



Animal Welfare Institute

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February 12, 2014

Mr. Mike Brown
President, National Chicken Council
1152 Fifteenth Street, NW, Suite 430
Washington, DC 20005-2622
mbrown@chickenusa.org

Dear Mr. Brown:

I am writing on behalf of the Animal Welfare Institute (AWI) to comment on the National Chicken Council's (NCC) recently revised Animal Welfare Guidelines and Audit Checklist ("Guidelines"). Since its founding in 1951, AWI has sought to alleviate the suffering inflicted on animals by people, and a major goal of the organization is to achieve humane slaughter for all animals raised for food.

According to the NCC website, the Guidelines "offers science-based recommendations for proper treatment."¹ However, nowhere on the website or in the Guidelines itself is the scientific justification for the standards given. The Guidelines is in fact not based on animal welfare science but rather on commercial expedience. Moreover, in a number of instances, the Guidelines is not in compliance with the internationally-recognized recommendations of the World Organization for Animal Health ("OIE"). As you know, OIE is the intergovernmental organization dedicated to improving animal health worldwide. Its animal welfare standards are developed through expert scientific working groups and comments from its 178 member countries.

Below are several examples of NCC animal welfare standards that are inconsistent with scientific research and the international standards of the OIE.

1. Unhealthy Lighting

To increase feed consumption and subsequent weight gain, the conventional chicken industry warehouses birds under near-continuous, dim lighting. The result is inadequate light during the day to encourage birds to be active and too few hours of darkness for the animals to rest properly. NCC guidelines prolong day length by requiring only four hours of darkness per 24-hour period, and the hours of darkness may be provided in increments as short as one hour. Moreover, the Guidelines sets an inadequate minimum light intensity of 0.5 foot candles, similar to a moonlit night. Skeletal disorders and other growth abnormalities have been found to be higher among chickens kept in continuous light, while exposure to more natural intervals of light and dark results in reduced leg abnormalities, reduced

¹ National Chicken Council, *Animal Welfare for Broiler Chickens* (webpage).

physiological stress, and improved eye condition.² In addition, increasing light intensity in chicken barns enhances the birds' locomotive activity and reduces leg problems.³

Four 1-hour periods of darkness—allowed by the Guidelines—does not comply with international guidelines of the OIE, which require adequate periods of continuous light and continuous darkness within each 24-hour period.⁴ OIE standards also recommend a period of gradual adjustment to lighting changes.⁵ In order to provide healthy living conditions for birds, NCC should require, at minimum, six hours of continuous darkness per 24-hour period and a minimum light intensity of 15-20 lux (approximately 1.4-1.9 foot candles) during periods of light.

- AWI requests the scientific studies used to justify a minimum light intensity of 0.5 foot candles and requiring only four 1-hour periods of darkness per day.

2. A Crowded, Barren Environment

The Guidelines does not require access to the outdoors or to any sort of exercise area, nor does it require any form of environmental enrichment for the birds who are confined indoors for their entire lives. Moreover, the Guidelines provides only 0.6 - 0.7 square feet of space per bird, about the size of an 8 ½ x 11 inch sheet of paper. The ability to perform natural behaviors, such as preening and stretching and flapping of the wings, is impacted by this level of crowding.⁶ High stocking density also has a negative impact on other housing conditions, including litter quality, temperature, humidity, ventilation, and air quality.⁷

Research shows that lower stocking densities are associated with increased activity, lower mortality, and decreased incidence of leg problems, skin dermatitis, and bruising.⁸ Research also shows that offering chickens environmental enrichments, such as perches and straw bales, increases activity and decreases sitting and the amount of time spent in contact with waste-soaked litter.⁹ This increased activity may

² G.S. Sanotra et al., 2002, Influence of light-dark schedules and stocking density on behavior, risk of leg problems and occurrence of chronic fear in broilers, *British Poultry Science* 43:344. See also J. Buyse et al., 1996, Effect of intermittent lighting, light intensity and source on the performance and welfare of broilers, *World's Poultry Science Journal* 52:121.

³ R.C. Newberry et al., 2007, The influence of light intensity on behavior and performance of broiler chickens, *Poultry Science* 67:1020.

