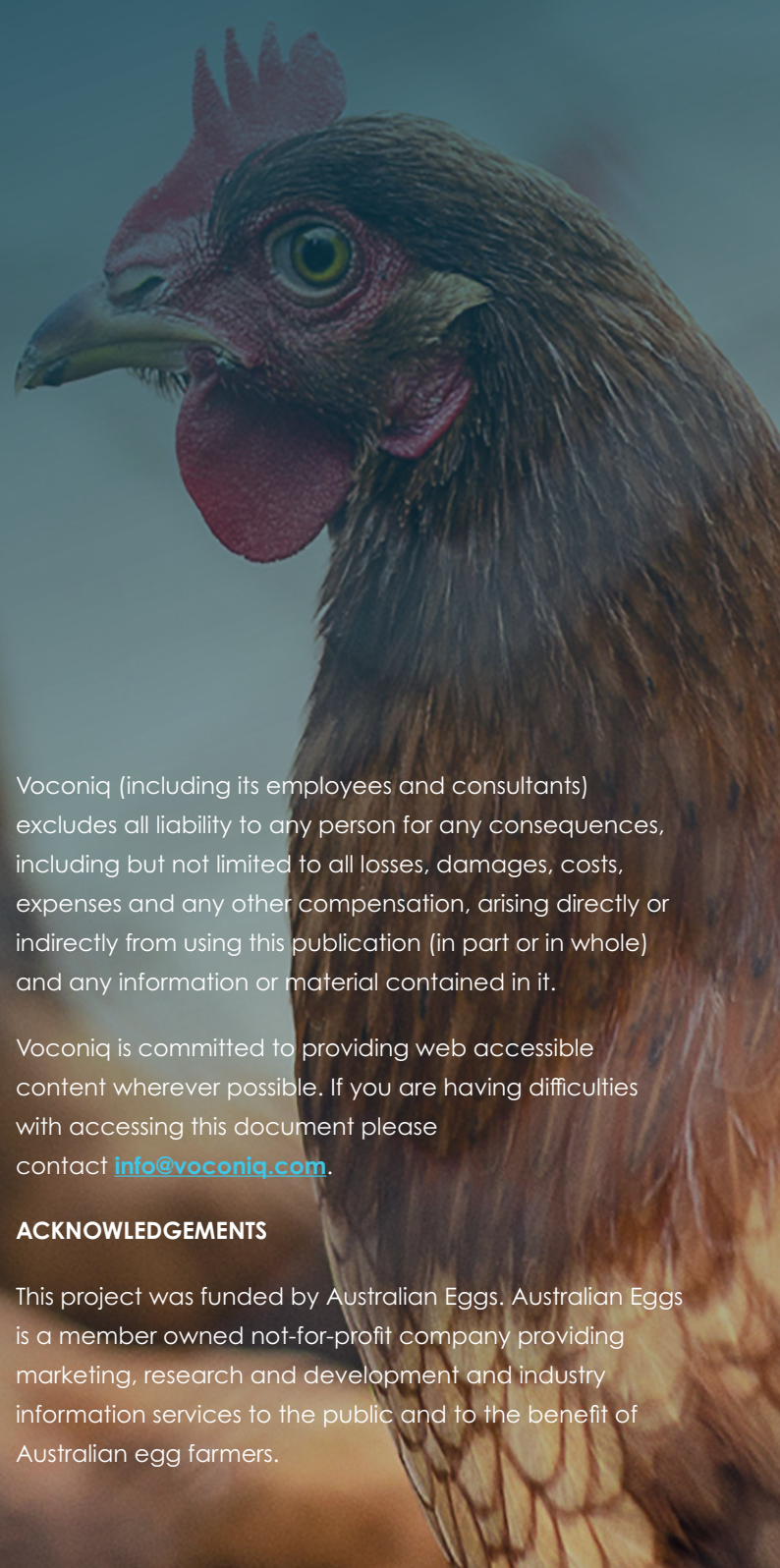


AUSTRALIAN EGG INDUSTRY COMMUNITY RESEARCH REPORT

2022





CITATION

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INTRODUCTION

*The Australian Egg industry plays an important role in the lives of many Australians. In the 2020-21 financial year, the industry produced 6.3 billion eggs with Australians consuming **249** eggs a year on average¹.*

This presence comes with community expectations about the way the industry operates. Over the last five years Australian Eggs, the industry's member owned not-for-profit company providing marketing and research & development (R&D) services for the benefit of Australian egg farmers, has commissioned independent social research to measure and transparently publish community attitudes toward the egg industry. The report provides a summary of the 2022 community research and comparisons with responses by Australians in the previous four years of research.

This community research informs the work of the egg industry's Sustainability Committee, its executive and members in setting Australian Eggs' R&D agenda, and the way the industry engages with the Australian community on issues material to its relationship with the industry. Importantly, it also informs the Australian egg industry's Sustainability Framework.

Since 2018, this research program has engaged almost 40,000 Australians via a comprehensive online survey instrument that is updated each year to ensure that it captures relevant information to societal expectations to inform egg industry practices.

This research started with a three-year engagement with CSIRO and since 2020 with Voconiq.

A key principle in this research and in the Australian Eggs Sustainability Framework is transparency, which is shared by both Australian Eggs and Voconiq. The findings will be published on Voconiq's website² and separately on the Australian Eggs website³.

