FRANKENMEAT: INVESTIGATION INTO THE PRESENCE OF DISEASE IN LIDL GB'S FRESH CHICKEN

UK REPORT 2023

EXECUTIVE SUMMARY

Lidl is the fastest growing retailer in the UK[1] with regularly soaring sales figures. More broadly, with its owner Schwarz Group, Lidl is the largest retailer in Europe by far[2]. It is one of the UK's most popular supermarkets and its market share is steadily growing as the German owned discounter 'outperforms' the grocery retail sector[3] through a uniquely disruptive sales model. Lidl is attractive and well known for allegedly managing to offer **high quality food that rivals high end retailers**[4], but whilst also maintaining **low prices.** Lidl is likely to be one of, if not the most important retailer in the UK in terms of the future of food.

In addition to our concerns for food quality, animal welfare - a factor which is closely related - is also deeply important to British consumers. 78% of us would go so far as to being opposed to 'cruel' farming practices even as a means of producing more affordable food.[5] The link between the two is especially important considering that chicken is the UK's most popular meat.

Complimenting its bold claims on the quality of its food, Lidl claims to have 'high' animal welfare standards, and that its chickens are 'reared with care' in 'safe, comfortable barns.'[6]

However, British consumers are becoming increasingly concerned about the transparency and origin of our food with the rise of undercover exposès and antibiotic scares linked to Lidl making headlines[7,8]. Lidl continues to uphold its claims, in particular in relation to the criticism of the sale of fast growing chicken breeds - known as 'Frankenchickens.'

This report set out to bypass the debate about farming standards, and instead directly assesses the meat itself.

Fast growing breeds are the type of chicken sold most extensively in Lidl as the basic tier "Birchwood" label offering and are therefore inevitably the most popular choice of Lidl's customers. Unknown to them, however, these intensively farmed birds have been bred to gain weight at an extremely fast rate - 400% faster than natural. Typical living conditions give the birds less space than an A4 sheet of paper each on average in their final weeks of life - this is known as 'stocking density' in the industry. The sheds are not cleaned until after the birds are taken for slaughter, and so the birds' waste gradually builds and collects on the floor where the birds spend their entire lives.

Due to genetic selection and the insufficient living conditions, these animals routinely suffer from many diseases and health problems[9,10,11,12,13] - **some of which consumers can observe with the naked eye. We have dubbed this phenomenon 'Frankenmeat.'**

One such condition is **white striping disease** - a muscle disorder that affects breast meat. Another condition is known as **hock burn** - a lesion/ulcer arising from the birds having prolonged contact with their own waste causing a chemical burn. The more severe the lesion is the more painful it is for the bird and it frequently impairs walking ability. The presence of either of these conditions is associated with animal welfare problems[14,15] and significantly affects the quality of the meat.[16]

Open Cages has carried out the largest ever known study of store-bought UK chicken meat to assess the prevalence of white striping & hock burns. A data sample of 1964 own-brand Lidl chicken products was collected and assessed. **White striping disease was observed in 94% of all Lidl chicken breast fillet packages tested. Hock burn was observed in 3 in 4 - 74% - of whole bird packages tested.**

For white striping, the methodology detailed levels of defect severity from 0 (no visible defect) to 3 (very advanced). Only 6% of the fillets were free from white striping disease - level 0. Severe white striping - level 2 & 3 - was detected in 41% of the fillets.

For hock burns, the methodology assessed the presence of ulcers on the birds' knees from levels 0 (no lesion) to 1 (ulcer visible.)

The presence of disease detected in Lidl's chicken meat was widespread and extremely high. According to the findings, the vast majority of Lidl's chicken meat is of very poor quality and insufficient animal welfare standards are a major contributing factor.

Slower growing chickens - the likes of which are supported by the Better Chicken Commitment[17] - experience significantly less health problems, including white striping disease and hock burn[18]. Therefore, slow growing chickens also generally produce the highest quality of meat - whereas fast growing chickens generally produce the lowest quality of chicken meat.

