

FOOD, FIBRE AND OUR FUTURE 2020

PIEFA student survey summary
report on student knowledge,
understanding and sentiment
about primary industries



AUGUST 2020



Primary Industries Education
Foundation Australia



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The place for all your food and fibre resources

All enquiries: Primary Industries Education Foundation Australia
Info@piefa.edu.au
www.piefa.edu.au

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Research conducted by YouthInsight, the full-service research arm of Student Edge, in conjunction with Primary Industries Education Foundation Australia.

Acknowledgements

- This project was funded through the Landcare Smart Farms – Capacity Building program grant from the Australian Government Department of Agriculture, Water and the Environment.
- The research and data analysis was conducted by YouthInsight, the full-service research arm of Student Edge, through the direction of the Primary Industries Education Foundation Australia.
- Primary Industries Education Foundation Australia would like to thank member organisations who were integral to the design and development of the survey questions and their support of this work.
- Thanks to principals and staff at participating schools and the young people who participated and completed the survey.
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Executive Summary

The awareness divide between urban and rural communities continues to widen and knowledge of where food comes from and the methods of production and processing are less a part of daily lives than several decades ago. Once upon a time, there was a stronger connection with rural regions and farming, but nowadays that is not the case. As well, fewer schools across Australia offer food and fibre related subjects.

At a food and fibre education level, increasingly we can see interest at a national and state level. The Australian Curriculum Assessment and Reporting Authority (ACARA) identify it clearly as an area for students to be taught through the Australian Curriculum.

In 2010, Primary Industries Education Foundation Australia (PIEFA) contracted the Australian Council for Education Research (ACER) to design and conduct a baseline survey of students and teachers to assess their knowledge about primary industries in Australia. The 2011 report, known as [*“Food, Fibre and the Future”*](#), highlighted many examples of young people’s views about food and fibre industries. PIEFA also commissioned a report, known as [*“Room to Grow”*](#), that reviewed the challenges of food and fibre education in Australia and highlighted the need to further support Australian teachers to teach food and fibre in schools.

This *Food, Fibre and Our Future 2020* research aims to better understand the knowledge, understanding and sentiment that students have towards food and fibre industries. These findings are key to developing improved teaching and learning curriculum that targets food and fibre industry needs. It provides the impetus to seek out better ways to deliver these messages to young people and assist teachers towards this task. The research contained in this report provides a new snapshot of this understanding.

Students overall indicated a very positive sentiment towards food and fibre industries and are concerned about key environmental issues. Past research and PIEFA’s experience with schools and teachers indicate there is support for its inclusion in school programs.

As with the 2011 study, questions about the origin of products (such as yoghurt) were asked. We continue to have 30% of students indicating that yoghurt is made from something other than an animal product. Over 60% of students do not know that denim cotton used to make jeans is derived from plant material. This parallels the similar question about the origin of cotton wool in the 2011 study.

Knowledge about industries such as eggs, dairy, fruit and vegetables is much higher than rice, cotton, aquaculture and grains and oilseed industries. This is more pronounced among under 16-year-olds. An important fact to consider is that 59% of students indicated they learn what they know about food and fibre from their teachers. This is positive evidence of the need to develop high quality food and fibre teaching resources.

In relation to careers, 60% of students indicated an interest in knowing more about careers in food and fibre. While students do not know much about the jobs associated with food and fibre production, these jobs generally are not highly regarded by students. The

stereotype of food and fibre careers, meaning predominantly a farming occupation, is reiterated in the results. Food and fibre career images are increasingly at the core of encouraging young people into these industries.

This summary report provides highlights from the research data report produced by YouthInsight. The survey questions can be found in the Appendix. Additional industry communication potential and dashboards can be accessed via the full data report, which can be located on the [PIEFA website](#).

Project background

Primary Industries Education Foundation Australia (PIEFA) is a not-for-profit organisation established to encourage greater learning about Food and Fibre Production in Australian Schools. It is the peak body for primary industries education in schools. It receives funding from its members, primary industry organisations, Australian Government grants, philanthropic organisations and from the services it provides. PIEFA is a registered charity.

PIEFA works closely with the Australian Curriculum Assessment and Reporting Authority (ACARA) and the State and Territory school systems and education departments.

The goal of the Primary Industries Education Foundation Australia (PIEFA) is to provide a source of information on primary industries for educators to better equip students with not only knowledge about what goes into their food and fibres but also what career opportunities exist in primary industries.

Following on from a study conducted in 2011 by the Australian Council for Educational Research (ACER) amongst schools which identified a need to improve knowledge about food and fibre, PIEFA has been working to improve the situation through the Agriculture in Education Project funded by the Australian Government and other initiatives.

The 2011 ACER research summary is outlined here:

- In 2010, PIEFA contracted ACER to design and conduct a baseline survey of students and teachers to assess their knowledge about primary industries in Australia.
- The research focused on year 6 and year 10 students and teachers at both primary and secondary schools. Different versions of the survey were created to cater for all three groups.
- After successful testing of the surveys, fieldwork commenced, targeting 150 primary schools and 150 secondary (or central) schools, with an additional 600 possible replacement schools identified to ensure robust samples could be collected.
- ACER was required to gain permission from State and Territory governments to conduct research in their schools.
- Gaining cooperation from schools to participate in the survey proved to be very difficult due to perceived large amounts of survey activity occurring in schools at the time.
- As a result, the survey achieved low response rates from the initial sample of schools, and a boost involving replacement schools was required.
- The fieldwork period was also impacted, with an extension of 2 weeks required after some schools requested additional time to participate following scheduling difficulties.

The current survey seeks to evaluate progress both in the general school community and amongst the schools which have been involved in the Agriculture in Education Project.

Food, Fibre and our Future 2020 - research study stages in the development of the survey:

Industry Workshop

YouthInsight held a workshop session with key stakeholders of PIEFA; the PIEFA membership group. The objective was to provide stakeholders with full transparency into the project, clarify any queries and provide an opportunity for members to have their say.

Online Survey

The initial quantitative research established benchmarks for key metrics such as awareness, usage and satisfaction. It also allowed for an initial segmentation of the market. The key target for the online survey was students and teachers. The teacher survey results will be made available at a later date.

Research focus

The main focus of the research was to assess young people's awareness, understanding and perceptions of food & fibre production in Australia.

The survey gauged the knowledge and appeal of careers in the Food and Fibre industries, with the aim of increasing awareness of the career options available and understanding of how to make it a more attractive option for young people.

Research Objectives

Food and fibre production

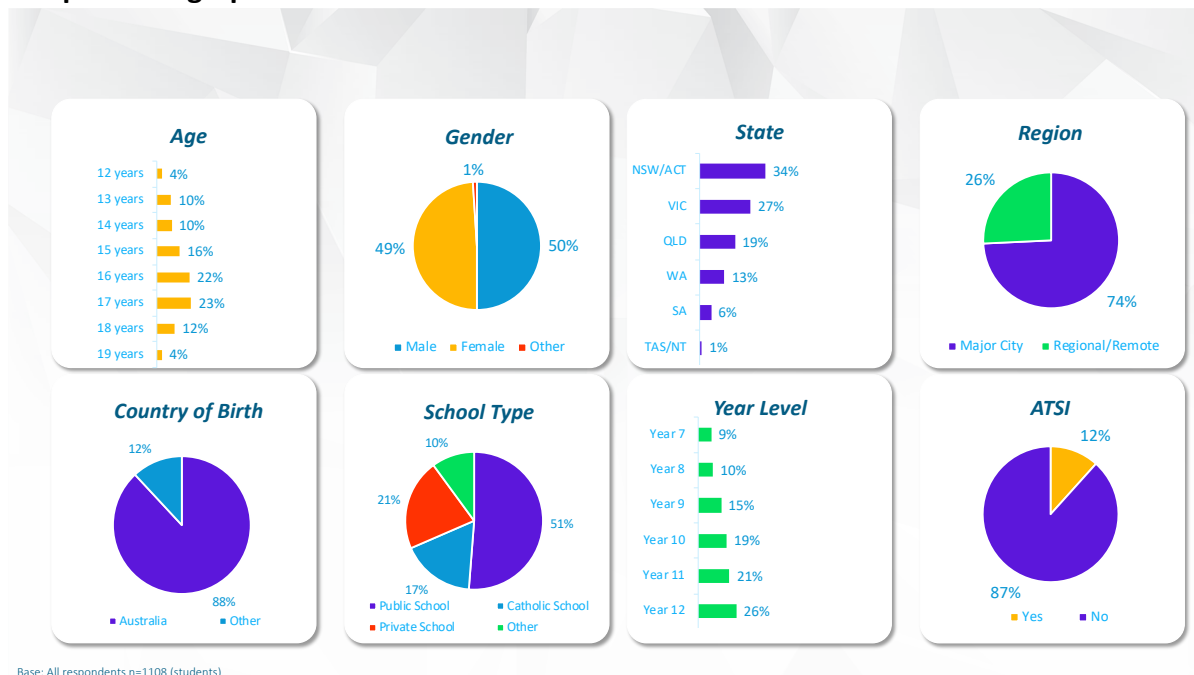
- Establish benchmarks around awareness, consideration and perceptions of Food and Fibre production in Australia
- Evaluate effectiveness of the existing communications
- Establishment of key metrics to track over time

Knowledge of career pathways

- Understand the drivers of career choice and the decision-making process (supplement existing knowledge)
- Determine how to position primary industries as a desirable career option

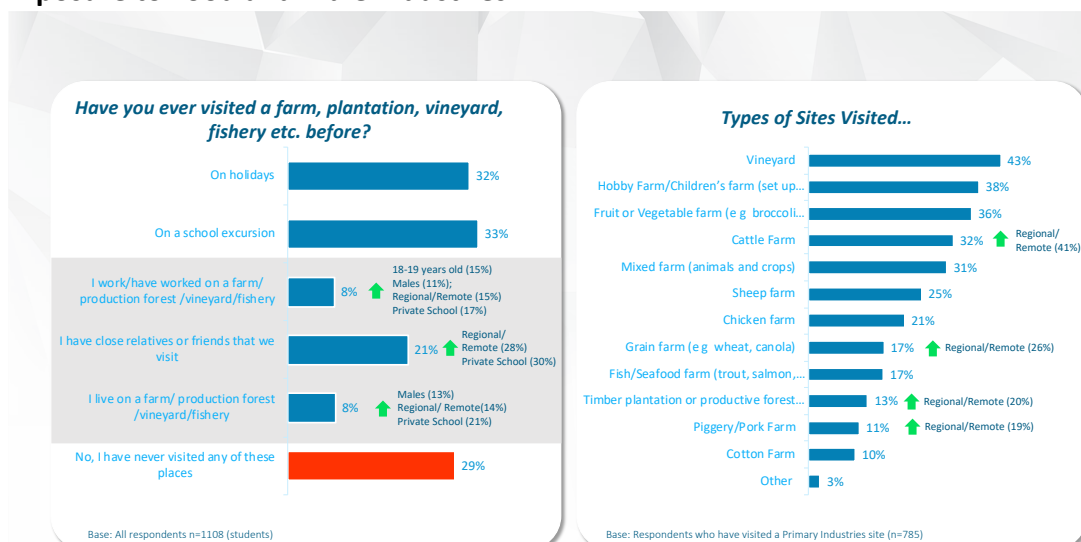
Survey Sample Background

Sample demographics



- 1108 students were surveyed across Australia.
- A balance of gender and state percentages reflected the number of students in each of the states.
- Higher numbers of older students and urban students were surveyed.

