Common Questions on the Better Chicken Commitment (BCC)

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Are the components of the Better Chicken Commitment (BCC) rooted in science?
Absolutely. Each element of this broiler welfare improvement ask reflects the most recent published research in animal welfare science. Below, we have summarized the main scientific findings that ground each aspect of the ask. A comprehensive list of references can be found at the end of this document.

- ***Higher welfare breeds***: It is well established in the scientific literature that selective breeding for performance traits, such as faster growth rates, greater breast meat yields, and lower feed conversion, are responsible for the majority of the health and welfare issues experienced by industry-standard broiler chickens. Specifically, these issues include higher mortality rates,[1,2] a greater incidence of cardiovascular disorders (*i.e.*, ascites and sudden death syndrome (SDS),[3] as well as more leg weakness and a higher incidence of breast blisters and skin lesions.[4-6] Additionally, breeding solely for greater white meat yields and weight gain has resulted in the appearance of serious degenerative conditions in the breast muscles commonly known as wooden breast, white striping, and spaghetti meat.[7] These conditions not only represent downgrades in meat quality, but research indicates birds with wooden breast have chronic tissue inflammation from the first week of age – along with poorer walking abilities, impaired wing movement, and a higher incidence of pulmonary disease and mortality.[8-10]

  Fast growth rates are often singled out as the single cause of poorer welfare outcomes in broiler breeding. However, the potential for higher welfare is not only related to a reduced growth rate, but also to meaningful improvements in several important physical and behavioral animal-based welfare outcomes. These outcomes include better leg health, proportional organ and skeletal development, improved robustness to immune and thermal challenges, and the ability to remain active and express normal behavioral patterns throughout their lives. Therefore, genetic selection that focuses on higher welfare, rather than primarily production goals, must be prioritized.

  Broilers bred for higher health and welfare outcomes have been observed to engage in more highly-motivated natural behaviors, including perching, walking, foraging, and ground scratching.[1,11,12] When grown to 9 weeks of age, chickens with slow-to-intermediate growth rates continue to spend ~40% of their daily time perching. In contrast, the time spent perching by industry-standard broiler strains has been shown to decline to roughly 10% around six weeks of age.[11-13] Studies have shown that broilers

selected for improved physical and behavioral outcomes are more active (35-55% of total observation time),[1,12] spending more time walking[11] and less time resting on the litter throughout their lives. Alternatively, fast-growing broilers may spend as little as 7% of their time actively moving (*i.e.*, walking, running, or foraging[1]). Higher welfare chickens exhibit more comfort behaviors (*e.g.*, dust-bathing, preening, leg and wing stretching) indicative of a more positive welfare status.[1]

Businesses that commit to the BCC should select broiler strains based on their comprehensive performance on several health and behavioral parameters in order to achieve balanced selection for breeds that truly demonstrate higher welfare outcomes. Guidance for the selection of suitable breeds will be informed by a rigorous scientific study currently being conducted at the University of Guelph (to conclude in 2020) in addition to existing criteria outlined in the RSPCA Broiler Breed Welfare Assessment Protocol.

- ***Stocking density*** *(maximum 6 lb/ft^2)*: This requirement is based on extensive research documenting the effects of higher stocking densities on welfare and production outcomes. Among relevant findings, higher stocking densities result in higher daily mortalities; a higher incidence of leg health problems, contact dermatitis, and carcass bruising;[4,14] more disturbances to broiler resting behavior;[15] and decreased locomotion, ground pecking, preening,[16] perching,[17] foraging, and play behavior.[18-21] Similar studies have reported a decline in body weight, reduction in feed consumption, and increased foot pad lesions and skin scratches at densities ***above*** 6 lb/ft^2.[22-24] Stocking chickens at high densities also inhibits their ability to effectively dissipate metabolic heat, which can lead to cellular damage to the liver[25] and gut resulting in poorer nutrient absorption[26] and reduced resilience to infection.[27]

