

Australian Egg Industry Community Research

2018 Report



CITATION

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Introduction

Eggs are a staple in the Australian diet. Each day, almost 17 million eggs are consumed in Australia¹. Yet how those eggs come to be on a plate, in a cake or in a lunchbox is a topic of keen discussion in the Australian community.

The Australian egg industry, led by Australian Eggs², has developed a Sustainability Framework which “reflects the Australian egg industry’s objective of farming eggs for Australians in a manner which is socially, environmentally and economically responsible”³. In supporting the Australian egg industry to implement this Sustainability Framework, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) was engaged to bring the voice of Australians into this process.

The research described in this report seeks to examine the full breadth of the industry. This is important because the sustainability of any industry is dependent on many parts all working together; in this report we describe the results of a community research process that engaged industry stakeholders and the broader Australian population about the whole industry.

In conducting this work, CSIRO aimed to go beyond a description of how Australians feel about the egg industry in this country, but to also describe how it may work to improve the level of trust that Australians have in the industry, and their level of acceptance of the industry. In this way, we aim to support a constructive conversation about how the relationship between the Australian egg industry, its stakeholders and the Australian community may be strengthened.

CSIRO has been engaged to conduct a program of community research over three years, from 2018 to 2020. This program of community research will track key areas of focus in the Australian Egg Industry Sustainability Framework, changes in community sentiment as a result of industry or external change, and to dive deeper into issues of particular concern or relevance to the industry.

A key principle in this research is transparency. CSIRO will publish the findings from this project on a public CSIRO website (<https://research.csiro.au/eggs/>) and Australian Eggs has committed to do the same through their website (<https://www.australianeggs.org.au/what-we-do/sustainable-production/sustainability-framework/#item-836>).

1 Australian Eggs (2018). Australian Egg Industry Sustainability Framework. Australian Eggs. Accessed on 29/09/18: <https://www.australianeggs.org.au/what-we-do/sustainable-production/sustainability-framework>

2 Australian Eggs is a member owned not-for-profit company providing marketing and research & development (R&D) services for the benefit of Australian egg farmers. <https://www.australianeggs.org.au>

3 Australian Eggs (2018). Australian Egg Industry Sustainability Framework. Australian Eggs, Page 3. Accessed on 29/09/18: <https://www.australianeggs.org.au/what-we-do/sustainable-production/sustainability-framework>

The community research process

This report summarises the key findings from a community research process about the egg industry that was open to a broad range of Australians. This research process had two components: an engagement process with egg industry stakeholders and a national community survey.

Stakeholder engagement process

This engagement process involved sending invitations to 30 industry stakeholders directly involved in the key areas of the Sustainability Framework. Interviews were conducted with 17 industry stakeholders that included egg producers, agricultural industry associations, government regulators, researchers and animal welfare groups⁴.

Stakeholders were asked to nominate current biggest issues facing the Australian egg industry, as they relate to the Australian Egg Industry Sustainability Framework (e.g. the lives of people, animal welfare outcomes, environmental impacts, and economic viability), as well as any additional topics or issues that participants wanted to discuss or communicate to ensure CSIRO had a good understanding of the industry.

Together with desktop research by CSIRO and discussions with Australian Eggs, these interviews informed the design of the community survey.

Community survey

A key aim of the community research process was to enable all Australians over the age of 18 years to have their say about the Australian egg industry. We used an online survey to achieve this because surveys offer an efficient way to access the views of many people in a consistent manner. By conducting this survey online, participants can complete it when it suits them in a relatively straight forward way. We use surveys because it allows us to reach out and 'speak' to many more Australians than would be possible if we only conducted interviews, for example.

In this project, as in many similar national projects conducted by CSIRO, we sought to collect surveys from a diverse and representative group of Australians. By collecting surveys from a group of people that is representative of the Australian population as a whole, we can be more confident that our findings reflect the broader set of community views about the egg industry. To achieve this, we used a research panel.

Research panels are used frequently in survey research of this kind to access a group of people that reflect the broader Australian population on specific demographic attributes. In our case, participants were matched with Australian Bureau of Statistics (ABS) data for age and gender, with the number of participants recruited in each state reflecting their proportional representation in the country as a whole (e.g. we collected more people from

⁴ The Australian Egg Industry Stakeholder Engagement Summary Report is available here: <https://research.csiro.au/eggs/results>



New South Wales than the Northern Territory, in line with the distribution of people across the country)⁵. We also made sure that we collected surveys from regional areas in each state, again in line with ABS data regarding the proportion of people in each state that live in regional versus metropolitan areas. Research panel participants receive a small incentive for participating in each survey that they complete. In this report, participants from the research panel are referred to as the **representative sample**.

Through the research panel, we collected surveys between the 6th August and the 14th September 2018 from 5,440 people matched to the ABS population statistics. After cleaning the survey data⁶, 4,797 surveys from the research panel were analysed for inclusion in this research (known as the **representative sample** in this report).

In this project, however, we also wanted to make sure that as many Australians as possible had an opportunity to share their views about the egg industry with us. To enable this, we also collected surveys through an open web link hosted on the CSIRO project page and the Australian Eggs project web page. The survey was available via this web link between the 9th of August and the 10th September 2018, with 8,037 surveys collected in this period. After cleaning the survey data, 7,876 surveys from the web link were analysed for inclusion in this report. Participants that self-nominated to complete the survey through the web link are referred to as the **open sample** in this report.

The representative and open samples were kept separate in our analyses because they had very different demographic characteristics and often very different responses to the questions that we asked. This report predominantly describes survey results from the representative sample. However, we have also provided a summary of the open sample survey responses and some key differences between them in this report. We have also provided a more comprehensive description of the survey data collected from both samples in an appendix to this report, which is also available on the CSIRO and Australian Eggs web pages.

WHY DIDN'T WE JUST COMBINE THE TWO SAMPLES?

It would seem a natural thing to just combine the two groups of surveys that we collected to create one very large sample of Australians to analyse. However, when we looked at the two samples side by side, it was clear that they were very different in a number of important ways. While the panel sample was representative of Australians on key demographic and geographic attributes mentioned above, the web sample demographics in particular were quite different. Likewise, when we looked at the responses to our survey questions about the Australian egg industry, the responses from each group often looked very different. If we had combined them, these differences would have been lost and our ability to analyse and understand the findings for the Australian adult population as a whole would be compromised.

