



Australia's National  
Science Agency

# Australian Egg Industry Community Research Report

2020



## **Citation**

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# Introduction

In 2018, Australian Eggs engaged the CSIRO to bring the voice of the Australian community into the heart of the Australian egg industry. Over the subsequent three years, CSIRO has conducted a comprehensive annual national survey of Australian community perspectives on a broad range of issues related to the egg industry. In this, the final year of the research project, a summary of data from all three years is presented in this report.

In addition, this final summary report will highlight how the CSIRO national survey data has been used by the Australian egg industry. As Australia's national science research agency, CSIRO seeks to shape the future through "using science to solve real issues to unlock a better future for our community, our economy, our planet". The application of CSIRO's science is therefore as important as its creation; this report will summarise the findings from the 2020 survey, provide a comparison with data from the 2018 and 2019 surveys, and place this data into a context of industry response.

The Australian egg industry is important to this country, producing 6.22 billion eggs at a value of \$961.3 million in FY2018-19.<sup>1</sup> Since the end of June 2015, annual average consumption of eggs in Australia has increased 11.8%, from 221 eggs per person per year to 247.<sup>2</sup> Eggs are produced commercially in every Australian state and territory. Eggs and egg-based products are present in the lives of most Australians in some form.

The industry therefore has many interaction points with the Australian community throughout its value-chain.

The Australian egg industry also arouses strong feelings among many people on the issue of hen welfare, and that has been a focus of the CSIRO research to date. However, this work has sought to place the issue of hen welfare into a much larger context of issues, benefits and impacts that the Australian egg industry is a part of in the production and sale of eggs in this country. Through this work, community attitudes toward the full breadth of issues related to the egg industry have been explored over time.

This research has also sought to be inclusive of all perspectives on the egg industry in Australia and the research method employed by CSIRO has sought to facilitate openness and accessibility to all Australians over the age of 18 years.

The findings from this work have been communicated transparently, reflecting a key principle of this research shared by both CSIRO and Australian Eggs: all of the research reports produced throughout this program of work are available via a public CSIRO website (<https://research.csiro.au/eggs/>) and separately via an Australian Eggs website (<https://www.australianeggs.org.au/whatwe-do/sustainable-production/sustainability-framework/>).

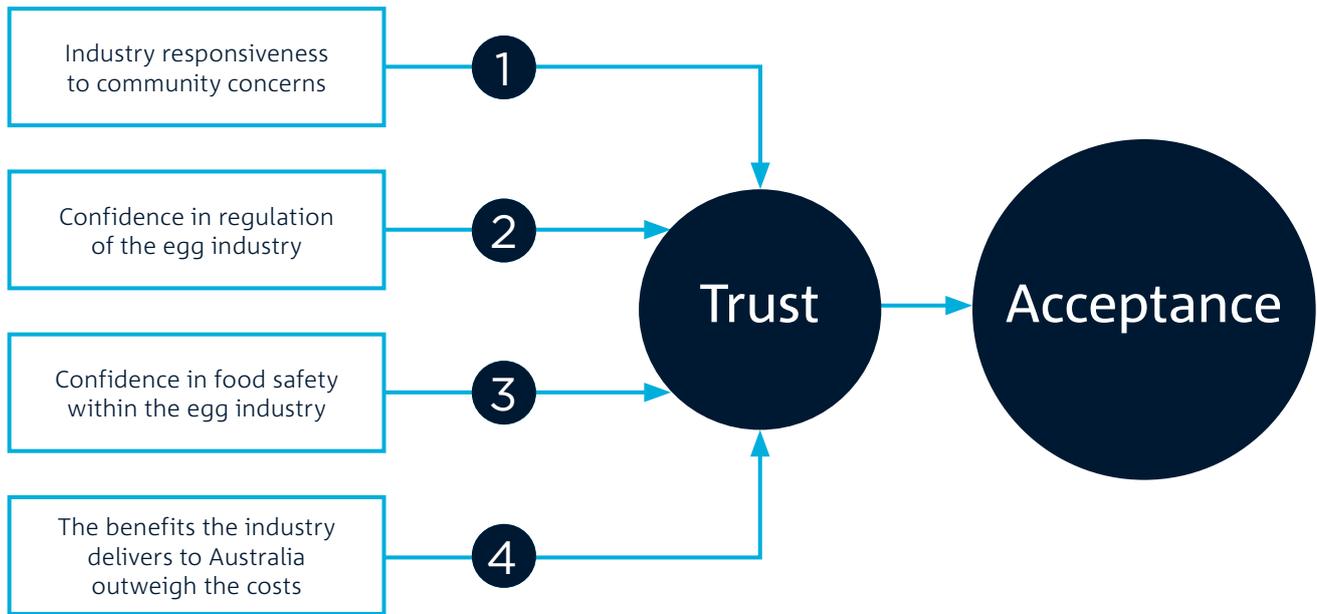
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<sup>1,2</sup> Australian Eggs website, accessed 31 July 2020: [https://www.australianeggs.org.au/egg-industry?gclid=CjwKCAjw34n5BRA9EiwA2u9k34O0BQTtYCdZr8DNIRTOOXyDF\\_9iV6q1d0UdMnI0zAuw9bh5g8uFkRoCVVUQAvD\\_BwE](https://www.australianeggs.org.au/egg-industry?gclid=CjwKCAjw34n5BRA9EiwA2u9k34O0BQTtYCdZr8DNIRTOOXyDF_9iV6q1d0UdMnI0zAuw9bh5g8uFkRoCVVUQAvD_BwE)

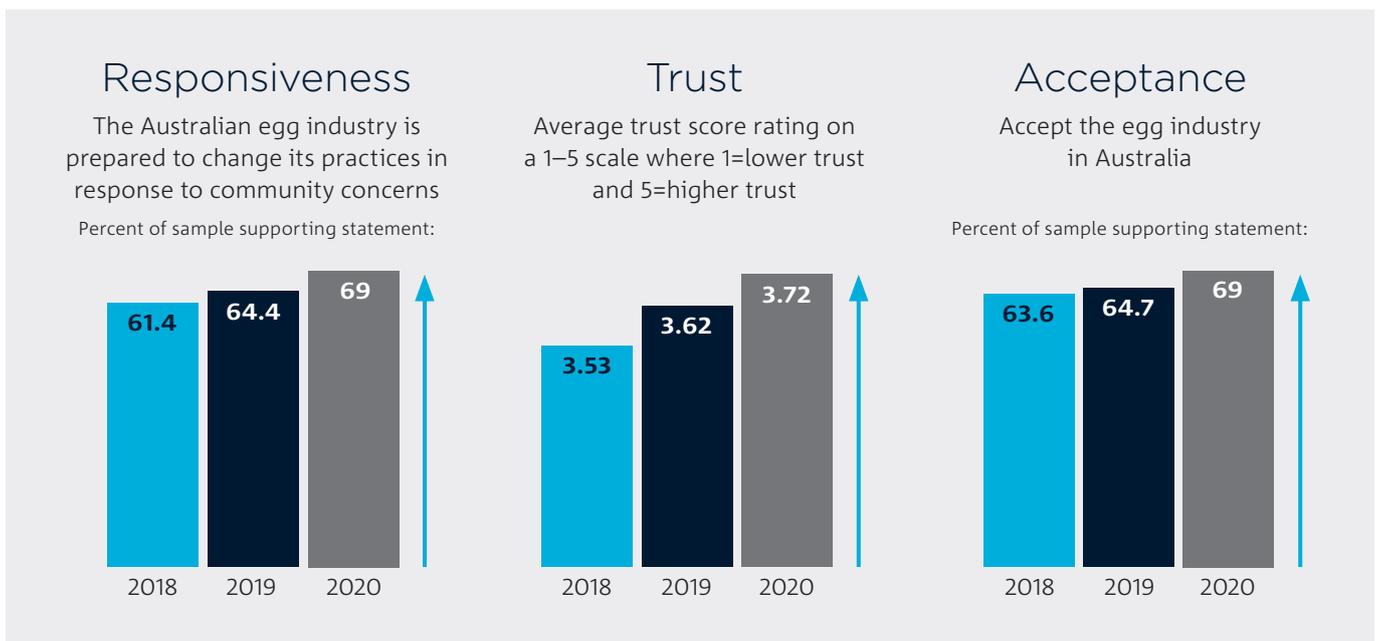
# Key results 2018-2020

Each year from 2018 to 2020, the same four issues were the strongest drivers of trust in and acceptance of the egg industry in Australia.