- ***Enriched environments*** *(including adequate behavioral enrichment, litter, and lighting)*: The welfare of broiler chickens is improved by housing them in enriched environments with opportunities for the expression of important species-specific behavior, including foraging, scratching, exercise, dust-bathing, perching, and undisturbed resting. The addition of enrichment items, such as dust-baths and pecking objects, have been shown to increase bird activity, which improves leg health by strengthening the muscle and bones of growing broilers.[28-30] Raised platforms and perches allow chickens to move off the floor leading to better foot pad condition, allowing birds to escape more dominant chickens, and for chickens to have longer undisturbed resting periods.[30-32]

  Besides a lack of enrichment, broiler chickens are typically housed indoors in barns with poor quality, compacted litter and a near-constant, low intensity of artificial lighting with very short periods of continuous darkness. Poor ***litter*** management, including insufficient litter depth and wet litter, has been demonstrated to have multiple negative effects on broiler flocks, including reductions in weight gain and feed conversion ratios.[33,34] Litter that is too wet will result in air quality issues, as well as irritation and

lesions to the foot pads, hock, breast, and eyes - due to increased amounts of ammonia.[33] In contrast, broilers housed on deep, friable litter express higher levels of foraging, ground pecking, scratching, and dust-bathing behavior.[35,36]

Adequate ***lighting*** conditions are also important for poultry, as vision is the primary sense that allows them to engage with their environment and perform adequate social interactions. Research has shown light intensity significantly affects normal eye development, foot pad health, and activity levels.[37-39] Several studies have shown broilers reared at <5 lux lighting (approx. <0.5 foot-candles) spend more time sleeping and less time engaged in highly-motivated preening and foraging behavior.[39,40] Chickens require a sufficiently long continuous dark period each day to obtain the undisturbed rest needed to support good eye and leg musculoskeletal health. The expressions of normal behaviors signifying a good level of health and welfare (*e.g.*, moving, litter pecking, comfort behaviors) also disappear when chickens are raised without adequate lengths of daily darkness.[41-44]

- ***Controlled atmosphere stunning (CAS)***: Controlled atmosphere stunning, when properly executed, offers many welfare advantages compared to electric water-bath stunning and other common industry methods. Electrical water-bath stunning at slaughter facilities often uses uniform electrical parameters, so variation in the body size and electrical resistance between individual broilers means some chickens may be ineffectively stunned and recover consciousness prior to bleeding.[46] In contrast, CAS operates to irreversibly stun chickens so these birds do not regain consciousness and are killed in the system prior to being bled.

  One of the greatest advantages of CAS is that it avoids the dumping, handling, inversion, and shacking of live birds. With CAS, crated chickens go directly into the controlled atmosphere chamber, and therefore are not subject to pain and distress from being shackled by their legs or the weight of their organs shifting onto their heart and lungs while conscious prior to stunning. The pre-stun handling required for electrical water-bath stunning also significantly increases bird stress levels, exposes them to greater risk of injury, and can affect final meat quality.[47,48] Although multi-step CAS processing is a requirement of the BCC, it currently falls outside the scope of the Global Animal Partnership (GAP) program.

In must be considered that any animal welfare or potential financial benefits of shifting to a higher welfare broiler production system will only be achieved through the full adoption of the BCC. More specifically, any environmental improvements must be accompanied by a switch to chicken breed strains with better health and behavioral capacities. This is because the greater metabolic demands and poor physical condition of industry-standard strains can put these breeds at risk of heat stress and injury when these broilers become more active when provided with enrichment, such as perches, pecking substrates, or outdoor ranges.[6,49,50]

Why is the adoption of higher welfare breeds dated for 2026 while the other BCC criteria are required by 2024?

