Banning the culling of male chicks:

Drawbacks of dual purpose chicken breeds as a solution

1 Introduction

An estimated 45 million male chicks are culled in the UK per year as they are of insufficient value to the egg industry (Animal Welfare Committee, 2023). This is because they do not lay eggs and are not of a breed that will produce meat to a desirable quality or volume by industry and/or consumers. Increasing pressure exists to ban male chick culling in the UK, as exemplified by the momentum of the *Ban Hatch & Dispatch* campaign (Vegetarian Society, 2025) and the parliamentary discussion dedicated to the topic in September 2025 (UK Parliament, 2025).

The practice constitutes an urgent welfare issue, ultimately due to the absence of a 'life worth living', which is a cornerstone of modern animal welfare understanding (Mellor, 2016). Not only are they killed typically when only hours old and typically using aversive CO_2 gas, but also, the hours they live for are within a fast-paced, highly stressful, dangerous conveyor-belt environment that is entirely bereft of any positive welfare opportunities and full of stress, fear, and lethal hazards (Nielsen et al., 2023, pp. 136, 138; de Haas, 2020; Knowles et al., 2004). A ban would follow in the footsteps of several other European nations, with the most stringent case to date being Germany (Niekerk & Workamp, 2022; p. 30).

A UK legislative ban should go even further than Germany's ban by outlawing any import of chicks from countries where their culling remains legal. A ban should embrace in-ovo sexing technology as the means for achieving this. In-ovo sexing technology enables male chick embryos to be identified at a pre-sentient embryonic stage (i.e., prior to embryonic day 13) whilst still in the egg (Animal Welfare Committee, 2023). These can then be killed at this significantly earlier—and importantly, pre-sentient—time point, and used for energy generation and pet food (Inciner8, 2024; Heuzé et al., 2015). Alternatively, they could even potentially be kept intact and re-directed as whole feed for captive raptors and other carnivorous exotics (Mace, 2025, Appendix I). From the broadest possible sustainability perspective that spans economic, welfare, ethical, environmental, and social concerns, this short statement highlights the drawbacks with another proposed means of achieving a ban on chick culling—a switch to dual purpose chicken breeds (DPCBs) that are well suited to both meat and egg production. First, the proposed benefits of this alternative are outlined.

2 The attraction of dual purpose chicken breeds

DPCBs are native/heritage breeds that have not been selectively bred for specialised roles. They can also be hybrids of specialised laying and meat breeds such as the Lohmann Dual—the latter seeming more suited to commerciality (Tieman et al., 2020). Relative to the current predominant chicken breeds/types used commercially in egg and meat production, there are undeniable animal welfare benefits to be accrued for both layer-type and meat-type chickens from a switch to DPCBs. These can include reductions in problems common in current layer lines, such as feather pecking (Malchow et al., 2022; Giersberg et al., 2020a) and fear/stress levels (Giersberg et al., 2020b). It can also include reductions in problems common in current meat breeds, such as obesity, pressure sores, mobility issues, and risk of heart failure (Harash et al., 2019; Malchow & Schrader, 2021). Studies are suggesting feed conversion ratios at least comparable to those of slower-growing breeds of meat chickens (Mueller et al., 2018). DEFRA is also funding DPCB projects currently underway, with no concrete findings yet available (Ryan, 2025). Environmentally, Escobedo del Bosque et al. (2022) have found that some DPCBs can thrive on regionally grown fava beans, whilst the Soil Association (2024)

asserts some DPCBs can even thrive on waste food. Both options would lower the environmental burden of poultry farming as chicken feed currently relies on imported high-protein soya (Escobedo del Bosque et al., 2022). Finally, due to making use of both roosters and hens, renewed interest in DPCBs is particularly prevalent currently due to increasing pressure to move away from male chick culling.

3 The drawbacks of dual purpose chicken breeds

3.1 Welfare

From another perspective, the aforementioned welfare benefits may effectively be partially or entirely cancelled out by other welfare considerations. These other welfare considerations mainly concern the *duration* and *scale* measures of harm—the third less applicable measure being *severity* (Welfare Footprint Institute, 2025; Rioja-Lang et al., 2020; Scherer et al., 2018). This is because less meat and fewer eggs would be produced by the same number of DPCs meaning an overall increase in the number of chickens bred and reared to produce *current* production levels of chicken meat and eggs—*unless* a concurrent policy is introduced to facilitate significant reductions in current production and consumption levels (Compassion in World Faming, 2023, p. 4; Tieman et al., 2020). Thus, a higher number of chickens will be subject to the low quality of life offered to industrialised farmed animals (Molento & Phillips, 2023)—high-stress commercial hatchery processes; crowded, stressful, low enrichment, and unsanitary conditions on farms; crowded and stressful transportation; and the high stress and aversiveness of slaughter by gassing.

