P-06-1202 Ban the killing of day old chicks in Wales, Correspondence – Humane Slaughter Association to Committee, 08.12.21

Humane Slaughter Association – response to P-06-1202 Correspondence from the Chair of the Petitions Committee

Maceration

Maceration of day-old chicks, despite its unpleasant appearance to many observers, is likely to be humane if used correctly. The process will lead to instantaneous destruction of the chicks' brains, precluding any possibility of suffering. However, there is potential for poor welfare both during pre-cull handling and during maceration. Poorly designed or maintained macerators can injure chicks without killing them instantly. Poor handling during sexing and conveyance to the macerator may also cause poor welfare as may the holding of birds in storage containers prior to maceration.

Gas/Controlled Atmosphere Killing

Use of gas killing carries the same welfare risks during handling prior to culling as mechanical dispatch. Various methods are used including carbon dioxide and Inert Gases (argon and nitrogen). The use of Low Atmospheric Pressure Stunning has also been suggested. There is limited evidence to suggest that inert gases may induce more stress as measured by hormonal assays than CO_2, possibly because they take longer to induce loss of consciousness (e.g Wang et al. 2021; Gurung et al. 2018). The possibility that CO_2 exposure causes aversion in chicks cannot be conclusively ruled out and it is notable that this gas is aversive to adult birds and many other species. Unlike the welfare risks from maceration, the welfare risks of gas-killing are inherent and so it may not be possible to avoid them by employing best practice.

In-ovo egg sexing

If this method is viable on an industrial scale we would support the usage of this method, which precludes the possibility of hatched male chicks suffering when they are culled. We do not envisage any animal welfare downsides to the adoption of this method. We also note the recent development of gene-editing techniques which may in future allow the creation of single-sex offspring, which may offer another solution to the problem.

Emergency killing for deformed and unviable chicks alongside any mis-sexed chicks.

Even where in-ovo sexing is performed, a process for culling unviable or injured female chicks will need to be in place. If in-ovo sexing is not 100% reliable, leading to the hatching of some male chicks, these chicks will also need to be culled. In both these scenarios it will still be necessary to cull these chicks in a humane manner. Maceration should potentially be retained as an option for the culling of these limited numbers of chicks even if in-ovo sexing is universally adopted..

Summary

The HSA would support a move towards in-ovo sexing and away from culling of viable male chicks. However, the feasibility of this transition, timescale and any eventual ban on culling male chicks is a matter for the industry and regulators. The use of maceration, as long as carried out with care does not inherently compromise chick welfare although the method may compromise welfare if good practice is not followed. We continue to encourage and support producers to employ best-practice wherever maceration is used.

Gurung, Shailesh, Dima White, Gregory Archer, Dan Zhao, Yuhua Farnell, J. Allen Byrd, E. David Peebles, and Morgan Farnell. 2018. 'Evaluation of Alternative Euthanasia Methods of Neonatal Chickens'. *Animals : An Open Access Journal from MDPI* 8 (3): 37. https://doi.org/10.3390/ani8030037.

Wang, Xi, Dan Zhao, Allison C. Milby, Gregory S. Archer, E. David Peebles, Shailesh Gurung, and Morgan B. Farnell. 2021. 'Evaluation of Euthanasia Methods on Behavioral and Physiological Responses of Newly Hatched Male Layer Chicks'. *Animals : An Open Access Journal from MDPI* 11 (6): 1802. https://doi.org/10.3390/ani11061802.