



## Poultry Public Consultation

Animal Justice Party

February 2018

### Contents

<b>1 Introduction</b>	<b>3</b>
<b>2 Is this consultation being done in good faith?</b>	<b>3</b>
<b>3 Biased representation and processes</b>	<b>4</b>
<b>4 Misuse or neglect of scientific evidence</b>	<b>5</b>
4.1 References . . . . .	6
<b>5 General comments on the RIS and Standards</b>	<b>7</b>
<b>6 Poultry at slaughtering establishments (Part A, 11)</b>	<b>7</b>
6.1 Specific recommendations . . . . .	8
6.2 Why live shackling should be phased out . . . . .	9
6.3 Problems with the shackling process . . . . .	10
6.4 Problems with electrical stunning . . . . .	11
6.5 End-of-lay hens . . . . .	11
6.6 References . . . . .	12

<b>7 Laying Chickens (Part B, 1)</b>	<b>14</b>
7.1 Welfare . . . . .	14
7.2 Cages and Welfare of ‘Layer Hens’ . . . . .	15
7.3 Public Attitudes to Industrialising Animals . . . . .	15
7.4 The Cost of Welfare . . . . .	16
7.5 In Conclusion . . . . .	16
7.6 References . . . . .	16
<b>8 Meat Chickens (Part B, 2)</b>	<b>17</b>
8.1 Lameness . . . . .	18
8.2 Contact dermatitis . . . . .	20
8.3 Recommendations . . . . .	20
8.4 References . . . . .	21
<b>9 Ducks (Part B, 4)</b>	<b>24</b>
9.1 References . . . . .	26

# 1 Introduction

This submission is in response to a call for public comments on draft *Australian Animal Welfare Standards and Guidelines* (DAAWSG) and associated *Regulation Impact Statement* (RIS) on the *Australian Animal Welfare Standards and Guidelines*<sup>1</sup> website.

The *Animal Justice Party* (AJP) is a political party with a policy to phase out the farming of animals for food or fibre. There are many reasons to do this. Killing is the ultimate harm you can visit on any creature unless it is to prevent suffering, and the science has long been clear (9) that people can live long and healthy lives without animal products.

This longer term vision doesn't mean we eschew improvements in current farming systems. Even small improvements can be of enormous significance in the daily lives of animals; so we welcome them and will push for them.

## 2 Is this consultation being done in good faith?

It appears to us that this consultation process isn't being done in good faith, despite the extent and professionalism of the RIS.

We have serious doubts about the value of making a submission. As former law lecturer and animal law expert, Elizabeth Ellis, concluded in relation to the previously endorsed *Standards and Guidelines for the Land Transport of Livestock*:

“Rightly or wrongly, standards developed through the above process are not viewed as a genuine attempt to balance animal welfare and economic interests but simply as a means of justifying existing industry practices. There is little reason to suppose that **anything said in the public consultation phase will change an outcome which appears ... to have been pre-determined**. In these circumstances, there is a grave risk not only to animal welfare but also to public confidence in our system of law and government.” (1, 2011, p. 96, emphasis added)

The *Productivity Commission* (6) recently identified several major flaws in the current process of drafting farm animal regulations, which it regarded as sufficiently serious to call for a new and independent statutory authority to be responsible for animal welfare. Goodfellow (3) similarly called for a new and independent body, that would be in a better position to balance animal welfare, community expectations and productivity than the current system, which he referred to as “procedurally unfair and democratically illegitimate”.

Problems in the standards and guidelines setting procedure reflect the larger problem of a government that is too close to industry to allow objective consideration of animal welfare issues. Researchers at Melbourne University have drawn attention to this problem as follows:

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<sup>1</sup><http://www.animalwelfarestandards.net.au/poultry/poultry-public-consultation/>

“Governments in the USA and Australia have consistently defended the interests of large-scale producers in recent decades, and have introduced few regulations that aim to protect or enhance the welfare of farm animals.” (7, p. 787)

In theory, the standards and guidelines development process includes a public consultation stage. But in its current form, this process isn't consulting the public in any sense at all. The public in general is unlikely to be aware of the opportunity to write a submission, and in many cases would find it difficult to deal with the extensive documentation anyway. So how are community expectations to be taken into account? If you want to know what the public think about hens in cages, then do a proper random sample poll and ask them. It may need to be a *deliberative* poll where public knowledge is low or absent. Similarly, if you want to know if the public is happy with lameness rates in broilers, then, again, do a proper random sample poll.

In one of the few studies on attitudes, Franklin (2) found that a majority of his sample of 2000 representative Australians considered factory farming cruel and unnatural. However, as the Productivity Commission report notes (6 p. 199) "... the standard setting process does not adequately value the benefits of animal welfare to the community."

We believe the current standards process has been designed to avoid any kind of accurate assessment of what the public thinks about the intensive farming of poultry. Any community concern that does climb the barriers of the process and make itself known will be quickly swamped by the imbalances of the industry-dominated process.

### **3 Biased representation and processes**

The Stakeholders' Advisory Group (SAG) is involved in the initial draft consultation process. The vast majority of its members are industry representatives. According to the Productivity Commission report, only 2 of the 35 members are animal welfare representatives.