Even if some welfare problems may be reduced as a percentage (as outlined in section 2), the number of individuals experiencing the problems may remain similar as overall numbers would increase. Additionally, there is mixed evidence regarding some of the proposed welfare improvements. For instance, Langkabel et al. (2022) did *not* consistently find a lower prevalence of pathogens when carcasses of DPCBs were examined. Further examples can be found in the work of Malchow et al. (2022), who did *not* find significant differences in keel bone damage between the DPCB (Lohmann Duals) and conventional layers; the authors actually found *higher* foot pad dermatitis in the Lohmann Duals.

Moreover, currently, welfare problems experienced by meat chickens and laying hens are quite distinct. For instance, laying hens do not struggle with obesity-induced immobility and pressure sores as meat chickens do. Similarly, meat chickens, relative to laying hens, are killed too young to have feather pecking as a problem and are not predisposed to keel bone injuries (Widowski & Rentsch, 2023). However, it is conceivable that DPCBs may be predisposed to a *broader range* of welfare problems common to both conventional meat chickens and laying hens, albeit at *reduced* rates and severity; that is, there may be some welfare trade-offs. This is especially the case as both the male DPCs (intended for meat production) and the female DPCs (to be used for egg production) are both reared together initially under the same management system (Tieman et al., 2020). Finally, any male DPCs that do experience compromised welfare may experience it for longer durations as meat chickens are currently killed at roughly six weeks of age, relative to a slaughter age of 9 to 18 weeks for male DPCs due to an extended fattening period (Soil Association, 2024; Mueller et al., 2018).

3.2 Environment

The additional environmental burdens arising from a switch to DPCBs seem to outweigh any of the suggested benefits outlined in section 2. The additional burden relates to the higher number of chickens needing to be bred/reared. This will require not only more land on which to house them, but also more land on which to grow food to feed them with, even if a more efficient feed is utilised

(Damme, 2015). Additionally, many of the oft-cited environmental benefits can only transpire in extensive, free-range, and considerably small-scale systems (Compassion in World Farming, 2024, p. 5; Mueller et al., 2018). This is not conducive to meeting the public demand for chicken meat and eggs in an efficient fashion. To be clear, this current statement fully supports significant reductions in the production and consumption of chicken meat and eggs. Thus, if/when this can be guaranteed *in tandem with* or preceding a switch to DPCBs, then a switch to DPCBs would be most welcomed. This is echoed by others such as Compassion in World Farming (2023; p. 4). It is also worth pointing out that greater environmental burdens also inevitably mean negative welfare impacts for wild animals such as displacement or death due to habitat destruction/conversion (Fischer, 2023).

3.3 Economic/social considerations

In-ovo sexing technology seems to be the most popular means of fulfilling a ban on male chick culling amongst the public in the Netherlands and Germany (de Haas et al., 2021; Reithmayer & Musshoff, 2019). It is also known that the public is willing to pay 1p extra for 'cull-free' eggs arising from in-ovo sexing technology (Barclay, n.d.). The not-too-distant emergence of day zero sexing technology is particularly promising as this will maximally reduce production costs (EggXYt, n.d.). In contrast, use of DPCBs would result in a higher extra cost per egg than eggs arising from in-ovo sexing, and considerably higher costs for an equivalent mass of chicken meat to that produced by conventional meat breeds currently (Gangnat et al., 2018; Damme, 2015). Less is known about public acceptance of the differences in meat quality and egg size, especially in the UK, though there is some suggestion of public acceptance of this in Switzerland (Gangnat et al., 2018). It is likely that DPCBs will be used by a minority of farmers creating a subpractice for production of chicken goods at premium prices (Mueller et al., 2018). Indeed, the co-founder of one participating farm in the aforementioned DEFRA-funded on-going trial has stated specifically that the trial is *not* about replacing large scale commercial poultry (Ryan, 2025).

Summary

In-ovo sexing technology is the most sustainable means of *immediately* fulfilling a ban on male chick culling. DPCBs may have a bigger role to play longer term, if/when the public consumption of animal products reduces to a sufficient extent to mean that the environmental and animal welfare burden will not be increased. Until then, DPCBs remain an unfeasible commercial option at scale—likely reserved for small holders or other systems generating premium-priced goods. However, the government should implement educational campaigns about the multifaceted benefits to come from a reduction in animal product consumption, which could then conceivably enable use of DPCBs as standard practice.

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