High end retailers such as Marks and Spencer and Waitrose are currently phasing out the sale of fast growing broiler chickens having signed the commitment in 2018 and 2019 respectively[19,20]. As a result, when it comes to chicken which is the UK's most popular meat, Lidl's claims to rival these retailers on the quality of the chicken meat it sells are simply not based in fact.

However, many companies across the world including Lidl France and Lidl Denmark have also pledged to phase out the sale of fast growing chicken breeds[21,22]. Therefore Lidl GB is not only offering low quality chicken meat to its customers compared to other UK retailers, but also when compared to the company's own offerings in other countries.

Despite this disparity, food quality remains the top consideration for British consumers when making food purchases[23]. Time will tell whether Lidl GB plans to close this gap on the quality of its chicken meat.

PRESENCE OF HOCK BURNS IN TESTED PACKAGES OF LIDL'S OWN BRAND WHOLE BIRDS **74%**

PRESENCE OF WHITE STRIPING DISEASE IN TESTED PACKAGES OF LIDL'S OWN BRAND CHICKEN BREAST FILLETS **94%**

INTRODUCTION

The industrial farming of chickens that are killed for meat not only involves high levels of pain, stress and discomfort, but also has a negative impact on diet, food quality and human health. This report aims to arm consumers with knowledge of two conditions affecting chickens, **which reduce the quality of meat and are easy to observe when shopping.**

Beginning in the 1950s, chickens have been genetically selected to improve their production efficiency (i.e. growth rate and feed consumption). Today, 'broilers' grow 400% faster than chickens did 50 years ago. **These are fast-growing breeds whose unnatural growth rate means they are slaughtered at around 40 days old. The most commonly used fast-growing breed in the UK is the Ross 308.**

White striping disease is a muscular disorder visible as white striations - fat cells - running parallel to the muscle stripings, usually on the surface of breast filets.[24] Scientific studies have shown a strong correlation between the presence of white fibres and increased growth rate, body weight and amount of meat obtainable from chicken breasts[24,25,26].
The disease is a consequence of fat cells occupying the place of protein cells.

The cause of white striping disease is attributed, among other things, to an excessively rapid increase in body weight, including the growth of a gigantic pectoral muscle that is out of proportion to the rest of the body.[27] This extraordinarily rapid muscle growth is associated with the process of **replacing muscle tissue with fatty tissue**, which can be seen on the muscle. **White striping** made up of fat cells is both a visual representation of **the welfare problems faced by chickens and evidence of the reduced quality of the chicken meat offered to consumers by retailers.** The practice of breeding chickens for such fast growth changes the meat's structure and has reduced nutritional value due to the increased presence of fat.

With the presence of white striping disease, the nutritional value of chicken meat decreases - the intramuscular fat content increases and the ratio of collagen to total protein increases[28,29]. **Studies have shown a 224% increase in fat content**, a 9% decrease in protein and a 10% increase in collagen compared to chicken meat unaffected by the described disease.[29]

Meat affected by white striping disease also has a softer texture and less water retention than meat without this defect. During cooking, this affects its ability to absorb any marinades and retain less moisture[30]. **The presence of white striping disease is therefore associated with a lower quality of meat in terms of its nutritional value, aesthetic qualities and taste.** This can be compared to meat from slower growing chickens, where white striping is significantly less prevalent and thus the quality is higher.

Hock burns are ulcers found on the knee joints of chickens. These marks show where the ammonia from the waste of the birds has burned through the skin of the leg, leaving a mark[31]. This is, in effect, a chemical burn, and the corresponding ulcers can cause pain even in mild cases[32]. **Fast growing breeds experience significantly more hock burns because they spend more time lying on their own waste**[18,33]. The highly crowded environment also makes hock burns more prevalent by increasing the amount of waste on the floor.