However, industry influence extends well beyond overrepresentation. The ABC *7.30 Report* recently revealed evidence of what has been described as "collusion" between the egg industry and the NSW Department of Primary Industries (DPI), responsible for drafting the new standards (8). Documents obtained under FOI reveal that the supposedly independent chair of SAG, Stephen Atkinson, was invited to a private meeting with the industry prior to his endorsement as chair. He reassured the industry that a ban on cages would not be on the table for discussion at SAG meetings, hardly the behaviour of an "independent" chair.

Further evidence emerged of the NSW DPI actively supporting the continued use battery cages. A veterinary officer from the department recommended changing welfare requirements for hens, deleting the need for space to stand and stretch limbs, because these very basic behaviours were not possible in a battery cage.

Bias was also evident in the preparation of consultation documents. Three animal welfare scientists wrote a letter to the standards writing group, protesting about the misuse of their work in a supporting paper. The letter stated (4):

“The content is in general selective, and thus unbalanced, outdated on some points, and at times incorrectly references [and] this can mislead the debate. . . . Documents only include the sections and statements that outline the benefits of conventional cages, and omit sections that outline negative aspects . . . and fail to acknowledge that there are, in fact, viable alternatives.”

## 4 Misuse or neglect of scientific evidence

The example above shows omission of scientific evidence deemed to be inconvenient to the cage egg industry. Science was also ignored or misused in the previous drafting of the *Standards and Guidelines for the Land Transport of Livestock*. Glenys Oogjes of *Animals Australia*, one of the two animal welfare representatives in the process, gives three examples to:

“illustrate the pressures exerted within the Reference Group and through outside political lobbying by industry leaders to maintain the status quo and to avoid true consideration of the growing body of animal welfare science and sound scientific opinion.” (5, p. 16)

According to Oogjes, at the conclusion of the land transport review process, producers raised objections on 3 issues:

1. time off feed for bobby calves;
2. use of electric prods on pigs;
3. time off water for unwanted battery hens.

When it appeared that time off feed for bobby calves in transit would be set at 18 hours, the dairy industry commissioned its own study to show that there were minimal adverse effects of leaving calves without food for 30 hours. However, the calves in this study were managed better than general industry practice, so the results could not legitimately be generalised and used as basis for industry-wide standards. Nevertheless, industry demands prevailed.

Scientific evidence shows that electric prods hurt and distress pigs, and that effective and less aversive alternatives are available. Nevertheless, the industry argued that electric prods should be allowed for heavy sows and boars, who were difficult and dangerous to move. The outcome was that not only were prods allowed for these large animals, but for much smaller ones as well, in spite of the scientific evidence against their use.

At the conclusion of the review process, the egg industry appealed to have the 24 hour limit for time off water during transport changed. Like the dairy industry, the egg industry commissioned its own research to show that a longer period off water was not detrimental to the welfare of birds. The details of the study have not been revealed even to the welfare representatives in the review process, but once again industry demands were met.

In all three cases, industry got its way, in spite of existing scientific evidence to the contrary. Oogjes (5, p.21) concluded that:

“... we now seem to have a system in place that allows a moulding of scientific information to justify the status quo. These three examples illustrate that this new review process is not about science informing and guiding needed improvements to animal welfare. Rather in my view, science has been commissioned to shore up a preferred industry practice and thus to provide a veneer of respectability to the blocking of logical humane reform.”

A further example for bias is that the detailed and science-based report issued by the Voiceless Institute, *“Unscrambled: The hidden truth of hen welfare in the Australian egg industry”* (May 2017) was not considered, presumably given its conclusion did not support the intended outcome of the DAAWSG. The Voiceless report concluded that there is, for scientific reasons set out in their report, an urgent need to ban battery cages (p.45).

Is it too late to rescue this flawed process? The official response to this public consultation stage will determine if politicians allow a flawed process to determine poultry policy for the next decade.

#### 4.1 References

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8. Thomas, J. (2017). Allegations of backroom deals to keep battery hen eggs on the market. *ABC TV 7.30 Report*, December 22.
9. *Medical Journal of Australia*, (2013) Volume 199, Issue 4 Supplement. This whole supplement is devoted to dealing with issues that are mostly the result of decades of misinformation about a plant based diet.

## 5 General comments on the RIS and Standards

The RIS evaluates various options in addition to the simple replacement of current regulatory mechanisms by the new DAAWSG. We have already expressed concerns that, in effect, the poultry industries are in control of the process and that there are no real options on the table other than the DAAWSG.

The choice is further narrowed by the clear implication in the RIS that the guidelines are irrelevant and will be ignored by industry anyway. The RIS states clearly on page 1: *“As only mandatory standards impose costs, this RIS evaluates the standards and alternatives to them only – not the guidelines.”*

This implies either that guidelines won't be followed or that following them will always be cost free. Consider Section 11, *Poultry at slaughtering establishments* for example. Guideline GA11.5 says that shackles must be able to accommodate the shanks of birds of different sizes etc. Clearly if they fail to do this then birds will suffer and the shackles need to be changed; and it's reasonable to assume this must incur costs. On examination, it seems clear that all 15 of the guidelines in that section (GA11.1 through GA11.15) would incur a cost if complied with; in either materials or labour.

If the authors of the Guidelines assume they will be ignored, then they could have saved considerable time and effort in not writing them.

Nonetheless, we'll proceed with an analysis of critical Sections of DAAWSG. It shouldn't be inferred that we accept any sections we ignore, only that we have limited time to comment on a document where our confidence in the process is close to zero.

