Animal Health and Welfare Reporting 2020/21

As a team of more than 360,000 colleagues, we aim to serve our customers every day with affordable, healthy and sustainable food — to help them enjoy a better quality of life and an easier way of living. Customers are at the heart of everything we do and guide every decision we make. We push ourselves to improve for our customers — and that is embedded in our core purpose of serving shoppers a little better every day, doing what is right for our customers, communities and the planet. Our customers expect great products and expect us to take animal welfare seriously when sourcing these products. We are committed to working responsibly in this area and will continue to make progress by supporting best practice in our supply chains. Our Tesco Welfare Approved (TWA) standards are industry leading and independently audited.

Being transparent about our animal health and welfare policies, standards and progress is hugely important to us and allows us to continuously improve. To help us identify where we can improve animal welfare in our supply chain we have a system of reporting on animal welfare Outcome Measures relating to physical, mental and behavioural wellbeing. Increasingly the industry is using Outcome Measures derived from animal-based indicators to assess net welfare impacts. These measures give an indicator of an individual or group of animals' wellbeing on farm, during transport and up to the point of slaughter. Reporting data is used to evidence compliance with Tesco's overarching animal welfare policy requirements, e.g. close confinement, maximum transport times and pre-slaughter stunning, that are applicable to all species. These are then supplemented with a range of species-specific measures.

The indicators we use can be applied under a variety of different conditions (farm, transport and slaughter) and address:

- good feeding
- good housing
- good health
- good handling
- the ability to perform natural behaviours

Indicator data is submitted by suppliers on a monthly basis and/or derived as part of our ongoing programme of independent TWA inspections. The data allows Tesco to track and trend relative performance within any given sector and monitor individual supplier performance over time. This is pivotal to our supplier engagement and enables us to support good practice and drive targeted improvement.

Key measures and trends are reported below. Unless otherwise specified the data relates to own-label product (fresh, frozen and ingredient) supplied to Tesco UK. These are sector averages for the reporting period March 2020 – February 2021 (across the whole supplying geography) unless otherwise indicated. Previously published comparative data is also illustrated for March 2019 - February 2020.

It must be acknowledged that as a consequence of the impact of Covid-19 the last 18 months have presented exceptional challenges to the supply base as a whole and disrupted both normal processing schedules and established procedures at farm level. This is reflected in some of the Outcome Measure trends seen, which have been compounded by sector specific health challenges such as Avian Influenza. Case specifics are discussed but within this context the Tesco supply base has continued to show exceptional commitment to supporting Outcome Measure data collection and engagement with Tesco Welfare Approved Standards, resulting in trend improvements in a number of areas.

Farm Assurance

In addition to our Tesco Welfare Approved (TWA) Standard which applies irrespective of country of origin, as a pre-requisite 100% of farms supplying us must also be certified to an approved independent assurance scheme, which is compliant with ISO 17020 inspection requirements.

All of our British farms are assured by either Red Tractor, British Lion Code of Practice (laying hens) or RSPCA Assured and all imported products are assured to a recognised scheme benchmarked for direct UK equivalence. Find below a table of the Farm Assurance Schemes that Tesco recognises.

Scheme	Sector	Higher Welfare Standard
Aquaculture Stewardship Council	Aquaculture	
BIM Certified Quality Aquaculture	Aquaculture	
Bord Bia Sustainable Quality Assurance Schemes	Beef & Lamb/Poultry & Eggs (Irish)	
British Quality Trout	Trout	
DB Kontrol	Pigs and Poultry (Danish)	
Debio	Aquaculture (Organic)	x
Englandsgrise	Pigs (Danish)	
Farm Assured Welsh Livestock (FAWL)	Beef & Lamb	
GenesisGAP Chicken	Poultry	
GenesisGAP Duck	Poultry	
GenesisGAP Pig Standard	Pig	
GlobalGAP	Aquaculture	
IKB Kip	Chicken	
IKB Nederlands Varkens (+ Welfare Module)	Pigs	
IKB Varkens (+Welfare Module)	Pigs	
Interporc	Pigs	