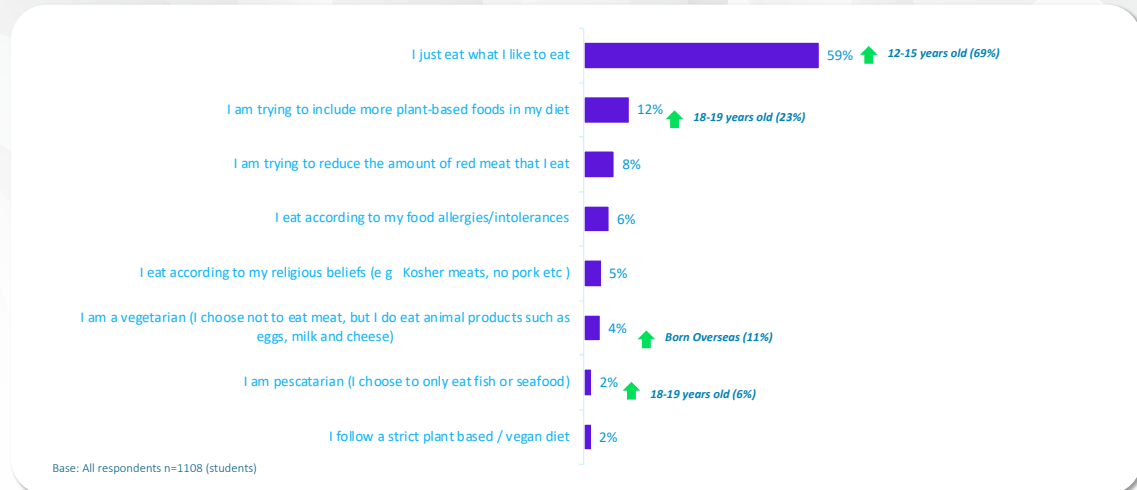
Exposure to Food and Fibre Industries



- Approximately 70% of students indicated they had visited a primary industry location while on holidays or on an excursion.
- Exposure to working on commercial sites skews to males in regional/remote areas who are most likely to be attending private schools

- A smaller number of students indicated that they have worked on a farm or live on a farm.
- Vineyards, hobby farms and fruit and vegetable farms were the most popular sites visited

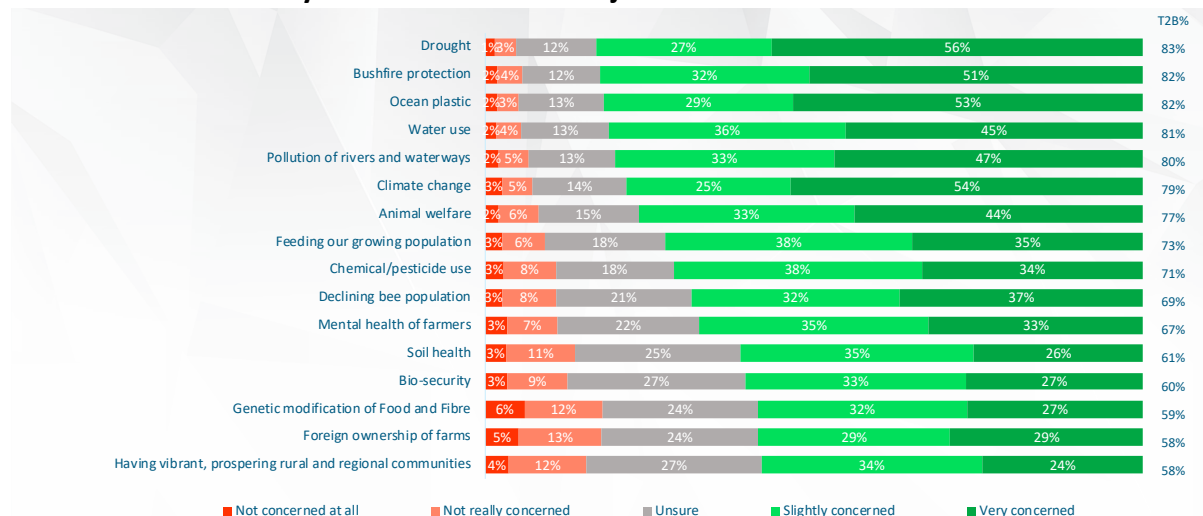
Food Consumption Behaviour



- Nearly 60% of students indicated they make food consumption decisions based on eating what they like.
- There was a trend towards plant based foods among the older age groups.

Food & Fibre Related Issues Concerning Students Today

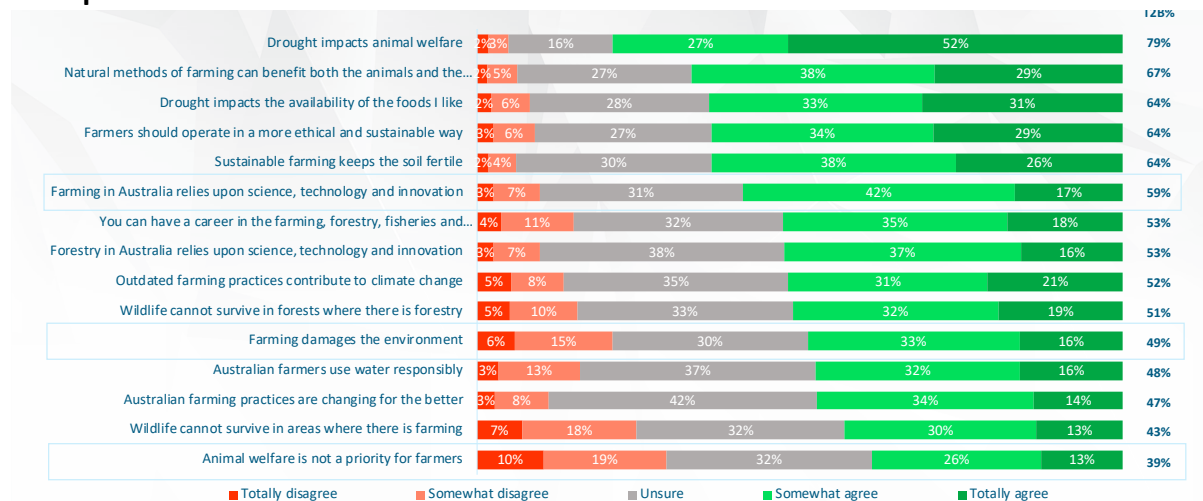
Concern about Primary industries related subjects



Q. Thinking about Food and Fibre production in Australia, how concerned are you personally about the following issues and challenges?
Base: All respondents n=1108

- Drought and bushfires were the most concerning issues, likely due to their occurrence during the survey period.
- Animal welfare and climate change were also very concerning to students.
- Students were less concerned about soil health, biosecurity, genetic modification, foreign ownership of farms and having prosperous regional communities.

Perceptions and behaviours about food and fibre industries



Q. How much do you agree or disagree with the following statements about farming, agriculture and forestry in Australia?

- 64% of students indicated that droughts affect animal welfare.
- A significant number of students (31%) indicated they were unsure if farming in Australia relies upon science and technology, or farming damages the environment (30%)
- A high number (39%) indicated that animal welfare was not a priority for farmers.

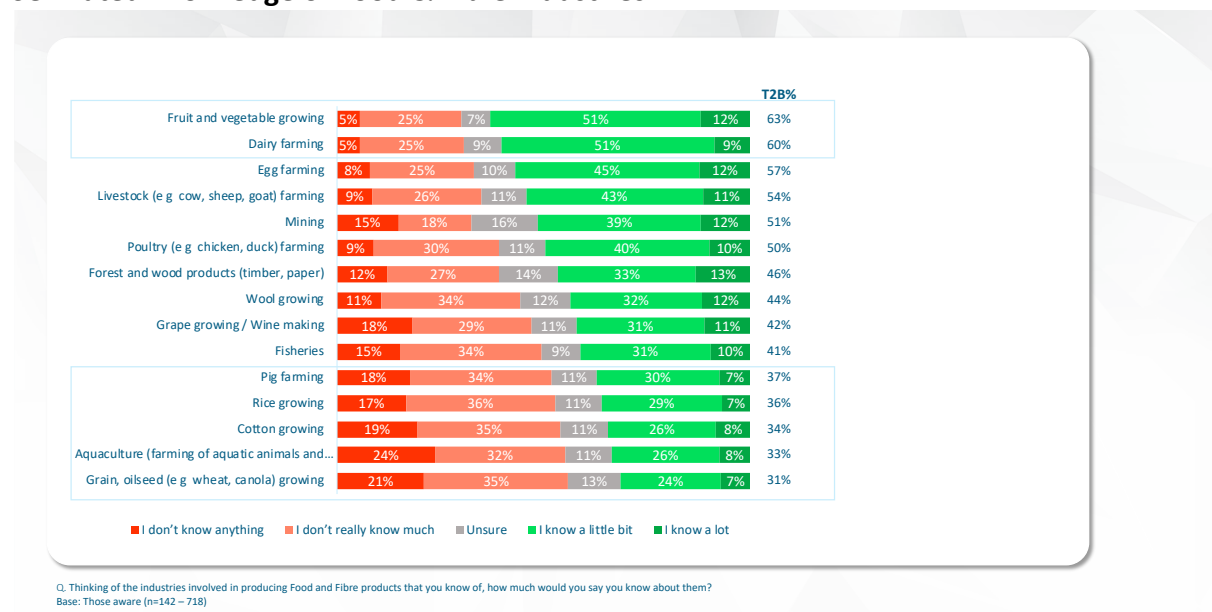
- A significant number (21%) considered that farming damages the environment while 37% were unsure farmers use water responsibly.