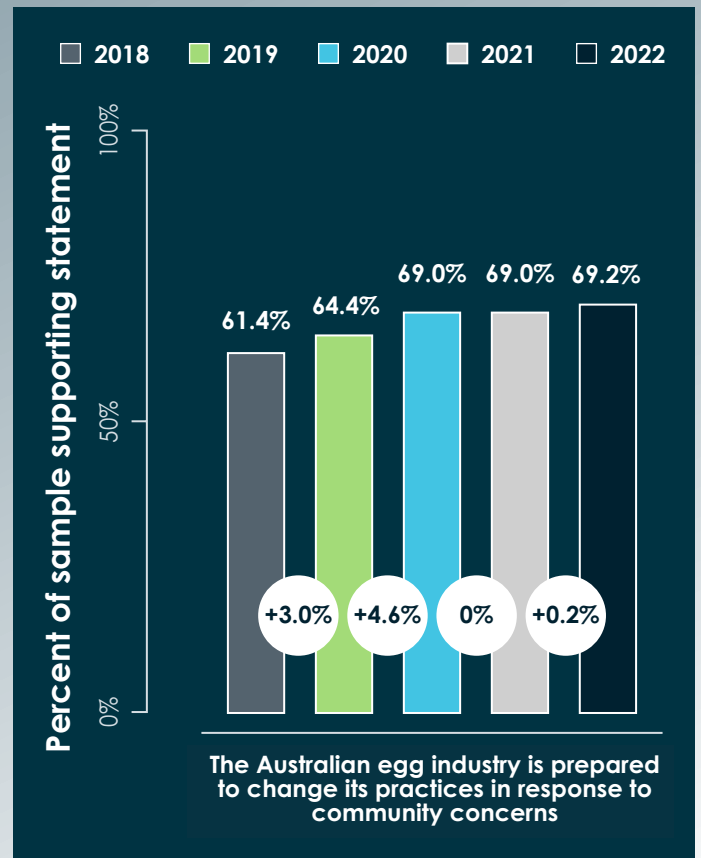
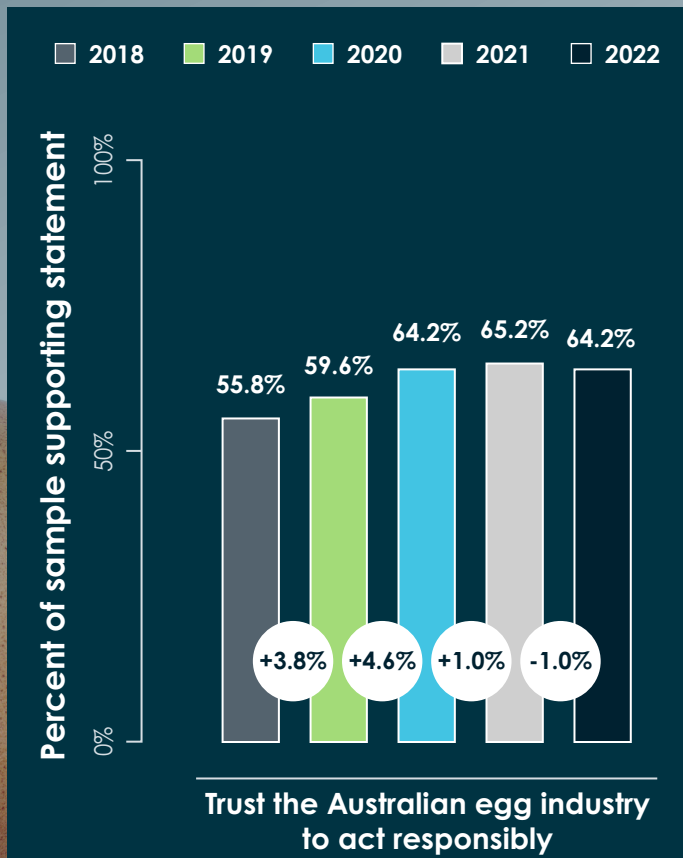
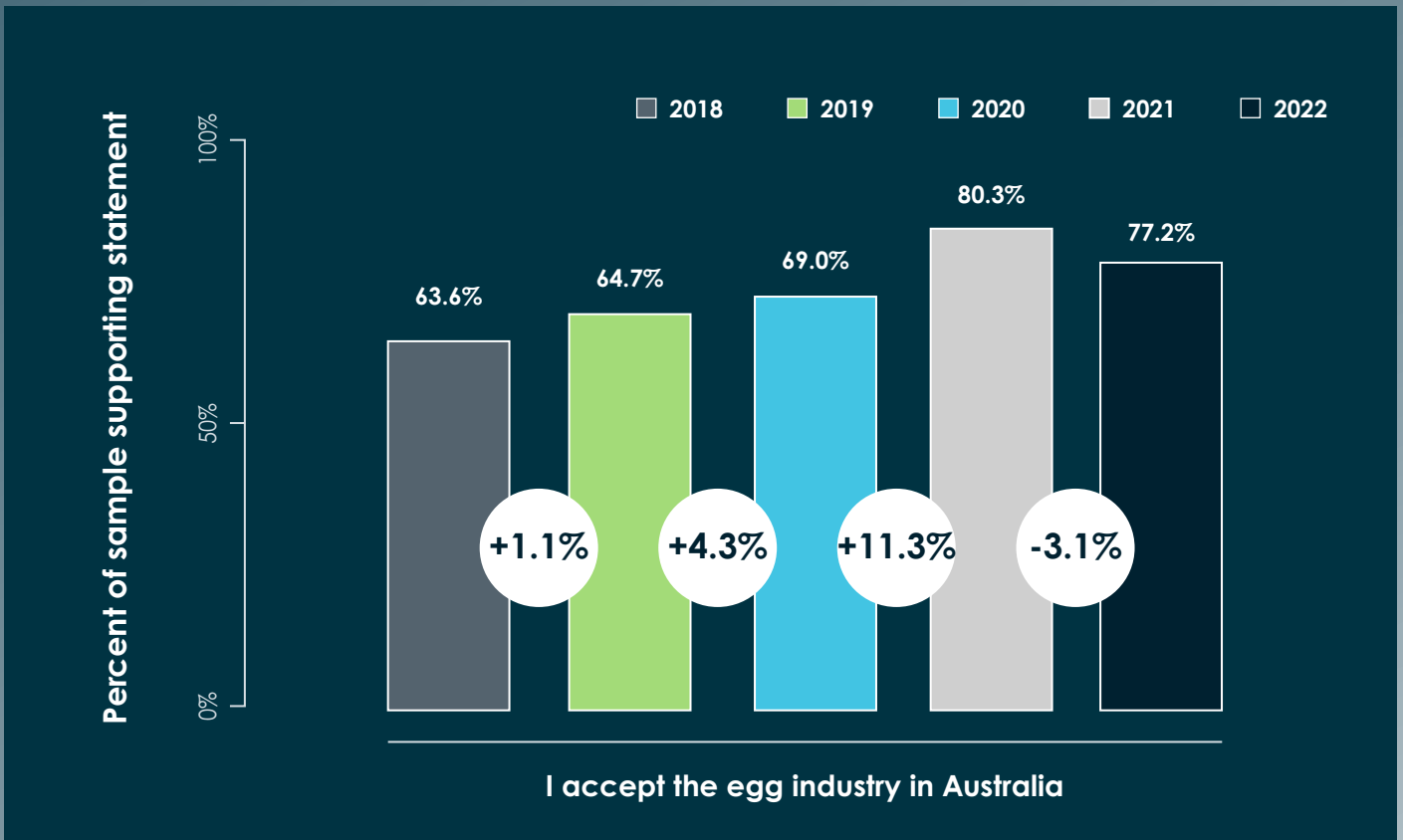
¹ Australian Eggs 'key statistics', accessed 15 August 2022: <https://www.australianeggs.org.au/egg-industry>

² <https://voconiq.com/eggs/>

³ www.australianeggs.org.au/what-we-do/sustainable-production/sustainability-framework/



KEY RESEARCH FINDINGS 2018-2022



WHO COMPLETED THE SURVEY

5,398

TOTAL PARTICIPANTS 2022

Representative sample: 4,951
Open call sample: 447

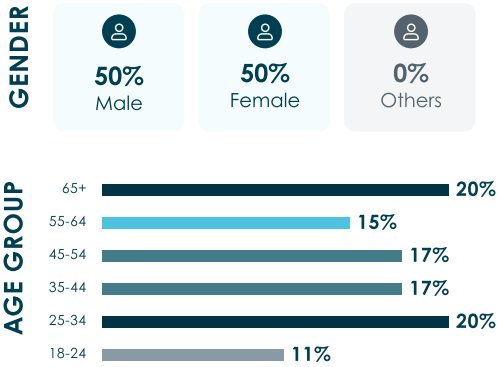
38,378

TOTAL PARTICIPANTS 2018-2022

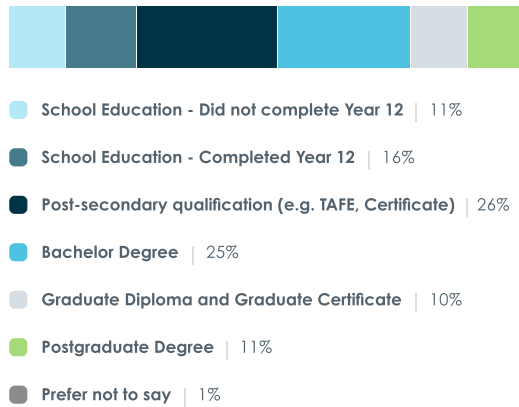
Representative of the Australian population: 37,931
Open call samples combined: 13,144