Many meat processors now remove these marks as they discourage customers, however they can still be seen on the knees of whole birds. In poultry meat, appearance and texture have been considered the two most important attributes responsible for initial consumer meat evaluation and final product acceptance[34]. However, not only do hock burns affect the look of the meat being sold and eaten, **it is also likely to raise concerns about hygiene** once consumers are made aware of the reason for these ulcers: **prolonged contact with the bird's own waste.** As for Lidl's chickens similar concerns have been raised before: a report from ITV found that the retailer's frozen chicken meat - which originated from Poland - was 'dosed' with antibiotic resistant bacteria[8].

Nowadays, the typical chicken eaten by Lidl's customers is the fastest growing breed commercially available. To investigate the prevalence of white striping disease and hock burns afflicting the chicken meat eaten by Lidl's customers, **we conducted a survey in 40 Lidl stores in 21 cities and towns.** The results show conclusively that Lidl's chickens are not only experiencing pain and suffering in large numbers, but also that the meat is of the lowest quality possible when compared to other retailers with higher animal welfare standards.

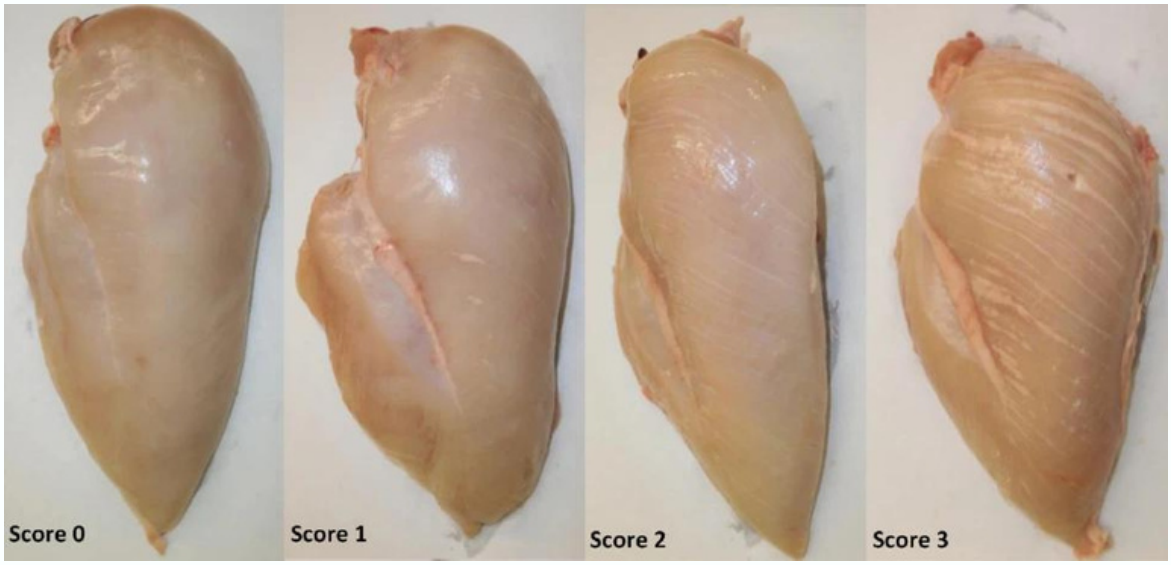
METHODOLOGY

The study, aimed at assessing the incidence of white striping disease and hock burns on fresh, own brand, standard tier chicken meat sold in Lidl, **was carried out in 21 cities and towns** (Aldershot, Birmingham, Bridgewater, Brighton, Burnham-on-Sea, Byfleet, Tautnon, Clevedon, Eastbourne, Farnborough, Glasgow, Kingston upon Thames, London, Maidstone, Reading, Wilmslow, Staines, Stanwell, Wellington, Weston-super-Mare, Wokingham).