Summary about food and fibre issues concerning students

1. Students are concerned about key environmental issues (drought, bushfire, water management, and climate change amongst others)
2. These concerns align with a range of beliefs concerning food and fibre production in Australia and have potential to impact the perceptions of the quality, safety and ethical value of the food and fibre we strive to produce
3. Regional students are more attuned to issues and implications, both positive and negative, concerning food and fibre production.
4. This is the lens through which students have responded to this research regarding food and fibre production – and these prevailing attitudes demand that building positive imagery and trust (through knowledge and connection) must remain a key focus for these industries moving forward, particularly among metropolitan students.

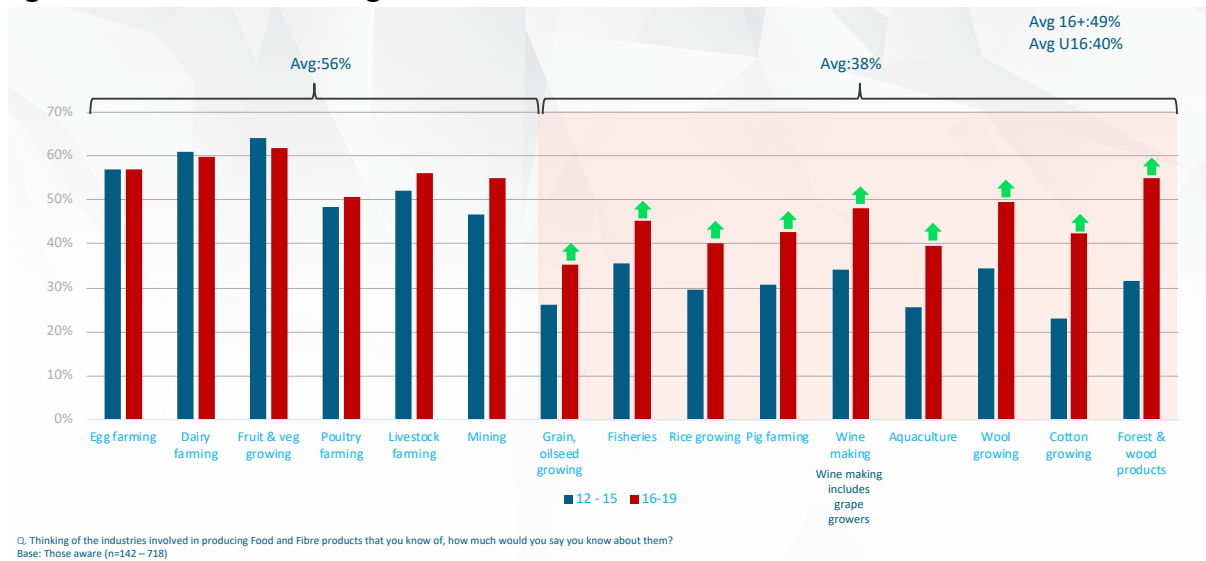
Primary industries awareness, perceptions and understanding

Self-rated knowledge of Food & Fibre industries



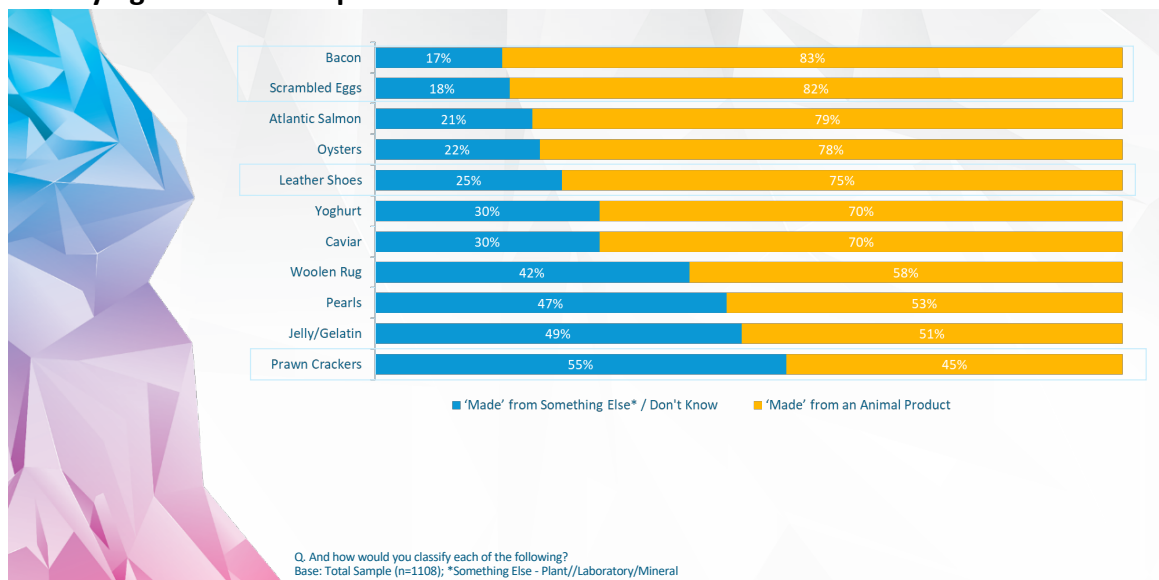
- Two thirds of students feel confident in their knowledge of fruit and vegetable growing and dairy farming.
- One in five students claim to know nothing at all about grain (wheat, canola) rice, cotton growing, grape/wine or pig farming.
- Males and those living in regional areas have significantly higher claimed knowledge across most food and fibre industries.

Age differences in knowledge of food and fibre industries



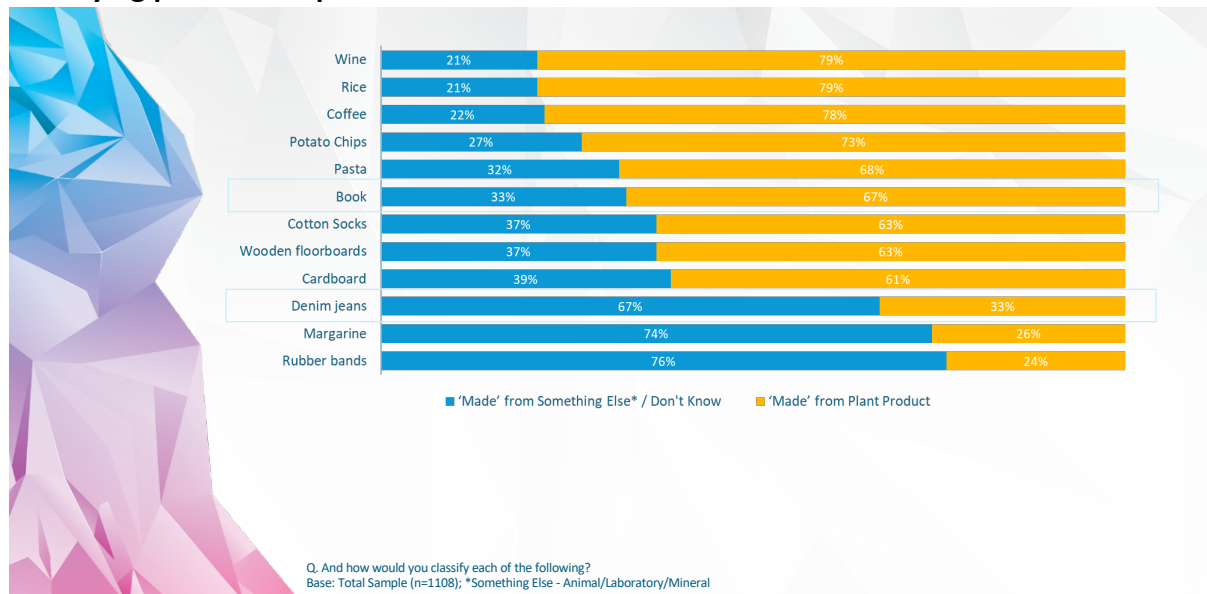
- Knowledge about industries involved in producing food and fibre products significantly declines beyond the more typical industry groups (e.g. eggs, dairy and fruit and vegetables) and is more pronounced in students under 16-years of age.
- Knowledge about industries involved in producing food and fibre products is significantly higher among male students with the exception of dairy, eggs and mining.
- Knowledge about industries involved in producing food and fibre products is significantly higher with students in regional areas for most industries; mining is the only industry where metropolitan students have indicated more knowledge.

Classifying animal based products



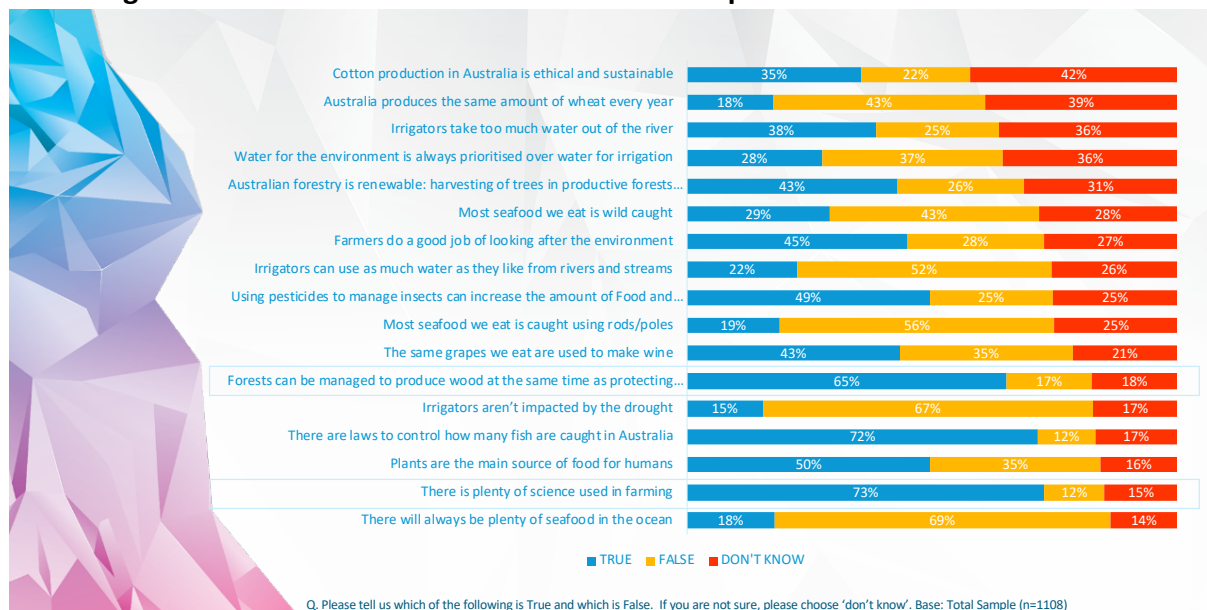
- There is confusion over the origins of some animal products.
- As per the 2011 study, 30% indicated yoghurt is made from something other than animal product.
- One in six students did not know that bacon and scrambled eggs are animal products.
- One in four students do not know that leather shoes are made from animals