In late 2019, the BCC was updated to include an optional timeline extension for the breed criteria to 2026. This shift is primarily due to the delay in the original timeline for the delivery of the findings from the breed evaluation research at the University of Guelph (due Spring 2020). Based on conversations with producers and genetics companies about the timeline to scale flocks, this accommodation was made to ensure that it is viable for food companies to achieve their commitments on time. The delivery date for the other BCC criteria remains 2024 because producers have already begun to scale production in these areas and continue to demonstrate that it is possible to achieve all other criteria by 2024.

Aren't industry practices rooted in science as well?

A vast majority of the practices and technologies used in industrial agriculture are indeed rooted in scientific knowledge intended to maximize yields and profits, minimize the use of resources, and manage food safety risks. However, the welfare of animals has remained a low priority. When welfare is considered, the focus lies only on the physical health of animals, rather than on comprehensive improvement to overall broiler chicken welfare, which also includes mental well-being and the satisfaction of behavioral needs.

Are the National Chicken Council (NCC) standards for broilers sufficient?

We do not consider the NCC standards to be sufficient, as they do not align with many of the scientific findings discussed above. For example, the NCC recommends stocking densities ranging from 6.5 lb/ft^2 for light broilers to 9 lb/ft^2 for roasters or heavy birds.[51] As for lighting, the NCC requires only 4 hours of darkness per each 24-hour period, and it is not required that the 4 hours be provided continuously. Li et al (2000) found that normal ocular development in a growing broiler requires a minimum of 4 hours of darkness per day, provided at the same time of day, without interruption.[41] These results are supported by Olanrewaju et al (2006), who states that "an absolute minimum uninterrupted dark period of 4 hours should be given, but the requirements for sleep may be higher at certain points of the growing period." The NCC guidelines also fail to make any recommendations regarding the use of environmental enrichment or breed.[45]

Isn't it the role of the USDA and other government agencies to ensure that broiler chickens have good welfare?

The USDA oversees the food safety aspects of poultry processing but does not regulate welfare at the farm level for industry-standard broiler production.* Poultry are specifically excluded from the USDA Animal Welfare Act. Similarly, other government regulatory agencies have no jurisdiction over poultry welfare.

What about the American Veterinary Medical Association (AVMA) guidelines?

The AVMA has produced a series of useful policies that apply to commercial poultry production, such as general guidelines and protocols on euthanasia and pain management, as well as more specific documents on the transport and slaughter of poultry. While we consider these to be meaningful guidelines based on robust research, they do not cover the wider range of issues

addressed by third-party animal welfare certifiers. Furthermore, these guidelines are not meant to be regulatory instruments, but rather scientific opinions. The AVMA has no obligation to oversee or enforce their use in commercial production, except as pertains to individual veterinary practitioners.

Why do we advocate for third-party certification?
As stated above, third-party animal welfare certification is important because it provides a way to impartially guide *and* enforce best practices for animal welfare. We advocate for the Global Animal Partnership (GAP) standard as a model, as it comprehensively covers the issues that we believe to be central to the on-farm welfare of broiler chickens, based on scientific research. Furthermore, GAP uses third-party auditing and certification to preserve the integrity of the program, which ensures a higher level of impartiality and transparency. As a result of careful assessment of the available standards, we believe that the GAP standard is one of the strongest and most comprehensive; therefore, we recommend certification by this standard to meet the welfare criteria addressed in the BCC.

How does GAP develop their standards?
The GAP 5-Step™ Animal Welfare Rating Standards are fully transparent, allowing for public and scientific scrutiny. The GAP standards are developed in consultation with their Scientific Advisory Committee, composed of highly-trained animal welfare scientists with specific expertise on the welfare and behavior of the covered farm species. The scientific committee also meets regularly to ensure the standards reflect the most current and relevant scientific research. The GAP standards go through multiple rounds of review - including input from multi-stakeholder groups and are open for public comment during the approval process. A unique aspect of the GAP program is their 5-step tiered structure, which allows producers to enter the program at the level that best fits with their business. More information on how GAP develops their standards can be found here.