## 6 Poultry at slaughtering establishments (Part A, 11)

According to the DAAWSG for Poultry p.11, the Guidelines *“are the recommended practices to achieve desirable livestock welfare outcomes.”* However, the recommended practices as set out for poultry slaughter ignore an ever expanding body of research, and fail to promote the highest standards of welfare. In brief, the guidelines completely ignore calls by various experts to phase out live shackling (1) and also the European Food Safety Authority (EFSA), which recommended in 2004 *“that water bath stunning of poultry be phased out on the basis that the live shackling of birds is detrimental to animal welfare and that birds are occasionally not stunned prior to slaughter using this method.”* (2). It should be noted that traditional water bath stunning has been phased out in the Netherlands (3).

The guidelines minimise problems inherent in live shackling and water bath stunning. GA11.5 implies that pain associated with shackling can be completely avoided, similarly GA11.10 implies that pre-stun shocks can be completely avoided. The shackling time of 3 minutes (GA11.9) is not consistent with welfare research. In relation to controlled atmosphere stunning, there is no mention of acceptable gas mixtures, even though some are more aversive than others. In the section on humane slaughter (GA10.4), CO<sub>2</sub> concentrations of 45%-80% are recommended, which is inconsistent with research findings. Based on these findings, the use of CO<sub>2</sub> concentrations greater than 40% while birds are still conscious is not permitted by law in the Netherlands (3). The laissez faire nature of the current guidelines is clearly to facilitate business as usual for producers rather than achieving desirable livestock welfare outcomes, the explicit goal of the guidelines.

## 6.1 Specific recommendations

**Insert SA11.9** (to replace GA11.9), taken from the EU Regulation 1099/2009.

Conscious birds must not be hung from a shackle line for more than one minute, except for ducks, geese and turkeys which must not be hung conscious for more than two minutes.

Being restrained and inverted is highly stressful for birds. A number of studies show that a range of stress measures increase with duration of shackling (4-7). For example, the level of corticosterone increased four-fold after 60 seconds, and nine-fold after 120 seconds (4). On the basis of their findings, some researchers (4,5) recommend that the shackling period for chickens should be less than 60 seconds, as does EU Recommendation 1009/2009. The three minutes allowed in the guidelines is unacceptable and not supported by research.

**Insert SA11.10** (Amend GA10.4 accordingly)

Conscious birds must not be exposed to CO<sub>2</sub> concentrations exceeding 40%.

Exposure of humans to CO<sub>2</sub> is known to be unpleasant. At a concentration of 50% it produces a sense of breathlessness and gasping, and it is very likely that poultry suffer pain and distress at concentrations higher than 40% (8). CO<sub>2</sub> in combination with water is acidic, so in high concentrations it is irritating to the mucous membranes (1).

A biphasic system minimises the respiratory disruption by beginning with a lower level of CO<sub>2</sub>, which is increased to deepen the stun once the birds lose consciousness. Several studies have investigated this approach, where the first phase uses 40% CO<sub>2</sub> mixed with 30% oxygen (O<sub>2</sub>) and 30% nitrogen (N<sub>2</sub>) (9-13). One study was under slaughterhouse conditions (13). There is general agreement that even this concentration CO<sub>2</sub> produces some respiratory discomfort, as indicated by deep breathing with open beak and head shaking, followed by deep breathing with the neck stretched upwards (11). However, while alternatives such as high concentrations of N<sub>2</sub> or argon (Ar) produce less respiratory discomfort, they result in more vigorous wing flapping and convulsions. The number of broken wings



is many times higher in Ar than CO<sub>2</sub> (12-13). Electroencephalograms show that convulsions occur while birds may still be conscious. On this basis, the biphasic CO<sub>2</sub> system is preferred to inert gases (9-10, 12-13).

Gas stunning is increasing in Europe. A number of systems have been studied, some of which are already in commercial use:

- Crates of broilers were placed in a chamber (Praxair), where the concentration of CO<sub>2</sub> increased in 5 stages from 20% to 64% over a 6 minute period (3).
- Crates of broilers were lowered stepwise into a pit, with CO<sub>2</sub> concentrations increasing at each level (Linco). All birds were unconscious by the time they reached 40% (11,14).
- Crates of turkeys were moved through a tunnel on a conveyor belt at a medium sized slaughterhouse. In transit, the CO<sub>2</sub> concentration increased from 27% to 74% (15).
- Crates of turkeys were stunned in a small-scale system (Anglia Autoflow) with 30% CO<sub>2</sub> followed by 60% (16).

These systems minimise respiratory distress, while achieving a very high stunning effectiveness (11,15), meaning that all birds are stunned and do not regain consciousness prior to death. Birds do not need to be removed from crates, and working conditions are much better when unconscious rather than fearful, flapping birds are shackled (2).

The findings cited indicate that

(1) the guidelines should specify types of gases and their concentrations;

(2) given the advantages of gas stunning over the traditional water bath stunning, Australia should follow the lead of Europe and advance discussion of phasing out the water bath and live shackling.