Classifying plant based products



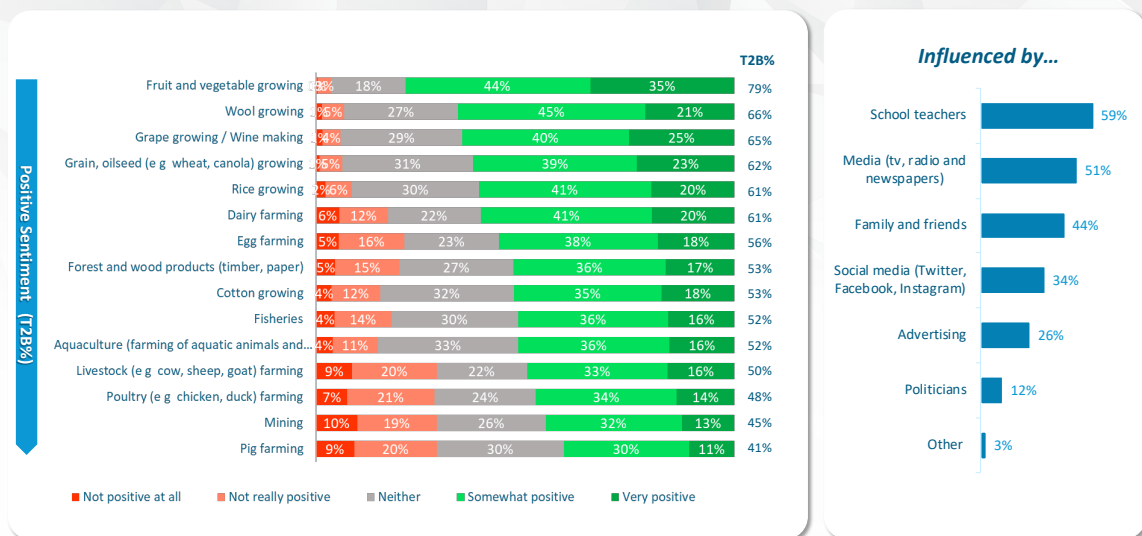
- Over 30% of students did not know that books or pasta are made from plant material.
- Over 60% of students did not know that denim cotton used to make jeans is a plant material.

Knowledge of environmental factors in food and fibre production



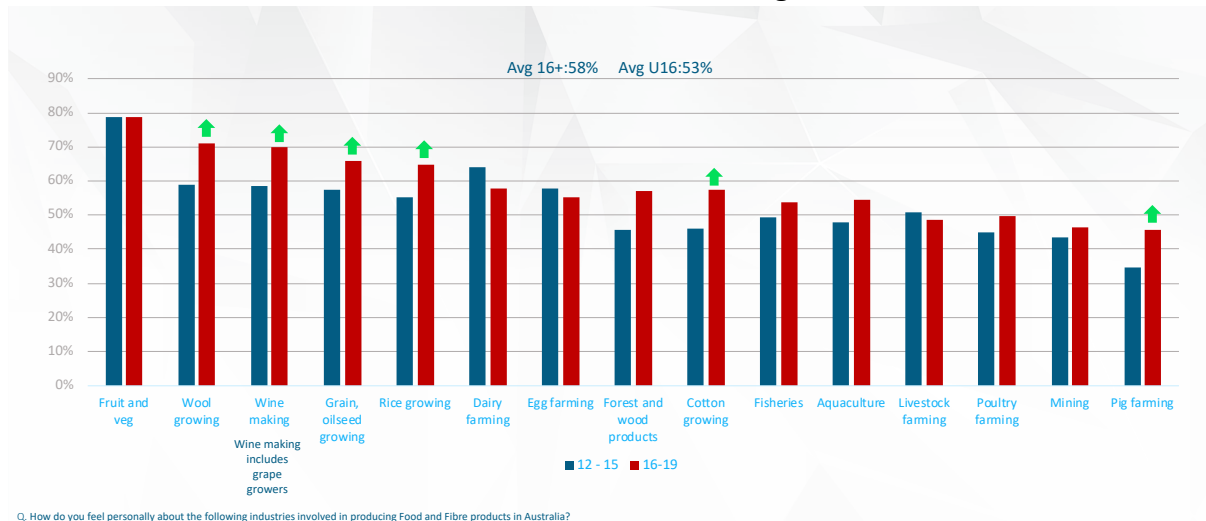
- Most industry specific aspects are poorly understood.
- Over 40% of students indicated that they do not know if cotton production was ethical and sustainable.
- On a positive note, over 70% of students indicated that there is plenty of science in farming.
- Over 30% of students indicated they did not know if irrigators took too much water from rivers.

Sentiment towards food and fibre products



- While students lack a depth of knowledge about food and fibre Industries, they do have opinions regarding these industries.
- Animal based industries have a lower sentiment overall compared with plant based industries.
- 59% of students learn what they know about food and fibre from their teachers.
- Media and family/friends are also significant influencers of students.

Positive sentiment of food and fibre Industries based on age



- Students aged 16 and over had a slightly more positive feeling towards industries involved in producing food and fibre.

Summary of student knowledge and sentiment about food and fibre

1. Knowledge and understanding of food and fibre related Industries among school students are weak to moderate overall
2. In absence of knowledge, socially, culturally, and politically relevant issues and causes have helped to shape student perceptions and sentiment towards food and fibre industries.
3. Industries that are plant based, or 'of the animal' (wool, eggs), fare better than do industries associated with meat production; however, mining and water-related industries may come into focus due to environmental concerns.
4. Generally, industry perceptions fare better amongst males and those from regional areas.

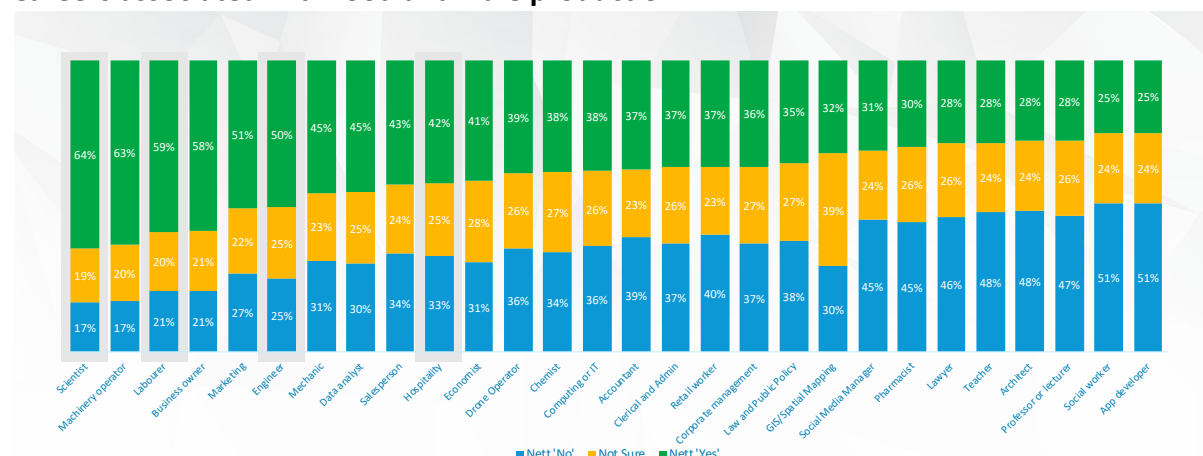
Study and Careers in Food & Fibre

Students were asked what they think about when asked about jobs in food and fibre industries.



- Farming and the food industry dominate the jobs spontaneously associated with food and fibre production.
- The stereotype that food and fibre equates to farming is reaffirmed; it emphasises this to be a point of issue in encouraging young people into food and fibre careers.

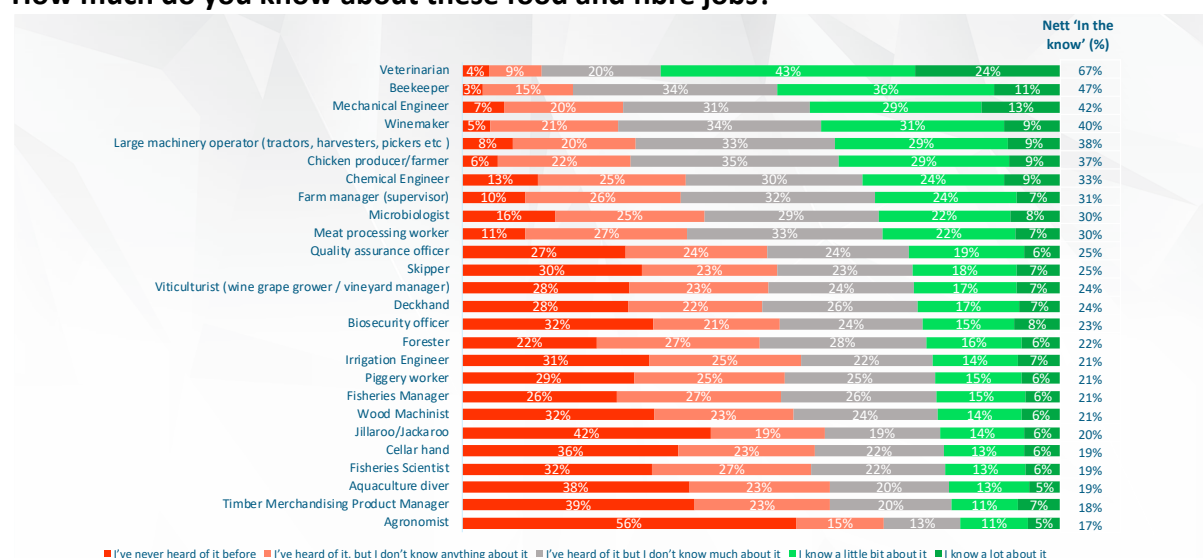
Careers associated with food and fibre production



Q. How much do you associate the following jobs and careers with Food and Fibre production in Australia?
Base: Total Sample n=1108

- When prompted to think about the applicability of more traditional jobs to food and fibre production, most students were able to make these associations. This is promising in terms of breaking the stereotypes that most food and fibre careers have with young people.
- Except for science, labouring, engineering and hospitality, food and fibre jobs are not top of mind for students when considering jobs and careers relating to food and fibre production.
- Overall, the stereotype of food and fibre careers associated with farming are entrenched in the minds of students.

How much do you know about these food and fibre jobs?



Q. How much do you know about the following jobs?
Base: All respondents n=1108

- Knowledge and understanding of the roles of specific industry related jobs is mostly weak.