5 Australian Bureau of Statistics (<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3101.0Main+Features1Dec%202017?OpenDocument;http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3218.0>)

6 'Data cleaning' is conducted in order to ensure the quality of data included in analyses is high. This involves screening and potential removal of surveys where, for example, participants answered the survey very quickly (i.e. less than 5 minutes), in ways that indicate lack of attention to the content of questions, and extreme or consistent responding on survey questions (i.e. answering '1' to all questions). For more detail on what this involves, see Meade AW and Bartholomew C. (2012) Identifying careless responses in survey design. *Psychological Methods*, 17(3), 437-455. DOI: 10.1037/a0028085.

The structure of this report

This report has been written to reflect the structure of the community survey. As in the community survey, we have tried to cover a broad range of topics and issues in an engaging and useful way.

We start with a description of the participants that completed the survey, followed by the community view around the position of the egg industry in Australian society. We then explore community survey responses around the four key areas of the Australian Egg Industry Sustainability Framework:

- The lives of people
- Animal welfare
- The environment
- The economics of the industry

We then include a section describing the similarities and differences in the two groups of surveys collected (representative and open sample), before detailing some more complex analyses describing the drivers of trust in the egg industry.

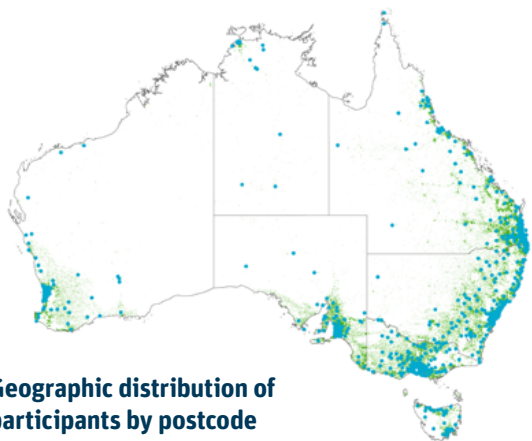
Where appropriate, we have reported averaged results for groups of questions that examined a particular topic or issue rather than include individual questions. In survey design, we often try to explore a topic or issue using more than one question so that we can be sure that we have respected the complexity of these issues and have a robust measure of community sentiment. The averaged scores then allow us to reflect the multi-dimensional nature of these issues in an accessible way.

Finally, it is important to note that at the beginning of the community survey we asked participants to consider the following comprehensive definition of the egg industry developed with input from Australian Eggs:

“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).”

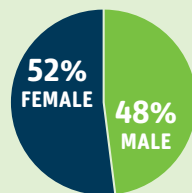
Who completed the community survey?

PARTICIPANTS

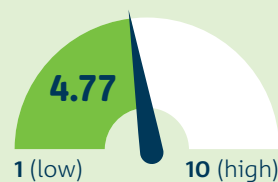


Geographic distribution of participants by postcode relative to population density

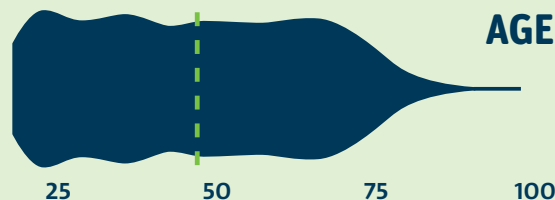
- 4,797 surveys included for analysis
- Green dots represent population distribution as a whole



GENDER

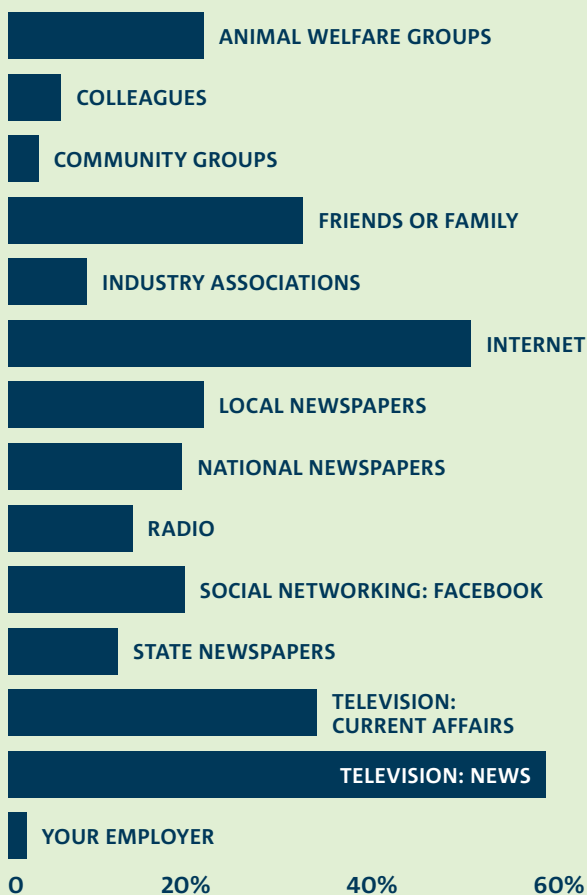


SELF-REPORTED KNOWLEDGE OF EGG PRODUCTION

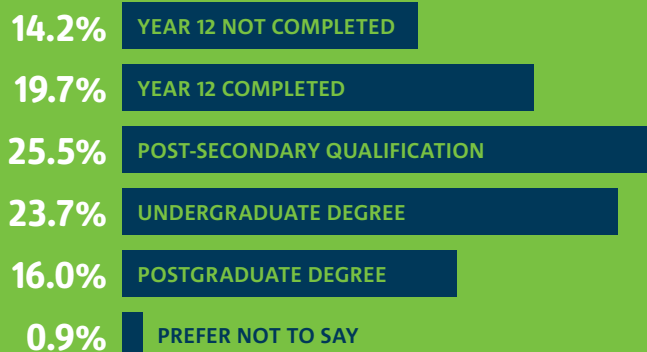


AGE

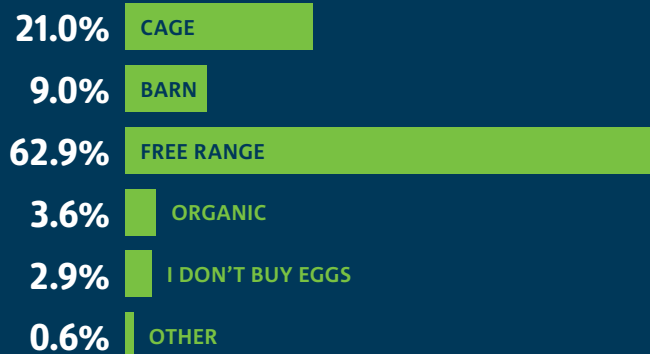
INFORMATION SOURCE



EDUCATION LEVEL



EGG TYPE PURCHASED IN THE LAST WEEK



What does the egg industry mean to Australians?

