



*Submission in relation to the Australian Animal Welfare Standards and Guidelines for Poultry*

The Animal Law Institute is a not for profit community legal centre that is dedicated to protecting animals and advocating for their interests through the Australian legal system.

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Animal Welfare Standards Public Consultation

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## **Submission in relation to the Australian Animal Welfare Standards and Guidelines for Poultry**

### **Introduction**

The Animal Law Institute (**ALI**) welcomes the opportunity to make this submission to in response to the public consultation on the *Australian Welfare Standards and Guidelines for Poultry (the Standards)*.

ALI is a registered charity and a not for profit community legal centre that is dedicated to protecting animals and advocating for their interests through the Australian legal system. ALI is a member of peak bodies, the Victorian Federation of Community Legal Centres and the National Association of Community Legal Centres.

While the *Standards and Poultry Regulatory Impact Statement* cover a broad set of issues, this submission focuses on the continued contemplation by the Standards of the keeping of layer hens in battery cages.

### **Summary**

ALI is of the view that both public opinion and relevant science are strongly in favour of discontinuing the use of battery cages.

### **Detailed reasons**

Concern about the lifelong confinement of layer hens in battery cages had its first formal expression in 1964 with the publication of Ruth Harrison's book *Animal Machines*. The public outcry which followed that book resulted in the inquiry headed by Professor FW Rogers Brambell; the Brambell Committee Report was published in 1965, and much of what it said still applies very much today.

The increase in public concern over battery cages in the decades after the Brambell Report has resulted in legislation to in effect abolish the use of battery cages in several jurisdictions, including the European Union, Canada, New Zealand and several states in the USA (California, Michigan and Oregon). In Australia major retailers, including Coles, Woolworths and Aldi, have taken steps towards ceasing stocking eggs from hens kept in battery cages, and major buyers of eggs (such as several large restaurant chains, including McDonald's)

have likewise greatly reduced the use of cage eggs. Users of eggs in food service, which has not received much public attention, have nevertheless commenced moves away from cage eggs; this include major food manufacturers such as Nestle and Kraft Heinz.

In ALI's view, even without reference to surveys of public opinion, the strongest and most evident indicator that a majority of the public do not want hens kept in cages is the drastic reduction in sales of cage eggs, together with a corresponding increase in sales of 'free range' and so-called barn-laid eggs. Far and away the biggest increase is in the free range sector. In 2016 the value of grocery sales of free range eggs was just over 51%. The negative view of the public towards caged eggs is confirmed in the latest survey by McCrindle Research, which found that 84% of those surveyed believed that layer hens should not be housed in battery cages. Despite this apparent public concern and international precedent, the Regulatory Impact Statement ('RIS') prepared as part of the Standards review does not address key questions regarding a move away from cage eggs.

It is ALI's view that the review process which has generated the Standards cannot be relied on. Firstly, it appears from documents obtained by Dr Jed Goodfellow of RSPCA Australia under freedom of information legislation that there has been serious collusion between the New South Wales Department of Primary Industries (tasked with conducting the review process) and industry interests, which arguably has resulted in the Standards reflecting the desires of industry; that is, that there should be continued use of battery cages. Secondly, the review process has been run by what amounts to a private organisation, Animal Health Australia, in a manner which has allowed industry views to dominate to the exclusion of views of those who represent animal welfare interests, namely Animals Australia and RSPCA Australia. Thirdly, the science which has been selected for reference on the issue of layer hen housing, and other key welfare issues relating to layer hens, is selected and referenced in a way which is arguably meant to favour the industry position.

It appears that the review process did not involve an independent review of relevant science. This seems a reasonable view to take, as the Victorian Government has commissioned its own review of the relevant science, which was carried out by poultry welfare expert Professor Christine Nicol and her colleagues of Bristol University School of Veterinary Sciences ('the Nicol Review'). As a result of this Victorian initiative, there is an authoritative source which can be consulted by those interested in the area.

The situation with animal welfare science is that there are several interdependent approaches which can be taken to measure the welfare status of an animal. These can include, for example, measures of physiological state (such as using biochemical techniques to assay so-called stress hormone), observations of behaviour including assessment of whether an animal's natural behaviours are frustrated, and observations of an animal's health status. These frameworks are not mutually exclusive; indeed animal welfare scientists agree that multiple approaches must be taken in measuring animal welfare. What is also clear is that, while scientific measures can be objective, animal welfare science alone is unable to weight the relative importance of one welfare measure against another. For example, in the present context, there is no objective way of establishing whether increased mortality in free range layer hen housing is 'worse' for animal welfare than preventing the animal from being able to carry out its normal behaviours by keeping it in a battery cage for the entirety of its life. Striking that balance, once the science is known, is therefore an ethical and political consideration.