## **6.2 Why live shackling should be phased out**

Live shackling for electrical stunning is a high speed process. Slaughterhouses can kill up to 10,000 birds an hour (17), which means 2-3 birds every second. Given this speed, it is virtually impossible to consider the welfare of individuals. Birds are pulled from transport crates and have their legs inserted into the metal slots of shackles. They are conveyed in this inverted position to the electrified water bath for stunning. A number of experts have listed welfare problems inherent in this method (1, 17-19):

- trauma and stress when pulled from transport crates at speed
- pain caused by the pressure of shackles on legs
- pain caused by existing skeletal problems
- stress of being inverted

- pre-stun shocks
- failure to stun
- inadequate stun

As noted by one group of researchers (17, p.254): “These welfare compromises can be reduced by good staff training, well-designed and maintained equipment and correct parameter selection, **however they cannot be completely avoided.**” (emphasis added)

### 6.3 Problems with the shackling process

The leg size of chickens, and other poultry, is variable with, for example, the legs of males being thicker than those of females. For electricity to be conducted from the water bath through the bird, there has to be a tight fit between the shackles and legs, so the slots in shackles cannot be too large. As a result, considerable force is needed to pull large legs into these slots, resulting in bruising (19). The legs of chickens are well supplied with nociceptors, and the forces exerted by shackles excite the majority of these receptors. Since there is a close relationship between discharge of nociceptors and the experience of pain in humans, it can be concluded that shackling is very painful (20). However, there is little that can be done to make shackles comfortable (19, p.283): “Conflicting bird welfare concerns involve using tight-fitting shackles. Although they may provide good electrical contact between the legs and metal shackles, they are likely to increase the severity of the pain associated with shackling.”

The pain of shackling is made worse if poultry have existing leg abnormalities or trauma as a result of handling. An early UK study found that 26% of chickens at slaughter age had a gait abnormality of sufficient severity to compromise welfare (21). A similar study 16 years later again showed moderate lameness in around one quarter of chickens (22). Chickens with moderate lameness preferentially ate food medicated with the analgesic drug carprofen, and improved their walking ability as a result, suggesting that their lameness was painful (23-24). While there has been debate about the gait scoring system and the results of carprofen studies, a review by a panel of experts concluded (17, p.101): “Overall, the evidence suggests that NSAIDs do have an analgesic effect on lame birds, at least some lame birds experience pain, and that lameness has the potential to compromise broiler welfare on several different levels.” Shackling will be even more painful for lame birds.

Another factor is injuries caused by handling. A study of shackled chickens just prior to stunning showed that 3% had broken bones and 4.5% had dislocated femurs, both likely to be very painful (25). The injuries could have occurred during catching and crating, or during uncrating and shackling. The situation is much worse for end of lay caged hens, who have osteoporosis. In this case, 29% had broken bones after being shackled (26).

## 6.4 Problems with electrical stunning

Effective stunning depends on the head only being immersed in the electrified bath. However, for large birds such as turkeys and geese, in particular, the wings may hang lower than the head and make contact with the water bath first, resulting in a painful shock (17-18). Chickens also can suffer pre-stun shocks (PSS). In a commercial slaughterhouse, 9.8% of pullets and 6.9% of cockerels showed evidence of PSS (27).

Some chickens are not stunned at all, for example, if they are particularly small or lift their head at the wrong time. In the study above (27), 1.6% of pullets, or 142 birds an hour, missed the water bath completely and so were fully conscious when their throats were cut.

Many more birds are ineffectively stunned. The resistance of individual birds is highly variable due, for example, to differences in size, weight or body composition. The result is that there is large variation in the current flowing through birds (1, 17-18), and the possibility in some cases of birds regaining consciousness and experiencing pain before they die.

There is a dearth of Australian research on these welfare issues, coupled with a tendency in some quarters to dismiss European research as irrelevant. However, as one group of researchers has noted (28, p.1208): "... we would like to emphasize that the physiological reactions of the birds to various stunning interventions are universal, and hence globally relevant."

The guidelines do not reflect the research cited in this section. They should indicate the need to move away from live shackling and electrical stunning within a reasonable time frame, as advocated for example by EFSA and the *Farm Animal Welfare Council* (1). We agree with the researchers who conclude (19, p.290): "... electrical water-bath stunning systems supplied with constant voltages are inadequate on welfare grounds because they do not always ensure slaughter of birds with the minimum of pain and suffering possible."

## 6.5 End-of-lay hens

As one very well-respected animal welfarist has observed: (29, p.210 "of all the animal welfare problems faced by the poultry industry today, the disposal of spent laying hens probably is the most serious."

Laying hens have fragile bones (26), which may break as birds are pulled from cages or even picked up by one leg from a barn floor. They have little monetary value, and few slaughterhouses will kill them. This means long journeys without food and water, and possibly in pain due to catching and crating injuries. At the slaughterhouse they are likely to be pulled from crates and shackled, further increasing the risk of injury and pain.

The alternative is to kill end-of-lay hens on site. In Sweden between 2008 and 2010, 1.5 million hens were killed using CO<sub>2</sub> gassing in barns, and the use of this method is increasing (30). The method has been tested with caged hens in 4 tiers, as well as barn hens (31). Electroencephalograms showed that hens were unconscious in 2 minutes, and brain activity ceased in less than 5 minutes (31). Death is reliably achieved, but care must be taken to reach adequate concentrations for a sufficient period of time.

Producers should be required to make regular payments into an account which would then be used to fund slaughter at end of lay. This would be set at a level sufficient to allow the best practice killing method.

As is the case with live shackling and water bath stunning, improving the welfare of end-of-lay hens deserves far greater discussion, and here too Australia should follow the lead of Europe.

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## 7 Laying Chickens (Part B, 1)

We note first that terms such as ‘layers’ or ‘meat chickens’ can undermine welfare goals by implying that these birds are a willing component of the human food chain; a commodity. We use them only to match the DAAWSG.