To understand how Australians view the egg industry in a broader national context, we asked participants about the position of the egg industry in Australia, how it relates to the agriculture sector, and the level of trust and acceptance Australians feel toward the egg industry.

Agriculture and eggs are important to Australians

Overall, Australians felt strongly that the agriculture sector is important to Australia, contributes significantly to the economy and is important to our way of life in Australia. Looking at the egg industry specifically using a scale from 1 (strongly disagree) to 7 (strongly agree), Australians felt strongly that egg farmers play an important role in Australian society (Mean(M) = 5.68) and that the egg industry is an important part of the agriculture sector in Australia (M = 5.68).

Trust and acceptance of the industry

Participants were asked about how much they trusted various institutions related to the egg industry. Trust scores for each institution examined are displayed below in Figure 1 on a scale where 1 represents lower trust and 5 represents higher trust.

The results show that trust in the Australia egg industry is positive (i.e. above the mid-point of the scale used). The egg industry is trusted more than state and federal governments, and egg retailers (e.g. Coles, Woolworths, and Aldi). However, the egg industry is trusted less than animal welfare groups (e.g. RSPCA and Animals Australia) and research institutions (e.g. CSIRO, universities).

Looking at the level of acceptance of the egg industry in Australia, again results were generally positive (M = 3.78, on a scale from 1 = Not at all to 5 = Very much so), with almost 60% of participants strongly approving of the industry and less than 10% not approving of the industry.

Responsiveness of the industry

We also asked participants how responsive the egg industry was to community concerns. Overall, participants in the community survey rated the egg industry as being responsive to public sentiment (M = 4.80).

RATINGS OF TRUST

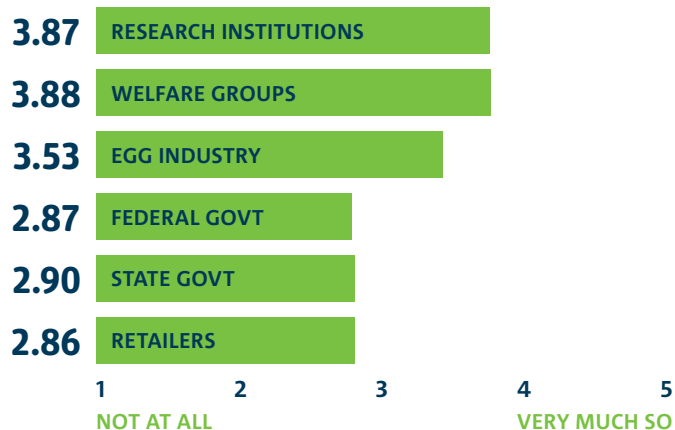


Figure 1. Level of agreement with Trust items

The lives of people

The first key area of the Australian Egg Industry Sustainability Framework that we examined was the lives of people. Australian Eggs describes this as the provision of a safe, nutritious, affordable and secure staple food to consumers with a strong emphasis on food safety and food waste.

Eggs as an affordable staple

Participants felt strongly positive toward the role of eggs in the Australian diet. More than 85% of participants in the representative sample agreed that eggs provide important nutrition in the Australian diet (M = 6.10) and that Australians rely on eggs as an important staple food (M = 5.90; see Figure 2). The vast majority of participants (more than 70%) also indicated that eggs were affordable where they lived (see Figure 3).

Food safety is important to Australians

Participants were strongly of the belief that maintaining strict biosecurity controls to protect the Australian egg industry from threats such as Avian Influenza is important (see Figure 4).

This was consistent with the views of respondents on confidence in food safety.

EGGS AS A STAPLE (DISTRIBUTION OF PARTICIPANT RATINGS)

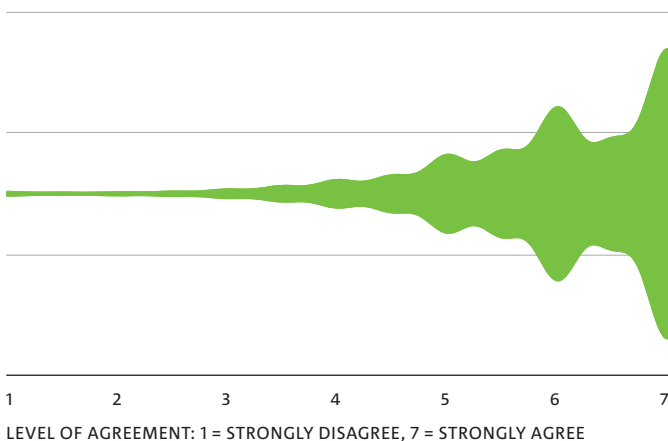


Figure 2. Australians rely on eggs as an important staple food; distribution of scores.

AFFORDABILITY (PERCENTAGE OF PARTICIPANTS %)

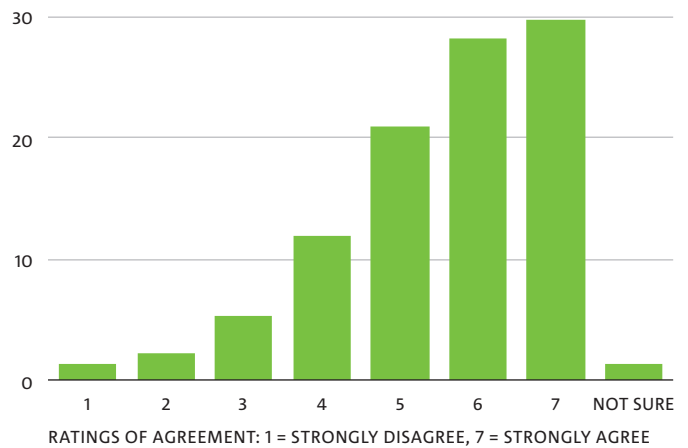


Figure 3. Ratings of the Affordability of eggs

BIOSECURITY (PERCENTAGE OF PARTICIPANTS %)