## Key drivers of trust and acceptance of the Australian egg industry

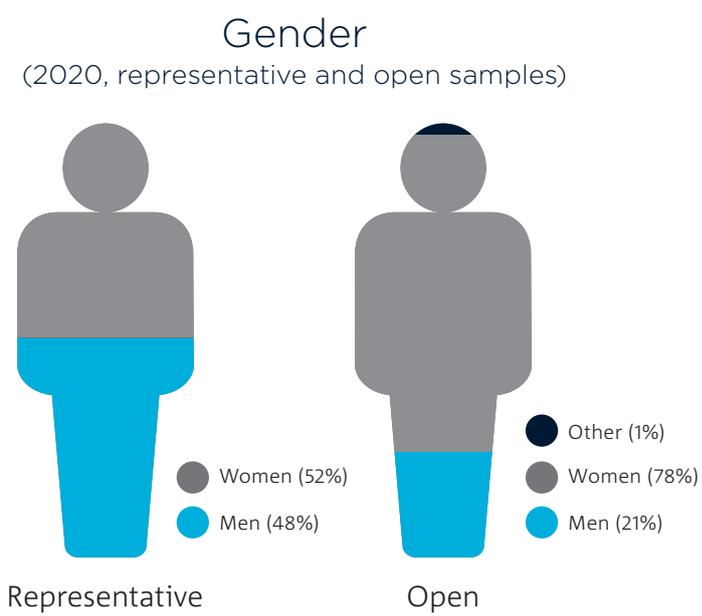
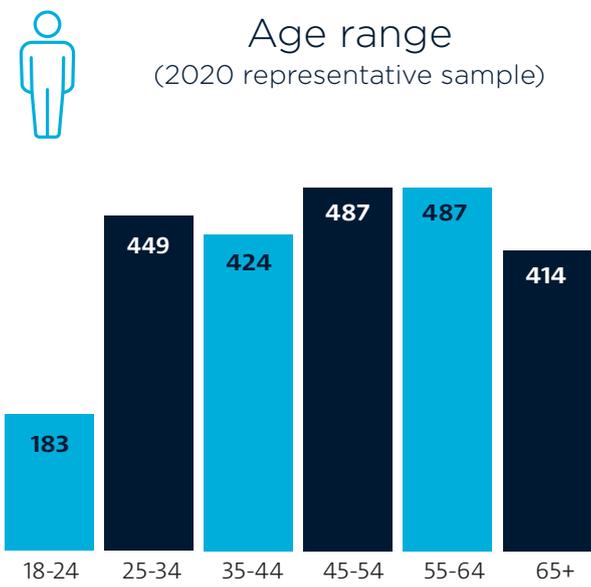


These drivers are consistent across the three years of the research



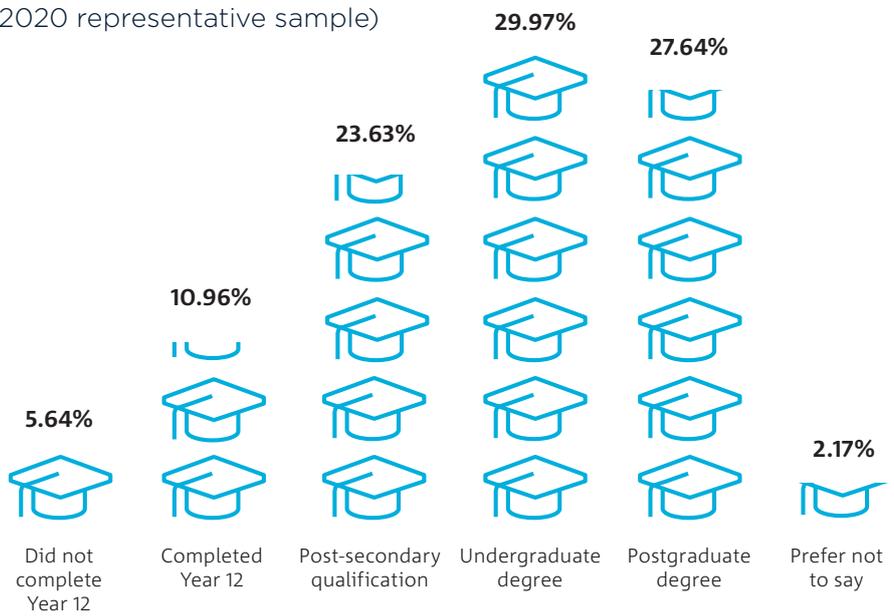
Data for Year 3 collected between 27th April and 7th May 2020

# Community participation 2018-2020



## Education

(2020 representative sample)



**64.8 million**  
media impressions over the  
three years of the program\*

\* Media impressions is a standard measure of media audience reach based on where content appears and circulation of that media platform

# The research process

Australian Eggs committed in 2018 to seek and engage with the views of the Australian community around the full breadth of its interactions with the community. By engaging CSIRO to conduct this work, Australian Eggs exposed itself to public scrutiny about community views on potentially challenging issues such as hen welfare, the industry's environmental footprint, and food safety standards. In this section of the report, the three-year research process used to conduct this work is explained.

The goals of the three-year CSIRO research program were to:

- establish a baseline of community attitudes toward the Australian egg industry in year one;
- assist the egg industry to interpret and apply the findings of the baseline research; and
- conduct follow up surveys of the Australian community in years two and three to evaluate any change in key outcome measures (community trust and acceptance of the industry) and explore any additional issues of emergent or contemporaneous importance (e.g. COVID-19).

To bring the voice of the Australian community inside the egg industry, a national survey process was undertaken. The development of the baseline survey instrument was informed by an egg industry stakeholder engagement process, a desktop review of key issues and previously published academic literature and relevant reports, and discussion between CSIRO researchers and the Australian Eggs executive team. This preparatory work was vital in understanding how the egg industry works, identifying the full breadth of issues and interaction points that define the relationship between the industry and the Australian community, and how industry participants and those outside of the industry, sometimes critical, speak about the industry.

The CSIRO research team then developed a detailed survey instrument that addressed the core themes of the, then emergent, Australian Egg Industry Sustainability Framework, and a broad set of additional issues. At the same time, as per CSIRO's Ethical Conduct in Human Research Policy, the project plan, materials, and research value were assessed and approved by the independent CSIRO Human Research Ethics Committee.<sup>3</sup>

In all three years of the survey process, as per ethical requirements, an informed consent procedure was included at the beginning of the survey instrument to ensure community members understood the purpose of the research, who was paying for the research to be conducted (Australian Eggs), and how the data collected may be used. The following industry definition was presented to participants in each of the three data collection activities:

*“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).”*

<sup>3</sup> Further information about CSIRO's approach to ethical human research may be found here: <https://www.csiro.au/en/About/Policies-guidelines/Integrity-of-science/Ethical-human-research>

Following the informed consent process, the content of the survey instrument may be broadly categorised into the following groups of questions, or items:

- demographic information about participants to assist in analysing the data (no personal or identifiable information was collected);
- self-rated knowledge about the egg industry;
- where participants receive information about the industry;
- the lives of people inside and outside of the industry, including food safety and security;
- animal welfare;
- the environment;
- the economics of the industry;
- governance and regulation related to the industry;
- trust in the industry and a range of other relevant parties, institutions, and organisations; and
- acceptance of the egg industry in Australia.

Where possible and practical, multiple questions, or items, were included in the survey instruments to examine each issue or topic. This is to ensure that the different dimensions of an issue, (e.g. environmental management), are explored thoroughly. This allows a more thorough understanding of these complex issues and the ability in later analyses to determine which parts of an issue are particularly important in the relationship between community members and the egg industry.

## Sampling method

A key principle for this research was that it was inclusive and rigorous in its design. To this end, CSIRO effectively collected two samples of data in each of the three years of the project, both of which were collected using an online survey data collection platform.

The first was a sample of Australians nationally representative by gender and age according to the Australian Bureau of Statistics data. The target sample size each year for this representative group of Australians was 5000 people. This sample was collected with the assistance of a research panel provider and participants were paid a small amount for their time.

In addition, CSIRO created a 'mirror' survey instrument which was open to anyone with an interest in the egg industry to complete during the data collection period each year. A web link to the open survey was hosted on the CSIRO project web page and the Australian Eggs project web page for any Australian resident over the age of 18 years to complete. This link was publicised by CSIRO and Australian Eggs through traditional and social media channels.

In this way, a robust nationally representative sample of Australians and an additional sample of Australians that were interested to participate were collected in each year of the project. In all three years, the average responses of both samples were compared and publicly reported in full. This report contains a summary of this comparison for the 2020 data.

## Analysis and reporting

Once data was collected, a thorough statistical analysis of the data was completed. This included a data cleaning process to ensure data quality. Subsequently, in each year a small percentage of submitted surveys were excluded from analyses for a range of reasons, including incomplete or missing data within the survey, a survey completion time that was impractically brief, or responses that appeared to be random or suspicious (e.g. choosing all '4's on the items presented). Following data cleaning, a range of statistical analyses were conducted to determine the nature of community sentiment within both samples to a broad range of issues and topics related to the egg industry, and a path analysis to determine the key drivers of trust and acceptance of the egg industry within the community.