Lloyds Register Poultry Scheme (Platinum & Gold)	Poultry	
Naturland	Poultry	
NIFQAS	Pigs, Poultry, Beef & Lamb	
Organic* EU Regulation (EC) No 834/2007 and 889/2008[1]	Prawns	x
Organic* Farmers & Growers	All	x
Organic* Food Federation	All	x
Organic* Trust	Trout	x
PAI International Pig Standard	Pigs	
QS (+ Welfare Module for Pigs)	All	
Quality Meats Scotland	All	
Red Tractor	All	
Red Tractor – Enhanced Welfare Module	Chicken	x
RSPCA Assured	All	x
SKAL*	All (organic)	x
Soil Association*	All (organic)	x

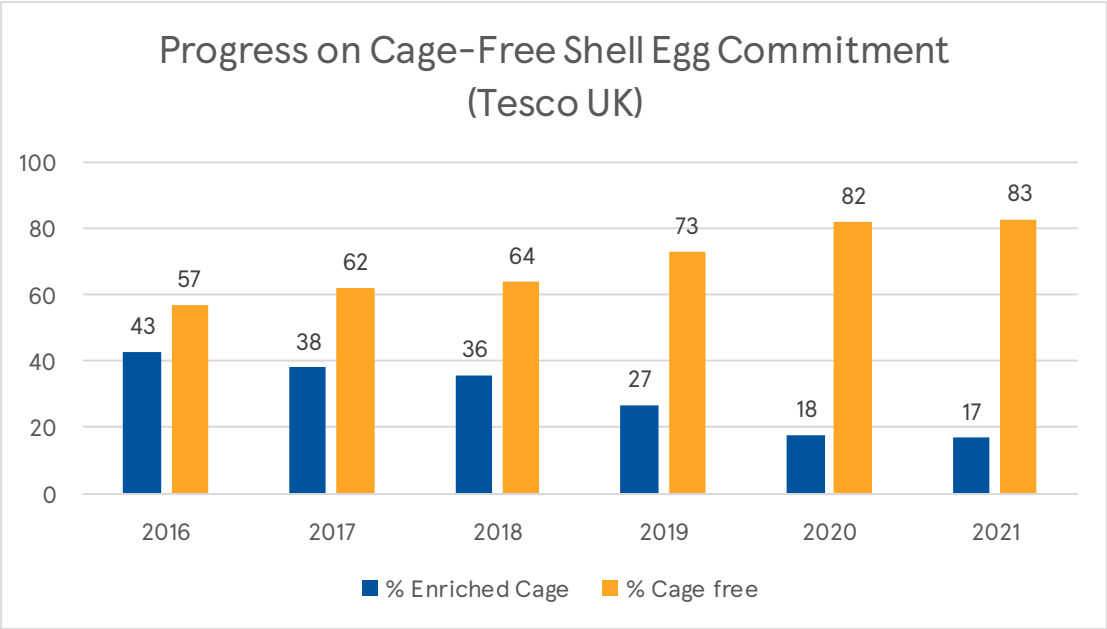
*To be compliant with Regulation (EU) 2018/848 as of January 2021

Close confinement

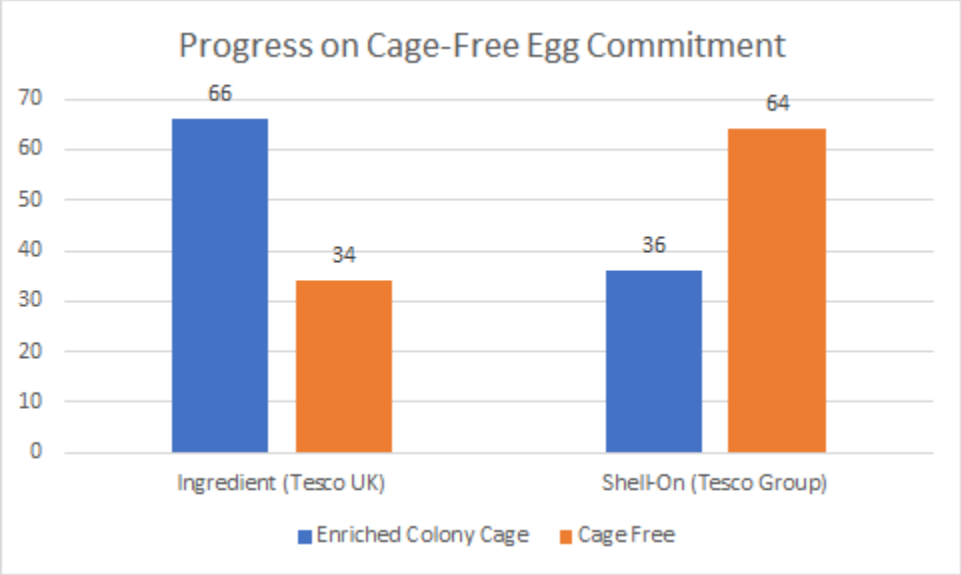
The Tesco Animal Welfare Policy stipulates that close confinement systems must actively be avoided. Within all of our species-specific requirements we specify the maximum livestock allowed in an area to avoid close confinement. We define this by the species and production system, based on welfare monitoring, legislation and evidence based best practice approaches.