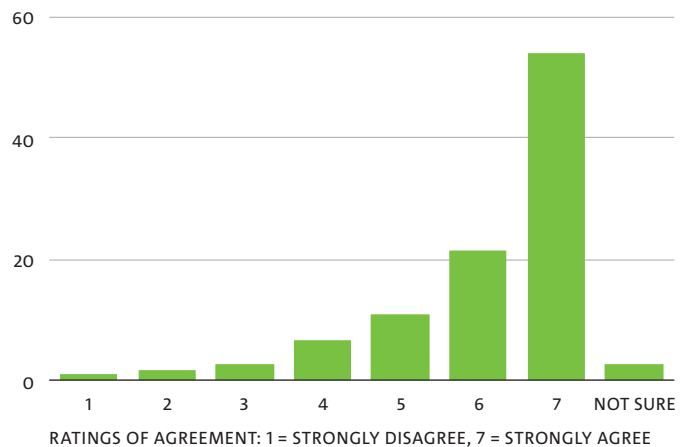


Figure 4. Level of agreement with importance of biosecurity in egg production

Regulation of the egg industry

We also examined community attitudes toward the regulation of the egg industry in Australia. Overall, results indicated strong confidence that egg production is safe and well-regulated, and that Australians care deeply about how their eggs are produced.

Again on a scale from 1 (Strongly disagree) to 7 (Strongly agree), we found that Australians were strongly of the view that it is important to understand where our food comes from and how our food is produced (see Figure 5). Participants were also confident that the industry is already effectively regulated (see Figure 6), with almost 70% of participants agreeing with this sentiment.



IMPORTANCE OF FOOD PROVENANCE (DISTRIBUTION OF PARTICIPANT RATINGS)

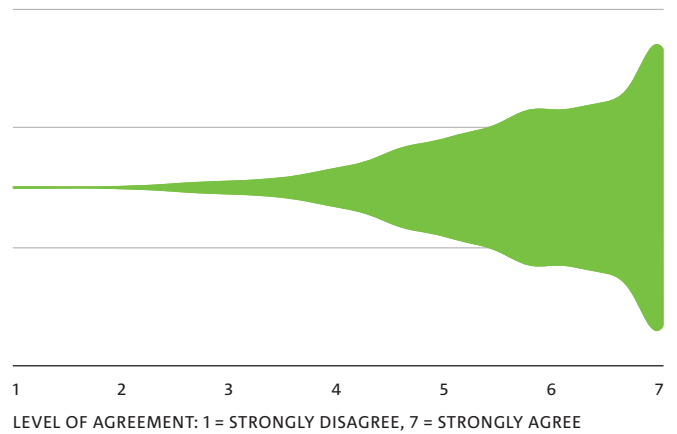


Figure 5. Distribution of scores for questions about the importance of how food is produced (1 = Strongly disagree, 7 = Strongly agree)

CONFIDENCE IN REGULATION (DISTRIBUTION OF PARTICIPANT RATINGS)

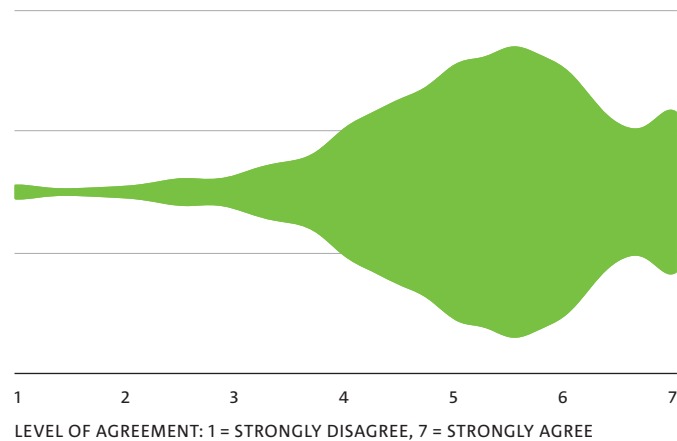


Figure 6. Distribution of scores for questions about regulation of the egg industry (1 = Strongly disagree, 7 = Strongly agree)

Animal welfare

The Australian Egg Industry Sustainability Framework has animal welfare outcomes as a key area of focus. In our community survey we examined Australian attitudes toward the treatment of laying hens in the egg industry and views around different egg farming systems.

Hen welfare is important to Australians

We asked a range of questions about the welfare of egg laying hens in order to provide a comprehensive understanding of Australian attitudes on this issue. The results in Figure 7 show that Australians care strongly about hen welfare (M = 5.30, on a scale from 1 = Strongly disagree to 7 = Strongly agree).

Hen welfare is complex

Given approximately 17 million eggs are consumed in Australia every day, we also wanted to understand how Australians think about the complexity of animal welfare in this industry. For example, we asked participants to rate their level of agreement with the statement “good hen welfare requires some invasive activities (e.g. beak trimming)” on a scale from 1 (Strongly disagree) to 7 (Strongly agree).

The average response to this item was 5.21, indicating significant support for this statement (i.e. one full point above the mid-point of the scale used). In addition, Figure 8 reveals that responses to this question were spread across the full range of possible responses, with approximately 20% of participants indicating that they were “not sure”. Perhaps reflecting this complexity, participants were also in agreement (M = 5.31) that there are costs and benefits for hens in all egg farming systems (e.g. cage, barns, free range, organic).

IMPORTANCE OF HEN WELFARE (DISTRIBUTION OF PARTICIPANT RATINGS)

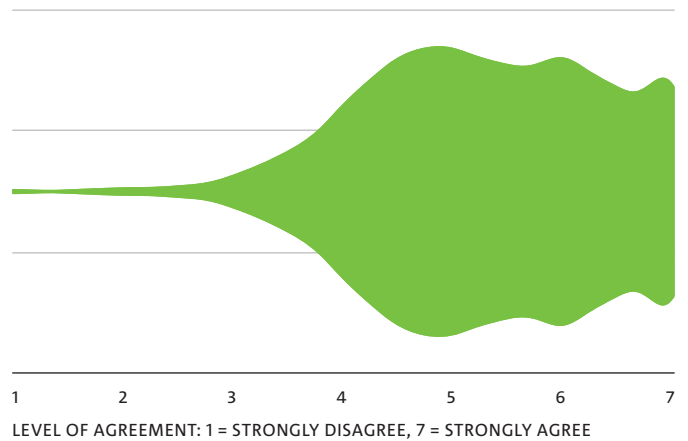


Figure 7. How important is the welfare of hens?