The analysed data was then written up in a report by the researchers for public release by CSIRO and Australian Eggs, hosted on each organisation's respective project web pages. Unless otherwise indicated, all data presented in this report is from 2020.

## Communication and engagement

CSIRO communication and community/stakeholder engagement with the results generated through this work have been extensive. The chief reason for these activities is to ensure the insights generated are communicated back to the Australian community to support a public conversation about the way the egg industry operates. It is also a key requirement of CSIRO's ethical research framework. Extensive engagement activities have also been conducted with the egg industry itself through a range of forums, committees, briefings, and conference presentations. Again, this is an important part of the work to help industry to see themselves through the eyes of the Australian community and explore how their practices may better reflect the expectations of the Australian community.

In commissioning this research, Australian Eggs have used the data to inform its Sustainability Framework with the support of egg industry stakeholders. This includes using the data to shape its research and development (R&D) program and releasing an annual Sustainability Report to highlight the community's main concerns as identified by CSIRO, and the industry's actions in response. 'Closing the loop' and demonstrating responsiveness to community sentiment is critical in building deeper, more constructive relationships with the community. Industry responsiveness has consistently been the key driver of community trust for many agriculture industries, resource based industries such as mining and unconventional gas, and the waste management sector, to name a diverse few additional cases.

In addition, Australian Eggs has extensively communicated the key findings of this work and its implications to its industry members, critical stakeholders of the industry, government, other agriculture industries, and the Australian community through traditional and social media channels, website and earned media. Talking about the research and its implications is important in a research process designed to effect change. It continues a public conversation about the industry and commits the industry to a path of openness and public self-reflection. It is challenging for an industry to be vulnerable in this way but as the data shows across the three years of the project life, it is fundamental to building a better relationship with the Australian community.

# Indicative project activities by CSIRO and Australian Eggs 2018-2020

2018

## CSIRO research activities

- Industry stakeholder engagement
- Representative national survey
- 'Open call' national survey

## CSIRO industry engagement activities

- Australian Eggs Sustainability Committee
- Reports released
- CSIRO press release
- Australian Eggs Executive Management Team briefings
- Egg industry extension (e.g. conference presentations, explanatory videos, etc)
- Media engagements to explain findings

## Australian Eggs activities

- Reports hosting
- Press release
- Egg Industry Sustainability report release
- Internal membership communications
- External communications (multi-channel)
- Media engagement to present findings

2019

## CSIRO research activities

- Representative national survey
- 'Open call' national survey

## CSIRO industry engagement activities

- Australian Eggs Sustainability Committee
- Reports released
- CSIRO press release
- Australian Eggs Executive Management Team briefings
- Egg industry extension (e.g. conference presentations, explanatory videos, etc)
- Media engagements to explain findings

## Australian Eggs activities

- Report promotion and media
- Egg Industry Sustainability report release
- Media updates on industry initiatives
- Internal membership communications
- External communications (multi-channel)
- Media engagement to present findings

2020

## CSIRO research activities

- Representative national survey
- 'Open call' national survey
- Cataloguing Australian Eggs responses to research

## CSIRO industry engagement activities

- Reports released
- CSIRO press release
- Australian Eggs Executive Management Team briefings
- Egg industry extension (e.g. conference presentations, explanatory videos, etc)
- Media engagements to explain findings
- Australian Eggs Sustainability Committee

## Australian Eggs activities

- Report promotion and media
- Egg Industry Sustainability report release
- Internal membership communications
- External communications (multi-channel)
- Proposed media engagement to present findings

# The position of the egg industry in Australian life

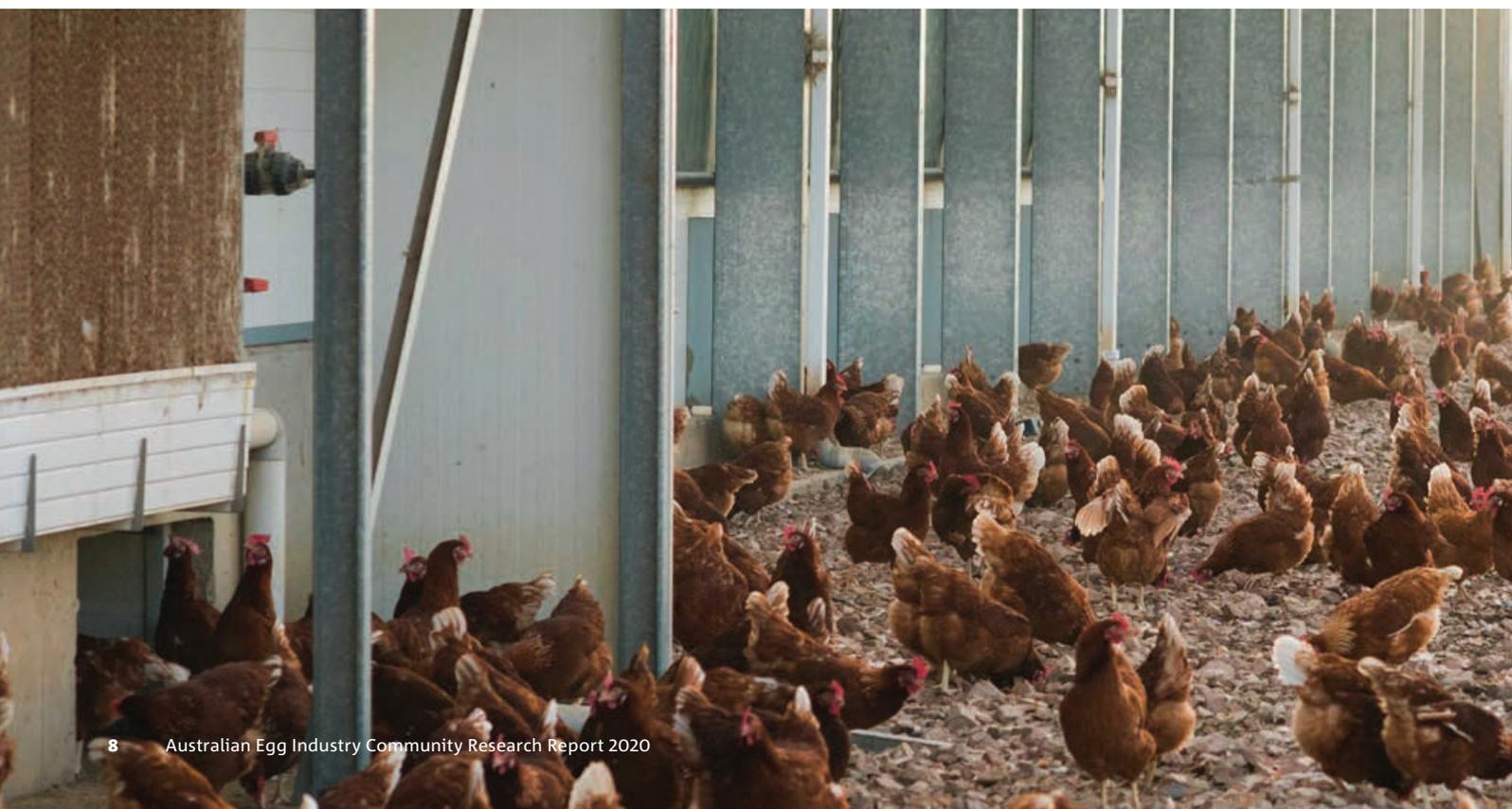
In 2018 and 2019, trust in the Australian egg industry was found to be an important driver of community acceptance of the egg industry. In what has emerged as a key measure of the state of the relationship between the Australian community and the industry, we examine how things have changed over the last three years.