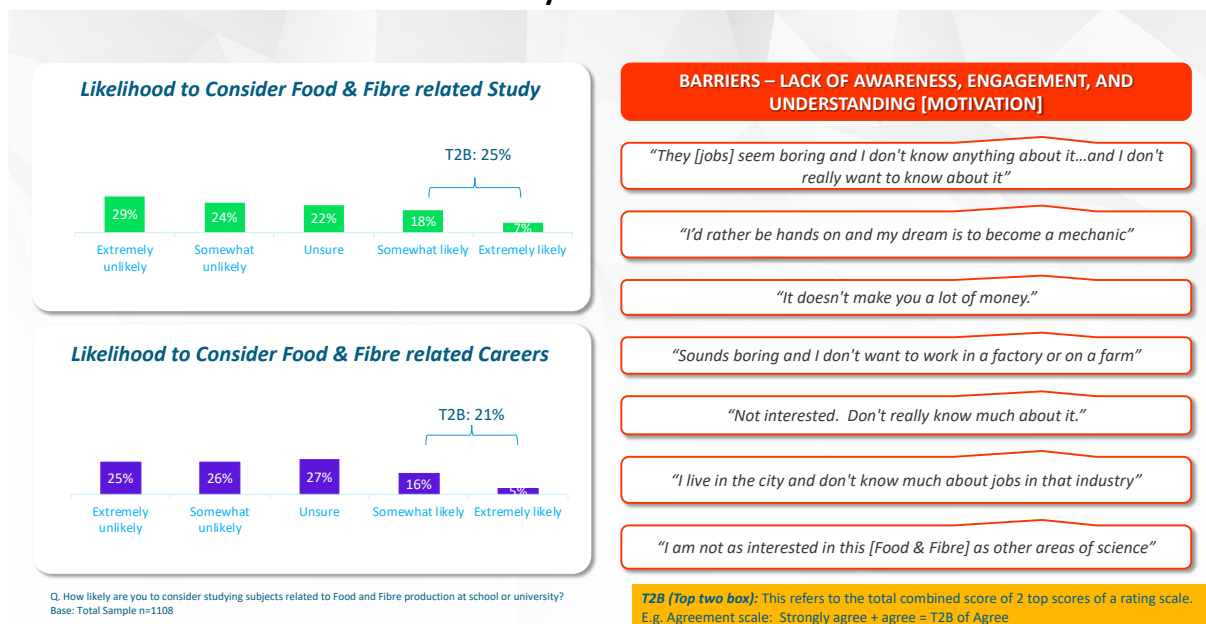
- Results for farm manager and microbiologist show poor knowledge of these roles.
- Viticulturalist, forester, fisheries manager, jillaroo and jackaroo roles were poorly understood.
- Agronomist was the most poorly understood; many students would not be exposed to this job title although it is significant in broadacre cropping industries.

Summary of food and fibre careers

1. Students are seeking jobs and careers that offer good working conditions, a safe working environment and job security.
2. Top of mind food and fibre production jobs relate to farming and the food industry (from hospitality to food nutrition). There was some spontaneous association with more science focused jobs and careers.
3. While students know little about the jobs associated with food and fibre production, such jobs generally are not highly regarded by students – they lack recognition as ‘good’ jobs, aspirational merit and ‘fit’ with students’ interests.
4. To increase awareness and consideration of the range of jobs and careers within food and fibre production it will be essential to educate students about these industries and the role they play in driving Australia forward both commercially, environmentally and socially.

Considering Careers in Food & Fibre Production

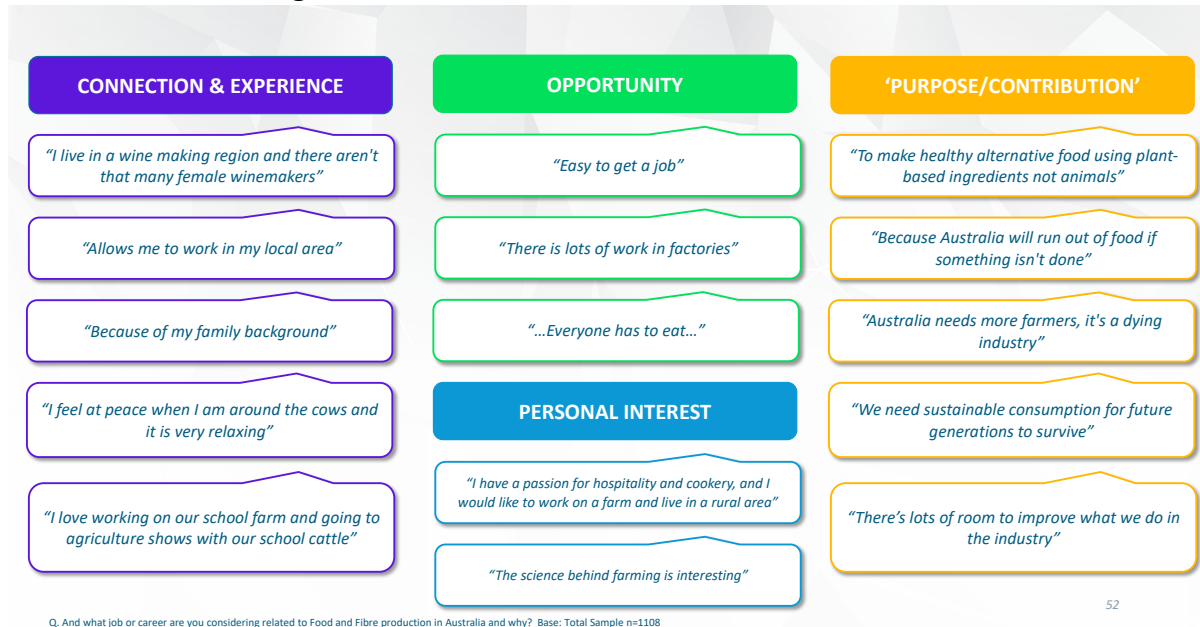
Likelihood of food and fibre related study



- One in four students would consider food and fibre related study and one in five students would consider an industry related career.

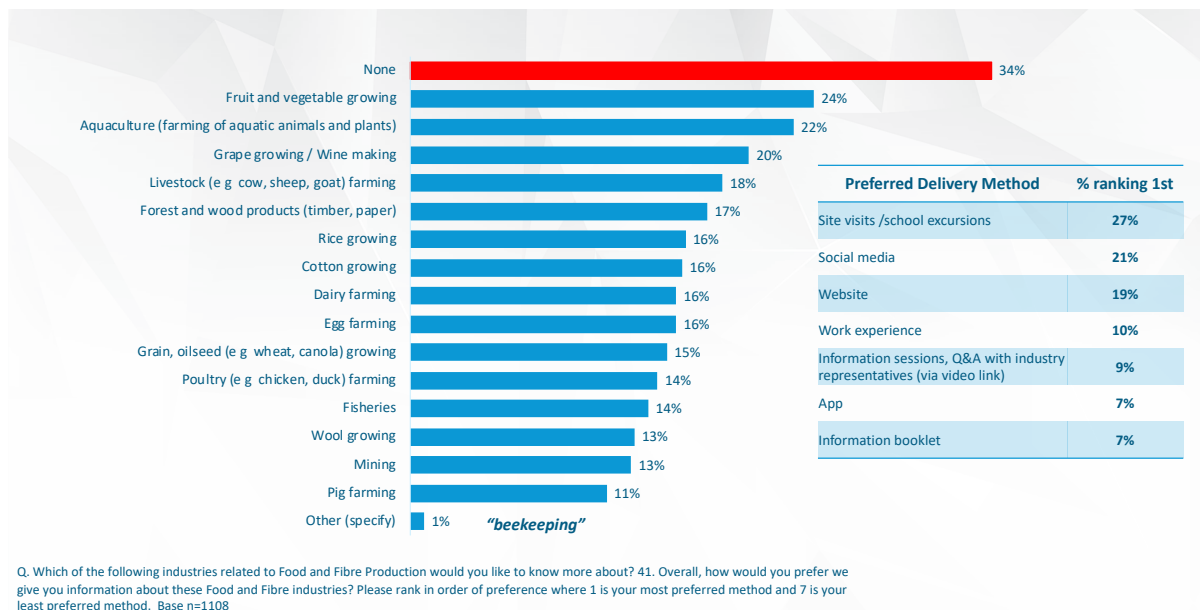
- Jobs are assumed to be boring, low paid, and in rural locations. In some cases, preferred careers (e.g. mechanic) are simply not considered in relation to food and fibre industries.

Drivers for considering a food and fibre career



- Students who would consider a job in food and fibre have some connection to, or experience in the industries either at school or through family.
- Of these students many noted their purpose would be to make farming more sustainable and improve the industry.

Food and Fibre Careers



- Overall 66% of students would like to know more about food and fibre careers.

- Student interest in fruit and vegetable production and in aquaculture careers were highest; fisheries, wool growing and pig farming were of least interest to students.
- The preference on how to receive information about these careers was predominantly through excursions, followed by social media and websites.

Summary of consideration of food and fibre careers

1. Consideration of food and fibre career related study was low as was consideration of food and fibre related jobs.
2. Apathy appeared to be a key barrier to consideration of food and fibre jobs. Students simply did not know enough about the jobs to be interested, and had little motivation to 'find out more'.
3. Those who considered jobs in food and fibre generally had a more informed understanding of the types of jobs available and were very specific in talking about their chosen career.
4. Other drivers for considering food and fibre jobs included ease and convenience, and a desire to contribute meaningfully to a bigger purpose (climate, society, environment) by leading change and driving the future.
5. Students considering jobs and careers in food and fibre were more likely to have experience on farm (living, working, holidays) and have close friends or relatives who own a farm.
6. Students were more likely to consider food and fibre careers around the age of 16-17 before study choices necessarily shape their career path. The challenge is to capture, inspire and connect students early.

Has there been an improvement in food and fibre knowledge and understanding since 2011?

Reflections on the differences between this study and the 2011 research reveals that young people's knowledge of food and fibre industries still shows a lack of understanding in several key areas outlined in this report. This is seen predominantly in the 12 to 15 age bracket. Also, similar to 2011, older students (16 years plus) demonstrated greater understanding across many of the topics. They also demonstrated a deeper sentiment and understanding than did the 12 to 15 years age groups. This indicates increased targeting of the younger age groups with food and fibre content and examples may be the key to improve this understanding.

There is an increasing divide between urban and rural communities relating to the origin of their food sources. This may be a reflection of teacher knowledge and the need for more food and fibre curriculum resources. As well there is a shortage of trained food and fibre teachers across Australia, thereby restricting the in-depth teaching required to engage students in these industries. There are now many online resources available for teacher professional development in food and fibre, but high teacher workloads make time allocation restrictive.