⁴ OIE, *Animal Welfare and Broiler Chicken Production Systems*, Terrestrial Animal Health Code, Chapter 7.10.4.2b.

⁵ Ibid.

⁶ A. Meluzzi & F. Sirri, 2009, Welfare of broiler chickens, *Italian Journal of Animal Science* 8(suppl. 1):161. See also I. Estevez, 2007, Density allowance for broilers: where to set the limits?, *Poultry Science* 86:1265.

⁷ M.S. Dawkins, S. Donnelly & T.A. Jones, 2004, Chicken welfare is influenced more by housing conditions than by stocking density, *Nature* 427:342. See also W.A. Dozier et al., 2006, Stocking density effects on male broilers grown to 1.8 kilograms of body weight, *Poultry Science* 85:344.

⁸ A.L. Hall, 2001, The effect of stocking density on the welfare and behavior of broiler chickens reared commercially, *Animal Welfare* 10:23. See also B.A. Ventura et al., 2012, Access to barrier perches improves behavior repertoire in broilers, *PLoS one* 7:e29826; T.G. Knowles et al., 2008, Leg disorders in broiler chickens: prevalence, risk factors and prevention, *PLoS one* 3:e1545; P. Sorensen et al., 2000, Effects of age and stocking density on leg weakness in broiler chickens., *Poultry Science* 79:864.

⁹ A. Kells et al., 2001, The effect of a "Freedom Food" enrichment on the behavior of broilers on commercial farms, *Animal Welfare* 10:347. See also B.A. Ventura et al., 2012, Access to barrier perches improves behavior repertoire

reduce leg deformities and decrease levels of fear in birds.¹⁰ In order to provide for adequate animal welfare, NCC should cap stocking density at 30 kg/m² (or 6 lb/ft²) and require that all birds be provided at least one form of environmental enrichment.

- AWI requests scientific studies showing that a crowded, barren environment provides good welfare for chickens.

3. Too Many Broken or Dislocated Bones

Another area where the Guidelines is inadequate in providing for the welfare of birds is the allowable percentage of broken or dislocated wings upon the birds' arrival at slaughter plants. Birds presented at slaughter with these injuries are at a higher risk of being inhumanely handled and suffering pain than healthy birds.

The Guidelines requires that corrective action be initiated only when the level of broken or dislocated wings exceeds 4 percent. OIE recommends a standard of 2 percent, with less than 1 percent being the goal.¹¹ OIE standards also provide that birds with dislocated or broken wings be humanely killed before being shackled,¹² but the Guidelines allows for these injured birds to endure the painful process of shackling while still conscious. To prevent pain and suffering, NCC should recommend a limit of 1 percent of birds with broken or dislocated wings and require action if the level exceeds 2 percent. Furthermore, the Guidelines should require that birds with broken or dislocated bones be humanely killed before shackling.

- AWI requests an explanation of how shackling birds with broken or dislocated bones provides acceptable animal welfare.

4. Excessive Holding Times Before Slaughter

The Guidelines allows birds to be held in slaughtering facilities for up to 15 hours. During this time birds are often held in cramped transportation crates, where they can become dehydrated and overheated. Long holding times are stressful to birds; they increase injuries and the number of birds found to be dead on arrival.¹³ OIE recommends that waiting time at the slaughter plant not exceed 12 hours.¹⁴ In order to ensure animal welfare, NCC should shorten its maximum holding time.

in broilers, PLoS one 7:e29826; B.A. Ventura et al., 2010, Effects of barrier perches and density on broiler leg health, fear, and performance, *Poultry Science* 89:1574; U.G. Simsek et al., 2009, Effects of enriched housing design on broiler performance, welfare, chicken meat composition and serum cholesterol, *ACTA VET. BRNO* 78:67; E.H. Leone & I. Estevez, 2008, Economic and welfare benefits of environmental enrichment for broiler breeders, *Poultry Science* 87:14.

¹⁰ D. Bizeray, 2002, Influence of increased environmental complexity on leg condition, performance, and level of fearfulness in broilers, *Poultry Science* 81:767.