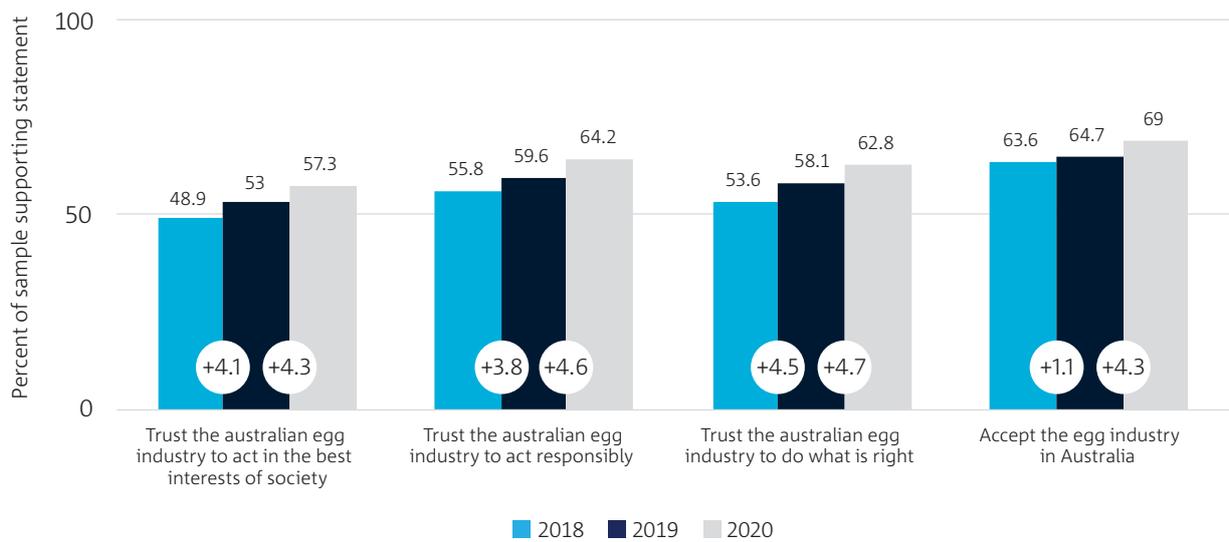
Community trust in the Australian egg industry has increased significantly year on year since 2018, with the average trust score improving from 3.53 in 2018, to 3.62 in 2019, and then 3.72 in 2020 (on a scale from 1-not at all to 5-very much). Across the three trust questions used, the percentage of Australians who expressed high levels of trust in the industry (e.g. choosing 4 or 5 on the 1 to 5 scales) increased from 53% in 2018, to 57% in 2019, to 61% in 2020 (see figure for individual items).

Over the same three-year period, community acceptance of the egg industry has also increased significantly. In 2018 acceptance was 3.78, in 2019 it increased to 3.82, and in 2020 it was 3.93 (on the same 1 to 5 scale).

The percentage of Australians who expressed high levels of acceptance of the industry (e.g. choosing 4 or 5 on the 1 to 5 scale) was 69% in 2020 (see figure). This improvement over time is statistically significant.

When we asked how much Australians trusted a variety of groups and institutions to act responsibly, we found the egg industry was trusted more than state and federal government and large egg retailers (e.g. Coles, Woolworths), but less than advocacy groups (e.g. RSPCA, Animals Australia, WWF). This pattern has remained consistent across the three-year project term.





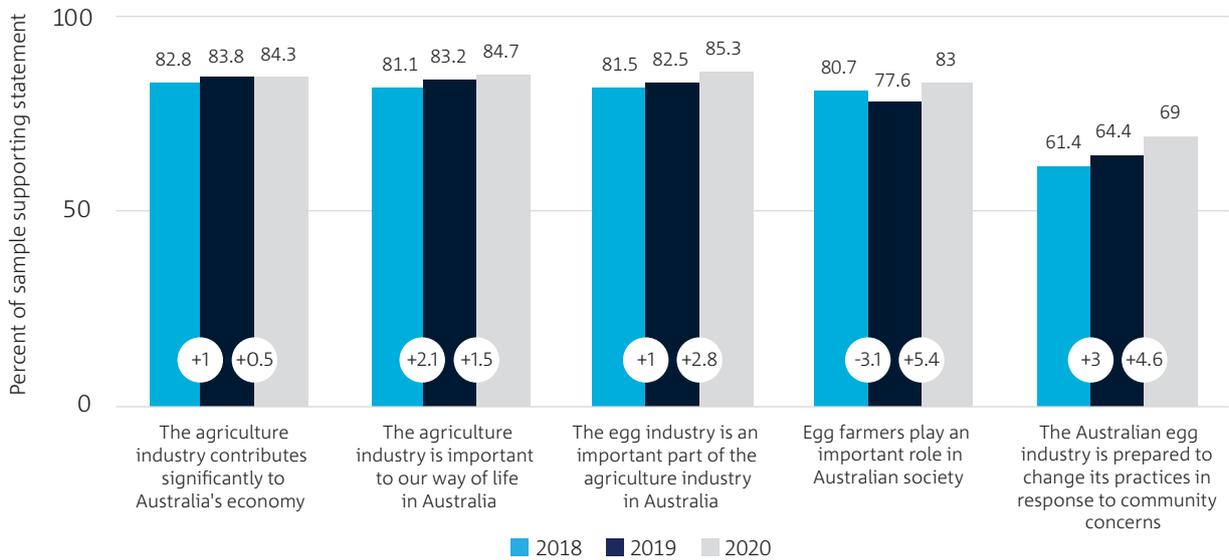


## Position of the egg industry

We also examined how important Australians felt the egg industry was to the country. On questions about the importance of the egg industry to the Australian economy, our way of life, the industry’s importance to the agricultural sector in Australia more broadly, and that egg farmers play an important role in Australian society, ratings were all more positive in 2020 compared to 2019. Apart from the role of egg farmers specifically, community sentiment in this area has improved consistently across the three years of data collection and is strongly positive.

## Responsiveness

Finally, community ratings of the egg industry’s responsiveness to their concerns has improved consistently across the three years of the research project. In 2020, 69% of Australians indicated agreement or strong agreement in this area as shown in the figure below. In each year of this research, industry responsiveness to community concerns was the strongest driver of trust in the egg industry, and the improvement in trust ratings across time are in large part driven by community recognition of industry responsiveness.



# The lives of people

For Australians in 2020, the provision of a safe, nutritious, affordable and secure staple food is more important than ever. The role of eggs in the Australian diet is important but community members are also very interested in how safe those eggs are.

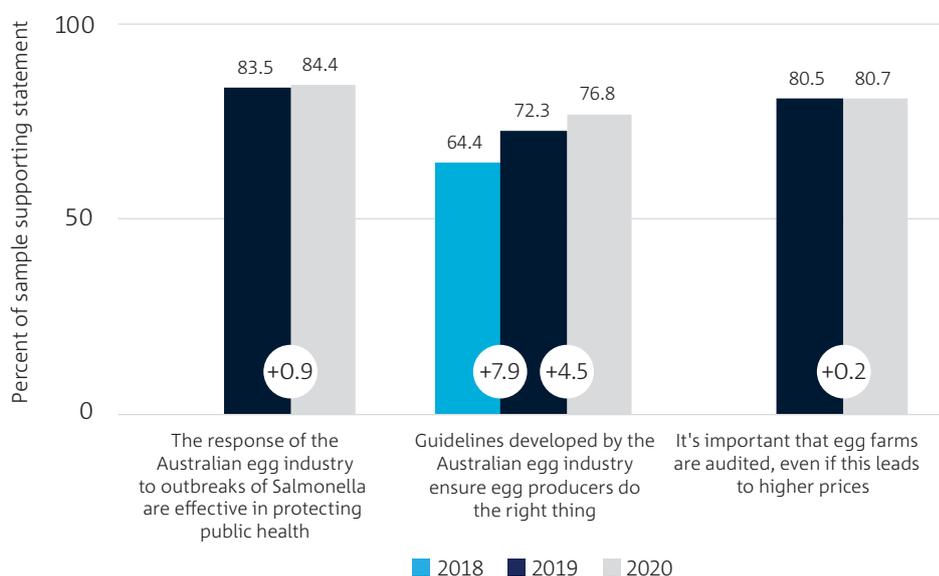
Across the three years, 2018-2020, the proportion of Australians agreeing that eggs are an important source of nutrition in the country's diet remained very high (see figure opposite). Agreement that eggs are a staple food Australians rely on also remained very high across time.

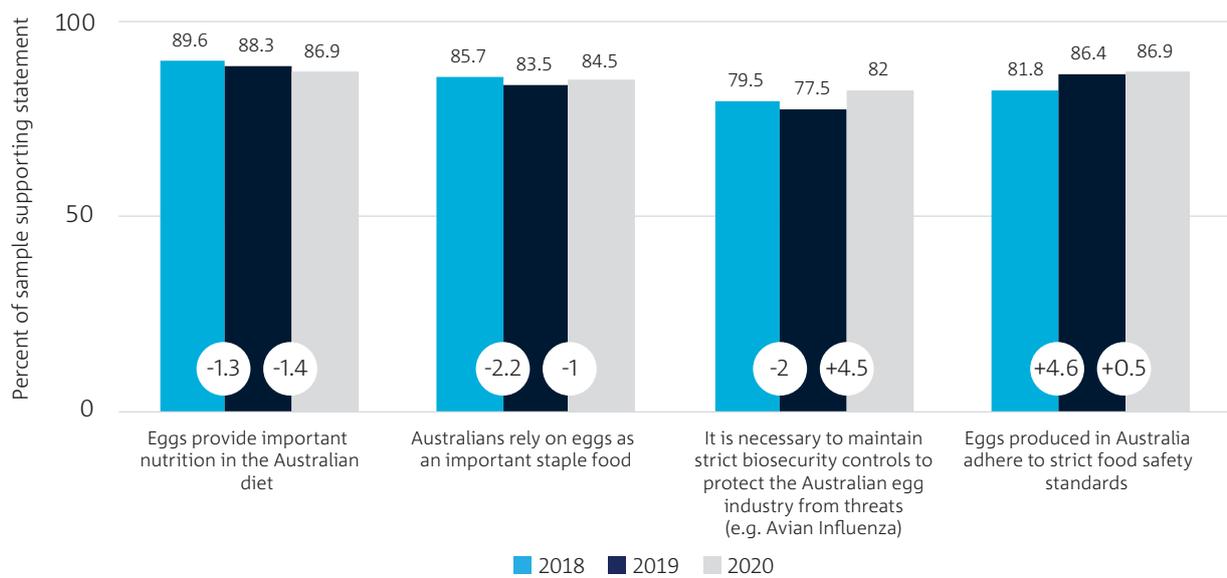
Australians also felt that egg production standards are high in this country. Community members feel strongly that protections against biosecurity threats (e.g. Avian Influenza) are important for the industry and that food safety standards in the egg industry are high. These ratings have remained high and stable across the past three years.