The material for the research, in the form of photographs of fillets and videos of whole birds available on the shelves, was collected by shoppers - volunteers and employees of Open Cages at various locations across the UK. The photographs and videos include the front of the packages, where the brand name and batch number are indicated. **1964 photographs and videos were taken in 40 shops.** The number of photos and videos taken in a shop depended on the availability of the meat; on average, 49 images were captured in each shop. In many cases, almost all of the products on the shelves were surveyed. In all cases, the selection of products was random and based simply on the ease of access within the fridge: products at the back of the fridges were occasionally impossible to reach.

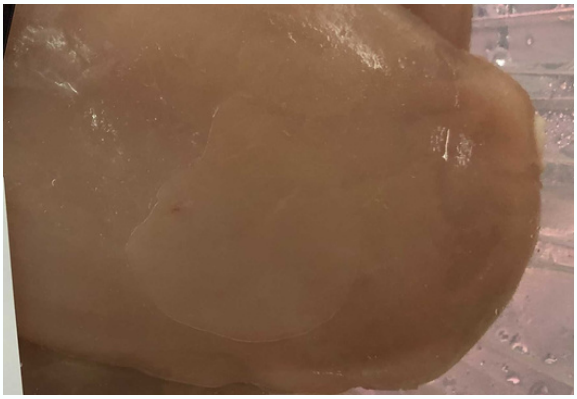
The survey was conducted between September and November 2023. The breast meat packages most often contained 4 and 6 individual chicken breast fillets, but there were times when packages with more or less fillets were photographed. Whole packs, rather than individual fillets, were assessed for the presence of white striping disease, due to the fact that consumers have no way of separating fillets with a defect from fillets without a defect when buying them in packs. Various sizes of whole birds were selected based on availability on the shelves.

The photographs and videos collected were subjected to an assessment process for the presence and severity of white striping disease and hock burn. Each assessment applies only to the portion of the product visible in the data. The images were independently assessed by 4 people and an average score was calculated. In case of discrepancies, a final evaluation was made and one final grade was given to each image. Ratings were given based on the highest visible degree of defect.



White striping defect prevalence levels determined by the authors of the study "The genetic basis of pectoralis major myopathies in modern broiler chicken lines" [35].

According to the above examples, the following evaluation criteria was established for assessing the severity of white striping:

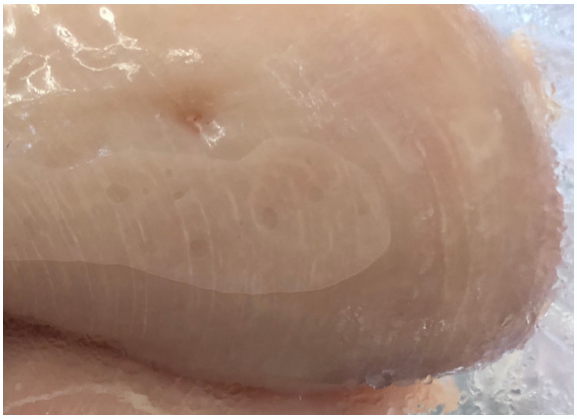


0

No visible signs of white striping disease

1

A few short white stripings visible



2

Numerous but not too coarse stripings can be seen at irregular intervals

3

Visible and very numerous stripings, including thicker stripings, at relatively regular intervals

For the assessment of hock burn, we used the simplified macro scoring system suggested in the study "Histologically validated scoring system for the assessment of hock burn in broilers."[36] **The following evaluation criteria was established:**

0

No visible lesion

1

Ulcer visible

In the case of some of the photos & videos (288), due to the degree of fogging of the packaging or the insufficiently high quality of the image, it was not possible to give an unquestionable rating - in such cases, the photos were given a status of 'ungradable'.

WHITE STRIPING EXAMPLES

Level 0

Among the 1162 images that were able to be examined, only in 73 cases was no white striping defect observed in the visible part of the breast.

Level 1

On the fillets with the lightest degree of defect observed, we notice single white stripings running across the breast. 53% of the fillets contained this level.

Level 2

Meat with a defect at an intermediate level is characterised by a higher accumulation and sharpness of stripings. One third - 35% - of the fillets contained level 2.