WELFARE COMPLEXITY (PERCENTAGE OF PARTICIPANTS %)

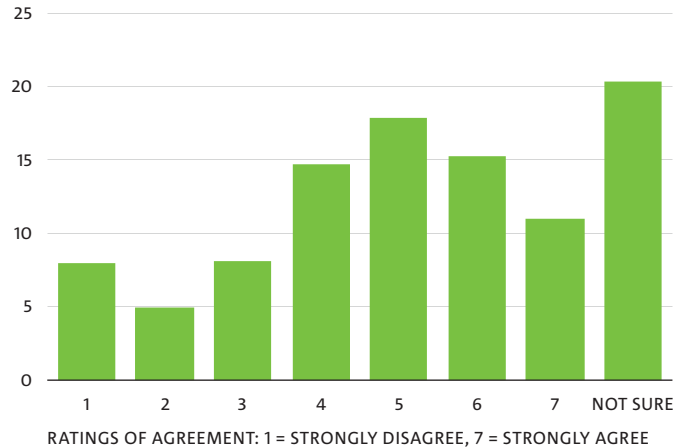


Figure 8. Percentage of agreement with hen welfare complexity item

Environmental impact of the industry

The Australian Egg Industry Sustainability Framework includes environmental impacts as a key focus area. We included questions in the community survey to examine community attitudes toward the egg industry’s environmental impact on water, dust, its neighbours and use of land for farms.

Overall, when asked about the negative environmental impacts that the egg industry may have, responses were in general around the mid-point of the scale used (1 = Strongly disagree, 7 = Strongly agree, 4 = mid-point) (see Figure 9).

The clustering of scores demonstrates that although respondents care about the environment and are aware the egg industry impacts the environment, they do not have a high level of confidence regarding environmental issues in the context of egg farming.

These items also produced a high number of “not sure” responses, indicating that for many participants the egg industry’s environmental impacts are unclear.

DISTRIBUTION OF PARTICIPANTS

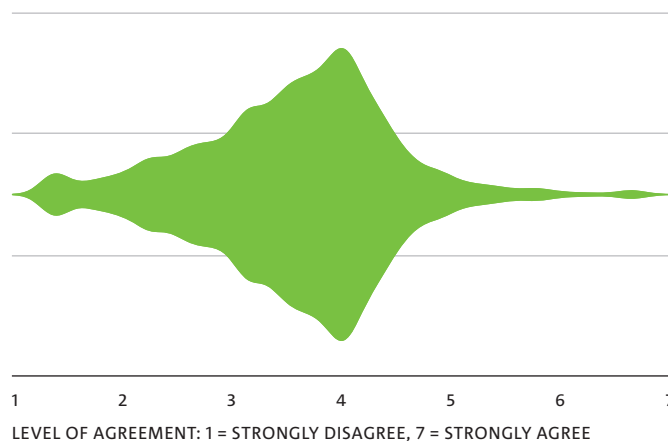


Figure 9. Distribution of scores for Environmental impact items



Economic viability of the industry

The final area of focus in the Australian Egg Industry Sustainability Framework is the economic viability of the industry. We examined community attitudes using questions about jobs, whether the cost of producing eggs is represented in their price, and whether Australians feel egg farmers are able to make a living.

Australians feel strongly that the egg industry contributes positively to the Australian economy and creates jobs (see Figure 10). Participants also felt strongly that egg farmers are able to make a living (M = 5.59, on a scale from 1 = Strongly disagree to 7 = Strongly agree) and that the price of eggs fairly reflects the cost of producing them (M = 5.44). This is an area that will be important to explore more deeply in future work as the ability of egg farmers to operate sustainably within a context of changing community expectations of the industry is dependent on the profitability of the industry.

Support for the industry considering benefits and costs

We were also keen to understand how much the Australian public supports the egg industry overall, considering the benefits and impacts that we had asked them to rate in the community survey. We asked participants questions about economic and livelihood benefits of the industry, as well as environmental and animal welfare complexities for the industry. Overall, participants were strongly favourable that all things considered, they supported the egg industry in Australia (M = 5.72, on a scale from 1 = Strongly disagree, and 7 = Strongly agree). As shown in Figure 11, the vast majority of people responded at or above the mid-point of the scale, with ~30% indicating the maximum level of support.

ECONOMIC BENEFITS (DISTRIBUTION OF PARTICIPANT RATINGS)

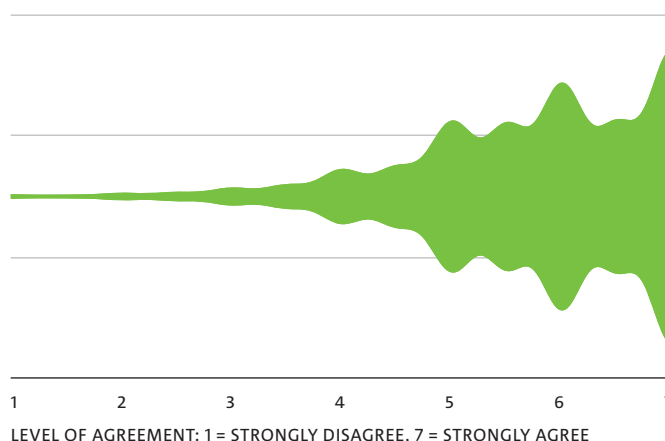


Figure 10. Distribution of scores for questions about the economic benefits of the eggs industry (1 = Strongly disagree, 7 = Strongly agree)

SUPPORT FOR INDUSTRY (PERCENTAGE OF PARTICIPANTS %)

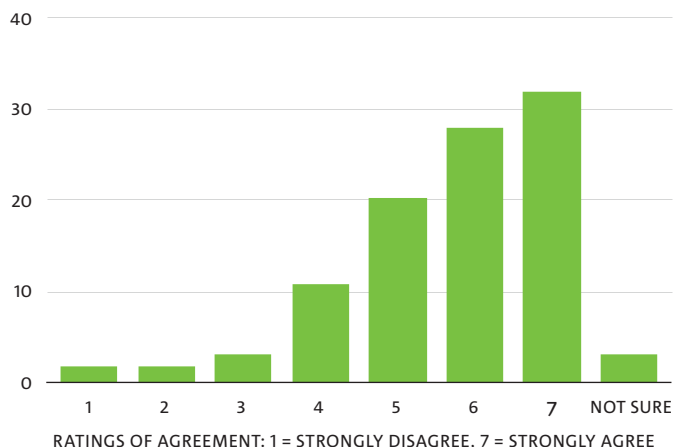


Figure 11. Level of support for the industry considering its benefits and costs

What informs egg purchasing decisions?