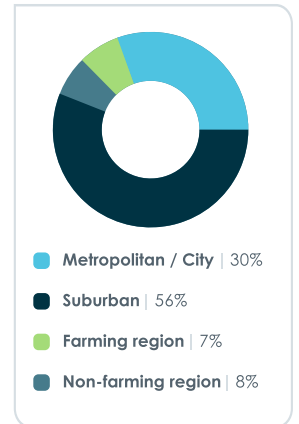
GENDER AND AGE



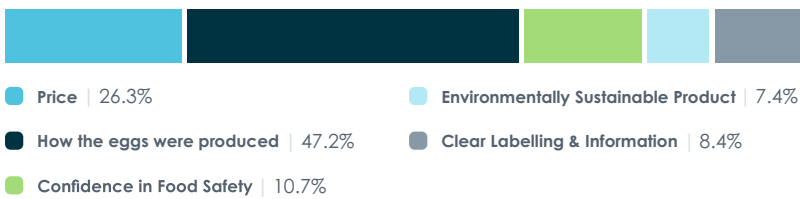
LEVEL OF EDUCATION



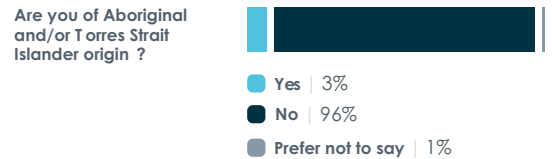
REGION TYPE



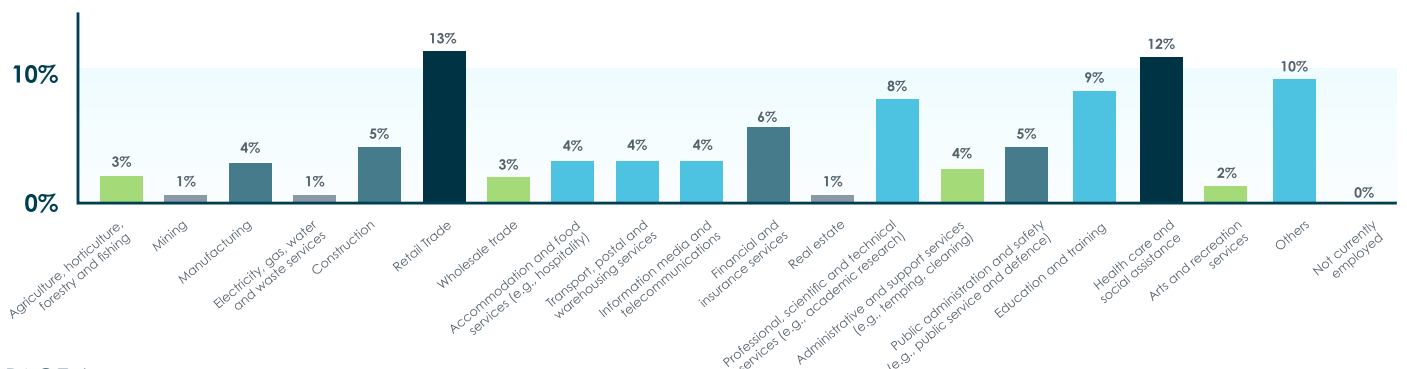
TOP FACTOR INFORMING EGG PURCHASES



ABORIGINAL AND TORRES STRAIT ISLANDER STATUS



INDUSTRY IN WHICH PARTICIPANTS WORK



THE RESEARCH PROCESS

The Australian egg industry national community research program aimed to establish a deep understanding of community attitudes towards the Australian egg industry, track and compare key measures relating to community attitudes, trust and acceptance of the Australian egg industry over time, and explore any additional emerging issues (e.g. COVID-19). It was undertaken by CSIRO between 2018 and 2020 and then by Voconiq from 2021 onwards. All surveys are completed via an online survey.

In 2021, Voconiq extended the research:

- repeating key measures from the 2018, 2019 and 2020 surveys,
- exploring emerging issues in greater depth (e.g. COVID-19 and food security, food traceability), and
- exploring community attitudes towards research and development initiatives by the Australian egg industry.

The survey instrument comprehensively examined issues material to the relationship between the egg industry and the Australian community, including:

- background knowledge of and information sources about the egg industry,
- animal welfare,
- environmental impact,
- economic viability,
- governance and regulation,
- COVID-19, including food security and traceability,
- Trust and acceptance of the egg industry in Australia, and
- participant demographic characteristics.

Before beginning the survey, all participants read information about the study and

needed to indicate that they understood the research aims, funding source for the research (Australian Eggs), and how participant data may be used. The following industry definition was also included, consistent with previous iterations of the research:

“The Australian Egg Industry includes egg farming businesses that keep laying hens to produce eggs for consumption by the Australian community. The industry includes very large egg farming businesses that have a large flock of hens across a number of farms, medium and small egg farming businesses. Large and medium egg farming businesses generally have more than one egg production system (cage, barn, free range) and small egg farmers generally have one egg production system. Eggs and egg products (liquid egg) are sold to major retailers (supermarkets), other retailers, farmers markets, food service companies (cafes, restaurants), hospitality (hotels) institutions (aged care facilities) and food manufacturers (bakeries).”

SAMPLING METHOD

In 2022 as in all previous years of this research, Voconiq collected two samples of data using the same online survey instrument. The first was a nationally representative sample by gender and age according to Australian Bureau of Statistics (ABS) data.

5,362 surveys were completed with 4,951 retained for analysis after data cleaning. The representative sample is collected via a research panel provider and participants are paid a small amount for their time. Participants do not know the topic of the survey when they choose to participate.

The second sample (n = 447, all retained) was collected by responses to a web link of the survey instrument published by Voconiq and Australian Eggs on their project web pages and through traditional and social media channels. The additional sample was collected to ensure the openness and transparency of the research process by enabling any interested Australians to participate and share their views on the Australian egg industry. Participants in both samples needed to indicate they were over the age of 18 years to complete the survey.

This report contains a summary of the data for the nationally representative sample. A full report including the responses to each question from the open, public sample is available on both Australian Eggs and Voconiq project web pages.

As with previous years, the key themes emerging from the open sample align with that of the representative sample. However, respondents in the open sample generally demonstrated a greater interest and concern regarding sustainability issues.

ANALYSIS AND REPORTING

The survey data collection period was between 16 May and 25 July 2022. Once the data was collected, statistical analyses were completed including a thorough data cleaning process. The data cleaning process involves excluding surveys from the analysis for various reasons such as missing data, brief completion times or responses that indicate carelessness or suspicious consistency (e.g. answering '1' to all questions).

THE ROLE OF THE EGG INDUSTRY IN AUSTRALIA

Eggs play an important role in the lives of many Australians and community members also feel strongly that the egg industry plays an important role for the country. Between 2018 and 2021, positive sentiment toward the role and importance of the egg industry increased, before dropping in 2022. There are compelling contextual reasons why this may be the case. The onset of the COVID-19 pandemic had a positive effect on community opinion of rural industries in general, and the egg industry specifically.

As shown in Figure 1, the extent to which the egg industry is seen to contribute significantly to the Australian economy has grown in each year when compared to the baseline measurement in 2018. In early 2021, agreement on this measure spiked to 92.8% of the Australian population before falling back to 84.5% in 2022. The same pattern of responding is seen across several measures in the 2022 survey to the effect that the 2021 results represent a Covid 'bounce'.

The individual context for Australians also appears to impact the survey results when we look at measures of affordability. In 2022, reliance on eggs as a staple food source and ratings of eggs as an important source of

nutrition was very high (see Figure 1) and in line with long term average scores in this research. Ratings in 2022 declined from the peak recorded in 2021.

Measures of affordability reflect part of the explanation for this pattern, with ratings on this measure in 2022 dropping considerably compared to 2021 and to lower levels in 2022 than have been seen in any of the previous four years of data collection (see Figure 2). This coincides with increased cost-of-living pressures in Australia and the importance of eggs as a necessary staple food for most Australians.

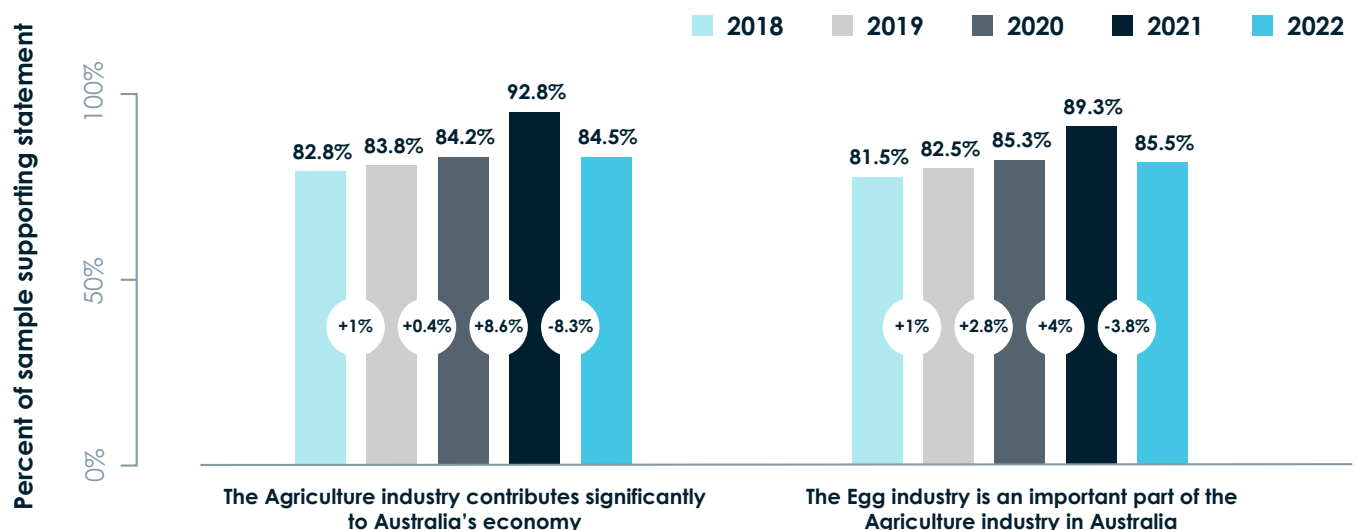
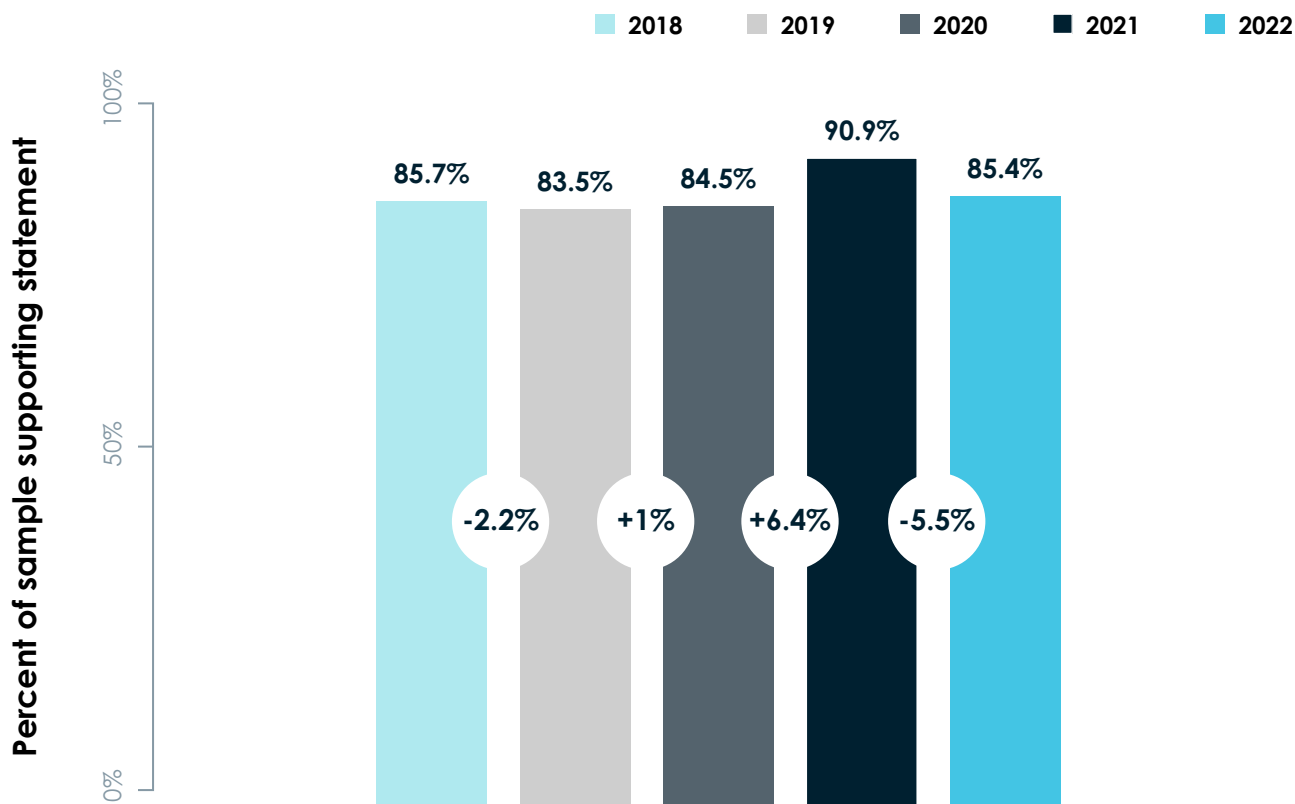