Of interest, ratings of the importance of guidelines developed by the egg industry to ensure farmers do the right thing has improved significantly year on year since 2018, from 64.4% agreement to 76.8% (a 12.4% improvement).

Alongside this, community members also agreed strongly that the industry has been responsive to outbreaks of salmonella within the supply chain, and that these responses have protected public health.

It would appear community members recognise the efforts of the egg industry to prioritise their safety through effective responses to challenges such as this, a sentiment that also likely contributes to an improvement in community trust in 2019 and 2020. Responsiveness of the egg industry to community concerns has been the strongest driver of trust in the industry in all three years of this research program.





# Animal welfare

Animal welfare outcomes are central to public perceptions of the Australian egg industry and have remained so over the last three years. The picture is nuanced, however, with the Australian community aware that welfare is a complex issue.

A range of questions were asked about animal welfare in different aspects of the farming process across the three years of the research program. Australians felt strongly that egg farming be done ethically, had a preference that hens should be able to engage in natural behaviours, and believed that hen welfare is about more than just the absence of harm. Agreement with these sentiments was very high in all three years of the research program.

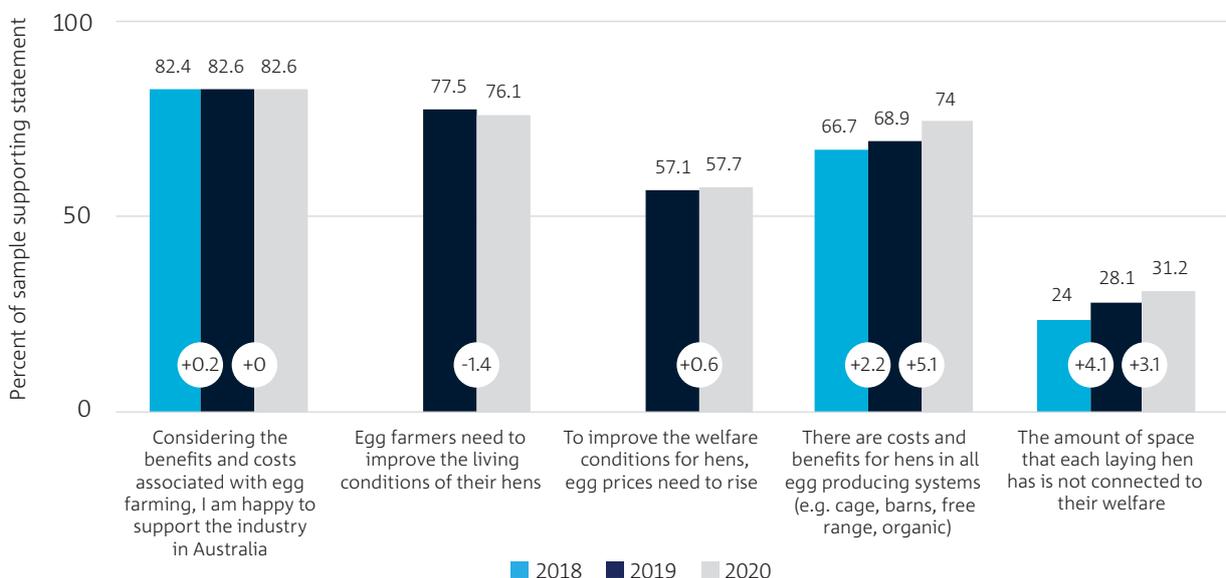
Across the three years, the community indicated confidence in the egg industry to address areas of challenge such as welfare. When asked to make a judgement about whether they supported the egg industry in Australia, considering both the costs and benefits the industry brings, support was consistently strong at around 83% across 2018-2020.

While Australians clearly care a great deal about hen welfare in general, further questions in the survey reveal community members recognise the issue is complex. Increasingly since 2018, Australians believe that all egg production systems (e.g. cage, barns, free range, organic) have costs and benefits for hen welfare.

Agreement also increased across all three years for the statement: “The amount of space that each laying hen has is not connected to their welfare”. In 2019 and 2020 we also asked a very straight forward question of Australians, with more than three quarters of participants in both years agreeing or strongly agreeing that egg farmers need to improve the living conditions of their hens.

Only 58% of participants in this representative sample agreed that egg prices would need to rise for this improvement in welfare to happen, however, indicating that Australians consider welfare improvements to be an issue for farmers and the industry more broadly.

Together, the responses to these questions show that animal welfare is a central issue for Australians when considering the egg industry, although understanding of the complexity of the issues involved has increased over time.



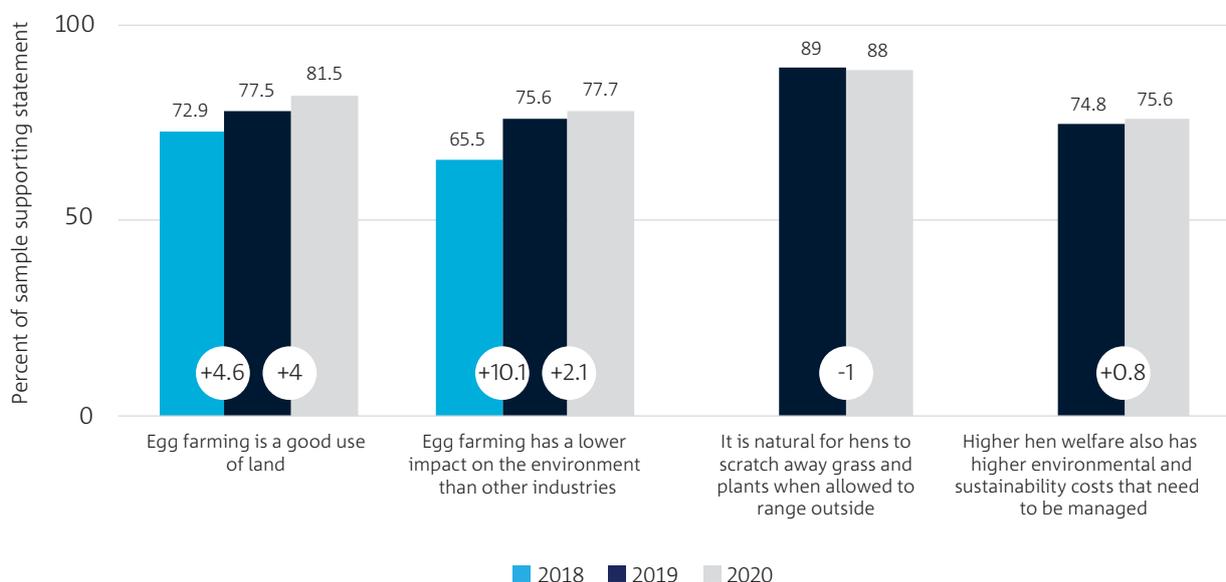
# The egg industry and the environment

The Australian Egg Industry Sustainability Framework includes environmental impacts as a key area of focus and action. Over the last three years, we have seen the prominence of environmental issues relating to the eggs industry increase in the responses of Australians.

We asked participants across all three years of the research program whether they felt that egg farming had a lower environmental impact than other industries. Agreement with this statement increased significantly, from 65.5% in 2018 to 75.6% in 2019 and then 77.7% in 2020. Alongside this finding, agreement that egg farming is a good use of land increased to 81.5% in 2020 from 72.9% in 2018. Together this suggests that egg farming is viewed as a legitimate use of land and that this use, compared to other industrial activities, is more environmentally sustainable.

Following the inclusion of a new item in 2019 examining the trade-offs that may be involved in balancing environmental sustainability and hen welfare, we saw strong levels of agreement that it was natural for hens to scratch away grass and plants when allowed to range outside and that higher hen welfare also has higher environmental and sustainability costs that need to be managed (see figure below). This sentiment was consistent across 2019 and 2020.

