government as they lead the way nationally in understanding the importance of agriculture and the crucial role the school education system plays
- ▶ The other States are currently paying lip-service to the importance of the agricultural industry, and this approach must change
- ▶ Also, the importance of having well-qualified ag science teachers cannot be over-emphasised, there must be programs in place to attract and train these people into the school system

**Thank you!**

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