Figure 1. Percentage of agreement with importance items 2018-2022.

⁵ See Community Trust in Rural Industries Year Two report: www.voconiq.com/ctri



Australians rely on eggs as an important staple food

Figure 2. Ratings of eggs as an important staple food.



TRUST AND ACCEPTANCE OF THE AUSTRALIAN EGG INDUSTRY

The role of trust in the relationship that the Australian community have with the egg industry has been a central focus of this research program over the last five years. Trust has consistently been a key driver of community acceptance of the egg industry. It operates as a vehicle that translates community expectations and experiences of the industry into levels of acceptance.

Trust was measured using three different questions on a scale from 1 (Not at all) to 5 (Extremely).

Trust in the egg industry appears to have plateaued, well above baseline levels of trust established in 2018 (see Figure 3).

Acceptance of the Australian egg industry is also very strong in 2022 (see Figure 4). As with trust, the five-year trend in community ratings is positive, with 2022 ratings well above 2018 baseline levels. The small drop in acceptance in 2022 is relative to the dramatic improvement on this measure in 2021.

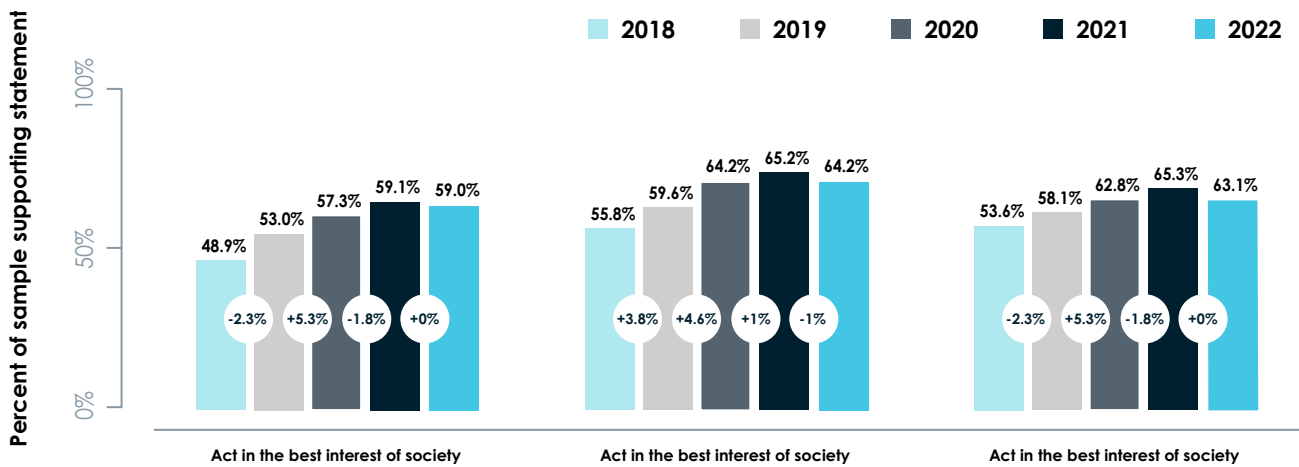


Figure 3. Percentage of agreement with individual trust items 2018-2022.

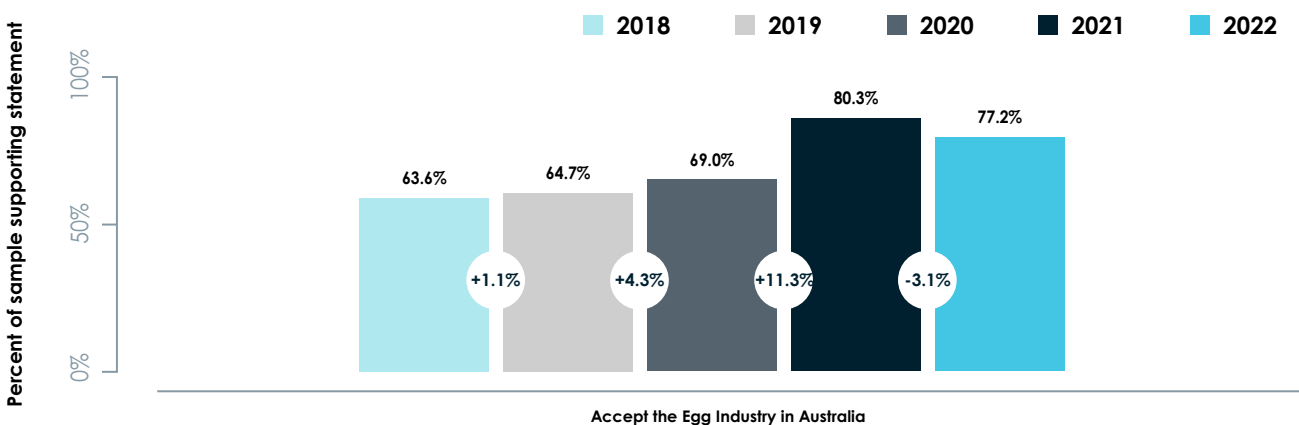


Figure 4. Percentage of agreement with acceptance item 2018-2021.

COMMUNITY TRUST REMAINS STRONG AS ENVIRONMENT TAKES CENTRE STAGE

In each year of the Australian eggs community research program, the drivers of community trust in and acceptance of the industry are assessed. In 2022, several important changes to this modelling were observed.