There have been repeated recommendations over the years that the process involved in generating animal welfare standards must involve an independent review of the relevant

science. This has not happened. The only substantive mention of science relating to layer hen housing is in a few paragraphs of the RIS. These mentions do not constitute a review, and furthermore can be seen on close analysis to be amateurish and biased. The mentions of science in the RIS involve subtle misstatements which create a bias in favour of approaches which generate data tending to support maintenance of the *status quo* – that is, the position favoured by industry: retention of the battery cage. This bias is seen as a denigration of the study of chicken behaviour, and an emphasis on measures of hormones such as corticosterone. The advantage to industry of emphasising (falsely) the importance of measuring this stress hormone is that the results, taken uncritically and at face value, can be said to indicate that stress levels are the same for hens in cages compared to hens in a free range environment. However, the many results obtained using such measures indicate that the levels are intrinsically very variable and in any case are probably not relevant to assessing the welfare status over prolonged periods of time. Moreover, there are several serious technical problems which give rise to questions concerning the validity of the assays themselves.

The evident bias against the use of behavioural science in assessing different housing systems can be seen in the RIS discussion of ‘natural living’, one of the frameworks said to be useful for assessment of welfare. It says (quoting a 2015 review by Hemsworth et al<sup>[1]</sup>) ‘...the concept of ‘natural is often poorly defined and this framework does not provide a rigorous scientific basis for welfare assessments’, thereby dismissing this framework as a valid approach. Consideration of the actual relevant text in Hemsworth et al’s review reveals that the RIS quote conveys the opposite impression to that intended by Hemsworth et al, who actually said: ‘...the concept of natural is usually too poorly defined to provide a sound basis for animal welfare assessment, **and thus when applied uncritically it may lead to poorer welfare instead of an improvement...There is a need to define natural behaviours that are desirable or undesirable in terms of animal welfare and to clarify the rationale for their inclusion or exclusion...although the concept of natural living does not provide a rigorous basis for welfare assessment, it usefully draws attention to the potential welfare benefits of providing opportunities to engage in such natural behaviours** (emphasis added).’ So, far from dismissing any consideration of natural behaviours, the Hemsworth et al review says that such consideration, when used critically, is in fact useful in welfare measurement.

The de-emphasis of the importance of expressing innate behaviours (and the inability to do this in battery cages) continues throughout the RIS. For example, at page 34, it is said that ‘the importance of these behaviours...is a matter of contention’. This again misrepresents the scientific consensus (see the analysis in the Nicol Review). Later, the RIS adopts a stance to the effect that depriving birds of the ability to perform innate behaviours is not associated with ‘physiological evidence to indicate that bird welfare is impaired’ - an assertion attributed to an unpublished source. The use of an unpublished source to support this highly arguable statement is in any case reprehensible, and a further indication of the amateurish and biased nature of the RIS. Regardless, it is an unhelpful statement to make, as there is no logical connection between the frustration of expression of natural behaviours and abnormal physiology, particularly given the interpretative and technical problems associated with measuring ‘physiology’. Both of these issues are properly dealt with in the Nicol Review.

The RIS purports to deal with the science in more detail at page 236. It says (quoting just one paper, and ignoring many others) that mortality rates are highest in free range systems. This again misrepresents the true position. It further notes that ‘space allowance has been found to have an effect on...physiological measures used to assess welfare’, quoting an unpublished industry-sponsored report by Downing (2012), to be found on the website of Australian

Eggs. This latter statement is untrue; that report did not purport to measure the effect of space allowance. Moreover, the 'physiological' measure used (assay of corticosterone in egg white) is very unlikely to be an accurate measure of corticosterone, as it relies on the use of anti-corticosterone antibodies, which are inherently non-selective. Even disregarding the serious technical questions concerning this assay, the measurement of corticosterone changes is not necessarily a measure of 'stress'. Changes in corticosterone occur as a response to activation, not 'stress' *per se*. Further assertions relating to cages versus free range housing are supported by repeated reference to unpublished work, such as a review by Widowski and colleagues of the welfare status of hens in cages compared to free range systems. This 'review' was said to have found 'little physiological evidence to indicate that hen welfare is impaired' when 'resources are not provided'. Immediately following this is a reference to a PhD thesis by Engel (2016) (which is not even available online), saying that stress hormone levels are not elevated when a nest box is not provided. The validity of such measurements is in fact questioned on technical grounds by the 2012 review of Cronin et al., which is cited in the RIS; perhaps unsurprisingly no reference is made to those criticisms. The conclusion is that the references to science regarding layer hen housing in the RIS are not only biased, they are highly questionable.