Implementation is ongoing, but there is progress across all sectors.

Within the Tesco UK supply base there has been sustained transition from colony-cage production for shell eggs with 83% of eggs now produced in free-range or barn systems.



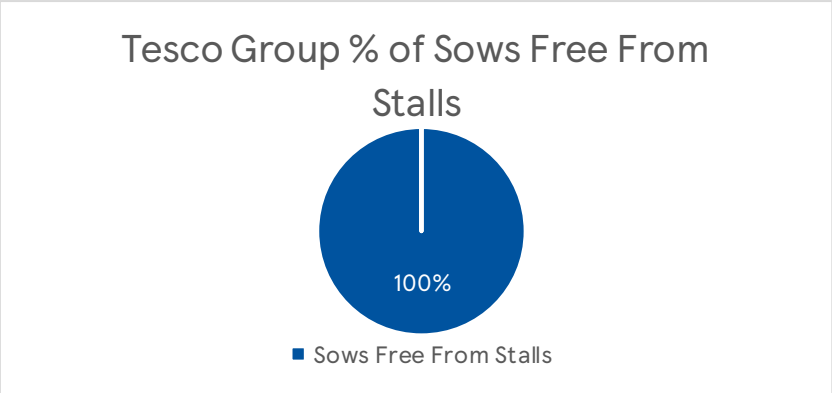
The total cage-free proportion of liquid egg within the Tesco UK supply base is 34% and at Group level, with improved visibility of data sets in 2020, the proportion of cage-free shell egg production has been established as 64%.



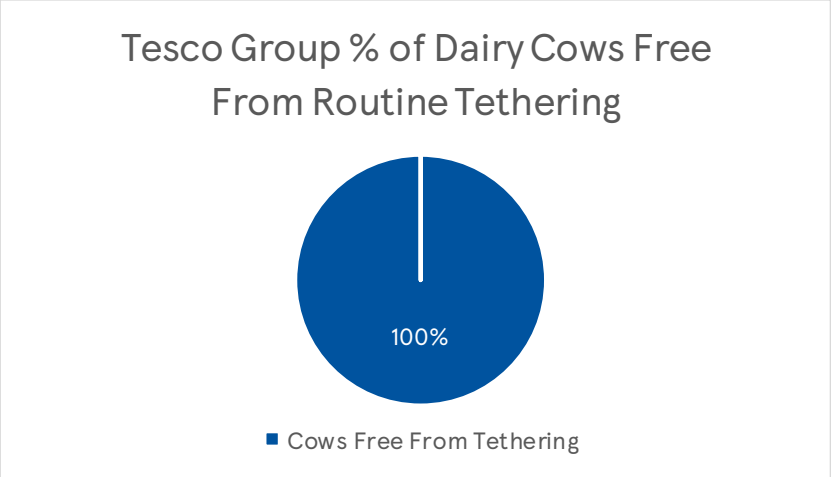
Other species-specific commitments include:

- 100% of own-label fin fish across the Tesco Group are either wild caught or farmed in open water systems.
- 100% of own-label finished pigs across the Tesco Group are housed in systems which meet or exceed stocking density requirements and are never restrained or housed individually.
- 100% of breeding females (dairy cattle, sows and ewes) producing own-label products across the Tesco Group are never tethered during gestation.

