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Animal Welfare Standards Public Consultation
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26th February 2018

Dear Animal Health Australia,

Submission by Humane Society International Australia providing comments on the *draft Australian Animal Welfare Standards and Guidelines for Poultry*

Humane Society International (HSI) is the world's largest conservation and animal protection organisation with 70,000 Australian supporters, and over 12 million supporters globally.

In 2006 HSI Australia launched the certification scheme called *Humane Choice True Free Range*™ to improve the welfare standards of farm animals across Australia and New Zealand. It ensures the highest standards of animal welfare and guarantees that the animals are truly free range.

As the representative of the highest standard of true free range producers nationally we welcome the opportunity to comment and trust you will give our recommendations serious consideration.

This review of the Australian Poultry Standards represents an important opportunity to advance the welfare for millions of birds across the country. To achieve this, the following changes need to be implemented in line with the global movement towards less intensive production systems and strong calls by Australian consumers for animal welfare improvements.

HSI Australia offers the following comments on the draft.

HSI RECOMMENDATIONS FOR POULTRY

- **Perches should be provided:**

  Chapter 4 of the draft needs to be amended to ensure that perches are provided to all poultry with a motivation to perch, and adequate space should be allocated for them to satisfy their perching behaviour. Perching is a natural behaviour of chickens. When given the opportunity, they normally roost high in the trees at night. Perch use

is important for maintaining bone volume and bone strength[1] [2] [3]. In motivational analysis experiments, hens show behaviour indicative of frustration when thwarted from accessing a perch[4]. They are also willing to push through an increasingly heavily weighted door for perch access[5]. Many studies conclude that hens are highly motivated to a perch[6] [7] [8]. Perches can also serve as refuges for hens to avoid interactions with more aggressive hens[9].

- **The provision of nests for hens:**

The draft needs to state that nests should be provided to hens of all species in Chapter 4. Nesting behaviour is so important to the laying hen that it is often used as a prime example of a behavioural need[10]. Studies have shown that hens are highly motivated to gain access to a nest site when they are about to lay an egg[11] [12]. If they are denied this basic behavioural need it results in frustration and distress. Decades of scientific evidence suggest that hens are frustrated and distressed, and that they suffer in battery cages because there is no outlet for nesting behaviour[13] [14] [15] [16] [17] [18] [19].

- **The provision of sufficient litter for dust bathing and foraging:**

The draft does not state that litter should be provided to poultry in Australia in Chapter 8. Suitable litter is essential for birds to carry out some of their basic natural behaviours, namely dust bathing and foraging, which will enhance their welfare status[20]. Dust bathing is an intricate body maintenance behaviour. During dust bathing, birds work loose material, such as litter, through their feathers. This helps remove dirt and parasites to maintain plumage condition as well as maintaining body temperature and protect against skin injury. Dust bathing is also an indicator of positive welfare[21]. The provision of an enriched environment and loose foraging material, particularly in the pullet rearing system, can help prevent the development of feather pecking[22].