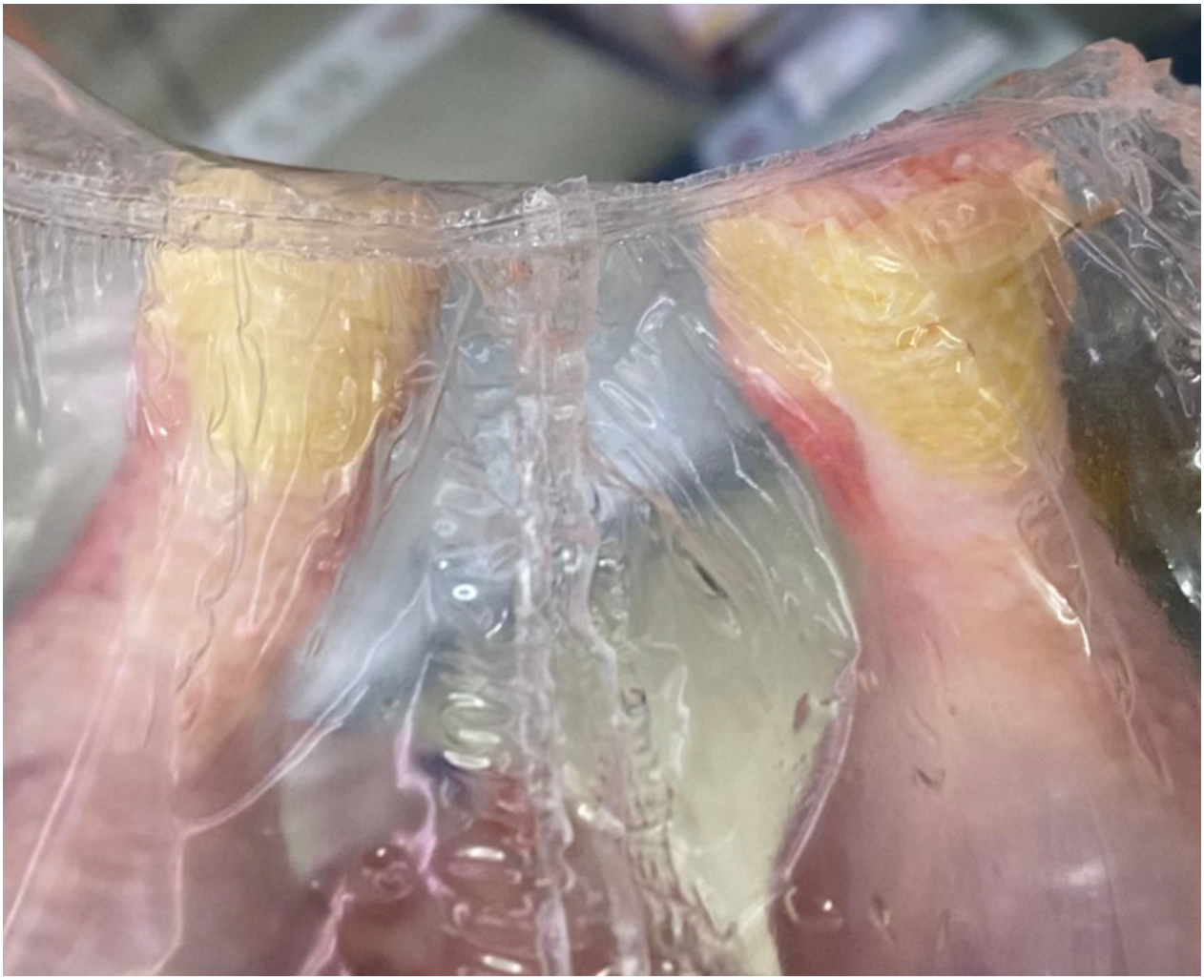
Level 3

Rating 3, indicating the highest level of defect, was found in 6%. In this case, numerous, easily discernible and often thicker white stripings formed from fatty tissue are found on the fillets.