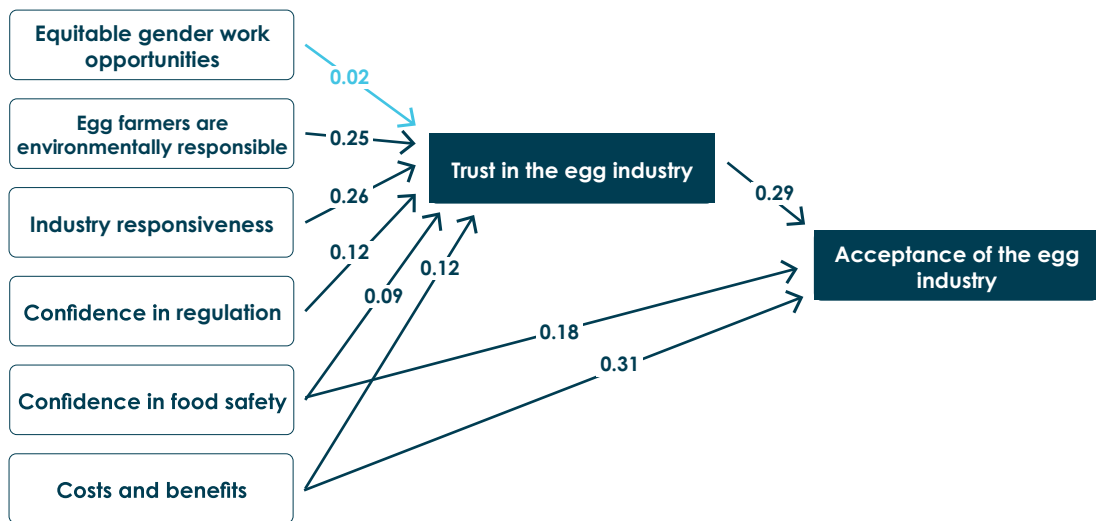
Path modelling helps Australian Eggs understand what is most material to their relationship with the community and where to prioritise activity to strengthen it. By conducting this modelling each year, changes in priorities and what matters most to community members may be identified.

This year's path modelling reveals an important change in the egg industry trust model. In 2022, environmental responsibility of egg farmers has increased significantly in importance. It is one of the strongest drivers of community trust alongside industry responsiveness (see Figure 5).

Moreover, the relative importance of responsiveness through listening and responding effectively to community concerns has decreased in the 2022 model.

This change is profound and illustrates the dynamic nature of relationships between the Australian community and its rural industries. It also sets a clear challenge for the egg industry to increase focus on this area.

Another new inclusion in the 2022 modelling comes through the addition of a new measure in the survey instrument. 'Equitable work opportunities for men and women' was added to this year's survey. More equitable opportunities was found to impact trust positively. While low in statistical significance, this item out-competed many other topics and issues as explicit drivers of trust.



HOW TO INTERPRET THIS PATH MODEL

A path model shows how all included variables relate to each other. In this path model we are exploring what leads to trust and acceptance of the Australian egg industry, shown by the blue arrows. The numbers represent the strength of the relationship between two variables, relative to all other relationships in the model. For example, industry responsiveness is a stronger driver of trust than confidence in food safety.

Figure 5. 2022 egg industry trust model.

INDUSTRY RESPONSIVENESS

Industry responsiveness is a key driver of trust in the egg industry as it is for other agriculture and resource-based industries in Australia. Industry responsiveness has remained the strongest driver of trust in the egg industry throughout the five-year research program. Community sentiment remains strong and positive regarding the industry's capacity and intent to hear and act on community concerns. Responsiveness ratings are strong and stable (see Figure 6).

CONFIDENCE IN REGULATION

This driver incorporates measures that capture how much Australians believe that the egg industry 'does the right thing' and that the industry is regularly and effectively audited. Greater levels of public confidence that there are checks and balances ensuring the industry operates properly leads to greater levels of trust. Ratings on these measures improved in 2021 (see Figure 7).

FOOD SAFETY

Confidence in food safety within the egg industry is a key trust driver and an important factor in expressed preferences informing egg-purchasing decisions. Community confidence in the egg industry to produce eggs that are safe has remained consistently high through the course of the five-year research program.

ENVIRONMENTAL RESPONSIBILITY

New in 2022, the performance of egg industry participants in managing their environmental impacts was found to be a strong positive driver of trust. Practically equal in importance with industry responsiveness, this will be an area requiring strong industry focus over coming years to ensure gains in trust and acceptance are not eroded (see next section for an examination of individual environmental management items).

COSTS AND BENEFITS

This driver captures the extent to which the benefits of the egg industry in Australia (e.g. economic contribution of the industry and nutritional value of eggs) outweigh the negative impacts of the industry (e.g. environmental impacts). While ratings on this measure dropped in 2022 compared to last year, they remain significantly higher than they were in the period 2018-2020 (see Figure 8).

EQUITABLE GENDER OPPORTUNITIES

New in 2022, the more that community members feel roles within the egg industry are available to men and women equitably, the more they trust the industry. Currently, 75% of Australians agree that "there are equal opportunities for men and women within the Australian egg industry".



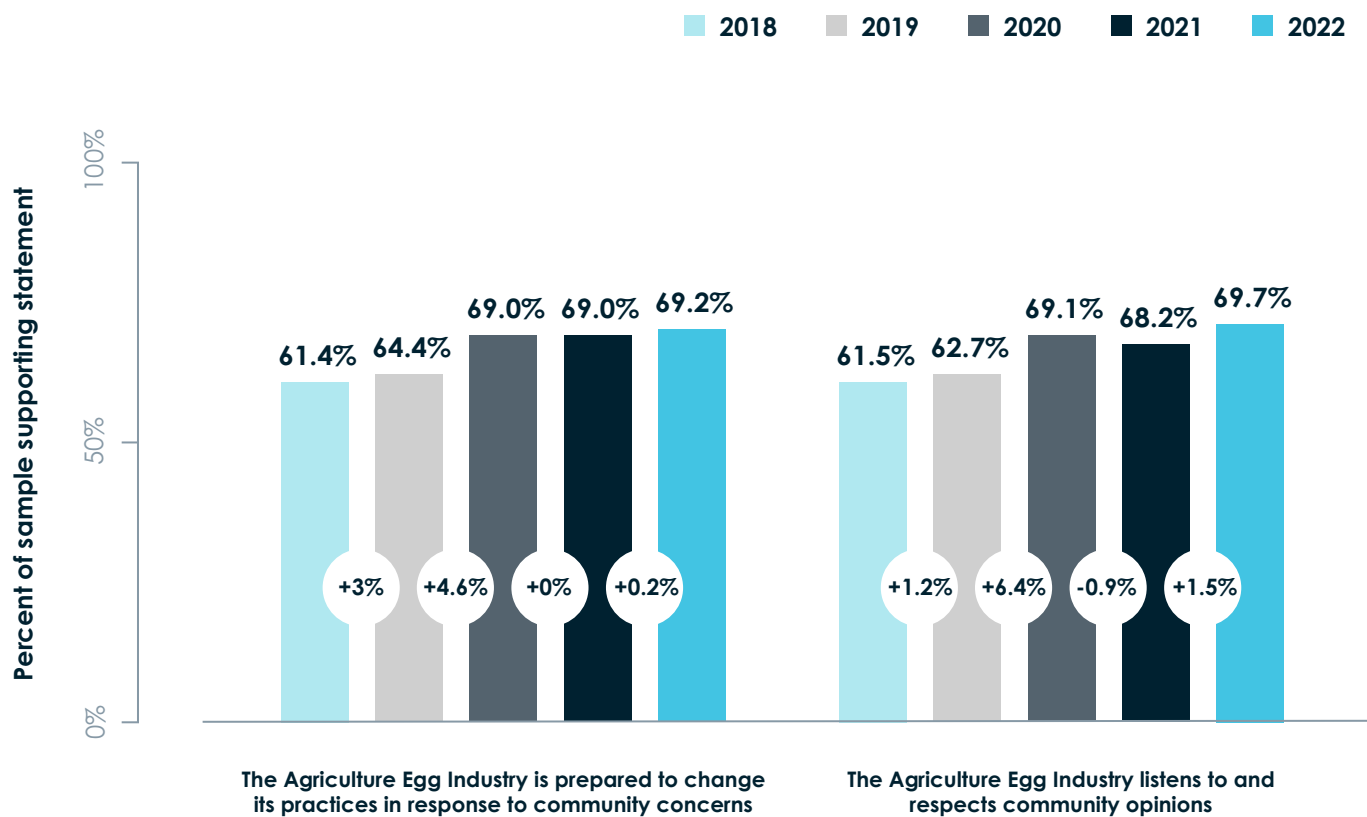


Figure 6. Percentage of agreement with responsiveness of egg industry item 2018-2021.