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[1] Wilson S, Hughes BO, Appleby MC, and Smith SF. 1993. Effects of perches on trabecular bone volume in laying hens. Research in Veterinary Science 54(2):207-11.
[2] Hughes BO, Wilson S, Appleby MC, and Smith SF. 1993. Comparison of bone volume and strength as measures of skeletal integrity in caged laying hens with access to perches. Research in Veterinary Science 54(2):202-6.
[3] Duncan ET, Appleby MC, and Hughes BO. 1992. Effect of perches in laying cages on welfare and production of hens. British Poultry Science 33(1):25-35.
[4] Olsson IAS and Keeling LJ. 2000. Night-time roosting in laying hens and the effect of thwarting access to perches. Applied Animal Behaviour Science 68(3):243-56.
[5] Olsson IAS and Keeling LJ. 2002. The push-door for measuring motivation in hens: laying hens are motivated to perch at night. Animal Welfare 11(1):11-9.
[6] Baxter M. 1994. The welfare problems of laying hens in battery cages. The Veterinary Record 134(24):614-9.
[7] Olsson IAS and Keeling LJ. 2000. Night-time roosting in laying hens and the effect of thwarting access to perches. Applied Animal Behaviour Science 68(3):243-56.
[8] Olsson IAS and Keeling LJ. 2002. The push-door for measuring motivation in hens: laying hens are motivated to perch at night. Animal Welfare 11(1):11-9.
[9] Appleby MC and Hughes BO. 1991. Welfare of laying hens in cages and alternative systems: environmental, physical and behavioural aspects. World's Poultry Science Journal 47(2):109-28.
[10] Petherick CJ and Rushen J. 1997. Behavioural restriction. In: Appleby MC and Hughes BO (eds.), Animal Welfare (Wallingford, U.K.: CABI Publishing, pp. 89-105).
[11] Follensbee ME, Duncan IJH, and Widowski TM. 1992. Quantifying nesting motivation of domestic hens. Journal of Animal Science 70(Suppl.1):164.
[12] Cooper JJ and Appleby MC. 2003. The value of environmental resources to domestic hens: a comparison of the work-rate for food and for nests as a function of time. Animal Welfare 12(1):39-52.
[13] Appleby MC, Hughes BO, and Elson HA. 1992. Poultry Production Systems: Behaviour, Management and Welfare (Wallingford, U.K.: CAB International, p. 186).
[14] Sherwin CM and Nicol CJ. 1992. Behaviour and production of laying hens in three prototypes of cages incorporating nests. Applied Animal Behaviour Science 35(1):41-54.
[15] Hughes BO. 1983. Space requirements in poultry. In: Baxter SH, Baxter MR, and MacCormack JAD (eds.), Farm Animal Housing and Welfare (Boston, MA: Martinus Nijhoff Publishers).
[16] Duncan IJH. 1970. Frustration in the fowl. In: Freeman BM and Gordon RF (eds.), Aspects of Poultry Behaviour (Edinburgh, Scotland: British Poultry Science Ltd, pp. 15-31).
[17] Baxter M. 1994. The welfare problems of laying hens in battery cages. The Veterinary Record 134(24):614-9.
[18] Wood-Gush DGM. 1972. Strain differences in response to sub-optimal stimuli in the fowl. Animal Behaviour 20(1):72-6.
[19] Yue S and Duncan IJ. 2003. Frustrated nesting behaviour: relation to extra-cuticular shell calcium and bone strength in White Leghorn hens. British Poultry Science 44(2):175-81.
[20] Loughton et al, 2016. Dust-bathing behaviour of laying hens in enriched colony housing systems and an aviary system. Poultry Science
[21] Widowski and Duncan, 2000. Working for a dustbath: are hens increasing pleasure rather than reducing suffering? Applied Animal Behaviour Science 68(1):39-53
[22] Tahamtani,FM, M. Brantsæter, J. Nordgreen, E. Sandberg, T. B. Hansen, A. Nødtvedt,

- **Appropriate light levels:**

  In Chapter 6, the draft stipulates for poultry to be kept in near-dark conditions almost constantly which can have adverse welfare consequences such as detrimental effects to their eye development and behaviour. All birds need to be exposed to a minimum of 8 hours of continuous darkness during each 24 your period to allow adequate rest, and during light periods the minimum light intensity should be at least 10 lux rather than 5 lux (SA6.3).

- **Biosecurity and Disease:**

  One factor which is repeatedly argued as a reason to continue using intensive systems is biosecurity and disease risk, and the belief that animal health issues such as avian influenza (bird flu) presents an increased threat in cage-free environments. However, contrary to some reports, there has never been an outbreak of bird flu traced back to a 'real' free range egg farm in Australia. An outbreak of bird flu in Young, NSW, in October 2013 was hotly debated when Federal Minister for Agriculture Barnaby Joyce blamed it on the free range egg industry, however the farm in question was anything but free range. Specifically, the Young property stocked 420,000 birds of which 240,000 were in a caged facility, whilst the rest were classed as 'free range' and kept on a couple of hectares. The stocking rate of their 'free range' operation equated to an enormous 80,000 hens per hectare. This is far from free range even when compared to the 10,000 birds per hectare limit prescribed in the new National Information Standard which will apply throughout Australia from 26 April 2018. In 2015 the Australian media reported that seven million poultry were killed in parts of the United States after an outbreak of bird flu prompting industry players to urge Australian producers to tighten biosecurity measures[23]. However, all five of these cases occurred in intensive farms with high stocking densities.