Again, this suggests that Australians are willing to consider the complexity and interplay between sets of complex issues like welfare and environmental sustainability. Alongside another key finding that industry responsiveness to community concern drives trust, this data shows that the Australian community thinks positively about industries that engage with them maturely, constructively and in ways that acknowledge the challenges that face them.

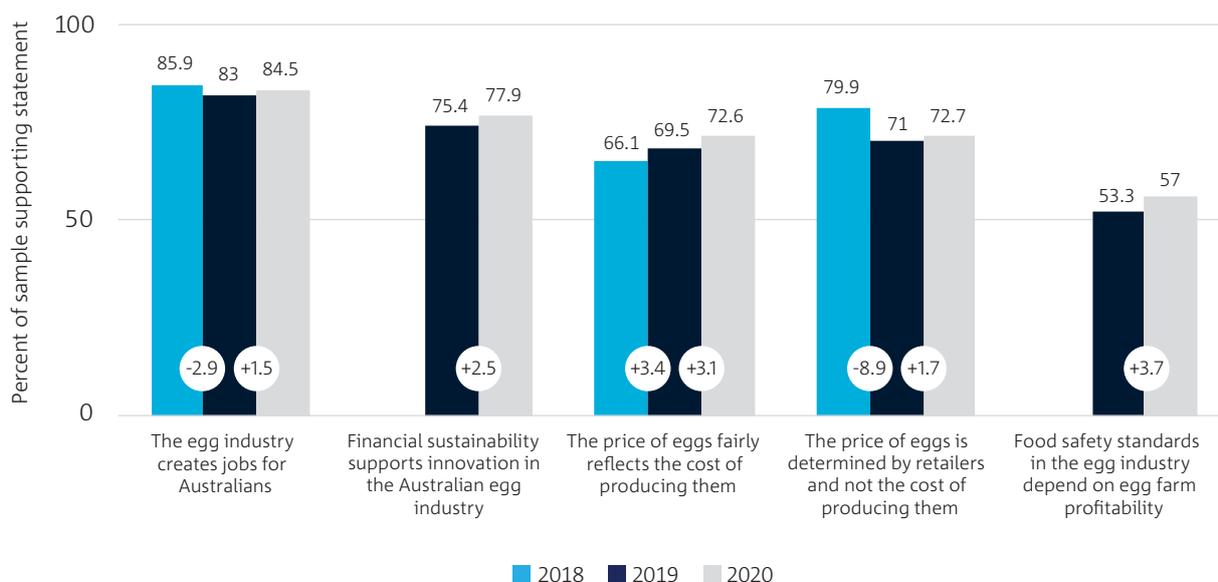


# Economic viability of the egg industry in Australia

The fourth focal area in the Australian Egg Industry Sustainability Framework is economic value and viability of the industry. In this section, we again explored the contributions of the industry to Australia’s economy through the eyes of the Australian community, and the interplay between economics and other issues.

Australians increasingly perceive that the price they pay for eggs fairly reflects the cost of their production, with the proportion of agreement in the representative sample on this statement increasing by 5% between 2018 and 2020. However, Australians also strongly believe that it is egg retailers and not farmers that set the price consumers pay for eggs rather than the costs of producing them.

Australians also feel strongly that food safety standards depend on the profitability of egg farms, and that financial sustainability of the egg industry supports innovation. Together, these findings reflect a potential point of tension for the egg industry, with low apparent levels of community support to fund innovation in areas like food safety through price increases coupled with agreement that retailers rather than egg farmers determine the costs of producing eggs safely, for example.





DAM FARM  
Poultry Services

# What informs purchasing decisions?

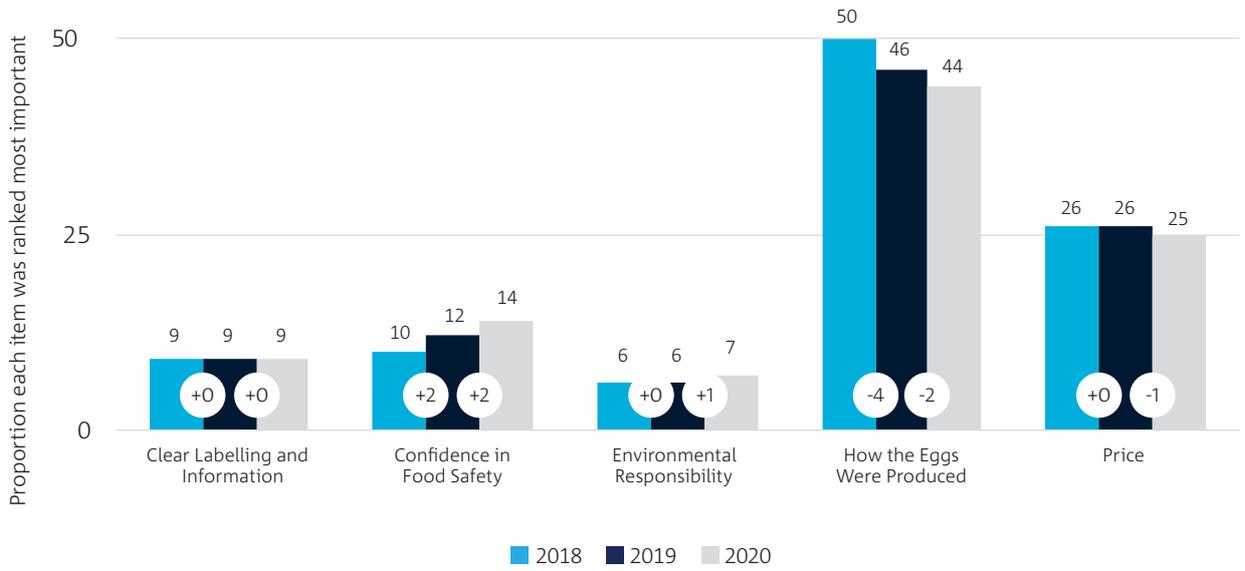
In each year of the research program, Australians were asked to rank the most important factor informing their egg purchasing decisions (if they purchase eggs).

Australians were asked to rank five factors that may influence their egg purchasing decisions: price, production method, confidence in food safety, environmental responsibility, and clear labelling and information. In all three years, the order of the rankings of these factors did not change: egg production method was by far the most stated first-ranked factor informing egg purchasing decisions (e.g. cage, free range, barn, organic). This was followed in each year by price, and then food safety considerations.

A consistent change was observed over time in the top three ranked factors. The proportion of Australians choosing egg production method as their number one factor decreased by 6% between 2018 and 2020. The proportion of Australians ranking price as the most important factor in purchasing decisions remained steady at around a quarter of the sample, while those indicating food safety increased from 10% in 2018 to 14% in 2020 (a 4% increase).

While the onset of the COVID-19 pandemic at the time of data collection may have influenced these rankings, the 2020 responses continue a shift observed between the 2018 and 2019 data.





# Representative versus the open sample

One of the most striking results throughout the program of research examining community attitudes toward the Australian egg industry has been the differences in sentiment between people in the nationally representative survey sample and those that completed the survey via an ‘open call’ public web link.

In each year of the program of research, we made the survey available to anyone who was interested to participate via a public web link hosted on the CSIRO project web page and Australian Eggs project web page. The opportunity to participate was promoted through significant media activity by Australian Eggs and CSIRO. This provided an opportunity to compare the responses of these two groups across three years.

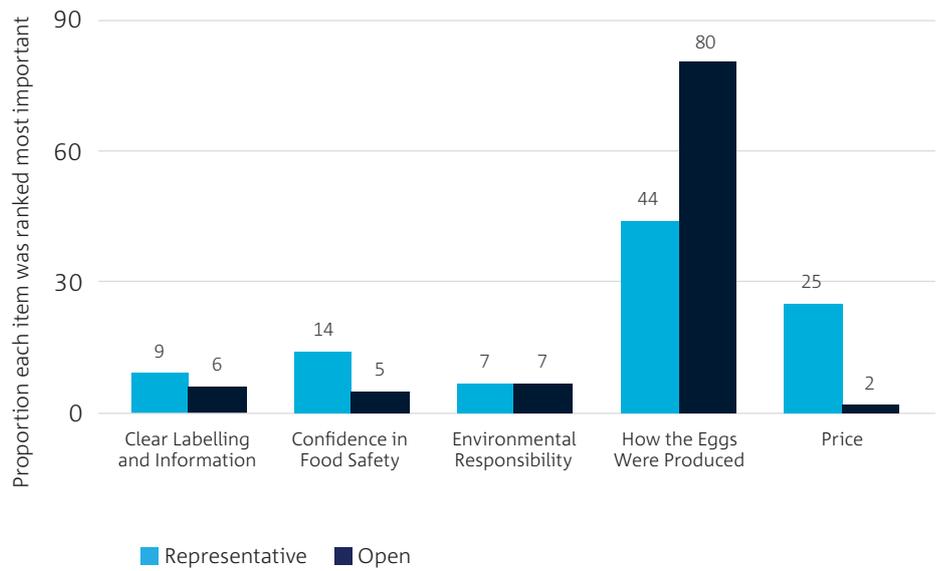
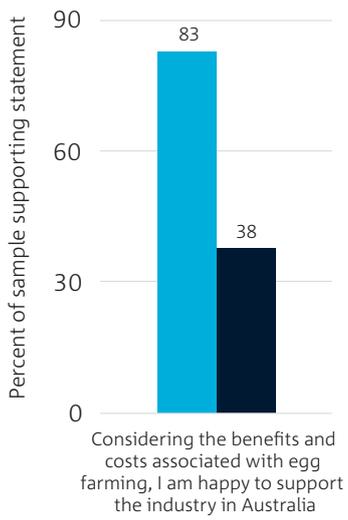
In 2018 the ‘open call’ sample numbered 7,869 people, prompted to participate by communications by CSIRO, Australian Eggs and the RSPCA. In 2019, 1,310 people took up the ‘open call’ survey invitation, but numbers increased to 2,446 in 2020.