The Nicol Review emphasises the importance of mortality levels in the different housing systems as indicative of welfare problems. It refers to three recent review papers (each of which review many experimental studies) which found that non-cage systems, including free range, had higher mortality levels than cage systems. It also analysed further more recent data from over 20 studies which indicated that, while mortality was often higher in free range systems, this was not necessarily always the case. In other words, some free range systems were found to have mortality levels as low as conventional cages. The Nicol Review reported that causes of mortality in free range systems (where this was analysed) included bacterial and viral infection, parasitic infections (such as coccidiosis) and cannibalism. Significant numbers of deaths can also result from smothering; predation can also contribute to mortality. In a very important conclusion, the Nicol Review went on to say that '*despite these average figures, well-managed and designed free-range systems can produce low-mortality outcomes*'. This is a crucial conclusion, as it strongly suggests that proper investigation of the factors that contribute to high mortality in free range systems may identify steps which can be taken on-farm to reduce chicken deaths.

The Nicol Review considered the issue of bone fractures (particularly of the keel bone) in layer hens, and noted this was an important issue. There were said to be higher levels of keel damage and fractures in non-cage systems. The predominant cause was collisions, either with other birds, falling on the ground, or with aviary structures.

It is not entirely clear whether severe (injurious) feather pecking is more predominant in cage than non-cage systems, but the Nicol Review does refer to several recent studies which indicate that there is likely to be less serious damage to birds from feather pecking in free range than in cage systems. However, they note the problem is caused by many factors, and control requires a multi-factorial response.

Restriction of movement in conventional cages is associated with reduced bone strength, which results in increased incidence of leg and wing fractures, particularly when facilities are depopulated. Most reported studies found the greatest bone strength in wing and leg bones in free range systems. Another condition which can be seen frequently in cage systems is 'fatty liver'. It probably results from an inability to exercise, and can occur in around 50% of caged birds.

The Nicol Review deals in detail with the behavioural needs of chickens, most of which are frustrated by housing in battery cages. Key behaviours are the need to nest, perch, forage, dust-bathe and have social interactions. The Nicol Review is clear that ‘there are negative welfare impacts if these behaviours cannot be performed’. In other words, in direct contradiction of what the RIS says, it does not regard these negative welfare impacts as contentious. The Nicol Review says ‘the spatial restriction of the conventional cage prevents or constrains the performance of most comfort movements and there are no resources to meet the birds’ roosting and nesting needs. A limited amount of foraging can take place in the feed trough.’ The Nicol Review says about free range systems that ‘range access has benefits in reducing overall stocking density and greatly increased opportunities for birds to perform foraging, exploratory and dust-bathing behaviours. This reduces the risks of injurious pecking. The benefits of outdoor access have to be weighed against risks of disease and predation’. The Review notes that ‘use of the range by individual birds is highly variable’; some studies report as few as half of birds do not use the range, while other studies indicate that use can be higher than 90%. Concerning measures of so-called stress hormones (ie corticosterone), the Nicol Review notes that these measures can often reflect arousal (rather than stress), which may explain the many contradictory levels obtained using this measure. Behavioural measurements of fear (such as ‘tonic immobility’) indicate ‘there is no clear relationship between housing system and fearfulness’, and it may be that ‘the nature and type of human contact have a greater effect than housing type’.

The Nicol Review concludes:

*‘The conventional cage system prevents birds from performing basic movements essential for good health...and denies birds the possibility of expressing their behavioural needs to roost, nest and forage, or their motivation to dust-bathe... Lack of exercise weakens bones which are likely to fracture during depopulation, and leads to metabolic conditions such as haemorrhagic fatty liver syndrome. Claw breakage, plumage abrasion and poor foot health are also features of [the] system...Non-cage systems tend to have highly variable outcomes for flock mortality, health, prevalence of keel fractures and injurious pecking...These same considerations apply to free range systems...’*

This conclusion represents a balanced and objective view of the current science concerning layer hen housing. It does not indicate a preference for either cage or free range systems, indicating instead that the benefits of any system must be weighed against negative aspects. Given the weight of evidence that chickens kept in cages suffer poor welfare for the entirety of their lives, this, taken with the public opposition to battery cages, is arguably sufficient justification to ban them.

We thank you for considering our submission.

Should you have any questions regarding this submission, please do not hesitate to contact The Animal Law Institute via email at [policy@ali.org.au](mailto:policy@ali.org.au).

Yours sincerely

The Animal Law Institute

[1] Hemsworth PH et al. (2015) Scientific assessment of animal welfare. *New Zealand Veterinary Journal* 63:24-30.

[2] Nicol et al (2017) Farmed Bird Welfare Science Review, published by Agriculture Victoria. Professor Nicol is the author of the most recent and comprehensive review of science relevant to chicken welfare: *The Behavioural Biology of Chickens* (2015), published by CABI.