Participants in the community survey were asked to rank a number of issues according to their importance when purchasing eggs.

For those participants that purchase eggs, responses indicated that egg farming system (e.g. cage, free range, barn, organic) was ranked number one in terms of influence, followed by price, clear labelling and information about the product, confidence in the food safety practices of the egg farmer, and environmental responsibility of the egg farmer.

Of note here is that while price was ranked the number one influencing factor in purchasing decisions by ~25% of participants, it was also ranked the lowest priority by almost 30% of participants. This would suggest that for Australians in general, people tend to either care a great deal about the price of their eggs, or very little.



Examining the two community survey samples together

As described earlier, the community survey about the Australian egg industry collected surveys in two ways (via a representative research panel and via an open self-nomination process for members of the public). In this section we provide a brief comparison of the results from these two groups of people.

Different methods, different groups of people

The methods for collecting surveys produced very different results. This is a consequence of these samples representing quite different groups of people. While the research panel recruitment process provided us with a representative sample of Australians, the open self-nomination process via the CSIRO and Australian Eggs web pages, provided us with a sample of highly engaged Australians that are passionate about hen welfare.

In large part this was the product of publicity of the survey by an animal welfare group. Further details of this data collection process are provided in the Appendix to this report.

In examining the two groups of surveys collected, it was clear that the two groups were very different on all of the demographic characteristics that we measured. Compared to the representative sample, the open sample was: older, more educated, more likely to be female, less likely to have bought eggs in the last week, reported themselves to be more informed about the egg industry, and more likely to receive information about the egg industry from animal welfare groups such as the RSPCA or Animals Australia. A much higher proportion of participants in this sample also indicated that they did not eat eggs (~20%).

Attitudes toward the egg industry

The open sample was generally more negative in their views about the egg industry than the representative sample. The open sample rated the reputation of the egg industry lower (although they rated the importance of the agriculture sector in general at a similarly positive level to the representative sample), expressed very low faith in the egg industry's responsiveness to community sentiment, and more than 40% of the open sample disapproved of the industry overall, compared to approximately 10% of the representative sample.

Hen welfare is a key difference between the samples

While there were differences between the samples on most questions, it was on responses to questions about hen and animal welfare in general where the largest differences were observed. Those in the representative sample indicated strong agreement that hen welfare was important across a number of items, but for those in the open sample there was an extremely high level of agreement that hen welfare was important. As shown in Figure 12, the distribution of responses was clustered very clearly around the 'Strongly agree' end of the scale used, while for the representative sample responses were more evenly distributed across the response options.

Explaining, in part, this strong response around hen welfare questions is the data contained in Figure 13; in rating their agreement with the item "my attitude towards the egg industry is a matter of principle", almost all participants in the open sample were in strong agreement.

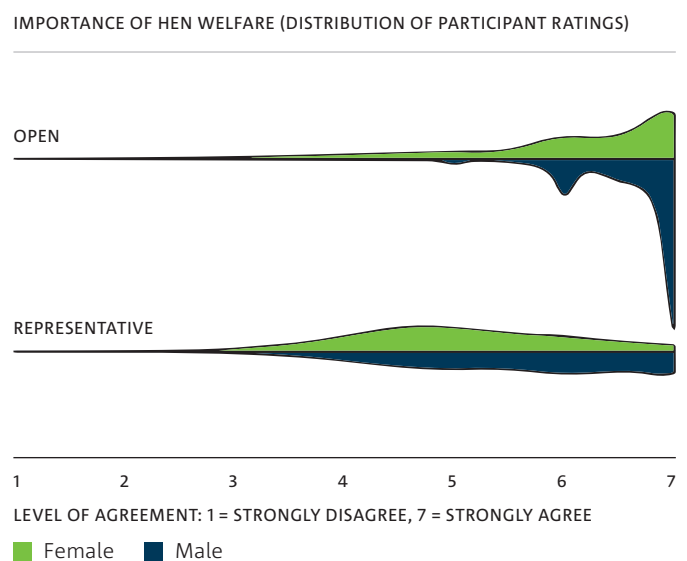


Figure 12. Distribution of scores for the representative and open samples regarding the importance of hen welfare (1 = Strongly disagree, 7 = Strongly agree)

What did people say?

For all community survey participants, we provided free response boxes where additional comments could be included. Free response boxes were included to ensure that participants were able to provide additional detail about their responses or identify additional issues that had not been measured in the survey instrument. We analysed responses in these boxes for the issues that were most prevalent for each sample. As displayed in Figure 14, there were clear differences between the two groups of participants (open and representative), as well as some important overlaps. Looking at the similarities first, people in both groups left comments about the importance of hen welfare, the space that hens have to move around in, the importance of labelling on egg packaging, and concerns in relation to cage systems of egg production.

Looking at the differences, the most obvious was that there was a significantly greater volume of comments from the open sample compared to the representative sample. Within the representative sample there were many positive comments about eggs in general, and comments about the positive qualities of eggs as a nutritious staple. There was also a number of people that indicated they would like to know more about the egg industry following the completion of the survey.

In the open sample, the main areas of comment that were distinct from the representative sample were comments questioning the existence of the industry at all and that disposing of male chicks in the egg supply chain was wrong and should stop. There were also quite a few comments to the effect that eggs do not have nutritional value for people and are therefore not required in the food supply chain.