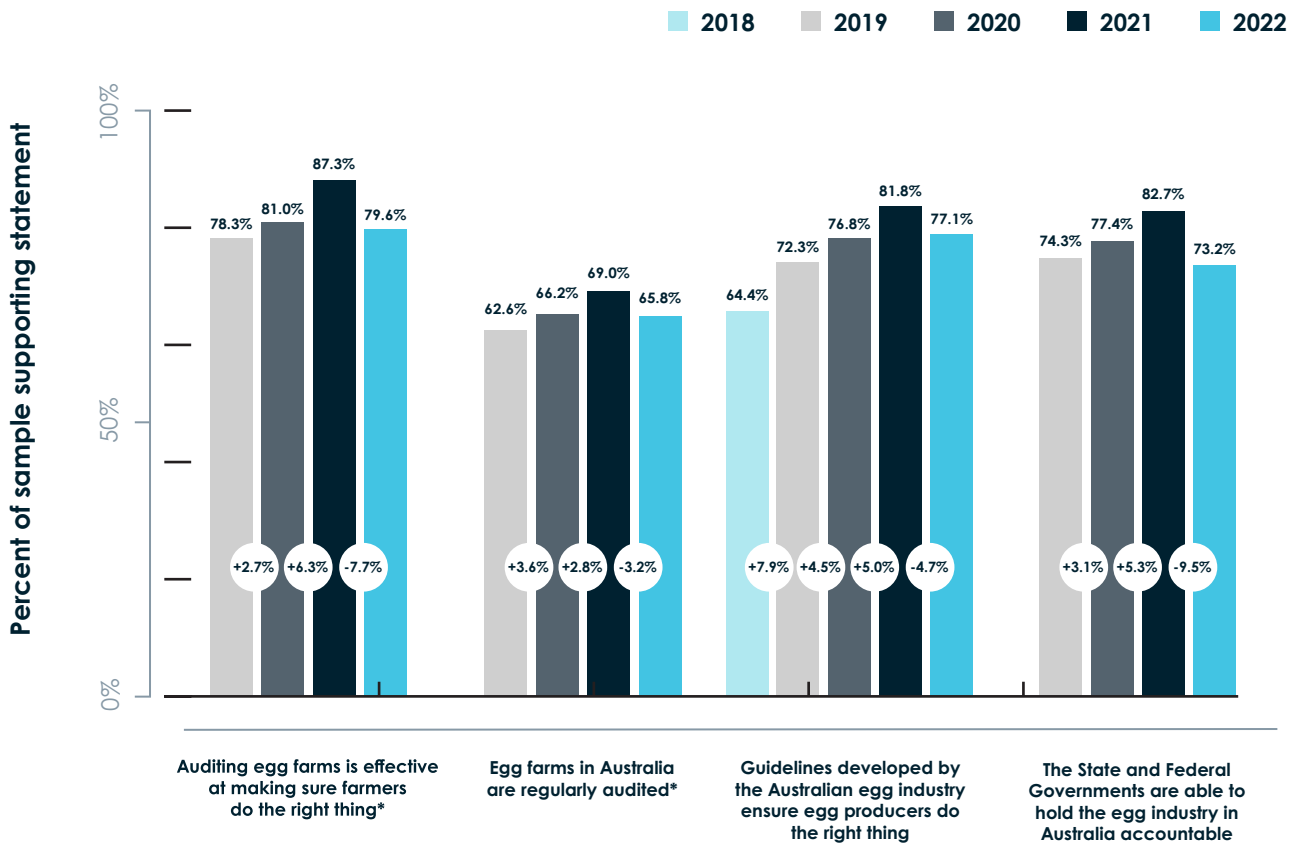


Figure 7. Percentage of agreement with regulation of the egg industry item 2018-2021.

*Item included from 2019

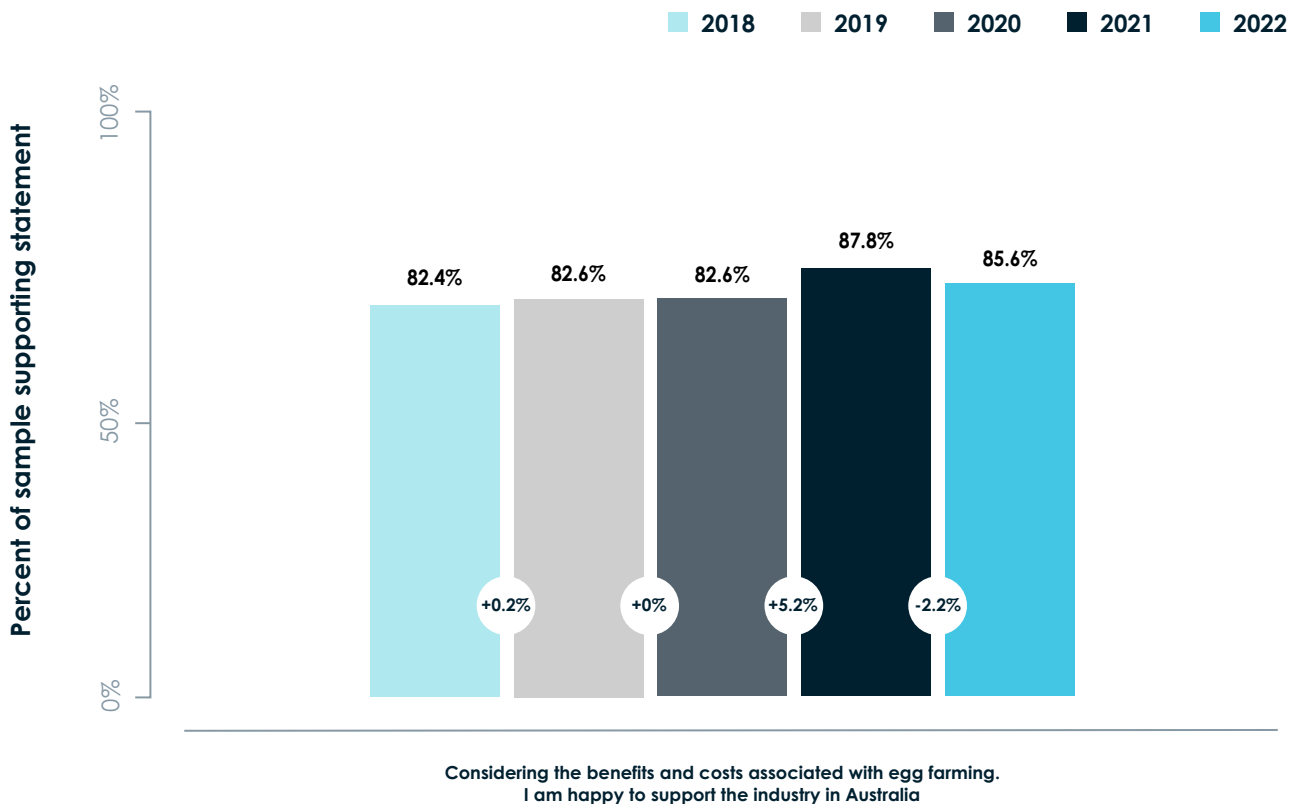


Figure 8. Percentage of agreement with costs and benefits of egg industry item 2018-2021.

ENVIRONMENTAL MANAGEMENT

In each year of this research program, perceptions of environmental impact and management by the egg industry is examined. In 2022, these measures take on greater significance with the elevation of environmental management to equal strongest driver of trust.

Reflecting the importance of this area for the egg industry, multiple measures have been included in this research and tracked across five years of data collection (see Figure 8). The results over this period are mixed in that they are generally high but some have dropped in the last two years. Coupled with the significant increase in the importance of responsible environmental management as a trust driver, this represents a call to action to address this pattern.

The challenge on environmental issues is demonstrated by the key measure of environmental impact relative to other industries where sentiment in agreement improved dramatically between 2018 and 2020 but has declined by approximately 5% since

then. Similarly, agreement that egg farming is a good use of land has declined this year relative to the 2021 ratings. In addition, a new item was included in 2022 "Australian egg farmers manage their environmental impacts effectively" with 70.1% of Australians agreeing with this statement. While this is still strong agreement, it is lower than the environmental measure in past years and reflects the overall trend for 2022.

Together, these measures show that overall, Australians believe the egg industry is doing a good job managing its environmental performance but at a lower level of confidence. The challenge will be to address this trend to ensure this issue does not undermine its relationship with the community.