This research has shown there is an ongoing challenge to establish a compelling dialogue with students to reposition food and fibre industries in their hearts and minds. Increased knowledge and positive messages will be key to debunking myths and disrupting the apathy that surrounds food and fibre careers. Encouraging students to have greater appreciation of the importance of these industries and their value to the Australian environment and economy is the challenge.

This research shows that further work is needed to increase awareness and understanding of food and fibre industries into the future. It is evident that farm visits and excursions have a powerful influence on understanding of food and fibre industries. These will be effective learning experienced whether as virtual or face to face farm tours.

PIEFA will continue its work to build connections between students and the food and fibre industries through supporting direct activity and engagement with schools and teachers. Better targeting of the gaps in the understanding and the ever-changing needs of students is the focus required.

Attachment

APPENDIX – Student Survey questionnaire

PIEFA Student Survey Questions

Sample: Mixed sample, comprising:

- Panel: n=1,000 students in years 7 – 12 (nationally representative for age and gender within the student population)
- List: n=250 students from participating Primezone Schools

PROGRAMMING INSTRUCTIONS PROVIDED IN RED

SC = Single choice question | MC = Multi choice question | OE = Open ended response required

INTRODUCTION

This questionnaire is about young people's attitudes and behaviour towards Australia's Australia's agricultural, forestry and fisheries industries related to Food and Fibre production. The research is being conducted by Student Edge on behalf of the Primary Industries Education Foundation Australia (PIEFA).

We would like to invite you to participate in this survey and share your understanding. All answers provided in this research are anonymous and confidential and will only be used for the purposes of this research.

To participate in this survey, please click on 'NEXT'

SECTION 1: DEMOGRAPHICS

To begin, we first need to ask a few questions to get to know you better

1. How old are you?

ASK ALL. DROP DOWN from 12 to 19 SCREEN OUT <12 AND >25

DUMMY VARIABLE

		AIM FOR
12-13	1	5%
14	2	20%
15	3	20%
16	4	25%
17	5	25%
18 – 19	6	5%
20 or older	7	TERMINATE

IF AGED 12 TO 13

As you are under 14 years of age, we will need to get parental consent for you to complete this survey. We will need one of your parents or a legal guardian to complete this next question before you can progress to the survey.

Dear Parents and Legal Guardians

This questionnaire is about young people's attitudes and behaviour towards Australia's agricultural industries related to Food and Fibre production. The research is being

conducted by Student Edge on behalf of the Primary Industries Education Foundation Australia (PIEFA).

We would like to invite your child to participate and share their understanding. All answers provided in this research are anonymous and confidential and will only be used for the purposes of this research.

For any queries please contact Student Edge – Cristiano@studentedge.com.au

To provide consent for your child to take part on this study you will need to answer a few questions below

- Are you over 18 years of age?
- What is your relationship to the child?
- Email Address
- Do you consent for your child to take part on this study?

IF NOT FULLY COMPLETED OR CONSENT IS NOT GIVEN - TERMINATE

2. And which of the following do you identify as?

ASK ALL. SC. DISPLAY ON SINGLE PAGE WITH PREVIOUS QUESTION.

		AIM FOR
Male	1	50%
Female	2	50%
Non-binary / other	98	

3. Where do you live?

ASK ALL. SC.

		Aim for
Sydney – City / Suburbs	1	32%
NSW – Regional	2	
Melbourne – City / Suburbs	3	26%
VIC – Regional	4	
Brisbane – City / Suburbs	5	20%
QLD – Regional	6	
Perth – City / Suburbs	7	11%
WA – Regional	8	
Adelaide – City Suburbs	9	7%
SA – Regional	10	
ACT	11	2%
Hobart – City/Suburbs	12	2%
TAS – Regional	13	
Darwin – City/Suburbs	14	1%
NT – Regional	15	

4. Please enter your postcode

ASK ALL. OE. RESPONDENTS TO BE ASSIGNED TO METRO OR REGIONAL BASED ON POSTCODE

5. Are you of Aboriginal and/or Torres Strait Islander origin?

ASK ALL. SC.

Yes	1
No	2
Prefer not to specify	3

6. Are you currently enrolled in any studies?

ASK ALL. SC.

Yes	1	
No	2	TERMINATE

7. And what type of school do you attend?

Ask if Q6= CODE 1. SC.

Public School	1
Catholic School	2
Private School	3
Selective School	4
Boarding School	5
Other (Please Specify)	6

8. Are you an international student or a domestic student?

ASK IF Q6= CODE 1. SC.

International student	1
Domestic student	2

9. Which of the below best describes the level you're currently studying at?

ASK IF Q6= CODE 1. SC.

Primary school – Year 5 or below	1	TERMINATE
Primary school – Year 6	2	TERMINATE
High School – Year 7	3	
High School – Year 8	4	
High School – Year 9	5	
High School – Year 10	6	
High School – Year 11	7	
High School – Year 12	8	
University	9	TERMINATE
TAFE/ Private College	10	TERMINATE
Other (specify)	98	TERMINATE

SECTION 2: CURRENT BEHAVIOURS, LIFESTYLE AND ATTITUDES

10. Which of the following best describes you when it comes to the foods you eat?

ASK ALL, SC, RANDOMISE

I just eat what I like to eat	1
I follow a strict plant based / vegan diet	2
I am a vegetarian (I choose not to eat meat, but I do eat animal products such as eggs, milk and cheese)	3
I am pescatarian (I choose to only eat fish or seafood)	4
I eat according to my religious beliefs (e.g. Kosher meats, no pork etc.)	5
I am trying to include more plant-based foods in my diet	6
I am trying to reduce the amount of red meat that I eat	7
I eat according to my food allergies/intolerances	8
Other (specify)	9

11. Thinking about the products that you use every day (e.g. clothes, shoes etc.) who makes the decisions about what products you use?

ASK ALL, SC, RANDOMISE

DECISION MAKER	I make the decisions about these products myself	1
INFLUENCER	I share the decision making with someone else (e.g. mum or dad)	2
PASSIVE	Someone else makes the decisions for me (e.g. mum or dad)	3

12. Thinking about the products that you use every day (e.g. clothes, shoes, cosmetics, lunchboxes, drink bottles etc.) which of the following best describes you?

ASK IF Q11=CODE 1 OR 2 [DECISION MAKER/INFLUENCER], MC, RANDOMISE

I avoid certain products due to concern of animal welfare	1
I avoid certain products due concerns to the environment	2
I choose organic products where they're available	3
I buy local /products made locally where I can	4
I prefer products made from natural materials/ingredients	5
I am part of the slow fashion movement (shop at op-shops etc)	6
I always choose sustainable products where they're available	7
None of these	8

SECTION 3: PRIMARY INDUSTRIES AWARENESS, PERCEPTIONS AND UNDERSTANDING

[UNAIDED AWARENESS]

13. What industries do you think of when you think of the different industries involved in producing **Food and Fibre** products in Australia?

Please list as many or as few **different industries** as you can think of. If you can't think of any just click 'none'

ASK ALL, OPEN ENDED

[PROMPTED AWARENESS] NEW SCREEN

14. To the best of your knowledge, which of the following industries are involved in producing Food and Fibre products in Australia?

ASK ALL, RANDOMISE, MR

Dairy farming	1
Wool growing	2
Cotton growing	3
Egg farming	4
Fruit and vegetable growing	5
Fisheries	6
Rice growing	7
Aquaculture (farming of aquatic animals and plants)	8
Pig farming	9
Forest and wood products (timber, paper)	10
Poultry (e.g. chicken, duck) farming	11
Livestock (e.g. cow, sheep, goat) farming	12
Grain, oilseed (e.g. wheat, canola) growing	13
Grape growing / Wine making	14
Mining	15
Automotive manufacturing	16
Plastic recycling	17
Food Processing	18
Baking/Bakery Production	19
Clothes Manufacturing	20

15. Thinking of the industries involved in producing Food and Fibre products that you know of, how much would you say you know about them?

ASK ALL, RANDOMISE, MR

INSERT INDUSTRIES AWARE OF FROM PREVIOUS QUESTION – PRIMARY INDUSTRIES ONLY (CODES 1 - 15)	I don't know anything	I don't really know much	Unsure	I know a little bit	I know a lot

16. How do you feel personally about the following industries involved in producing Food and Fibre products in Australia?

ASK ALL. SC PER ROW

	Not positive at all	Not really positive	Neither	Somewhat positive	Very positive
Cotton Growing	1	2	3	4	5
Livestock farming (e.g. cow, sheep, goat)	1	2	3	4	5
Grape growing / Wine making	1	2	3	4	5
Forest and wood products (timber, paper)	1	2	3	4	5
Pig farming	1	2	3	4	5
Aquaculture (farming of aquatic animals and plants)	1	2	3	4	5
Fisheries	1	2	3	4	5
Fruit and Vegetable Growing	1	2	3	4	5
Grain, Oilseed Growing (e.g. wheat, canola)	1	2	3	4	5
Dairy farming	1	2	3	4	5
Wool growing	1	2	3	4	5
Egg farming	1	2	3	4	5
Poultry (e.g. chicken, duck) farming	1	2	3	4	5
Rice growing	1	2	3	4	5

17. Below are some statements that other people have made about different types of industries involved in producing Food and Fibre products in Australia.

Please tell us which industries you associate with the following statements. You can choose as many or as few as you like.

ASK ALL RANDOMISE ROWS

	Cotton	Livestock farming	Grape growing /	Forest and wood	Pig farming	Aquaculture (farming)	Fisheries	Grain, Oilseed	None of these
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	Growi ng	ng (e.g. cow, sheep , goat)	Wine makin g	produ cts (timbe r, paper)		ng of aquati c animal s and plants)		Growi ng (e.g. wheat , canola)	
Sustainable	1	2	3	4	5	6	7	8	9
Innovation and technology	1	2	3	4	5	6	7	8	9
Important to the Australian economy	1	2	3	4	5	6	7	8	9
An industry that is growing	1	2	3	4	5	6	7	8	9
Offers lots of job opportunities	1	2	3	4	5	6	7	8	9
Lead by research and science	1	2	3	4	5	6	7	8	9
Positively impacts the community	1	2	3	4	5	6	7	8	9
Ethical	1	2	3	4	5	6	7	8	9
Environmentally Conscious	1	2	3	4	5	6	7	8	9
An industry that cares about animal welfare	1	2	3	4	5	6	7	8	9
Gender equality	1	2	3	4	5	6	7	8	9

SECTION 4: KNOWLEDGE OF FOOD SOURCES AND PRODUCTION

18. And how would you classify each of the following?

ASK ALL, SC PER ROW, RANDOMISE ROWS, SPLIT GRID OVER TWO SCREENS

RANDOMISE	'Made' from Plant Product	'Made' from Animal Product	'Made' from a Mineral Product	Man-made (made from materials produced in a laboratory)	I don't know
Pasta	1	2	3	4	5
Cotton Socks	1	2	3	4	5
Scrambled Eggs	1	2	3	4	5
Leather Shoes	1	2	3	4	5
Potato Chips	1	2	3	4	5
Woolen Rug	1	2	3	4	5
Coffee	1	2	3	4	5
Yoghurt	1	2	3	4	5
Pearls	1	2	3	4	5
Prawn Crackers	1	2	3	4	5
Oysters	1	2	3	4	5
Lycra	1	2	3	4	5
Wine	1	2	3	4	5
Jelly/Gelatin	1	2	3	4	5
Bacon	1	2	3	4	5
Denim jeans	1	2	3	4	5

Caviar	1	2	3	4	5
Atlantic Salmon	1	2	3	4	5
Book	1	2	3	4	5
Wooden floorboards	1	2	3	4	5
Glass	1	2	3	4	5
Margarine	1	2	3	4	5
Cardboard	1	2	3	4	5
Rice	1	2	3	4	5
Car tyres	1	2	3	4	5
Plastic	1	2	3	4	5
Rubber bands	1	2	3	4	5
Silicon	1	2	3	4	5
Nylon	1	2	3	4	5

19. Farmers who use water from rivers and dams are called 'Irrigators'. Thinking about what you know about irrigated farms please tell us which of the below statements are true and which are false. If you are not sure, please choose 'don't know'.