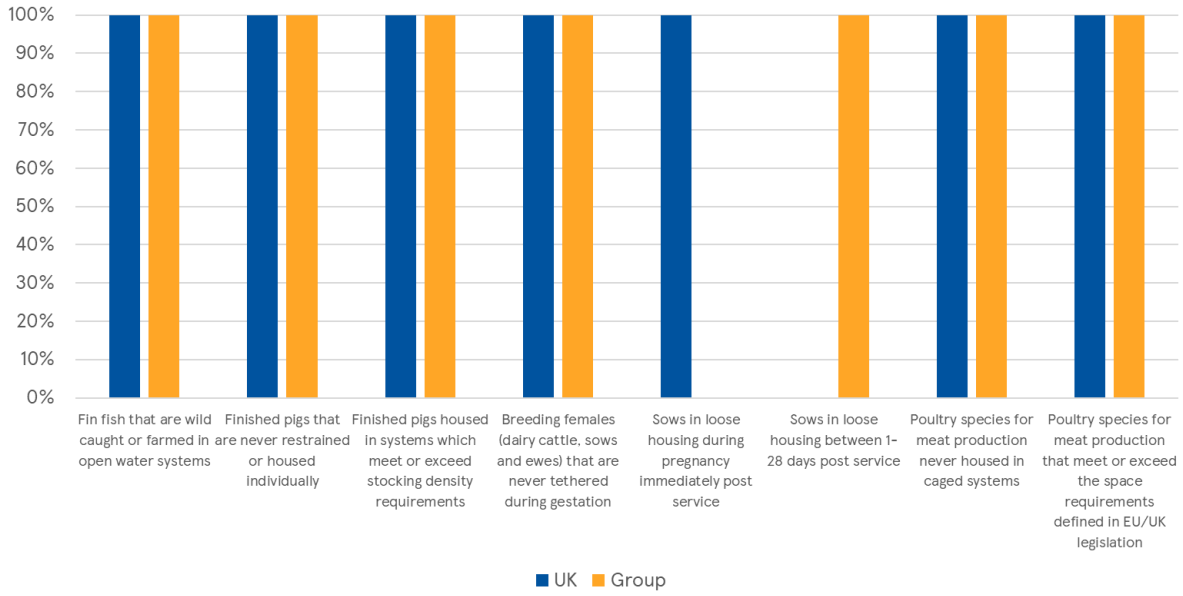
- 100% sows producing own-label meat across the Tesco Group are not confined in stalls during pregnancy post service.
- 100% of poultry species for own-label meat production across the Tesco Group are never housed in caged systems and meet or exceed the space requirements as defined in EU/UK legislation.



100% of the pigs used in the Tesco Group supply chain (all own-label products) are free from stalls in line with European legislation (within 28 days post-service). 100% of the pigs entering UK stores are free from stalls in line with UK legislation (i.e. loose housed immediately post-service).



100% of the total Group own-label dairy supply chain is free from routine tethering.



In all instances, these figures of 100% compliance have remained consistent between the 2019 and 2020 reporting periods, reflecting the absolute nature of these commitments within the Tesco Standards.

Routine physical/surgical interventions

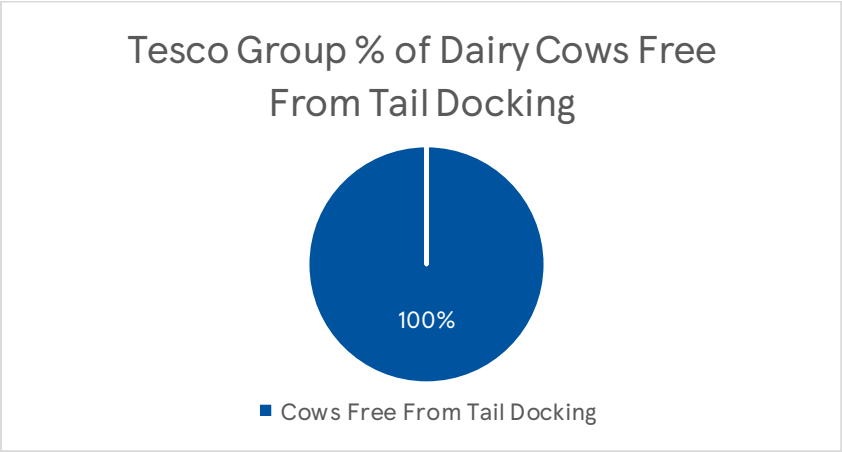
Tesco encourages farming practices that reduce the need for management mutilations. At present tail docking of dairy cattle, beak trimming in commercial meat chickens, fin clipping of fin fish, dubbing of cockerels and mulesing of lambs is not practiced by any producers supplying into Tesco Own-Label products across all businesses and geographies.