Birds are highly complex and intelligent individuals (2). Hens naturally live in sophisticated social groups that require them to engage with others of their kind, and discern the role and status of each bird. They communicate with each other, and learn from each other. They recognise others distinctly, recall them, remember their past behaviours and so are able to predict what she or he will do in the future. Science tells us that the intelligence of hens is underestimated (3): hens show bias, preference, and forward planning. They solve problems and have a good sense of numbers. They demonstrate self-awareness, predict and plan for the future, feel, think and play, and have strong species-specific moral codes. For these reasons alone, we owe hens a true and high standard of welfare, in the true sense of the word.

### 7.1 Welfare

Human welfare represents happiness, health and fortune. By contrast, animal welfare, is presented in the DAAWSG as the absence of certain negative states, like hunger, thirst and disease.

Contemporary welfare science has clearly revealed that good animal welfare cannot be achieved without the experience of positive affective states (4,1) which includes a constructive and happy social world, a comfortable physical world, and the space and opportunity to perform natural behaviours. These are fundamental to achieving positive welfare

states (5). 'Minimising risk' as stated in the proposed Standards and Guidelines is no longer enough.

## **7.2 Cages and Welfare of 'Layer Hens'**

Hens are sensitive individuals with highly responsive nervous systems. At the minimum, for hens to be well, they must be able to nest, perch, preen, forage, run, dust bathe, stretch their legs and flap their wings. When hens are part of a social community with appropriate space and numbers, they can be happy and content.

Cages are incompatible with the basic needs of hens and should be phased out. Option D of the RIS considers a 10 or 20 year phase out period. We think this is too long. The time set must reflect the seriousness of the intent behind the choice.

In respect of barns and sheds, there is also a need for improvement in current practice and support the kinds of changes mentioned in Option E so that a pecking order may be easily established, and each bird may find his or her place with little to no risk of cannibalism or harmful pecking. With acceptable welfare, there is little to no need to cut their beaks and bear the associated burdens of cost and conscience. This is recognised on page 41 of the RIS, but is still recommended. We believe if hens are well, they will not demonstrate behaviours that lead to beak 'trimming'. Therefore, we also support Option G.

Current Standards for Laying Hens (SB1 through SB1.4) require that 'laying hens' be able to stand upright, have ready access to food and water, and not be urinated and defecated on. This is grossly insufficient, especially given the understanding in contemporary animal welfare literature that positive affective states of impacted animals must be considered. We also disagree that the Current Standards reflect community expectations, as the community is rarely informed about the lived experience of 'laying hens'. This is like the difference between *consent* and *informed consent*.

Hens have a strong and persistent desire to nest, overriding even their desire for food. Not being able to nest remains a high and persistent form of stress, that hens cannot, and do not, adapt to. The recommended space available per bird in the Stocking Densities Cage Systems in SB1.6 do not allow hens to nest.

The Guidelines consider nesting for hens, but the Primary Industries Minister's decision in 2009 to not regulate Guidelines or enforce the Guidelines through legislation significantly weakens any improvement that the Standards and Guidelines bring to 'laying hens'. We believe this undermines the entire consultative process.

## **7.3 Public Attitudes to Industrialising Animals**

The successful pursuit of many industries involving animals is dependent on community confidence in the regulation of animal welfare. The recent productivity commission states that 'farm animal' welfare is important to consumers of animal products who feel concern or discomfort about the mistreatment of animals (6). Our concern with this statement is that it acknowledges the secondary harms imposed on human society, but demonstrates a notable lack in understanding the intrinsic harms experienced directly by – in this case –

the hens. Terms such as 'humane slaughter' and 'conventional cages' deceive the general public. We also believe the quoted statement that 'Australians generally accept that it is appropriate to rear animals for commercial purposes' (7) is misleading. Although the majority of Australians purchase and consume animals and their products, the awareness of the ways in which animal products are produced is greatly diminished through marketing, advertising and packaging.

## 7.4 The Cost of Welfare

The cost of cheap eggs is currently being paid by hens in the dismal nature of the lives they endure. Cheap eggs don't just harm hens, but also those consumers who eat too many eggs. While eggs are a small part of the Australian diet, hens consume almost a million tonnes of grain each year (10); this is feed that should be food. Feeding this grain to hens is a very inefficient use of the resources used to produce it. The two million tonnes of cereals eaten directly in our food supply provide far more nutrition (e.g., 10 times more protein).

All the environmental, human health and animal suffering costs associated with eggs should be passed on to the consumer so that they understand the real cost of eggs.

## 7.5 In Conclusion

Animal welfare and industry profitability are naturally opposing forces that make it difficult to properly establish and enforce welfare codes. True welfare of 'layer hens' is not likely to be achieved until we have an Independent Office of Animal Welfare, where the decision-making bodies are independent of those who benefit from the use of animals.

The RSPCA (9) points out that the Australian Senate recommended that cages be phased out in 1999; long after the basic cruelty of this production method had been well established. The industry has been successfully stalling for decades and the only options discussed in the RIS are a 10 and 20 year phase out. If either option is chosen, we can be confident that nothing will happen and the debate will be repeated in another 5-10 years.

There is little point having more debate without some hope of action. Action requires that the industry comply with any changes and that there be policing of the standards; coupled with enforcement.

Alternatively, the industry could diversify into cheaper egg alternatives, creating further jobs, better jobs and expanding healthy markets in Australia and internationally. We recommend that research and development funding go towards supporting and enhancing new markets in plant-based egg alternatives to an increasingly health conscious, and animal conscious, Australian public.