In general, the findings comparing the representative and ‘open call’ survey samples show the views of the representative group to be much more positive than those within the ‘open call’ sample. In areas such as animal welfare, both groups indicated strong concern but on a range of issues such as the economics of the egg industry, its position in Australian society and its importance in the Australian diet, the ‘open call’ sample was much less positive.

We also examined the differences between these groups on the factors that influence their purchasing decisions (if they reported buying eggs). While egg production method (e.g. free range, barn laid, cage eggs) was the most important factor for both groups, 80% of those in the ‘open call’ sample compared to 44% of the representative group selected it as the most important factor in their purchasing decision. And while price was the second most selected factor for the representative sample at 25%, only 2% of the ‘open call’ group selected price as the most important factor influencing their decision (see figure opposite).

Overall, when examining the key measure of community sentiment regarding the balance of costs and benefits, the difference was stark. For those in the representative sample, there was consistent strong agreement that the benefits of the industry outweigh its impacts, while for the ‘open call’ sample there was much lower agreement that the value proposition for the industry was positive (see adjacent figure for 2020 data).

Those in the ‘open call’ sample also rated the industry’s responsiveness to community concerns much lower than the nationally representative sample of Australians, with just 19.2% of ‘open call’ respondents indicating agreement on this statement compared to 69% of Australians in the representative sample.



# COVID-19 and the Australian egg industry

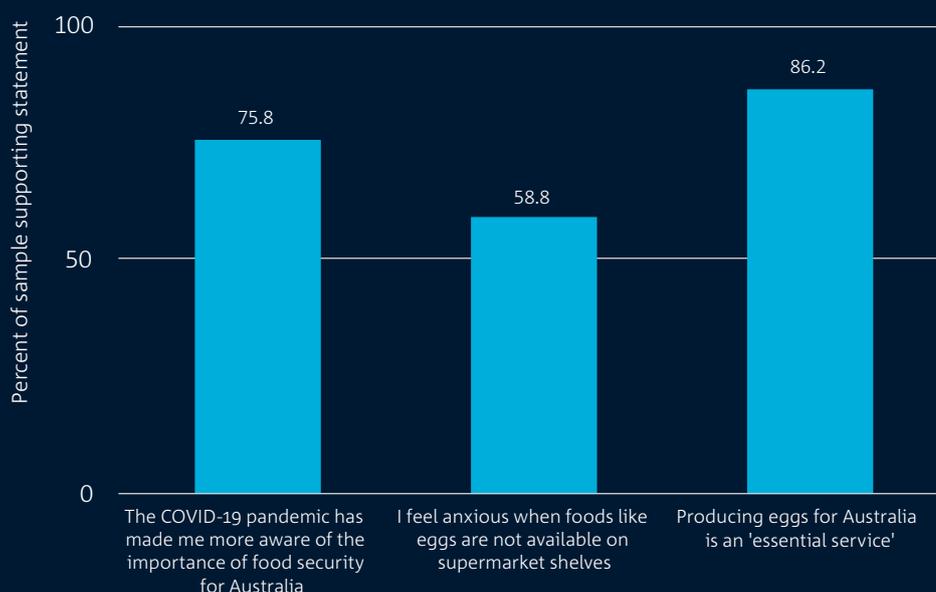
The timing of the 2020 national survey of Australian attitudes toward the egg industry coincided with a most challenging time for our country, and the world: the COVID-19 pandemic. Data collection occurred between the 22nd of April and the 7th of May 2020 and offered an opportunity to take account of and document the impacts of the pandemic on community attitudes toward the egg industry.

We asked Australians a range of questions about the pandemic. It is also important to note that we included information for participants regarding how to access assistance in the event that the impacts of COVID-19 was causing them distress.

First, at the time of data collection 33% of participants in the representative sample of Australians indicated that the pandemic had affected them personally 'very much' or 'a great deal', and 39% that they were 'very' or 'extremely' worried about COVID-19.

Next we asked about food safety and security. 80.5% of participants indicated agreement that 'having a safe, reliable supply of eggs is comforting' during the pandemic, and 87.8% that Australia's 'strong food safety standards give me confidence' that the country can maintain its supply of food during this challenging period.

A majority of participants (58.8%) also indicated agreement that shortages of eggs on supermarket shelves made them feel anxious, while 86.2% of participants indicated agreement that 'producing eggs for Australia is an essential service' (see figure below).



# What leads to acceptance of the egg industry in Australia?

In each year of this research program, we have detailed community sentiment toward the Australian egg industry. In each year we have also defined the pathways to a stronger relationship between the community and the egg industry. In 2020, we again explored the representative sample data to see what has changed over time.

Analyses revealed the four key drivers of trust and acceptance in 2020 were the same as for previous years:

**Responsiveness:** this is made up of several questions including the extent to which the industry listens to and respects community opinions, and the extent to which the industry is prepared to change its practices in response to community concerns.

**Industry regulations:** This is made up of questions that measure how much Australians believe there are measures in place to make sure egg farmers 'do the right thing'. This includes the belief that the industry is regulated, regularly audited, and that internal industry guidelines are effective.

**Confidence in food safety:** This is made up of questions that measure Australians' confidence in the food safety standards of eggs, and includes agreement with statements that eggs produced in Australia adhere to strict food safety standards, that these safety standards protect the public from issues like Salmonella outbreaks, and that industry responses to outbreaks of Salmonella are effective in protecting the public.

**The balance of benefits and costs:** Throughout the survey we asked participants about a range of benefits the industry has in relation to its perceived costs, including the industries' ability to create jobs and nutritional benefits, the affordability of eggs, and whether egg farming was a good use of environmental resources. After answering these questions we asked community members to weigh up the benefits and costs, and whether they support the industry in Australia as a consequence – we included this question in these analyses.

The results of the path analysis demonstrate that:

- Trust in the egg industry is the key driver of acceptance of the egg industry, and has remained so in all three years of the research program
- Trust acts as a vehicle through which responsiveness, confidence in regulation, confidence in food safety, and the balance of benefits over costs influences acceptance of the industry.
- In 2018, 2019 and now 2020, responsiveness of the industry is the strongest single driver of trust in the industry. The more the Australian egg industry is recognised as being willing to listen to the public and change over time in response, the more they are trusted.
- Confidence in regulation is the second strongest driver of trust, and is a more important driver than confidence in food safety standards, though both are independently linked to greater trust.
- Food safety was a stronger direct driver of acceptance of the egg industry in 2020 than in 2019, perhaps reflecting the effects of COVID-19 on community sentiment around the safety of food (see COVID-19 results).
- The balance of costs and benefits, or a positive value proposition for the country, is linked to increased trust but is more strongly linked directly to acceptance. That is, perceiving that the industry has tangible benefits for Australia does increase trust in the industry, but it increases acceptance of the egg industry both directly and indirectly via trust.