  The situation escalated dramatically that year marking it as the worst avian flu outbreak in U.S. history, claiming the lives of more than 48 million birds in a dozen states according to the U.S. Department of Agriculture[24]. These outbreaks clearly demonstrated that cages do not protect birds from bird flu. Specifically, as stated in this U.S. government report[25], *"Case farms tended to have a higher percentage of conventional cage housing type compared with enriched cages or cage free."*

  Disease risks are minimised by factors associated with the outdoor, free-range environment. Natural sunlight kills many pathogens and virus particles, and the lower stocking densities and access to fresh air typical of free-range flocks lower infection and transmission rates[26]. Disease risks can be heightened by overcrowded or unsanitary outdoor environments, necessitating responsible management, including rotation of fields or paddocks. Confinement rearing and high-density flocks increase exposure to protozoal infections with short, direct life cycles, such as coccidiosis and cryptosporidiosis[27]. Where stocking density is high, the environmental pathogen load may be correspondingly heavy, and bird-to-bird contact will be more frequent. Such overcrowding has been implicated as a factor in the emergence of highly pathogenic strains of avian influenza[28].

  The notion that cage free systems represent greater risks of the spread of diseases

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T. B. Rodenburg, R. O. Moe, and A. M. Janczak. 2016. Effects of litter provision during early rearing and environmental enrichment during the production phase on feather pecking and feather damage in laying hens. Poultry Science 95(12):2747-2756.

[23] ABC Rural, 28 April 2015, 'American bird flu outbreak puts Australian biosecurity in focus'.

[24] USDA – HPAI 2014/15 Confirmed Detections

[25] USDA – Epidemiologic and Other Analyses of HPAI-Affected Poultry Flocks: July 15, 2015 Report (page 19)

[26] Scientific Panel on Animal Health and Welfare. 2005. Opinion of the Scientific Panel on Animal Health and Welfare on a request from the Commission related to the welfare aspects of various systems of keeping laying hens. The EFSA Journal 197:1-23. www.efsa.europa.eu/EFSA/Scientific_Opinion/lh_opinion1.pdf. Accessed March 25, 2008.

[27] McDougald LR. 2003. Protozoal infections. In: Saif YM, Barnes HJ, Gilsson JR, Fadly AM, McDougald LR, and Swayne DE (eds.), Diseases of Poultry, 11th Edition (Ames, IA: Iowa State Press, p. 973).

[28] Greger M. 2007. The human/animal interface: emergence and resurgence of zoonotic infectious diseases. Critical Reviews in Microbiology 33(4):243-99.

such as bird flu are unsubstantiated, and it is unacceptably misleading to include these misconceptions within the line of questioning in the *DPI Community Survey*, namely question (13) which states, *"Reforms to animal welfare standards could have impacts on biosecurity and animal health issues such as Avian Influenza (i.e. Bird Flu). How concerned are you about potential increased threats to biosecurity and animal health associated with the welfare reforms?"* This line of questioning is misinformed and should not have been incorporated into this Consultation process.

- **Cage-free eggs may be safer:**

  Extensive scientific evidence strongly suggests that legislating against cage egg production will not reduce food safety, and may even improve it. Numerous scientific studies comparing *Salmonella* contamination between caged and cage-free operations have found that those farms confining hens in cages had higher rates of *Salmonella*. An EU-wide survey launched in 2007 in which more than 30,000 samples were taken from more than 5,000 operations across two dozen countries concluded there were significantly higher *Salmonella* rates in operations that confine hens in cages[29]. The European Food Safety Authority findings demonstrated that there were at least 25-times greater odds of contamination on factory farms that confine hens in cages compared to cage-free production. Their analysis concluded, *"Cage flock holdings are more likely to be contaminated with Salmonella."*

  The best available science suggests that confining hens in cages may increase *Salmonella* infection risk in the birds, their eggs, and the consumers of caged eggs [30]. Moving to cage-free production presents an opportunity worth serious consideration for the Australian population.