None of our UK or Dutch finished pigs are castrated and Tesco supports the work of the EU Pig Innovation Group; exploring methods of raising entire male pigs within EU pig supply chains as an alternative to surgical castration. 100% of our Italian finished pigs used in a range of our specialty continental meats for Tesco UK are free from tail docking and teething clipping.

100% of commercial meat chickens are free of any surgical intervention.

Procedure	Species/Sector	% Free of Mutilation
Tail docking	Dairy Cattle (Global)	100%
Mulesing	Lamb (Global)	100%
Beak Trimming	Meat Chickens (Global)	100%
Beak Trimming	Organic Layers (Global)	100%

Dubbing	Breeder Chickens (Cockerels, UK)	100%
Castration	Finished pigs (NL and UK)	100%
Tail docking	Finished Pigs (IT);	100%
Teeth Clipping	Finished Pigs (IT);	100%
Fin Clipping	Fin Fish (UK)	100%



100% of the total Group own-label dairy supply chain is free from tail docking.

Transport and fitness to travel

Self-reported data from all suppliers producing own-label product for all Tesco businesses across all geographies shows 100% of transport times from farm to slaughter to be 8 hours or less over land except on occasions where a situation occurs that is outside of the processors or hauliers control.

Over 90% of farm to slaughter transport times (own-label and branded) across the Tesco Group are 8 hours or less. Independent third-party inspection data confirms that 100% of our beef cattle, lamb, pork, broiler chickens, ducks and turkeys destined for Tesco UK own-label products typically travel from farm to slaughter within 8 hours.

One of the consequences of Covid-19 has been intermittent, short-notice closures of processing facilities. This in turn has periodically necessitated transport of animals to sites other than those closest. This is a decision balanced on a number of welfare variables, not least the need to avoid overstocking on the production farm. Under these circumstances potentially extended transport times have typically been managed through the use of intermediate holding sites to allow animals to be fed, watered and rested en route but those

occasions where total transport time has exceeded 8 hours are recorded and Tesco have full visibility of occurrence within their supply chain. This equates to 1.3% of all loads occurring over periods of Covid-19 restriction.

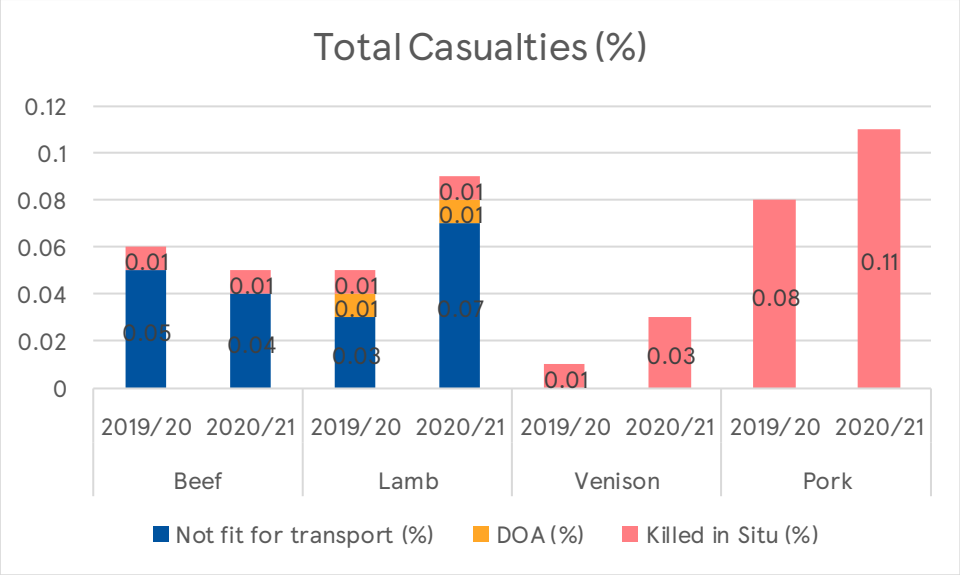
Transportation of aquatic species poses different challenges. For this reason Tesco actively encourages the humane slaughter of fin fish and crustacea in-situ i.e. at the site of final grow on. Where this is not possible our TWA Standards stipulate strict criteria for water quality parameters e.g. dissolved oxygen and the associated monitoring required.