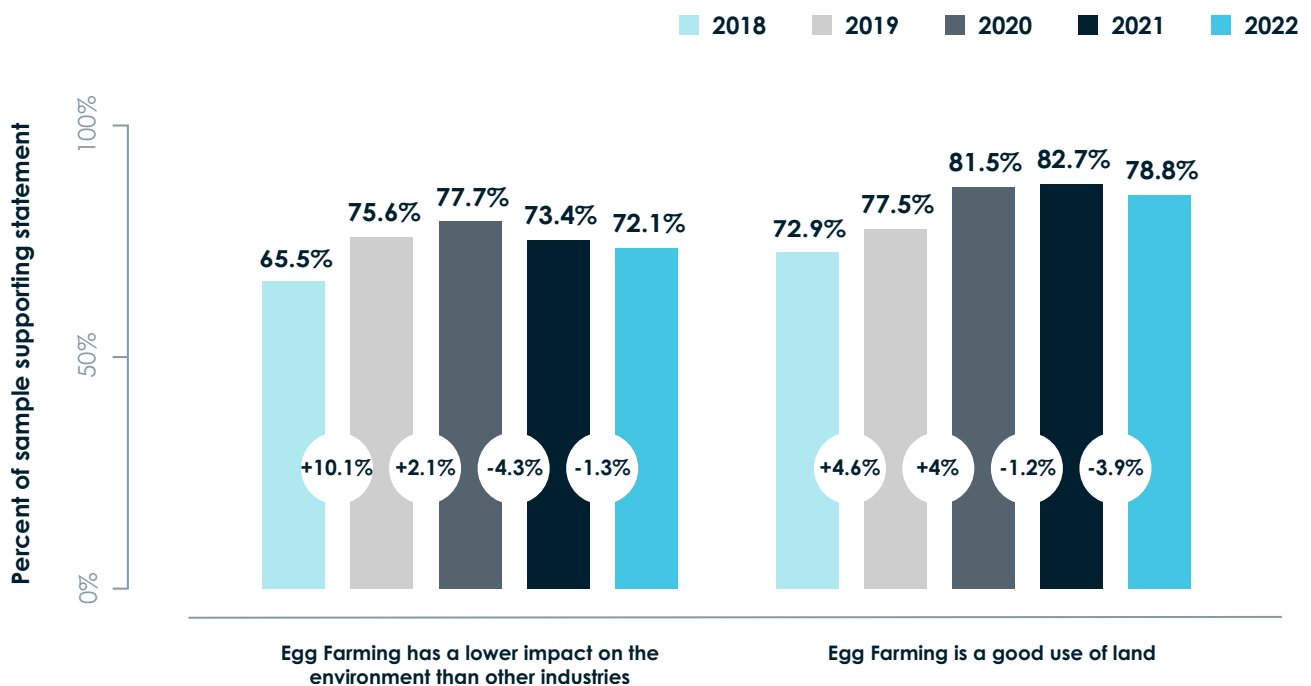


Figure 9. Ratings of egg industry environmental performance measures, 2018-2022.

THE VALUE PROPOSITION FOR EGGS HAS BROADENED

In each year of this research, we conduct path analysis on the drivers of trust and acceptance. Since 2018, this trust model has included the balance of benefits over impacts of the egg industry as a prominent component. We conducted additional analyses in 2022 to explore what components of the egg industry are considered by Australians when considering this judgement.

Most components of this value proposition judgement in 2022 remain consistent with previous years. These consistent components include (in order of their importance):

- egg farming is a good use of environmental resources,
- eggs as an important source of nutrition,
- the positive contribution of the egg industry to Australia's economy,
- the egg industry creates jobs, and
- eggs are affordable.

Two new components were also found to influence community judgements about whether the benefits of the egg industry outweigh its costs. These were clear labelling of eggs regarding where they come from and their system of production (e.g. cage, barn, free range), and community confidence in food safety standards for the egg industry.

As shown in Figure 10, both new components are important relative to other drivers of this value judgement, with clear labelling very similar in weighting to environmental concerns and nutrition.

This analysis shows that in 2022, not only is environmental management a stronger driver of trust in the relationship community members have with the egg industry, it is also one of the most important in whether the benefits of the industry are seen to outweigh its costs. This judgement remains very firmly in the positive, with 85.6% of Australians in agreement that they support the egg industry when considering all of the benefits and costs associated with it. The broadening of the value proposition for the egg industry brings opportunity and challenge. Community members are evaluating more attributes of the egg industry in this judgment but the industry also has more dimensions on which to demonstrate value.

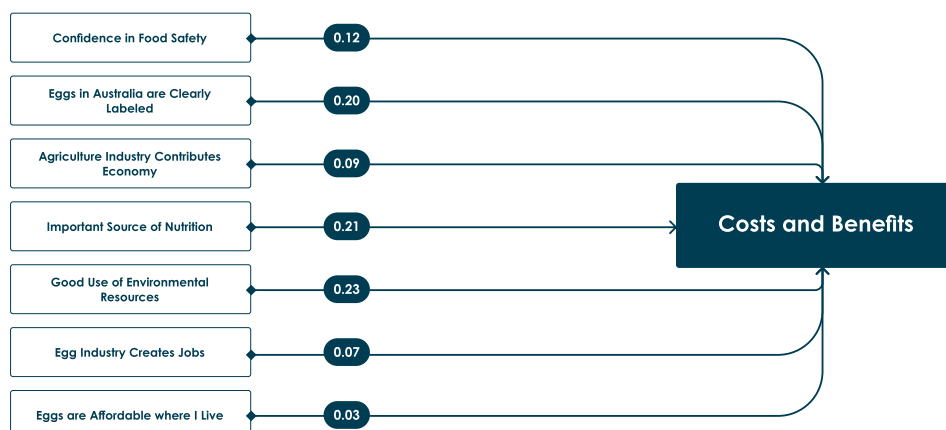


Figure 10. Drivers of overall community support for the egg industry based on perceived benefits and costs.

HEN WELFARE AND PRODUCTION SYSTEM PREFERENCES

Hen welfare does not feature in the egg industry trust model, a feature consistent since the work began in 2018. Hen welfare is important to Australians, however, and we examine here how this sentiment has changed over time.

Four items, included in each of the five national surveys conducted since 2018, are included in this report (see Figure 11). Consistent across all five years of research are the very high levels of agreement among Australians that hen welfare is complex and about more than just the absence of harm to them. There have been similarly high levels of agreement (~85%) that hens should be able to engage in natural behaviours such as flapping their wings and having dust baths. There has also been consistent levels of agreement across time (~55%) that “good hen welfare requires some invasive activities by egg farmers (e.g. trimming hen peaks so they do not peck each other)”. Together, these measures show that hen welfare is important to Australians, and community members understand that there is complexity in this issue.

In Figure 12 we can also see that hen welfare strongly influences choices at the supermarket. Since 2018, the factors that community members indicated most influence their egg purchases have remained remarkably consistent. The way eggs are produced (e.g. cage, barn, free range) has remained the most influential self-reported factor in all five years of research. Price was ranked as the top factor by around a quarter of the sample in each year.

The environmental credentials of the industry has grown over time but remains much lower than production system and price.

Thinking about the model for community trust and acceptance alongside the factors that inform purchasing decisions reveals an important nuance in this research; that ‘community’ and ‘consumer’ identities appear to operate independently of each other. That is, the preference, expectations, and perceptions of ‘community’ members can be seen to inform the context within which the egg industry operates, is regulated, and viewed and reported on by the media. The behaviour of these same individuals at the supermarket as a ‘consumer’ may be quite different. For example, environmental responsibility is very influential in shaping levels of community trust but relatively weak as a factor influencing (self-reported) consumption choices.

Rather than seeing this as contradictory, the attitudes of community members about the way the industry does and should operate can be seen to shape the choices placed in front of them in supermarkets by retailers, the relative costs of these choices, and ultimately the shape of longer-term shifts in egg production systems in part influenced by government policy decisions.