HOCK BURN EXAMPLES

Level 0

Among the 514 videos that were able to be examined, 136 showed no lesions.



Level 1

On whole birds with level 1 we notice the presence of a brown/black ulcer. Level 1 hock burn was detected in 74% of the whole birds examined in varying sizes of lesions.

FINDINGS

- **The presence of white striping disease was found in 94% of Lidl's own brand chicken breasts tested in this survey;**
- **Severe white striping was detected in 41% of the fillets tested;**
- **Among the 1162 images that were allowed to be examined, only 73 cases did not show the presence of white striping defect in the visible breast section;**
- **Hock burn "ulcers" were detected in 74% of Lidl's own brand whole birds tested in this survey.**

Our survey showed the presence of white striping disease in 94% of the basic tier chicken breast fillet packs tested in Lidl. Our survey showed the presence of hock burn ulcers in 74% of the basic tier whole chickens tested in Lidl.

Basing broiler chicken production on fast-growing breeds and high stocking densities leads to a number of pathologies. Unnaturally rapid growth (chickens reach a weight of up to 2.5 kg within their 6 weeks of life) and directly related characteristic musculoskeletal disorders and metabolic diseases result in reduced mobility, low activity and less expression of behaviours characteristic of chickens, such as burrowing or perching[33,37].

The rapid growth of chickens results in the development of disproportionate, huge pectoral muscles, which promotes a number of muscle pathologies, including degenerative processes. These processes are responsible for the occurrence of diseases such as, among others, the white striping disease described in this report[35].

Similarly, rapid growth in broiler chickens increases the amount of time the birds spend in contact with the waste, leading to significantly higher levels of hock burns[18]. Additionally, a high stocking density exacerbates these issues and is associated with a significantly higher prevalence of hock burn[18], largely due to the increased volume of waste on the barn floor.

Because of the link between accelerated growth rates and the incidence of myopathy, **the solution to this problem is seen, amongst other things, in abandoning the sale of fast-growing breeds in favour of slower-growing chickens. A move to lower stocking densities could also see a significant reduction in the prevalence of hock burn.** This would not only mean a significant improvement in animal welfare, but would also have a positive impact on the quality of meat consumed by consumers.

Slower-growing chickens are less likely to suffer from cardiovascular diseases, metabolic diseases or musculoskeletal disorders. They are also more active than birds of fast-growing breeds due to their lower body weight and better overall health[13,33]. Switching to slower-growing breeds also has other benefits, such as reducing the need for antibiotic use[39].

Consumers are making increasingly informed purchasing decisions. They attach greater importance to health and dietary considerations and the conditions in which the animals are raised. Consumer expectations of companies include taking action to improve animal welfare. Polling shows that:

- For a majority of British consumers, the most important reason for choosing a supermarket is the quality of its fresh food[23].
- 73% of British consumers return regularly to the store they consider best for fresh products[23].
- 77% of consumers who buy chicken meat said they were appalled that chickens farmed for their meat are suffering because of fast growth rates[40].
- 87% of the UK public said they expect supermarkets to ensure all the chicken they sell is farmed to higher welfare standards[40].
- 7 out of 10 adults say that a supermarket offering higher welfare chicken would have an impact on where they choose to shop[41].

In order to respond to the expectations of the British public, retail chains should take appropriate steps to improve the welfare of chickens and, consequently, the quality of products offered to consumers.