ASK ALL, SC PER ROW, RANDOMISE ROWS

	True	False	Don't know
Irrigators can use as much water as they like from rivers and streams.	1	2	3
Water for the environment is always prioritised over water for irrigation.	1	2	3
Irrigators take too much water out of the river	1	2	3
Irrigators aren't impacted by the drought	1	2	3

20. Please tell us which of the following is True and which is False. If you are not sure, please choose 'don't know'.

ASK ALL, SC PER ROW, RANDOMISE ROWS

	True	False	Don't know
1. Most seafood we eat is wild caught	1	2	3
2. Most seafood we eat is caught using rods/poles	1	2	3
3. Australia produces the same amount of wheat every year	1	2	3
4. There will always be plenty of seafood in the ocean	1	2	3
5. Australian forestry is renewable: harvesting of trees in productive forests is followed by replanting for the long term	1	2	3
6. There are laws to control how many fish are caught in Australia	1	2	3
7. Cotton production in Australia is ethical and sustainable	1	2	3
8. Forests can be managed to produce wood at the same time as protecting the environment	1	2	3
9. Plants are the main source of food for humans	1	2	3
10. Using pesticides to manage insects can increase the amount of Food and Fibre grown on farms	1	2	3
11. The same grapes we eat are used to make wine	1	2	3
12. There is plenty of science used in farming	1	2	3
13. Farmers do a good job of looking after the environment	1	2	3

SECTION 5: PRIMARY INDUSTRIES CAREERS KNOWLEDGE AND CONSIDERATION

Now, we'd like to talk to you about your future jobs and career considerations. For some of you it might seem a long way off, but we are still interested to hear your thoughts...

21. What comes to mind when you think about jobs and careers related to Food and Fibre production?

ASK ALL, OPEN ENDED

22. How likely are you to consider studying subjects related to Food and Fibre production at school or university?

ASK ALL, SR

Extremely likely	5
Somewhat likely	4
Unsure	3
Somewhat unlikely	2
Not likely at all	1

23. And how likely are you to consider **any** job or career related to Food and Fibre production when you leave school?

ASK ALL, SR

Extremely likely	5
Somewhat likely	4
Unsure	3
Somewhat unlikely	2
Not likely at all	1

24. And what job or career are you considering related to Food and Fibre production in Australia and why?

ASK IF Q23=CODE 4 OR 5, OE

25. And why are you unlikely to consider a job or career related to producing Food and Fibre when you leave school?

ASK IF Q23=CODE 1 OR 2, OE

26. How important are each of the following factors to you when choosing a career?

ASK ALL SC PER ITEM. RANDOMISE ORDER. SPLIT OVER TWO SCREENS IF NECESSARY

	Not importa nt at all	Not very importa nt	Neither	Somew hat importa nt	Very Import ant
Job security	1	2	3	4	5
Is in an industry that is growing	1	2	3	4	5
Lots of roles available	1	2	3	4	5
Offers a lot of variety	1	2	3	4	5
Uses lots of technology	1	2	3	4	5
Easy to learn on the job	1	2	3	4	5
High salary	1	2	3	4	5
Allows you to be creative	1	2	3	4	5
Positively impacts society	1	2	3	4	5

Helping people	1	2	3	4	5
Is in an industry that is sustainable	1	2	3	4	5
Has good working conditions	1	2	3	4	5
Is in an industry that's existed for a long time	1	2	3	4	5
Is a fun environment to work in	1	2	3	4	5
Provides an opportunity to travel	1	2	3	4	5
Contributes to solving a major world problem	1	2	3	4	5
Involves working with animals	1	2	3	4	5
Involves working in a team	1	2	3	4	5
Allows me to work outdoors	1	2	3	4	5
Allows me to work in my local area	1	2	3	4	5
Allows me to work in a rural community	1	2	3	4	5
Provides equal opportunities for women	1	2	3	4	5
Provides a safe work environment	1	2	3	4	5

27. How much do you know about the following jobs?

RANDOMISE	I've never heard of it before	I've heard of it, but I don't know anything about it	I've heard of it but I don't know much about it	I know a little bit about it	I know a lot about it
Farm manager (supervisor)	1	2	3	4	5
Irrigation Engineer	1	2	3	4	5
Large machinery operator (tractors, harvesters, pickers etc.)	1	2	3	4	5
Viticulturist (wine grape grower / vineyard manager)	1	2	3	4	5
Winemaker	1	2	3	4	5
Cellar hand	1	2	3	4	5
Beekeeper	1	2	3	4	5
Chicken producer/farmer	1	2	3	4	5
Jillaroo/Jackaroo	1	2	3	4	5
Agronomist	1	2	3	4	5
Mechanical Engineer	1	2	3	4	5
Forester	1	2	3	4	5
Veterinarian	1	2	3	4	5
Chemical Engineer	1	2	3	4	5
Skipper	1	2	3	4	5
Deckhand	1	2	3	4	5
Fisheries Scientist	1	2	3	4	5
Fisheries Manager	1	2	3	4	5
Aquaculture diver	1	2	3	4	5
Meat processing worker	1	2	3	4	5
Quality assurance officer	1	2	3	4	5
Microbiologist	1	2	3	4	5
Wood Machinist	1	2	3	4	5
Timber Merchandising Product Manager	1	2	3	4	5
Piggery worker	1	2	3	4	5
Biosecurity officer	1	2	3	4	5

28. How likely are you to consider working in any of the following jobs and careers when you leave school?

ASK ALL, SC PER ROW

	Definitely would NOT consider	Would not really consider	Unsure	Would give it some thought	Definitely WOULD consider
SHOW ONLY JOBS FROM Q30 ≠ 1 [NEVER HEARD OF IT]	1	2	3	4	5

29. And how much do you agree or disagree that jobs and careers in Food and Fibre production offer the following?

ASK ALL, SC PER ROW, RANDOMISE ROWS, SPLIT OVER TWO SCREENS IF NECESSARY

	Totally disagree	Somewhat disagree	Neither	Somewhat agree	Totally agree
Job security	1	2	3	4	5
Is in an industry that is growing	1	2	3	4	5
Lots of roles available	1	2	3	4	5
Offers a lot of variety	1	2	3	4	5
Uses lots of technology	1	2	3	4	5
Easy to learn on the job	1	2	3	4	5
High salary	1	2	3	4	5
Allows you to be creative	1	2	3	4	5
Positively impacts society	1	2	3	4	5
Helping people	1	2	3	4	5
Is in an industry that is sustainable	1	2	3	4	5
Has good working conditions	1	2	3	4	5
Is in an industry that's existed for a long time	1	2	3	4	5
A fun environment to work in	1	2	3	4	5
Provides an opportunity to travel	1	2	3	4	5
Contributes to solving a major world problem	1	2	3	4	5
Involves working with animals	1	2	3	4	5
Involves working in a team	1	2	3	4	5
Allows me to work outdoors	1	2	3	4	5
Allows me to work in my local area	1	2	3	4	5
Allows me to work in a rural community	1	2	3	4	5
Provides equal opportunities for women	1	2	3	4	5
A safe environment to work in	1	2	3	4	5

30. Which of the following jobs do you associate with the statements below? You can choose as many of as few of the jobs listed as you like. **ASK ALL, MC PER ROW, RANDOMISE ROWS**

IMAGERY STATEMENTS	Piggery Worker	Farm Manager (supervisor)	Deckhand	Viticulturist (wine grape grower / vineyard manager)	Veterinarian	Meat Processing Worker	Fisheries Scientist	Forester	None of these
A good job	1	2	3	4	5	6	7	8	9
I know what I need to study to get this job	1	2	3	4	5	6	7	8	9
You need to go to university to get this job	1	2	3	4	5	6	7	8	9
A job you can get even if you don't finish school	1	2	3	4	5	6	7	8	9
Not for me	1	2	3	4	5	6	7	8	9
A job I would feel proud to have	1	2	3	4	5	6	7	8	9
A job I'd be interested in finding out more about	1	2	3	4	5	6	7	8	9
A job my parents would be happy with me doing	1	2	3	4	5	6	7	8	9
A job you do only if you can't get a job doing anything else	1	2	3	4	5	6	7	8	9
A job that contributes to solving a world problem	1	2	3	4	5	6	7	8	9

31. How much do you associate the following jobs and careers with Food and Fibre production in Australia?

ASK ALL, SC PER ROW, RANDOMISE ROWS

	Not at all	Not Really	Unsure	A little bit	A lot
Accountant					
Architect					
Business owner					
Chemist					
Clerical and administration (office support)					
Computing or information technology (IT)					
Corporate management					
Data analyst					
Economist					
Engineer					
Drone Operator					
Hospitality					
Labourer (construction, grounds maintenance, factory worker)					
Law and Public Policy					
Lawyer					
Machinery operator or driver					
Marketing					
Mechanic					
Pharmacist					
Professor or lecturer					
Retail worker					
Salesperson					
Scientist					
Social worker					
Teacher					
App developer					
Social Media Manager					
GIS/Spatial Mapping					

32. From the below list, which factors influences your decision about future jobs and careers?

Please select up to 3 factors which influence you the most. ASK ALL, MC, RANDOMISE

TV show/movie	1
Activities outside of school	2
Books/Magazines	3
YouTube	4
My own skills and abilities	5
Work experience	6
Childhood dream	7
Personal interests	8

The kind of jobs people in my family have	9
Potential earnings	10
Potential to be famous	11
Ambition to change the world	12
Other (Please specify)	13
None of the above	98

SECTION 6: ATTITUDES AND BEHAVIOURS REGARDING PRIMARY INDUSTRIES

33. Thinking about what you know about Food and Fibre production in Australia... where have you learned what you know?

ASK ALL, MC, RANDOMISE

Social media (Twitter, Facebook, Instagram)	1
School teachers	2
Media (tv, radio and newspapers)	3
Advertising	4
Family and friends	5
Politicians	6
Other (specify)	7

34. Thinking about Food and Fibre production in Australia, how concerned are you personally about the following issues and challenges?