Are there environmental trade-offs related to the higher welfare broiler commitment?
While we acknowledge that higher welfare systems indeed require increased amounts of certain inputs to achieve the same output quantity, we think it is important to consider these challenges within a broader context of environmental sustainability, the benefits to these changes, and potential changes in current production methods (*e.g.*, feed composition) which can help mitigate environmental impacts. A more comprehensive view should simultaneously include considerations of environmental, social, and economic sustainability.

For example, the environmental benefits of including alternative feed ingredients, such as rotational small grains, in poultry diets is improved soil health and reduced fertilizer inputs by shifting away from the current reliance on monoculture crops (*i.e.*, soy and corn) for animal feed. Higher welfare strains typically require less protein and metabolizable energy in their daily rations to support their growth than industry-standard broiler breeds, so these strains could cope with being fed more varied diets that are less reliant on nutrient-dense ingredients, such as soy and corn. Therefore, the use of rotational small grains for broiler feed could be used to

offset the environmental impact of the adoption of higher welfare, slower-growing breeds, which can require more feed to achieve market weights.

Research on the relationship between higher welfare systems and environmental impact have also found areas in which there can be improvements for both animal welfare and environmental outcomes.[52] Sustainability analyses that only focus on the increase in inputs (such as land, feed, and water) required in higher welfare systems fail to account for the expected gains of cutting losses related to poor welfare. According to Dawkins (2017), higher welfare systems can actually result in long-term financial benefits from reduced mortality rates, improved health, improved product quality, improved disease resistance, reduced medication, lower risk of zoonoses and foodborne diseases, increased farmer job satisfaction, and positive consumer response to increased corporate social responsibility.[53] For example, the increased prevalence of white striping and wooden breast are conservatively estimated to cost the US broiler industry up to $200 million each year.[54] In addition, roughly five percent of flock mortalities may be attributed to cardiovascular disorders (*e.g.*, ascites and SDS)[55,56] due to selection focused on greater feed-to-body weight conversion over bird health. This could account for more than $2 billion dollars in annual losses from reduced meat output and lost costs of production for the US broiler industry.[57-59]

As established by scientific research and public opinion, improving animal welfare is critically important. Studies on consumer perception of animal welfare consistently indicate a growing consumer concern.[60] If the industry does not respond accordingly, economic losses are to be expected. To do so in a way that aligns with the broader goals of sustainability is part of the work that follows. A 2017 economics review of animal welfare highlighted that "[animal welfare] is likely to be of interest for the long term, as there is a clear correlation between income levels and demand for animal welfare as well as other sustainability concerns".[61]

Why do we ask for corporate positions to be made publicly available?
Transparency is one of the most important components of any animal welfare program, and as such, we believe that this information should be publicly available. According to a 2018 NCC consumer report, over 50% of US respondents were very to extremely concerned about how chickens are raised, housed, and bred to optimize the meat they produce.[60]

Transparency around animal welfare policies also paves the way for accountability, both internally and to external stakeholders, such as other companies, NGOs, and investors. In September 2019, Compassion in World Farming USA released its inaugural ChickenTrack report, which included a broiler market overview, a review of the BCC science, and profiles of two producers who have begun to invest in systems which meet the BCC. In future years, it will begin using publicly available information to track the progress of food businesses transitioning their supply chains to chicken that meets the BCC. The Business Benchmark on Farm Animal Welfare (BBFAW), an investor-facing report that ranks food companies based on risk management associated with farm animal welfare practices, also assesses companies using only publicly-disclosed data. BBFAW provides stakeholders interested in understanding the relative

performance of food companies with an independent, impartial, and reliable assessment on their commitments to improving farm animal welfare.

*The USDA oversees broiler chicken production systems under the USDA Organic program, which is verified by a USDA-accredited certifying agent before products can be labeled USDA organic. The only welfare provision under the USDA organic program is that certified producers must provide chickens with year-round outdoor access with shade, shelter, and exercise areas. Although the animals cannot be continuously confined, no minimum length of time is specified for outdoor access.

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Additional resources

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