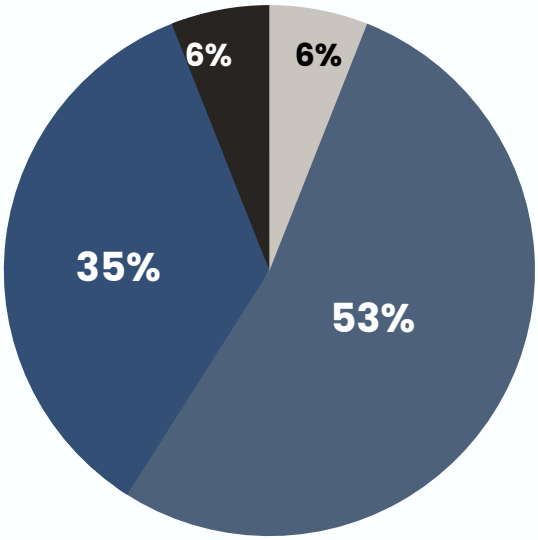
Guidelines to ensure a significant improvement in the welfare of chickens reared for meat can be found in the **Better Chicken Commitment (BCC)** - a set of criteria jointly developed by animal welfare organisations and poultry scientists from around the world (also known as the European Chicken Commitment (ECC.))

One of its requirements is precisely the abandonment of fast-growing breeds in favour of slower-growing breeds. Another is a reduction in stocking density to 30kg per square metre. Adoption of the BCC is tantamount to taking a very important step towards improving the quality of life of the most commercially reared animals in the United Kingdom, namely broiler chickens - more than **one billion** are killed in our country every year[42]. Already more than **600 companies** from around the world have committed to implementing the higher welfare standards set out in the BCC by 2026 at the latest. These include M&S, Waitrose, KFC, Lidl France, Nestlé, Unilever, Dr. Oetker, Danone, Sodexo, Kraft Heinz, IKEA and many more[43]. Major UK supermarkets Sainsbury's and Co-op have committed to adopting the reduced stocking density of the BCC.

In addition to ensuring decent living conditions for animals, the signing of the Better Chicken Commitment by a retail chain is a response to very specific consumer expectations regarding food quality.

"The European Chicken Commitment (ECC) is gaining popularity in Europe. Many retail chains, catering companies and even manufacturers have committed to it. In principle, they should implement the requirements from the ECC in 2026 at the latest, but we see several companies deciding to do so much earlier. ECC offers the opportunity to bridge the gap between existing concepts and conventional broilers with a slightly more efficient way of production. This has to be done using ECC-approved breeds." [44]

- Bruno Briand, Hubbard (international broiler breeding company)



Level of white striping disease

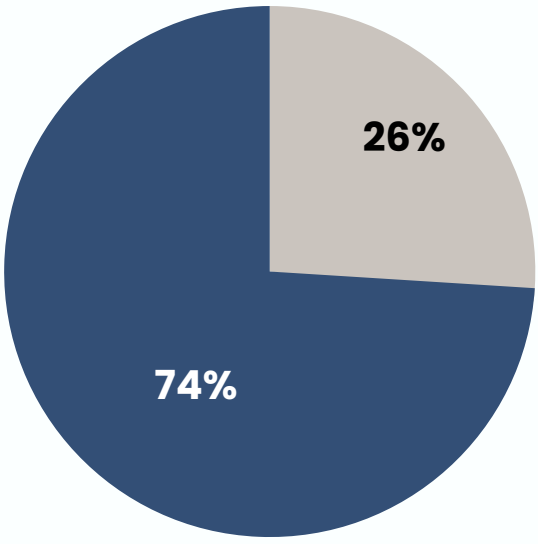
SCORE 0 **SCORE 2**

SCORE 1 **SCORE 3**

Level of hock burns

SCORE 0

SCORE 1



CONCLUSION

Disease is so common in Lidl's own brand chicken meat that our study found:

- **white striping disease present in 94% of packages containing chicken breast fillets;**
- **hock burns present in 74% of whole birds examined.**

It is not only chickens raised for meat that are suffering the effects of this extremely rapid growth and crowded conditions, but also consumers who buy such meat without sufficient information. These findings should be a wake-up call for Lidl and the food industry. If retail chains are serious about animal welfare and the quality of the food they supply, they must commit to improving the conditions in which chickens are reared by signing the Better Chicken Commitment.

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