Species	**% Transport typically less than 8 hours (Tesco Group, own-label)**
Broiler Chicken	100%
Turkey	100%
Ducks	100%
Pigs	100%
Cattle	100%
Lamb	100%

It is however, recognized that transport is an inherently stressful process and it is of absolute importance that only those animals considered fit are loaded on farm and that transport practices maintain the welfare of the animal in transit.

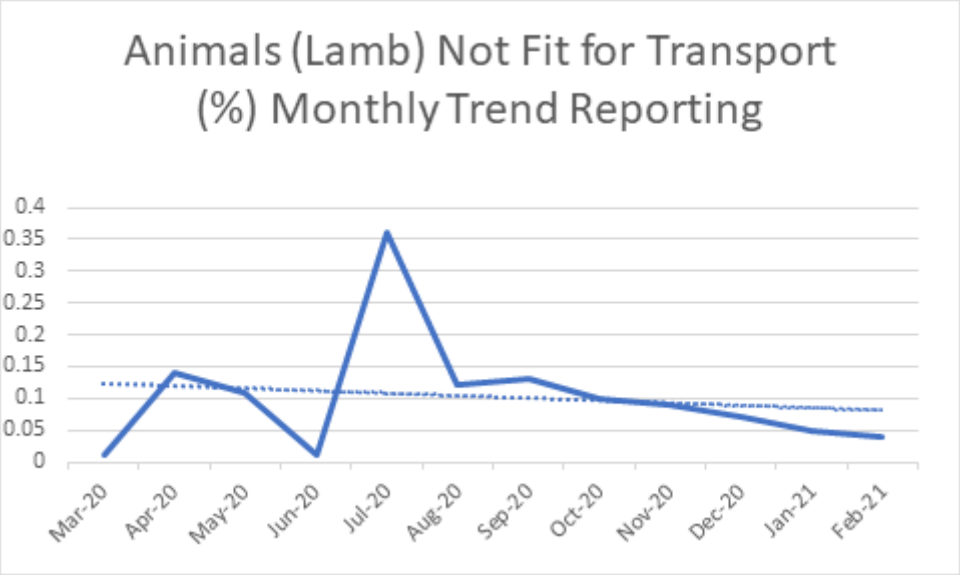
Red Meat

The cumulative proportion of animals considered not fit for transport, dead on arrival or requiring euthanasia is recorded and closely monitored for example, highlighting seasonal trends and the impact of weather conditions on transport experience. Reporting metrics vary slightly by species reflecting reporting challenges but the total values are comparable between species and year-on-year.



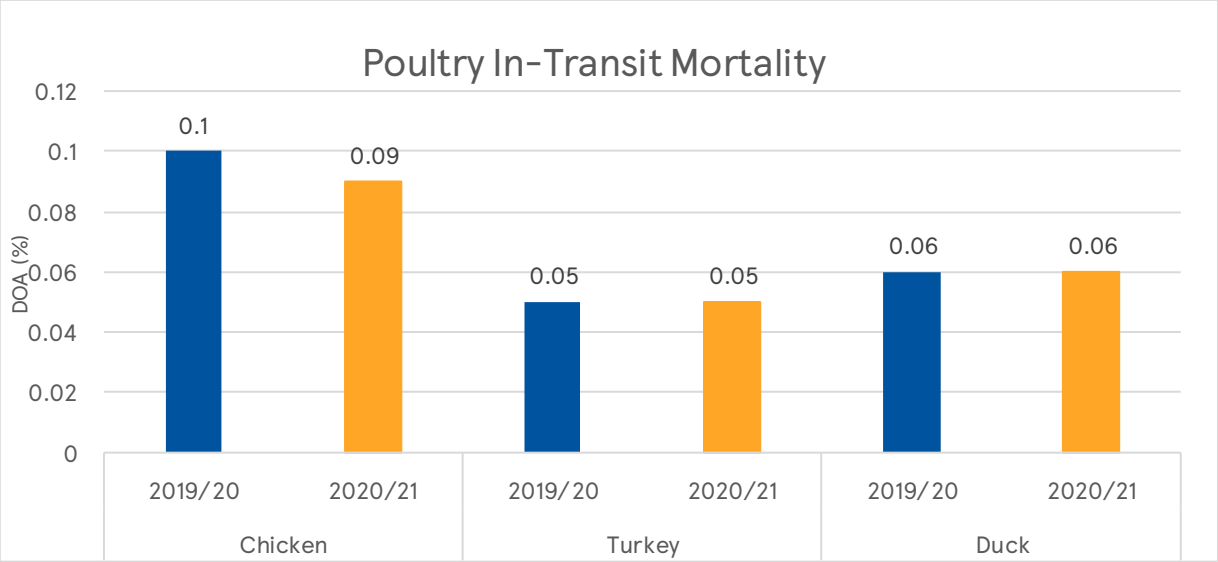
Inter-site variation is a significant aspect which we work with suppliers to understand and address as necessary. The relative proportion of total casualties has remained broadly consistent across the beef supply base (there has been a non-significant trend decrease). However, where there has been an apparent increase in total average in any sector, this is evaluated further.