- **Reduced Stocking Densities:**

  The Standards dictate specific maximum stocking densities for each species. HSI recommends the stocking densities should be reduced for all species to enhance bird welfare. For the following species they should be dictated as per below:

Meat chickens:	28 kg/m^2 for natural ventilation systems 30 kg/m^2 for tunnel ventilation systems
Layer pullets:	17 kg/m^2 at 16 weeks of age (assuming a 1.2kg bird at 16 weeks)
Layer hens:	7 birds/m^2 of the usable area for floor-based systems 9 birds/m^2 of the usable area for multi-tiered systems (Note: Sufficient perches should be provided in multi-tiered systems to allow at least half of the flock to occupy at any one time).

HSI RECOMMENDATIONS FOR EGG LAYING HENS

- **An end to the battery cage for poultry in Australia:**

  Even in a well-managed battery-cage confinement system, all caged hens are permanently denied the opportunity to express most of their basic behaviour within their natural repertoire. The fact that an overwhelming majority of laying hens used for commercial egg production in Australia are confined in battery cages sets us back on the global stage in terms of basic animal welfare progression. To maintain credibility and fulfil its objective, this review needs to strongly reconsider its standpoint on the continued use of cages because the only reason supporting this

[29] European Food Safety Authority. 2007. Report of the Task Force on Zoonoses Data Collection on the Analysis of the baseline study on the prevalence of *Salmonella* in holdings of laying hen flocks of *Gallus gallus*. The EFSA Journal 97. http://www.efsa.europa.eu/en/efsajournal/pub/rn-97Accessed March 15, 2010.

[30] An HSUS Report: 'Food Safety and Cage Egg Production'.

decision is industry pressure. The use of conventional battery cages for laying hens is banned or being phased out under laws or regulations throughout the EU, in six U.S. states and in New Zealand and Bhutan. Officials in the majority of states in India, the world's third largest egg producer, have declared that the use of battery cages violates the country's animal welfare legislation, and the country is debating a national ban.

The Australian public are becoming increasingly more selective when purchasing animal products, and more aware of animal welfare issues. This was clearly demonstrated in independent research recently commissioned by the RSPCA. It showed that around 80% of rural Australians and almost 83% of Australians in regional areas want battery cages phased out – compared with around 84.5% of people in major metropolitan areas[31].

This consumer concern is also highlighted by recent commitments by Australia's supermarket chains, Coles and Woolworths. Coles have removed caged eggs from their home-brand range, whilst Woolworths has made the commitment to go 100 per cent cage free nationwide by 2018. Not only is this trend towards cage-free systems being seen across the globe through legislation changes, but major corporates are also committing to higher welfare alternatives following consumer pressure. Nestlé, the world's largest packaged foods company, will source cage-free eggs for all of its food products by 2025. JBS, one of the world's largest food companies, has also committed to sourcing exclusively cage-free eggs throughout its supply chain by 2020. Other companies such as Kraft Heinz, McDonald's and 7-Eleven have already made similar commitments which represent an important benchmark in the global move away from cages. These moves should serve as a strong appeal to industry players in Australia that the future is cage-free, and it would be in their own best interests to direct their plans away from intensive practices. We anticipate that those who choose to continue to invest in caged systems will likely struggle to maintain their markets in future.

The use of battery cages for layer hens needs to be phased out because they fail to meet the physiological and behavioural requirements of the birds. Caged hens suffer from the denial of natural behaviour such as nesting, perching, and dustbathing, all important for hen welfare. An extensive body of scientific evidence confirms that birds confined in barren battery cages suffer immensely. We have known for decades the welfare problems that result from caged systems.