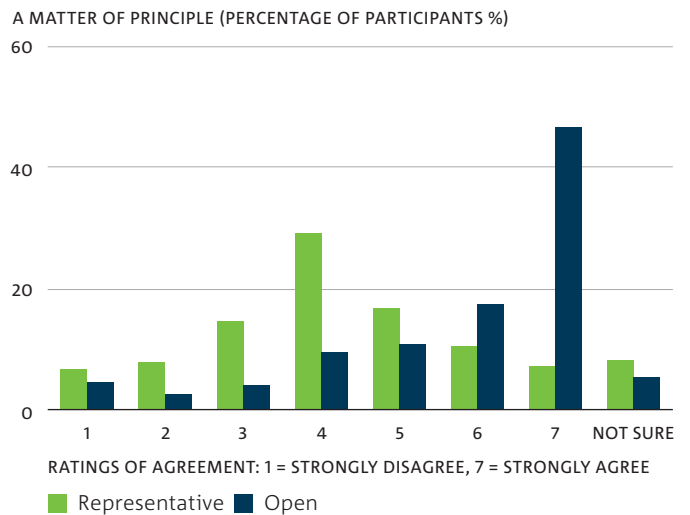


Figure 13. Distribution of scores for representative and open samples regarding position on the egg industry (1 = Strongly disagree, 7 = Strongly agree)

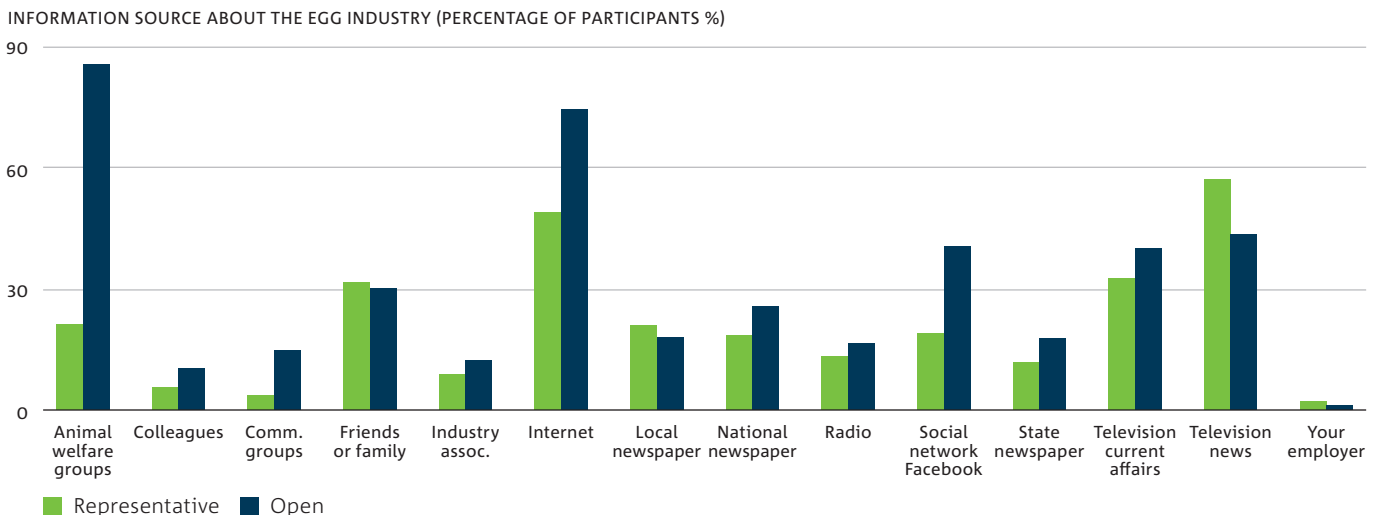


Figure 14. Information sources for participants in the representative and open samples (percentage)

An algorithm based analysis program organised the comments by thematic content into clusters. These clusters were labelled based on their content and then a quote that typifies each theme was chosen and included in this diagram for illustrative purposes. Where themes were represented predominantly in one sample and not the

other, they appear to the left or the right in this diagram. Where the themes were present in both samples, they are presented towards the middle of the diagram reflecting the overlap in content between the two samples. The position of these overlapping themes from the centre reflects their relative frequency of occurrence within each sample.



Figure 15. Comment themes and example quotes for representative and open samples

What leads to acceptance of the egg industry?

In this research, we have been interested to explore and report what Australians think about a broad range of topics and issues related to the egg industry in this country. In this section we detail additional analyses aimed at understanding the most important areas that effect community trust in and acceptance of the industry.

Focusing on the representative sample, this analysis showed us that there are three main drivers of trust and acceptance of the egg industry in Australia. They are:



How responsive the egg industry is to public sentiment



How well the egg industry is regulated



The balance of benefits that the industry delivers over the costs of the industry

Responsiveness: this is made up of several items 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 regulation: this is made up of several items including the extent to which participants believe the egg industry is regulated, should have consistent standards and can be held to account.

The balance of benefits and costs: this is made up of several benefit questions, including industry economic and nutritional benefits, affordability of eggs, and that egg farming is a good use of land, and several cost questions, including environmental impacts of the industry and the extent to which participants thought using hens for egg laying is not appropriate.



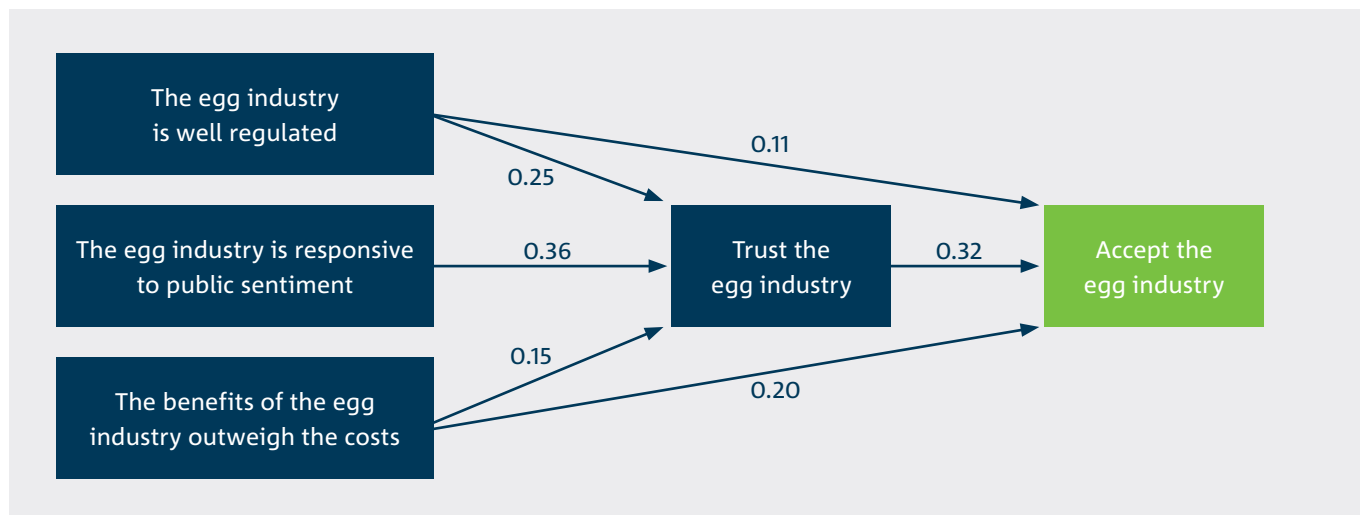
Specifically, the results of our path analysis demonstrate that:

- Trust in the egg industry is a key driver of acceptance of the egg industry
- Trust acts as a vehicle through which responsiveness, confidence in regulation, and the balance of benefits over costs influences acceptance of the industry
- Responsiveness is the strongest driver of trust in the industry; the more responsive the industry is the more trust the Australian community has in the industry
- Confidence in regulation is the second strongest driver of trust; the more confident that Australians are that their eggs are being produced responsibly and safely, the more they trust the industry

- The balance of benefits over costs for the industry is the third strongest driver of trust; when the benefits of the industry outweigh the costs, Australians trust the industry more.

This modelling also showed us that industry regulation and the balance of benefits over costs also directly influence acceptance of the industry, independent of trust. This means that there is more than one way for the industry to improve the level of acceptance it enjoys in the Australian community. Should the egg industry reduce its negative impacts relative to its positive contributions to the community, including improving community sentiment about hen welfare, acceptance of the industry will likely increase. Similarly, should community confidence in the regulation of the industry improve, so will acceptance.

PATHWAYS TO GREATER TRUST AND ACCEPTANCE OF THE EGG INDUSTRY



HOW TO READ THE PATH MODEL

When reading the path model on this page, follow the arrows from left to right. The direction of the arrow indicates the direction of the relationship; for example, trust leads to acceptance. The values on each arrow are called beta weights (include the beta symbol) and represent the relative strength of each relationship: a higher number means that pathway is stronger than a path with a lower number. Industry responsiveness, for example, is a stronger driver of trust in the industry than whether the benefits of the industry outweigh the costs. All pathways in this model are positive, which means that the more responsive that participants felt the industry was, for example, the more trust in the industry they had.

Conclusion

This research report summarises the results of an inclusive community research process conducted by the CSIRO. The research included a stakeholder engagement process and an Australian community survey. The aim of this work is to bring the voice of the Australian community in to the implementation of an Australian Egg Industry Sustainability Framework, led by Australian Eggs.

The community research method

Following a stakeholder engagement process covering a diverse set of perspectives on the Australian egg industry, a community survey was developed. Survey responses were collected across the country through two methods; a representative panel and an open sample of Australians via a web link on the CSIRO and Australian Eggs project web pages. This process provided us with a representative sample of the Australian population (the representative sample; N = 4,797 analysed surveys) and a sample of Australians with strong views around the egg industry (the open sample; 7,876 analysed surveys). This report focused on providing a comprehensive summary of the key findings arising from the representative sample of Australians. The results of each sample are provided in an appendix to this report.

Key findings

The community survey results demonstrate that the egg industry is viewed positively within the Australian population. However, the results also highlight the key challenges the industry faces in developing deeper levels of trust with the Australian people.

Australians see the egg industry as important to our way of life in Australia, as they do the agriculture sector more broadly. Eggs were seen to be an affordable, nutritious staple in the Australian diet, while the industry itself was seen to be responsive to community sentiment.

Australians also agreed strongly that food security was a critical issue for the egg industry, and that currently the industry was regulated well to ensure this. Examining the economic contribution of the egg industry to Australia, participants also felt the industry contributes positively and creates jobs for Australians.

In line with these positive findings for the egg industry, acceptance of the industry in Australia was found to be strong.

Yet the industry faces real and important challenges to maintain this level of acceptance and positive support from the Australian community. While Australians indicated trust in the egg industry is strong, addressing animal welfare concerns is a major challenge for the industry.



Hen welfare was rated very important by Australians, with participants consistently, strongly agreeing that hens should be well cared for. To build greater trust and acceptance of the industry it is critical that the egg industry is responsive to the community's strong interest in animal welfare.

We also observed quite a number of "not sure" responses in this survey around issues such as the industry's environmental impacts, some hen welfare items and the economics of the industry. This indicates that there is work to do to help the community understand more clearly the nature and characteristics of important parts of the egg supply chain in Australia.

When we examined the survey responses from the open sample (those collected through an open web link on the CSIRO and Australian Eggs project web pages), a very different story emerged. This group of participants were much less supportive of the egg industry than the representative sample of Australians, and held much stronger views around hen welfare. This group of Australians are passionate about hen welfare and the egg industry more generally, reflecting that broader conversations about the industry's sustainability need to be inclusive.

Within the representative sample of Australians examined, we found that when asked to consider all of these benefits and costs associated with the egg industry, that there was strong support for the industry overall. That is, currently, the value proposition for the industry is positive within the Australian community.

A pathway to deeper trust and acceptance

In this research, we were also interested to identify how the industry can work to improve the level of trust in and acceptance of the industry with the Australian community. In these analyses, we found that there are three key things that drive trust and acceptance of the industry. They were (in order of importance):

- The responsiveness of the industry to community sentiment;
- Confidence that the egg industry is well regulated, and;
- That the benefits of the industry outweigh the costs.

Confidence in regulation and a positive benefit/cost evaluation were also found to effect acceptance independent of trust.

Together, this indicates that listening and responding to community concerns within a context of confidence that eggs are produced safely, to high quality standards and with regard to hen welfare, is critical for the future of a healthy egg industry in Australia.

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