In the case of the relative increases seen across the lamb, venison and pork supply chains the annual increases are attributable to both the rise and marked variance seen in the first half of the reporting year; which encompasses the period of greatest Covid-19 related disruption to processing schedules. The challenges seen appear to be resolving as evidenced by consistent trend decreases seen in the latter part of the year, as illustrated by the lamb not fit for transport trend data.



Poultry

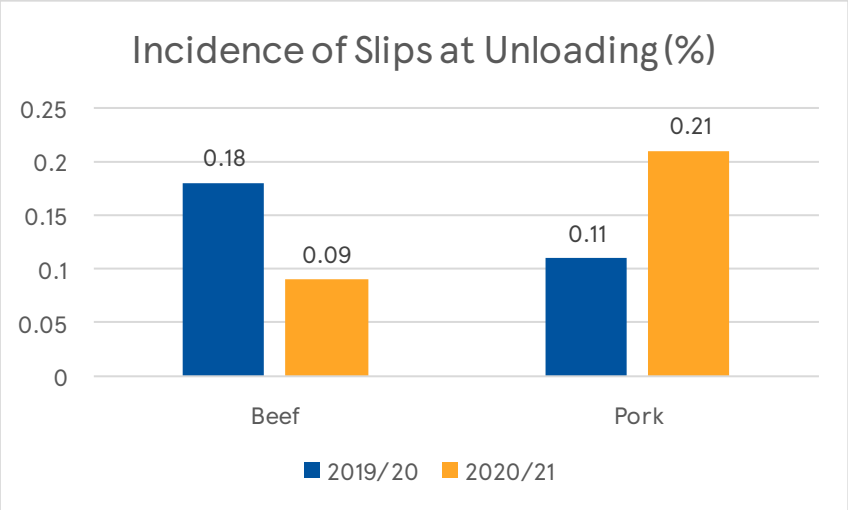
Logistically the only measure of transportation fitness to travel that is possible in poultry species is the in-transit mortality or dead-on-arrival (DOA) figure. There are species specific differences in that values are lower in turkeys and ducks however overall levels across the broiler (chicken) supply base are nevertheless low and have shown a slight reduction overall between the 2019/20 and 2020/21 reporting periods.