ASK ALL, SC PER ROW, RANDOMISE

	Not concerned at all	Not really concerned	Unsure	Slightly concerned	Very concerned
1. Climate change	1	2	3	4	5
2. Drought	1	2	3	4	5
3. Water use	1	2	3	4	5
4. Pollution of rivers and waterways	1	2	3	4	5
5. Bio-security					
6. Ocean plastic	1	2	3	4	5
7. Genetic modification of Food and Fibre	1	2	3	4	5
8. Soil health	1	2	3	4	5
9. Foreign ownership of farms	1	2	3	4	5
10. Animal welfare	1	2	3	4	5
11. Chemical/pesticide use	1	2	3	4	5
12. Feeding our growing population	1	2	3	4	5
13. Mental health of farmers	1	2	3	4	5
14. Declining bee population	1	2	3	4	5

15. Having vibrant, prospering rural and regional communities	1	2	3	4	5
16. Bushfire protection	1	2	3	4	5

35. How much do you agree or disagree with the following statements about farming, agriculture and forestry in Australia? **ASK ALL, SC PER ROW, RANDOMISE ROWS**

	Totally disagree	Somewh at disagree	Unsure	Somewh at agree	Totally agree
Drought impacts animal welfare					
Drought impacts the availability of the foods I like					
Sustainable farming keeps the soil fertile					
Farming damages the environment					
Outdated farming practices contribute to climate change					
Wildlife cannot survive in areas where there is farming					
Animal welfare is not a priority for farmers					
You can have a career in the farming, forestry, fisheries and agriculture industries even if you live in the city					
Natural methods of farming can benefit both the animals and the environment					
Farming in Australia relies upon science, technology and innovation					
Australian farmers use water responsibly					
Farmers should operate in a more ethical and sustainable way					
Australian farming practices are changing for the better					
Wildlife cannot survive in forests where there is forestry					
Forestry in Australia relies upon science, technology and innovation					

36. And how much do you agree or disagree with the following statements about the food and the production of food?

ASK ALL, SC PER ROW, RANDOMISE ROWS

	Totally disagree	Somewh at disagree	Unsure	Somewh at agree	Totally agree
Knowing where my food comes from is important to me					
Food that comes from Australia is safer than imported foods					
Australia exports more food products than it imports					
Drought makes food more expensive					
Australian food is produced more ethically than food from overseas					
Australian food is better quality than imported foods					
Plant based meat is the future of food production					

SECTION 7: MESSAGING AND COMMUNICATIONS

Thinking about the Food and Fibre production in Australia, there are a range of things we can tell you to help you understand more about the industries involved...

STIMULUS – MAX OF THREE KEY MESSAGES PER INDUSTRY

LOOP Q 37-39 FOR EACH INDUSTRY WITH MESSAGES TO TEST

Please take a look at each of the following messages about some industries involved in Food and Fibre production in Australia and answer the following questions.

37. Thinking about [INSERT INDUSTRY], how **surprised** are you to learn that ...

ASK ALL, SC PER ROW, RANDOMISE ROWS

		Not surprised at all	Not really surprised	Neither	Somewha t surprised	Very surprised
COTTON	90% of Australian cotton farms are family owned	1	2	3	4	5
COTTON	Not all cotton is irrigated, some cotton is grown from rainfall.	1	2	3	4	5
COTTON	Cotton seed can be used to feed cattle, especially during the drought	1	2	3	4	5
WINE	The grape and wine sector, including wine tourism, supports over 160,000 jobs.	1	2	3	4	5

WINE	A career in viticulture or winemaking gives you a chance to work across 65 regions around Australia and an opportunity to travel the world.	1	2	3	4	5
WINE	You can use diverse skills and knowledge from agriculture, science, technology, IT, innovation, research, communications, marketing and creativity in the grape and wine sector.	1	2	3	4	5
Fisheries	Australia's fisheries are some of the most sustainable in the world	1	2	3	4	5
Fisheries	Australia imports most of the seafood we consume	1	2	3	4	5
Fisheries	Most of the Atlantic salmon we consume is grown in farms, not caught in the wild	1	2	3	4	5
Forest and wood products (timber, paper)	You can use diverse skills and knowledge from environmental management, science, technology, IT, innovation, research, communications, business, marketing and creativity in the forest and wood product sector.					
Forest and wood products (timber, paper)	Most of the trees grown in Australia for wood and fibre production come from specially planted and replanted forests					
Forest and wood products (timber, paper)	Wood is the only renewable building material					
Forest and wood products (timber, paper)	Sustainable forest management aimed at providing timber, fibre, biomass, non-timber resources, and other ecosystem functions and services, can lower greenhouse gas emissions					
Pork	More than 80% of ham and bacon in Australian supermarkets comes from overseas					
Pork	It takes less than half the amount of CO2 to produce 1kg of pork as it does to produce 1kg of some other meats					

Pork	It is illegal to feed pigs any meat, meat products, or food scraps that have been in contact with meat.					
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38. And how do these messages from [INSERT INDUSTRY], make you feel about [INSERT INDUSTRY]

This message makes me feel...

ASK ALL, SC PER ROW, RANDOMISE ROWS

		Much less positive	A little less positive	No change	A little more positive	Much more positive about them
COTTON	90% of Australian cotton farms are family owned	1	2	3	4	5
COTTON	Not all cotton is irrigated, some cotton is grown from rainfall.	1	2	3	4	5
COTTON	Cotton seed can be used to feed cattle, especially during the drought	1	2	3	4	5
WINE	The grape and wine sector, including wine tourism, supports over 160,000 jobs.	1	2	3	4	5
WINE	A career in viticulture or winemaking gives you a chance to work across 65 regions around Australia and an opportunity to travel the world.	1	2	3	4	5
WINE	You can use diverse skills and knowledge from agriculture, science, technology, IT, innovation, research, communications, marketing and creativity in the grape and wine sector.	1	2	3	4	5
Fisheries	Australia's fisheries are some of the most sustainable in the world	1	2	3	4	5
Fisheries	Australia imports most of the seafood we consume	1	2	3	4	5
Fisheries	Most of the Atlantic salmon we consume is grown in farms, not caught in the wild	1	2	3	4	5
Forest and	You can use diverse skills and knowledge from					

wood products (timber, paper)	environmental management, science, technology, IT, innovation, research, communications, business, marketing and creativity in the forest and wood product sector.					
Forest and wood products (timber, paper)	Most of the trees grown in Australia for wood and fibre production come from specially planted and replanted forests					
Forest and wood products (timber, paper)	Wood is the only renewable building material					
Forest and wood products (timber, paper)	Sustainable forest management aimed at providing timber, fibre, biomass, non-timber resources, and other ecosystem functions and services, can lower greenhouse gas emissions					
Pork	More than 80% of ham and bacon in Australian supermarkets comes from overseas					
Pork	It takes less than half the amount of CO2 to produce 1kg of pork as it does to produce 1kg of some other meats					
Pork	It is illegal to feed pigs any meat, meat products, or food scraps that have been in contact with meat.					

39. And thinking about this information you have learned about [INSERT INDUSTRY] today, how likely are you to ...

ASK ALL, SC PER ROW, RANDOMISE ROWS

	Not likely at all	Not really likely	Neither	Somewhat likely	Very Likely
Support the [INSERT INDUSTRY] by buying local products					
Explore jobs and careers related to [INSERT INDUSTRY]					
Explore study options/pathways related to [INSERT INDUSTRY]					
Tell your friends/family what you have learned					
Do your own research to find out more information					

40. Which of the following industries related to Food and Fibre Production would you like to know more about?

ASK ALL, MC, RANDOMISE

Dairy farming	1
Wool growing	2
Cotton growing	3
Egg farming	4
Fruit and vegetable growing	5
Fisheries	6
Rice growing	7
Aquaculture (farming of aquatic animals and plants)	8
Pig farming	9
Forest and wood products (timber, paper)	10
Poultry (e.g. chicken, duck) farming	11
Livestock (e.g. cow, sheep, goat) farming	12
Grain, oilseed (e.g. wheat, canola) growing	13
Grape growing / Wine making	14
Mining	15
Other (specify)	16
None	17

41. Overall, how would you prefer we give you information about these Food and Fibre industries? Please rank in order of preference where 1 is your most preferred method and 7 is your least preferred method. ASK ALL, RANKING

Information booklet	1
Website	2
Social media	3
Information sessions, Q&A with industry representatives (via video link)	4
Site visits /school excursions	5
Work experience	6
App	7

SECTION 8: CLASSIFICATION

42. And have you ever visited a farm, plantation, vineyard, fishery etc. before?

ASK ALL, MC, RANDOMISE

Yes - on holidays	1	
Yes - on a school excursion	2	
Yes - I work/have worked on a farm/ production forest /vineyard/fishery	3	
Yes - I have close relatives or friends that we visit	4	
Yes - I live on a farm/ production forest /vineyard/fishery	5	
No, I have never visited any of these places	6	

43. Which of the following have you visited before? Please select all that apply

ASK IF Q45 = CODES 1 - 5. MC. RANDOMISE

Hobby Farm/Children's farm (set up for school groups)	1	
Cotton Farm	2	
Piggery/Pork Farm	3	
Cattle Farm	4	
Fruit or Vegetable farm (e.g. broccoli etc.)	5	
Grain farm (e.g. wheat, canola)	6	
Chicken farm	7	
Sheep farm	8	
Fish/Seafood farm (trout, salmon, oysters etc)	9	
Timber plantation or productive forest (e.g. pine forest, state native forest used for wood production)	10	
Mixed farm (animals and crops)	11	
Vineyard	12	
Other (specify)	13	

44. In what country were you born?

ASK ALL. SC.

Australia	1	
Other (specify)	2	

45. And in what country were your parents born?

ASK ALL. SC.

Australia	1	
One in Australia and one overseas (specify)	2	
Other (specify)	3	

46. How long have you been living in Australia?

ASK IF Q45 = CODE 2. SC

Less than 1 year	1	
1 – 2 years	2	

2 - 3 years	3
3 – 4 years	4
4 – 5 years	5
5+ years	6

THANKS AND CLOSE