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## 8 Meat Chickens (Part B, 2)

The Animal Justice Party promotes a plant-based diet, but recognising that dietary change is a long-term process, prioritises the phase out of factory farming. Studies show that free range chicken farming with slow-growing breeds can reduce but not eliminate the welfare problems that exist (1). Increased activity and natural behaviour was found in particular when the range was planted with short rotation coppice such as willow, used for biomass production (1). This type of environment benefits the birds and better meets community expectations. However, in the short-term, millions of chickens continue to be housed intensively.

Since the 1950s there have been massive changes in chickens due to selective breeding for rapid growth. While it used to take 120 days to reach a body weight of 1.5kg, it now takes 30 days (2). These changes have resulted in a range of welfare problems (2, p.1):

"The major welfare concerns that have a genetic basis and that may interact with management factors to lead to poor welfare include skeletal disorders, contact dermatitis, ascites and sudden death syndrome. Most of these are linked with fast growth rates."

The industry is huge, slaughtering 623 million birds in Australia in 2015-6 (3). If a welfare problem affects only 1% of the chickens, and may be regarded as insignificant by the industry, it still means that over 6 million individuals are suffering. Therefore much more attention needs to be devoted to reducing or eliminating the welfare problems that exist.

As will be discussed below, lameness and contact dermatitis affect a large number of birds and can be assumed to be painful on the basis of shared pain mechanisms (35) as well as growing knowledge of analgesia and anaesthesia birds (34); even if the level of pain can be hard to discern. Ascites is another common conditions and involves a swollen abdomen, due to fluid accumulation, and respiratory distress (4). The heart becomes dilated, leading to fluid leakage and insufficient oxygen delivered to tissues. It develops gradually and birds suffer for an extended period (5).

These welfare problems all stem from rapid growth and can be ameliorated or eliminated by breeding strategies and management regimes that slow growth. The draft standards and guidelines fail to address this problem.

## **8.1 Lameness**

In the review produced for the development of standards and guidelines, the writers note (6, p.4):

“Poor leg health is an important welfare concern in meat chickens as it typically occurs in significant proportions of birds in intensively reared commercial meat chicken flocks in all countries studied.”

Lameness is often operationally defined as having a gait score (GS) of 3 or more, with GS3 described as (7, p.191): “The bird had an obvious gait defect which affected its ability to move about. For example, the defect could take the form of a limp, jerky or unsteady strut, or severe splaying of one leg as it moved.” GS5 is described as: “The bird was incapable of sustained walking on its feet. Although it may have been able to stand, locomotion could only be achieved with the assistance of the wings or by crawling on the shanks.”

In a 1992 study in the UK, 26% of commercial broilers had a GS of 3 or more (6). In a study of 176 flocks 14 years later, this figure was 27.6% (8,9). In Swedish flocks the figure ranged from 14.1% - 26.1%, depending on genotype (10). In 2013 a study of 89 flocks in four European countries found the lower figure of 15.6%, but it is not clear whether this represents a genuine reduction or the fact that only farmers with the best welfare standards allowed access to their farms (11). Whatever the exact figure, it is clear that many bird have leg problems.

Lame birds have difficulty walking, which affects their behavioural repertoire. Lame birds spent more of their time lying (86%) and little time walking (1.5%). They spent less time than sound birds standing to preen and eat. Lame birds made fewer visits to the feeder and often sat while eating, unlike sound birds (12). Apart from behaviour, lame birds also have a higher mortality rate since severely affected birds can't reach food and water and are culled. Those that survive have lower body weight at slaughter (8,13).

There is much debate about whether lame birds are in pain. There are a range of causes of lameness, infectious, developmental and degenerative (14), and it is possible that more or less pain is associated with different causes. However, research findings suggest that lameness often is painful. In an early study, an injection of a non-steroidal anti-inflammatory drug (NSAID) reduced the time taken by lame chickens to reach food by crossing two obstacles, to the point that there was no difference between sound birds and drugged lame birds (15). Birds in this study were deprived of food for four hours, but drugs did not affect performance after only one hour without food (16). In other studies, lame chickens walked faster, increased stride length and generally walked more like sound birds, resulting in decreased GS score after NSAID administration (17,18). The Latency to Lie (LTL) test measures how long birds are prepared to stand to avoid the mildly aversive experience of sitting in a water bath. LTL is related to GS score, and lamest birds stand for the shortest period (19). However, administration of a NSAID increases LTL in lame birds (20). The fact that drugs improve the performance of lame birds in both moving and standing suggests that they reduce pain.

The preference of lame birds for food containing NSAID suggests that they self-medicate to alleviate this pain (21). When food was colour coded and chickens had the opportunity to learn which colour was associated with a NSAID, lame but not sound chickens preferred drugged to undrugged food, more so with increasing lameness, resulting in improved walking ability (21). A subsequent study (22) did not find preferential consumption of drugged food among lame birds, leading some writers to question the suitability of the self-selection paradigm (3). However, it should be noted that the second study did not use colour coded food, so it is not clear how birds could learn to recognise drugged food after three days training. Also this study did not include sound birds, therefore investigated a more narrow range of lameness. These differences mean that the findings of the original study (21) are not contradicted.