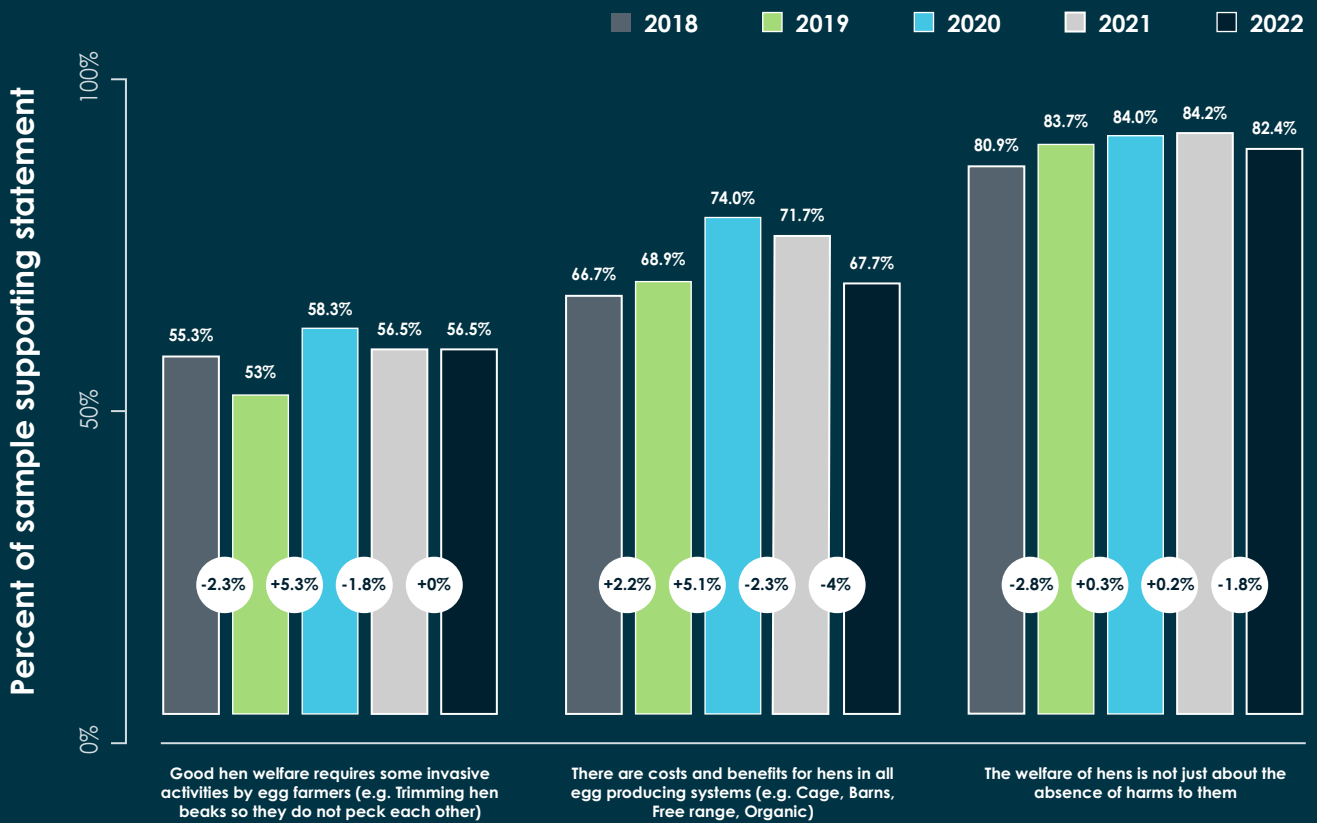


Figure 11. Ratings of agreement with hen welfare items, 2019-2022.

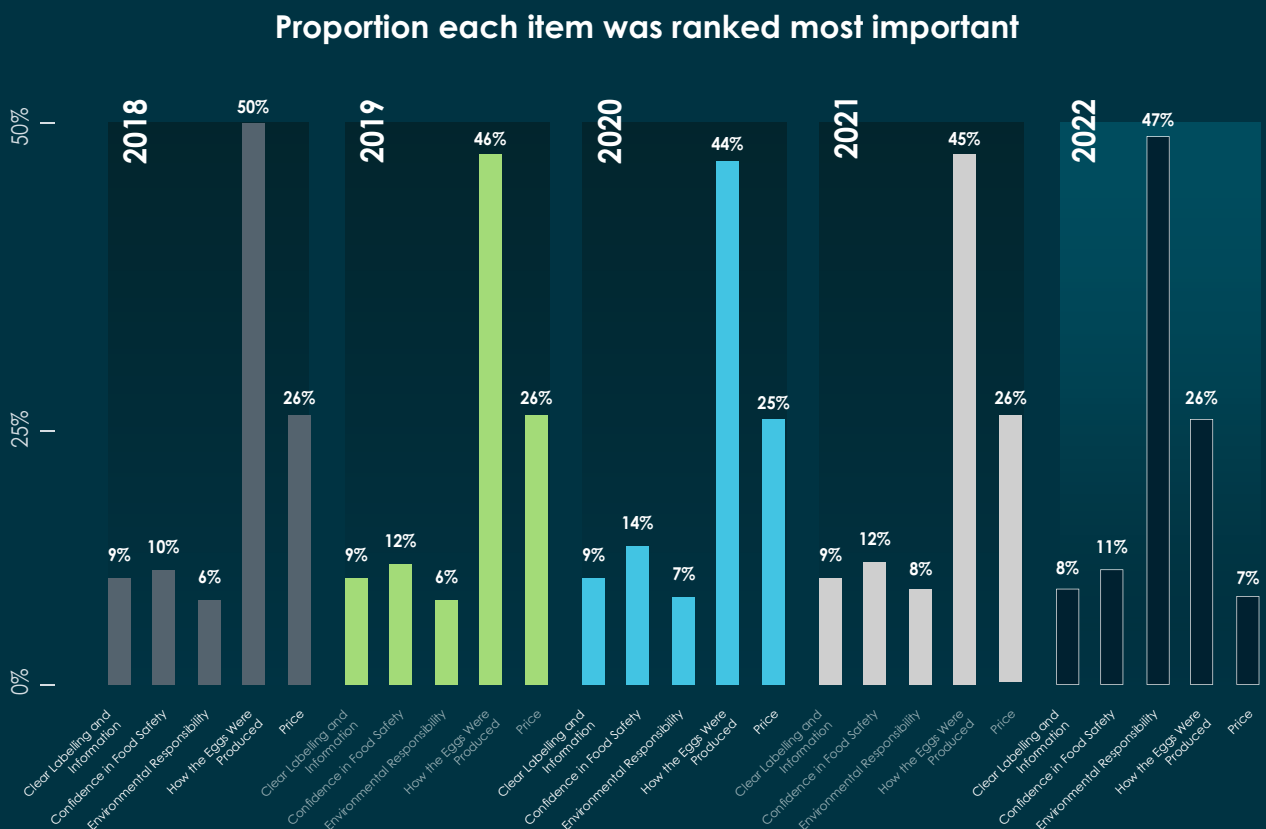


Figure 12. Proportion of sample indicating first preference factors informing purchasing decisions, 2018-2022.

CONCLUSION

The egg industry has a strong and productive relationship with the Australian community. Results from 2018-2022 indicate that while several areas require attention by the industry, the fundamentals of the relationship are strong and significant improvements since the 2018 baseline study have been maintained in most areas.

This program of research, engaging almost 40,000 community members, has provided the egg industry with a blueprint for strengthening its relationship with the Australian community. The longitudinal data from 2018-2022 demonstrates two things.

First, that the egg industry has succeeded in leveraging these insights to focus on the areas that matter most in this relationship with the Australian community and seen its levels of trust and acceptance increase substantially on the 2018 baseline study data.

Second, that this relationship is dynamic. The rise of environmental responsibility as a key driver of trust in the egg industry trust model illustrates the need to continually question assumptions about what is material to social risk.

The mixed outcome on industry credentials relating to environmental management provides a clear call to action for the egg industry. Leveraging the power of responsiveness to address this challenge is a productive opportunity for the industry. Demonstrating that the industry has heard these concerns and is focused on taking action to address them appropriately is a clear opportunity.

In 2022 we also saw the resonant effects of COVID-19 on broader attitudes toward the egg industry. A comparison of 2022 responses with those of the 2021 survey shows a drop in sentiment across a number of measures. However, the extraordinary improvements in community attitudes regarding the egg industry and its practices in 2021 masks the longer-term trend in this data; that there has been a steady and strongly positive improvement in community sentiment since the baseline study of 2018 in key areas.

This includes our key outcome measures in assessments of relationships between industries and communities: trust and acceptance. Both of these measures appear to have plateaued at a high level, as indicated in the corresponding 2021 survey report. These levels of trust and acceptance should provide confidence to the egg industry that there is goodwill enough in the relationship with community to tackle enduring and emergent challenges.

In 2022 we also observed a broadening of the factors that inform the value proposition for the egg industry in Australia. These factors now include clear labelling of eggs in a retail environment and confidence in food safety standards.

The fact that eggs are seen by most Australians as an affordable source of nutrition in a context where protein is experiencing significant production cost challenges makes a socially important rationale for ensuring there are always eggs available at prices most Australians feel are affordable.

Finally, there is emerging in this data set a distinction between 'community' and 'consumer' identities and how these identities, held simultaneously by our participants, may be considered by the egg and other industries. This framing provides an explanation for apparently contradictory responses by participants: that environmental responsibility is a key driver of trust and acceptance of the industry but is much lower in the ranking of factors informing purchasing decisions at retail outlets.

Our experience in conducting this type of research across more than a dozen countries and a similar number of industries or sectors suggests that these two sets of perspectives have very practical implications for industries and companies. The views of community members about how an industry 'should' operate and perceptions of their actual behaviour shape the context within which these industries operate through regulatory and retailer decisions. However, these perspectives may not directly translate into consumer preferences for particular egg products. Ultimately it is both community perceptions and consumer preferences that will determine the pace at which changes in how the industry operates take place.





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