The following points are cited from research by Dr Michael Baxter titled *'The welfare problems of laying hens in battery cages'*[32], notably:

"The space available in a battery cage does not allow hens even to stand still in the way they would in a more spacious environment. Some behaviours are completely inhibited by confinement in a cage causing a progressive accumulation of motivation to perform the behaviours."

"[T]he frustration of nesting motivation is likely to cause significant suffering to the hen during the prelaying period every day."

"Hens without access to perches may have more welfare problems resulting from increased aggression, reduced bone strength, impaired foot condition and higher feather loss."

"The fact that hens are restricted from exercising to such an extent that they are unable to maintain the strength of their bones is probably the greatest single indictment of the battery cage. The increased incidence of bone breakage which results is a serious welfare insult."

[31] RSPCA Media Release, 13 February 2018: 'Rural and regional Australia are concerned about hens in cages too'.
[32] Baxter M. 1994. The welfare problems of laying hens in battery cages. The Veterinary Record 134(24):614-9.

The ability to lay their eggs in nests, perch, forage, dustbathe, run and spread their wings are tangible benefits of cage-free systems that shouldn't be underestimated. Locomotion exercises the skeletal system and is important for physical fitness[33]. Exercise improves the overall health of the hens[34]. Scientific evidence also shows the detrimental effects of caged systems on bone strength for laying hens[35]. Several studies have compared the bone strength of caged hens to those in other systems. Findings conclude a very significant reduction in bone strength in the birds in cages[36] [37] [38]. This problem is so severe that in one study, 24% of birds removed from their cages at the end of the laying period suffered from broken bones[39]. Preference testing has demonstrated that hens prefer more space than is typically allotted to them in a conventional battery cage and that when given the opportunity to choose between enclosures that differ in size, they will generally choose the larger enclosure[40] [41] [42] [43] [44].

Further evidence and scientific references supporting cage free systems over the battery cage is provided in the white paper by Sara Shields and Ian Duncan of the Humane Society of the United States titled *'A Comparison of the Welfare of Hens in Battery Cages and Alternative Systems'*[45].

- **Induced Moulting:**

Forced-moulting, a technique used to speed up the natural moult process and temporarily stop egg laying, involves severe nutrient restriction for several weeks causing stress and chronic hunger. Even when provided with a non-feed-withdrawal moult diet, the hens can lose as much body weight as a complete starvation diet. Its purpose is to induce a second egg-laying cycle where the birds come back into lay. HSI recommends section SA9.6 of the draft should be revised to specify that poultry induced to moult only lose a maximum of 15% of their body weight, and not 25%, as diets that produce a lower body weight loss can be just as effective [46] [47].

- **Indoor maximum numbers and stocking densities for free range birds:**

The draft currently prescribes a stocking density for non-caged systems (or barn layer hens) (in SB1.8) of no more than 30kg/m^2. This means that this limit would also apply to free range layer hens for their maximum indoor density. However, for free range birds it is essential for the stocking density inside each shed to be no more than 15kg/m^2. This would be the equivalent to approximately 7.5 hens/m^2 (assuming a 2kg hen). A maximum of 5,000 birds per shed should also be stipulated otherwise they will not be able to successfully navigate past other birds to reach the outdoor range. These parameters need to be specified in the draft.