Given these findings, a number of UK and European authorities have called for action to reduce lameness (2,8,23). Since lameness varies with genotype, there is a call to include selection against lameness in breeding programmes. The large UK study (8) found systematic reductions in GS with increased whole wheat in the diet (0-30%), increased dark periods (0-8.5 hours), and decreased stocking density (15.9-44.8kg/m<sup>2</sup>). The Welfare Quality report (23) recommends increased use of whole wheat and mash to slow growth rate, step-up lighting programs and reduced stocking density to increase activity. Other factors which have been shown to improve leg health include the use of raised platforms (30cm) with access ramps (24,25), oat hulls to increase foraging and scratching (26) and natural light with average brightness of 85 Lux (26)

While there is action that can be taken to reduce lameness, it is problematic that farmers have been found to underestimate its significance, both in the UK (8) and Sweden (13). A focus only on birds that are culled fails to recognise the welfare significance of lameness to the whole flock, as noted in the Welfare Quality report (23, p.8):

“The problem of ‘detection’ of lameness is one of the reasons that many producers perceive broiler lameness as having a comparatively small impact on ‘production’ through dead or culled birds. However, the ‘welfare’ impact has been shown by many studies to be potentially much greater than the ‘production’ impact.”

## 8.2 Contact dermatitis

Footpad dermatitis (FPD) is characterised by inflammation and necrotic lesions of varying depths on footpads and toes (28). Hock burn (HB) involves lesions on the hocks. The effects have been described as follows (29, p.1):

“FPD starts as an erosion on the skin of the foot. This can initially appear as a dirty mark, but once the skin is broken, painful ulcers may develop. Broilers with severe lesions will experience pain and therefore move, eat and drink less. Broilers with severe lesions also often have other types of contact dermatitis such as breast blisters or hock burns.”

Studies in various European countries show severe FPB ranging from a high of 70.8% in France (30) to a low of 11.02% in the UK (31), with other studies intermediate between the two (11,32). Severe HB ranged from a high of 17.1% (30) to a low of 1.29% (31). Notably scores between flocks are highly variable (31), indicating that these painful lesions can be reduced.

As with lameness, FDP and HB have a genetic component and can be selected against. A comparison of fast and slow growing strains of chickens showed that those with fast growth rate began developing the first signs of FPD and HB at two weeks of age, whereas the slow growing strain had no FPD lesions and very few mild HB lesions, even at 10 weeks of age (33). However, management is also important and in some countries the incidence of FPD is used as a marker for husbandry standards. In Sweden and Denmark there is mandatory monitoring of FPD at slaughterhouses, and since this program began in 2002 there has been a dramatic improvement in foot health (29). These two countries, and in the near future The Netherlands as well, impose financial penalties when the FPD scores for a flock are above acceptable levels (29). Management factors which have been shown to improve foot health include feeding of more whole wheat, which reduces crude protein level and thereby decreases drinking and wet litter and reduces ammonia in the litter (29). Intermittent lighting also reduces FPD by increasing scratching and litter friability (29).

## 8.3 Recommendations

The problems experienced by chickens result from a variety of factors, and probably their interaction, including breeding and feeding for fast growth, and an environment that fails to encourage activity. Many researchers call for welfare criteria to be given greater prominence in breeding programs, selecting against propensity for lameness and leg weakness. However, as EFSA points out, it is impossible to assess the effectiveness of any such programs because of the secrecy involved (2, p.3):

“... the level of genetic improvement, or otherwise, of individual traits cannot be quantified due to the lack of access to confidential breeder data. Therefore, data on welfare outcome indicators (such as mortality and culling rates and the reason for dying and culling, gait scoring and ascites in commercial rearing conditions) should be recorded independently and made publicly available by breeding companies for each genetic line of broilers.”

Therefore, the following guideline should be changed to a standard:

**GA3.13** Mortalities, including culls, should be monitored and recorded.

**SA3.7** Mortalities, including culls, of broiler chickens must be recorded with a probable cause of death, and records submitted regularly to an organisation such as RIRDC for analysis and publication.

Following the lead of Sweden and Denmark:

**SA3.8** A sample of feet from each flock slaughtered must be scored for the incidence and severity of FPD and the results submitted to RIRDC for analysis and publication.

Only through this kind of analysis and transparency will improvements in the welfare of broiler chickens be made.

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## 9 Ducks (Part B, 4)

*“Like a duck to water”*; it’s an old saying, but is the affinity of ducks to water deeply rooted in duck genes? Is it beneficial to their health and/or happiness?

The DAAWSG supporting paper (SP) seems confused on this point. On the opening page it states that research is focused on duck behaviour and doesn’t evaluate animal health issues:

*“there is no accompanying research that defines the animal health or environmental consequences of moving from an essentially dry system back to a historic wet system.”*

This isn’t true, there are peer reviewed research papers (2,3,4,5,8) that consider health and sometimes the environmental effects of water troughs and showers compared to nipple drinkers.

And sure enough, a few pages later the SP contradicts the preceding quote with:

*“Some studies show access to open water to be important to improve and maintain eye and nostril health, as well as maintain plumage condition and cleanliness”*

We need to be able to trust that when the Drafting group, all qualified and paid professionals, make a claim about the presence of absence of research, that it is accurate. Otherwise we may conclude that the Drafting group is misrepresenting or cherry picking papers.

The SP also suggests that movements back to wet systems are likely to be associated with increased mortality, poor hygiene and environmental issues; citing (6). These findings were contrary to those in (3).