¹¹ OIE, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5.2.2.

¹² OIE, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5.7.3b.

¹³ M. Petracci et al., 2006, Preslaughter mortality in broiler chickens, turkeys, and spent hens under commercial slaughtering, *Poultry Science* 85:1660.

¹⁴ OIE, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5.4.

- AWI requests the scientific basis for setting the holding time limit at 15 hours.

5. No Limit on Hanging Time in Shackles

The Guidelines doesn't address the amount of time birds hang upside down on shackles before being slaughtered. Because of the stress and pain involved birds struggle violently when shackled, resulting in lacerations, dislocations, and hemorrhaging.¹⁵ Research shows that shackling birds upside down for over 60 seconds increases levels of corticosterone, a hormone associated with stress in birds, and other stress indicators.¹⁶

OIE standards recommend that hang time be kept as short as possible, not to exceed one minute.¹⁷ In order to minimize the chance of injuries and the suffering of chickens, NCC Guidelines should require that hang time on shackles be kept to a minimum—between 15 and 60 seconds.

- AWI requests scientific research demonstrating that prolonged hanging times are not detrimental to animal welfare.

6. Inadequate Electrical Stunning Protocol

NCC claims that electrical stunning, as practiced in poultry slaughter plants in the United States, “renders the birds insensitive to pain.”¹⁸ However, the Guidelines fails to provide any stunning parameters, such as acceptable electric frequency and corresponding current voltage levels, minimum stun duration, and maximum stun-to-cut interval. Research suggests that a significant percentage of electrically stunned birds in the United States may not receive a current of sufficient magnitude to render them unconscious.¹⁹

Immobilization is not the same as insensibility. While immobilized birds may bleed properly and cease breathing before they enter the scald tank, if the birds are sensible during the process due to inadequate stunning, they will suffer pain and distress.²⁰ OIE recommends minimum current levels for different frequencies,²¹ and NCC standards should as well. In addition, with low-level stunning, as is practiced in the United States, it is essential that a short stun-to-cut interval be specified to lower the risk that birds will regain consciousness.²² Therefore, to ensure the humane slaughter of chickens, NCC

¹⁵ D.G. Satterlee et al., 2000, Struggling behavior in shackled male and female broiler chickens, *Poultry Science* 79:652.

¹⁶ I. Bedanova et al., 2007, Stress in broilers resulting from shackling, *Poultry Science* 86:1065.

¹⁷ OIE, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5.7.3b.

¹⁸ National Chicken Council, *Animal Welfare for Broiler Chickens* (webpage).

¹⁹ S.J. Shields & A.B.M. Raj, 2010, A critical review of electrical water-bath stun systems for poultry slaughter and recent developments in alternative technologies, *Journal of Applied Animal Welfare Science* 13:281. See also M.I. Anastasov & S.B. Wotton, 2012, Survey of the incidence of post-stun behavioral reflexes in electrically stunned broilers in commercial conditions and the relationship of their incidence with the applied water-bath electrical parameters, *Animal Welfare* 21:247.

²⁰ S.F. Bilgili, 1999, Recent advances in electrical stunning, *Poultry Science* 78:282.

²¹ OIE, *Slaughter of Animals*, Terrestrial Animal Health Code, Chapter 7.5.7.3b.

²² P. Joseph et al., 2013, Broiler stunning methods and their effects on welfare, rigor mortis, and meat quality, *World's Poultry Science Journal* 69:99.

must set minimum electric current levels that produce insensibility—not just immobilization—and a maximum stun-to-cut interval of no more than 10-15 seconds.

- AWI requests research documenting that birds stunned at US poultry plants are rendered insensible to pain prior to slaughter.

In conclusion, AWI finds the revised Guidelines to be inadequate in providing an acceptable level of welfare for the 9 billion chickens raised for meat in the United States each year. We encourage NCC to make the revisions described above to provide these animals with a better quality of life as well as a more humane death.

Sincerely,

A handwritten signature in black ink that reads "Dena Jones". The signature is written in a cursive, flowing style.

Dena Jones
Farm Animal Program Manager