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[33] Shipov A, Sharir A, Zelzer E, Milgram J, Monsonego-Ornan E, and Shahar R. 2010. The influence of severe prolonged exercise restriction on the mechanical and structural properties of bone in an avian model. The Veterinary Journal 183:153-60.
[34] Knowles TG and Broom DM. 1990. Limb bone strength and movement in laying hens from different housing systems. Veterinary Record 126(15):354-6.
[35] Norgaard-Nielsen G. 1990. Bone strength of laying hens kept in an alternative system, compared with hens in cages and on deep-litter. British Poultry Science 31(1):81-9.
[36] Knowles TG and Broom DM. 1990. Limb bone strength and movement in laying hens from different housing systems. Veterinary Record 126(15):354-6.
[37] Norgaard-Nielsen G. 1990. Bone strength of laying hens kept in an alternative system, compared with hens in cages and on deep-litter. British Poultry Science 31(1):81-9.
[38] McLean KA, Baxter MR, and Michie W. 1986. A comparison of the welfare of laying hens in battery cages and in a perchery. Research and Development in Agriculture 3(2):93-8.
[39] Gregory NG and Wilkins LJ. 1989. Broken bones in domestic fowl: handling and processing damage in end-of-lay battery hens. British Poultry Science 30(3):555-62.
[40] Hughes BO. 1975. Spatial preference in the domestic hen. British Veterinary Journal 131(5):560-4.
[41] Dawkins M. 1978. Welfare and the structure of a battery cage: size and cage floor preferences in domestic hens. British Veterinary Journal 134(5):469-75.
[42] Nicol CJ. 1986. Non-exclusive spatial preference in the laying hen. Applied Animal Behaviour Science 15:337-50.
[43] Dawkins M. 1981. Priorities in the cage size and flooring preferences of domestic hens. British Poultry Science 22(3):255-63.
[44] Dawkins MS. 1983. Cage size and flooring preferences in litter-reared and cage-reared hens. British Poultry Science 24(2):177-82.
[45] Sara Shields, Ph.D., and Ian J.H. Duncan, Ph.D, 'An HSUS Report: A Comparison of the Welfare of Hens in Battery Cages and Alternative Systems'
[46] Mejia L, Meyer ET, Utterback PL, Utterback CW, Parsons CM, and Koelkebeck KW. 2010. Evaluation of limit feeding corn and distillers dried grains with solubles in non-feed-withdrawal molt programs for laying hens. Poultry Science 89(3):386-92.
[47] Hassanabadi A and Kermanshahi H. 2007. Effect of force molting on postmolt performance of laying hens. International Journal of Poultry Science 6(9):630-3.

ACCC also make this point in the October 2015 version of their *'ACCC enforcement guidance – free range hen egg claims'* [48]. They correctly state that, *"The discrete flock size is a threshold issue. While stocking density, barn size and flock size are inextricably related, it is the flock size which largely determines the ability of each hen to access an outdoor range. This is because larger flock sizes must be kept in larger barns so this will not only increase the absolute number of unfamiliar hens the hen must navigate past but also increase the average distance the hen must travel to reach an open side or pophole."* In their most recent version released in February 2018, on page 2 they state, *"Flock size largely determines the ability of each hen to access an outdoor range. As larger flock sizes must be kept in larger barns, this means that a hen must travel further, and navigate past more unfamiliar hens, to reach an open side or pophole."*

This point is further supported by *Dr Raf Freire* of *Charles Sturt University* (CSU) who has been reviewing global research on free range egg production and is a senior lecturer at CSU's School of Animal and Veterinary Sciences[49]. He says that studies indicate there should be no more than 200 birds per metre of pop-hole compare to the industry code of practice which recommends 500 birds per metre of pop-hole.

HSI strongly recommends that maximum flock numbers for layer hens should not exceed 5,000 birds per house, with an indoor stocking density no more than 15kg/m^2 including the roosting area. Where large numbers of 15,000 or more birds are placed in large sheds this means they will never make it to the pop-holes, and therefore they will be unable to access the outdoor range at all. This would prevent the birds from having meaningful and regular or continuous access to the outdoor range. On true free range farms with stocking densities less than 1,500 hens per hectare, during daylight hours it is unusual to find more than 10% of hens inside the sheds at any one time[50].

HSI RECOMMENDATIONS FOR MEAT BIRDS

- **Slower growth rates of broiler chickens to alleviate health and alleviate issues:**

  Selective breeding has resulted in broiler chickens that grow so fast, they reach slaughter weight in just 6 weeks. This rapid weight gain on an immature skeletal system presents serious welfare problems as it has resulted in poor bone health, leg disorders including deformities, lameness, tibial dyschondroplasia (TD), and ruptured tendons. Their rapid growth results in altered behaviour patterns as they are unable to support their heavy body weight, and so have to spend more time lying down. This in turn can lead to breast blisters, hock burn, and painful foot-pad dermatitis.