Is it possible for contaminated water to kill ducks? Of course. But was this finding a one-off? An outlier? Or an accurate measure of something intrinsically causally associated with having water? The issue is whether it is possible to run open water systems without such contamination and whether the gains are worth any additional work.

Entirely missing from the discussion is whether ducks enjoy access to water. Human welfare isn’t just about health, but happiness. Animal welfare that doesn’t consider positive elements is deficient. Watch a duck take to water, and you’ll understand the origin of the expression.

A variety of issues associated with wet litter and contaminated water are described in the SP including *Riemerella anatipestifer*, food safety and biosecurity risks. While no actual research is referenced for these statements, the SP states that industry itself associates wet and poor litter management with greater mortality from infections. While it is true that wet litter and contaminated water are likely associated with these issues, the positive links between water and health reported in (2,3,4,5,8) suggest that the risks can be avoided with proper husbandry in sheds with showers or water troughs.

The SP describes a study at *Pepe’s Ducks* but no reference is given to any published data or any information given as to the method undertaken to compare the two treatments.



Without this information no real conclusions can be drawn. For example, they may have put the troughs straight on the dry litter which is known to cause major health issues. Without this additional information we cannot know if the results are valid.

The only paper referenced by the SP in support of its claims that the provision of water is the cause of wet litter and therefore higher mortality and health issues is Schenk et. al (6).

This study concluded that open water in intensive duck rearing systems creates negative conditions including high ammonia levels, higher mortality rates and poorer health conditions for the ducks compared to ducks raised with nipple feeders only. This finding is contrary to many other research papers. Jones and Dawkins (7) concluded that welfare centres on the provision of bathing water. Liste et. al. (3) studied the health effects of open water resources within commercial settings. They found that properly managed open water did not have any significant negative effect on the overall health of the ducks when studying a variety of different open water sources. Their mortality rates remained below 5%.

Open water sources can improve eye health, nostril condition and overall hygiene (2, 8).

Jones and Dawkins (7) found that health scores improved with access to open water when compared to nipple drinkers. Ducks had cleaner feathers, and healthier foot pads. O'Driscoll and Broom (2) also assessed water provision in a commercial setting and found that mortality rates did not vary between nipple only or open water access. Mortality rates remained below 5%. They found that birds not provided with open water had worse gait scores. They recognised that improved health scores were only possible with good environmental and husbandry practices. Similarly, Jones and Dawkins also found that control of the environment when water was introduced was imperative. They found that litter moisture and ammonia were critical to duck welfare. High humidity and high ammonia caused eye conditions and higher mortality rates. Where water is introduced twice as much litter is required to ensure litter remains dry. Liste, Kirkden and Broom (3) suggest wet litter can lead to rapid water contamination as seen in Schenk's study. The issue with Schenk's study is that they used the same (and minimal) amounts of pine litter in both the nipple drinker and open water source treatments. They report that significantly higher ammonia levels were present in the last weeks in the open water source treatment group. This would have likely caused the reduced health scores and higher mortality rates recorded. Therefore, it is likely that better health outcomes can occur with access to open water, but litter quality needs to be maintained and kept dry to ensure health scores remain high. Failure to provide extra dry litter where open water is provided could lead to reduced health scores and higher ammonia levels.

All other research papers referenced refer to the claim that introduction of bathing water increases the overall use of water at the farm. There is a further point that Environmental Protection Authorities and planning provisions would make future Development Applications for duck farms difficult. This would only be the case if the water wasn't recycled. The option of an automated filtering system could clean and recycle the water. The support paper mentions that a recycle system would be expensive to run, but fails to mention that such systems are recommended for use in farms in the UK by the RSPCA. This avoids the excess use of water and any environmental issues with Development Applications.

The paper by Ahmed et al. (2) of Muscovy ducks is cited as concluding that they do not require water at any stage of growth. The Ahmed study did report a significant increase

in corticosterone without water, but ignored this in its conclusion. We think a statistical increase in this measure of stress is worth rather more attention than none at all.

We note that Muscovys are very rarely bred in Australian duck farming systems and may well have different requirements to the common Pekin. So at best this paper is irrelevant, and at worst it is misleading.

There is no mention in the SP of the cruelty involved in bill trimming. A duck's bill is filled with nerves used for foraging, so the tip of their beak is particularly sensitive. Bill trimming should be illegal. If animals are fighting, lower stocking densities should be required rather than a provision allowing de-billing of the animals.

In conclusion, the SP is somewhat confused and hardly a reliable guide on the industry and options available for welfare.

In regards to the proposed Standards and Guidelines, we suggest the following should be part of the Standards, either based on the above discussion, or for fairly obvious reasons.

1. It is essential that ducks are provided with accessible open water facilities that allow them to perform all water-related behaviours. Nipple drinkers must not be the only source of water for ducks. If nipple drinkers are used for drinking water they must not be modified to reduce water output. Open water facilities should be appropriate to the age of the duck.
2. Flooring – wire mesh flooring is not suitable and should not be used (obvious).
3. Bill trimming should not be legal (see above).
4. Mass matings should not occur as drakes become aggressive and females are often attacked and harmed (obvious).
5. Open fires/gas inside sheds with ducklings should not be used (obvious).
6. Water and feeding systems designed for chickens should not be used inside sheds as they are not suitable for ducks (obvious).
7. Live feather plucking, while not practiced in Australia, should be stated as illegal (obvious).
8. Casualty killing must not include killing pliers or other equipment that crushes the neck. Neck dislocation must not be used.

## 9.1 References

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