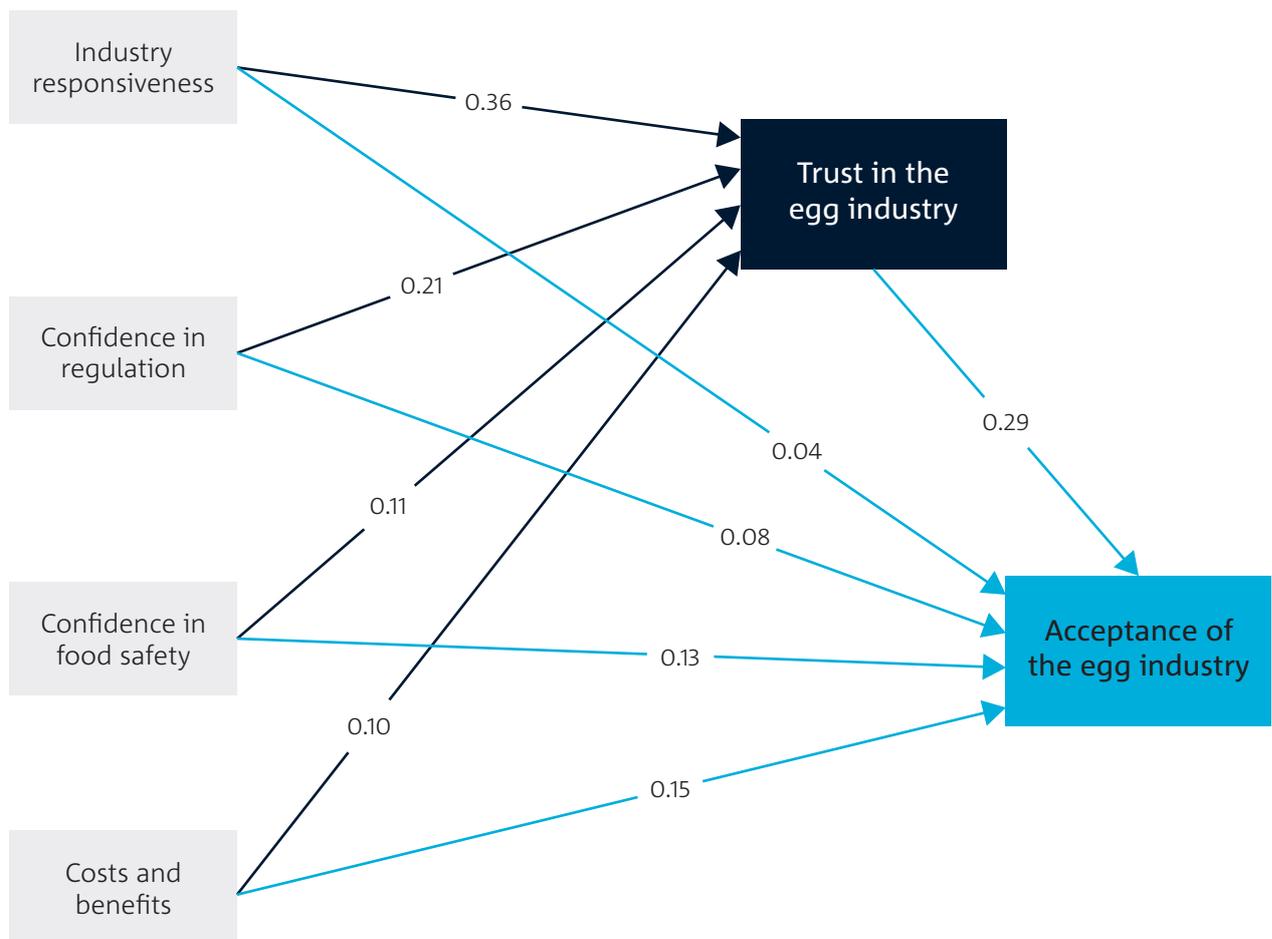
Experiences and expectations about the egg industry in Australia

Trust in the Australian egg industry

As in 2019, the modelling showed that all four of the key indicators of trust also had some direct influence on acceptance. That is, while industry responsiveness, confidence in regulation, and confidence in food safety all increase trust (and through trust, acceptance) they also all increase acceptance through other means. This means that there is more than one way for the industry to improve the level of acceptance it enjoys in the Australian community.

For example, should the egg industry reduce its negative impacts relative to its positive contributions to the community, acceptance of the industry will likely increase. Similarly, should community confidence in the regulation of the industry improve, so will acceptance.





## How to read 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. In this path model we're examining what leads to trust and acceptance of the Australian egg industry, shown by black lines and blue lines, respectively. Numbers represent the strength of the relationship between two variables, relative to all the other relationships in the model. For example, industry responsiveness is a stronger driver of trust than confidence in food safety. The direction of each arrow reflects the direction of the relationship. For example, higher levels of Industry responsiveness leads to higher levels of Trust in the industry.

# Conclusion

This report provides a summary of the findings from a three-year program of research from 2018 to 2020 by CSIRO on the nature of the relationship between the Australian community and the Australian egg industry.

Through the course of this research program, 15,435 Australian residents in three annual, nationally representative surveys, provided their perspective on a broad range of issues related to the egg industry. A further 11,625 people participated in this work through an ‘open call’ for any interested Australian residents. In total, 27,060 people have contributed over three years to a deeper understanding of the relationship between the egg industry and the Australian community.

The 2020 data was important for several reasons. Chief among these was to determine if changes observed between 2018 and 2019 continued in the same direction through 2020. In 2020, the key finding from this work was that trust in the Australian egg industry improved significantly once again within the representative national sample, making that a consistent and statistically significant trend over time. Acceptance of the industry, largely as a consequence, also increased each year between 2018 and 2020.

Examining the main drivers of trust, industry responsiveness to community concerns improved significantly year on year from 2018 to 2020, in large part driving the observed improvement in trust and then acceptance of the industry, as described in the 2020 path model. This model remained stable across the three years of the research program, allowing the egg industry to focus on those drivers of greatest importance in improving community trust.

Moreover, community trust in the egg industry is now at very strong levels (Mean = 3.72 on a scale from 1, not at all, to 5, very much). Recent similar research focused on trust in Australia’s rural industries found trust in the sector overall to be 3.42 on the same five-point scale.<sup>4</sup> Past research by CSIRO on the mining industry using the same methods found levels of community trust in that industry to be 2.69 on the same five-point scale.<sup>5</sup>

It is unlikely that trust in the industry will continue to improve at the same rate, and the industry will need to consider its next key challenge: maintaining high levels of trust. The data indicates that this will involve a continuation of the strategies adopted to date: following through on its commitments, delivering on an industry research and development agenda focused on the four pillars of its Sustainability Framework, and demonstrating how it is responding to existing (e.g. welfare) and emergent (e.g. environmental sustainability) challenges over time.

For other industries, the egg industry offers a case study in focused effort to build community trust. For the egg industry, the benefits of this focus are available so long as community members feel heard, respected and that the industry is worthy of its trust. The Australian Eggs Sustainability Framework and annual report offers a key insight into how the industry is responding to the data provided by CSIRO through this program of work. While a scaled-back process to bring the voice of the Australian community into the egg industry will be useful in the future, the Sustainability Framework reporting will remain a key vehicle for industry transparency and formal demonstration of responsiveness to the Australian community.

The 2020 data also revealed those areas where the egg industry may seek to continue to improve its performance and outcomes. Chief among these is animal welfare. This research has shown over the last three years that Australians care deeply about animal welfare, and that this concern is complex and nuanced. It is exactly this complexity that provides many opportunities to engage community meaningfully in ways that are more constructive than is typical in public discourses related to animal welfare and agricultural industries.

4 Voconiq (2020). Community trust in rural industries: A national survey. Voconiq, Australia. [https://www.agrifutures.com.au/wp-content/uploads/2019/09/CTiRI\\_A-national-survey\\_2020.pdf](https://www.agrifutures.com.au/wp-content/uploads/2019/09/CTiRI_A-national-survey_2020.pdf)

5 Moffat, K., Pert, P., McCrea, R., Boughen, N., Rodriguez, M., Lacey, J. (2017). Australian attitudes toward mining: Citizen Survey – 2017 Results. CSIRO, Australia. EP178434. <https://publications.csiro.au/rpr/download?pid=csiro:EP178434&dsid=DS1>

Similarly, the egg industry's environmental footprint and plans to mitigate its impacts are important to the Australian community, as is a continued commitment to the highest food safety standards. This work has demonstrated what the community values in and from the egg industry; it is the industry's ongoing challenge to repay the faith of the Australian community through matching its expectations with performance.

In the midst of the COVID-19 pandemic, the 2020 data also revealed the increased importance of food security for the egg industry in these difficult times. Fulfilling its role as an 'essential service' and providing reassurance to Australian community members will also be important for maintaining its current, high levels of community trust.

Finally, more than 27,000 Australians participated in this three-year research program. The Australian egg industry has sought and received the perspectives of a significant number of community members to inform its thinking, investments, and actions.

It has done so by engaging CSIRO to conduct this research in a systematic, arms-length manner, exposing itself to potentially difficult insights and challenging scrutiny. The authors would like to thank these Australians for their time and effort over the last three years.

The benefits for doing so, however, are clear. 27,000 Australians have been engaged in precisely the area shown by this research to have the greatest impact on community trust in the egg industry: listening to the views of community members, demonstrating respect for them, and taking action based on those concerns (i.e. industry responsiveness). By then communicating these findings and industry responses extensively within and outside the industry in each year of the research program, the egg industry has established a framework for effective national community engagement. The Australian egg industry must determine how it may most effectively broaden and deepen its relationship with the Australian community, and demonstrate it is worthy of community trust.



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