  Alternatives to the conventional Cobb and Ross genetic lines should be encouraged. These strains have higher welfare outcomes including lower mortality, improved gait, and more active behavioural profiles.

- **Ban the starvation of breeding birds:**

  Meat chickens that are used for breeding also possess the same genetics that make them grow at an extraordinarily rapid rate, so to ensure they live for a whole year to serve their purpose to breed more birds, they are routinely feed restricted and often just fed every other day. This is clearly fraught with welfare implications, including chronic hunger and suffering, so it is crucial for the draft to incorporate breeds with slower growth rates to begin to address these welfare issues faced by parent

[48] *'ACCC enforcement guidance – free range hen egg claims'* , October 2015 - (https://www.accc.gov.au/system/files/1029_Free%20range%20Eggs%20guidelines_FA.pdf)
[49] *'Australian free range egg standard should include shed and flock size and protection from predators: poultry expert'* by Laurissa Smith – ABC Rural News, 16 June 2015 (http://www.abc.net.au/news/2015-06-16/poultry-expert-identifies-obstacles-in-free-range-egg-production/6548740)
[50] Free Range Farmers Fact Sheet 1 (http://www.freerangefarmers.com.au/uploads/7/4/2/0/7420102/fact_sheet1.pdf)

chickens.

HSI RECOMMENDATIONS FOR DUCKS

- **The provision of clean water for ducks to swim:**

  Farmed ducks are slaughtered at around 6-7 weeks old whereas they would naturally live for around 12 years. For their short lives they have basic needs, and one of the key essentials for ducks is water. Without water they are unable to clean themselves, and they become more prone to respiratory conditions, crusty eyes, heat stress, or lameness. The draft needs to endorse the provision of pools or troughs for the ducks to swim.

- **Ducks should have access to the outdoors and stocking densities that allow them to express natural behaviours:**

  There should be enough room for ducks to spread their wings and escape confrontation from other birds, as well as carry out natural behaviour including grooming and preening. The stocking density should be such that any association aggression or cannibalism is avoided, and beak trimming is eliminated.

HSI RECOMMENDATIONS FOR TURKEYS

- **Slower growth rates:**

  One of the most significant welfare problems within the turkey industry is selective breeding for rapid growth to reach heavier final body weights in exceedingly shorter periods of time. Selective breeding means that turkeys can reach slaughter weight by just 10 weeks. Rapid growth and heavy body weight can compromise the health of turkeys by leading to muscle damage[51], cardiovascular problems[52], and increased susceptibility to disease[53], and is a factor in the development of focal ulcerative dermatitis (small skin lesions commonly called “breast buttons”), which develop on the keel bone[54].

  Rapid growth and heavy body weight stress bones, joints, ligaments, and tendons, and can result in leg problems, such as the development of an abnormal cartilage mass at the end of a growing bone (tibial dyschondroplasia), lesions in the hip joint (epiphyseal ischemic necrosis), and angular bone deformity (valgus varus deformity)[55]. Avulsion (rupture) of tendons or ligaments in the hock may also occur[56]. Although leg problems are clearly a serious welfare problem, economic considerations often trump concern by industry for the well-being of affected birds.[57] These devastating effects on their health and wellbeing often mean they are unable to even mate naturally. The draft should ensure the production of slower growing birds to eliminate these unnecessary welfare problems.

- **Ban beak trimming:**

  Stocking density should allow enough space for the birds to exhibit natural behaviour

[51] Wilson BW, Nieberg PS, Buhr RJ, Kelly BJ, and Shultz FT. 1990. Turkey muscle growth and focal myopathy. Poultry Science 69(9):1553-62.
[52] Crespo R and Shivaprasad HL. 2003. Developmental, metabolic, and other noninfectious disorders. In: Saif YM, Barnes HJ, Glisson JR, Fadly AM, McDougald LR, and Swayne DE (eds.), Diseases of Poultry, 11th Edition (Ames, IA: Iowa State Press, pp. 1055-1102).
[53] Bayyari GR, Huff WE, Rath NC, et al. 1997. Effect of the genetic selection of turkeys for increased body weight and egg production on immune and physiological responses. Poultry Science 76(2):289-96.
[54] Kamyab A. 1997. Studies on the etiology of enlarged sternal bursa and focal ulcerative dermatitis on market tom turkeys. Ph.D. Dissertation, University of Minnesota, pp. 1, 33-43, 50.
[55] Whitehead CC, Fleming RH, Julian RJ, and Sørensen P. 2003. Skeletal problems associated with selection for increased production. In: Muir WM and Aggrey SE (eds.), Poultry Genetics, Breeding and Biotechnology (Wallingford, U.K.: CABI Publishing, pp. 29-52).
[56] Julian R and Gazdzinsky P. 2000. Lameness and leg problems: turkeys. World Poultry–Elsevier Special 00:24-31.
[57] An HSUS Report: The Welfare of Animals in the Turkey Industry by http://www.humanesociety.org/assets/pdfs/farm/HSUS-Report-on-Turkey-Welfare.pdf

and reduce aggression.

- **Enriched environment:**

  Turkeys should be provided with perches and enough other environmental enrichments (such as bales of straw) in order to prevent the development of injurious pecking and the need to beak trim.

- **Treatment of Turkeys during Slaughter:**

  Upon arrival at the slaughter house, turkeys are commonly unloaded from transport crates, inverted, and hung upside-down on shackles that pass over an electrified water bath. Evidence from studies of chickens demonstrates that the process of inversion and shackling is both stressful[58] [59] and painful[60] [61], and the wingtips may become bruised if turkeys flap while being hung[62]. The birds are given an electric shock that is meant to render them unconscious and immobile while their necks are cut. However, when shackled turkeys are conveyed through the water bath, they may experience electric shocks before they are stunned into unconsciousness, because their wings, hanging lower than their heads, may touch the water before their heads are submerged[63] [64] [65]. The use of nitrogen gas systems, rather than passing turkeys' heads through electrified water baths, are in use by some processing plants in the United States and Europe, and these efforts should be commended for improving the animals' welfare. The shackling of turkeys and the use of water baths should therefore be replaced with more humane alternatives. To date, the most effective and least aversive method of stunning birds prior to slaughter is Controlled Atmosphere Killing (CAK), which rapidly and efficiently gasses the birds while they are in transport crates.

HSI RECOMMENDATIONS FOR POULTRY SLAUGHTER

- **Electrical water-bath stunning and throat-cutting should be phased out:**

  Although water-bath stunning could theoretically produce a state of insensibility rapidly, the complexities of ensuring the correct electrical stings and the conflict between effective stunning and commercial interests in carcass and meat quality largely preclude these conditions in practice. However, the problem of dumping, handling, and shackling conscious birds remains, even if electrical variables could be satisfactorily controlled. Questions about the nature of the state of unconsciousness (or lack thereof) actually produced by electrical water baths raises further concerns about the system. Therefore, multiple-bird electrical water-bath stunning systems supplied with constant voltages are inadequate on welfare grounds as they do not ensure the least aversive slaughter possible[66]. Killing with exposure to gas is the preferred practice. This should be prescribed in the draft.

- **Independently monitored mandatory CCTV in all slaughterhouses:**

  To help ensure that the slaughter process is carried out as humanely as possible, it is important to monitor activities using CCTV in all areas where the birds are unloaded, stunned and killed.

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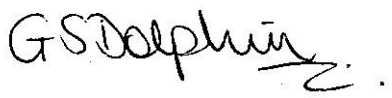
HSI RECOMMENDATIONS FOR OTHER POULTRY BIRDS

- **Caged production systems and husbandry practices such as beak trimming and other mutilations without pain relief should not be allowed for poultry.** This includes laying chickens, meat chickens, meat and laying chicken breeders, ducks, emus, geese, guinea fowl, ostriches, partridge, pheasants, pigeons, quail and turkeys.

HSI appreciates the opportunity to make this submission and we ask that it be properly considered and acted on. We would be happy to provide further information or assistance on any of the points outlined above if required.

Sincerely



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