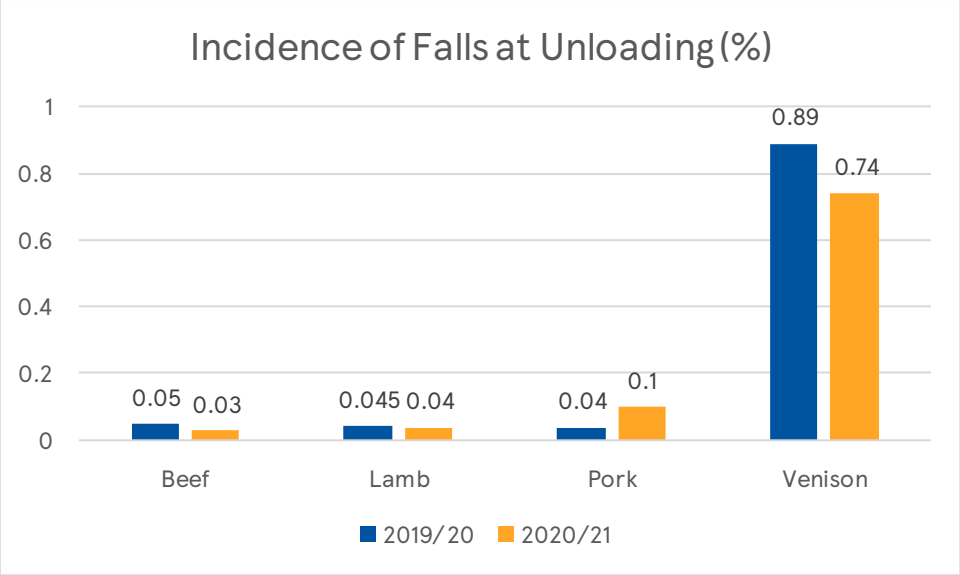


Animal handling

Red Meat

It is recognised that loading and unloading animals onto livestock vehicles can be inherently stressful and as such Tesco require that unloading is assessed and subsequently verified as part of the independent third-party inspection process (both from live observation and historic CCTV footage). Slips and falls are monitored for cattle and pigs; the inherent assessment challenges mean that only falls are recorded for lamb and venison.





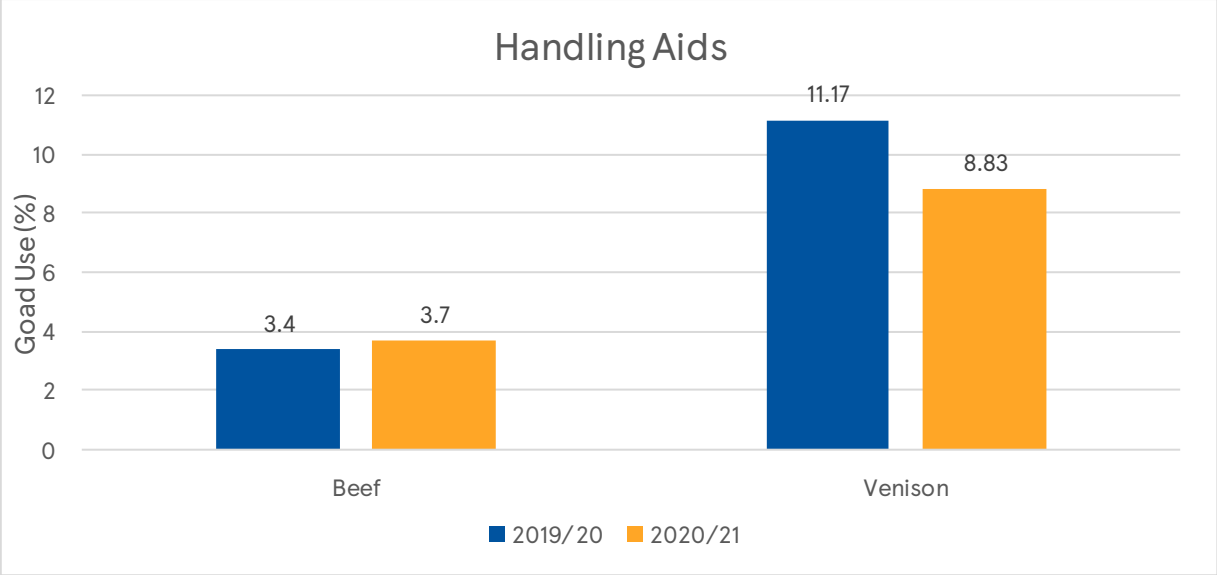
There is a consistency of outcome across beef, lamb and pork sectors. The higher percentage seen in venison reflects both the smaller total numbers processed (and so any individual instance has a proportionately greater result) but also the nature of deer as a species. This is similarly reflected in the figures for percentage goad use.

Beef, lamb and venison have all shown marginal trend decreases in the incidence of falls across the illustrated reporting periods. The increase that has been reported across the pig supply base is of potential concern but may reflect (in part) the difficulties of consistency of assessment during the unloading process. In response to feedback from suppliers in relation to this issue, Tesco are exploring Artificial Intelligence (AI) options to automate the data collection process for greater accuracy.

Goad use is prohibited across the Tesco Supply Chains for lamb and pigs. It is permitted (subject to strict conditions of use) for beef and venison. Where goad use is high and/or accompanied by other welfare indicators such as vocalisation, Tesco would require review of handling facilities and practices to resolve any issues.

Comparative data sets indicate a (non-significant) trend increase in goad use in cattle but a reduction in use across the venison supply chain. The increase seen in the beef supply chain has not resulted in an increase in associated behavioural indices (such as vocalisation) and may be a consequence of a variety of variables, not least cattle age.

Conversely the reduction in use across the venison supply chain may equally be reflective of animal type e.g. previous handling experience and change in usage level is not necessarily indicative of changes at processor level.



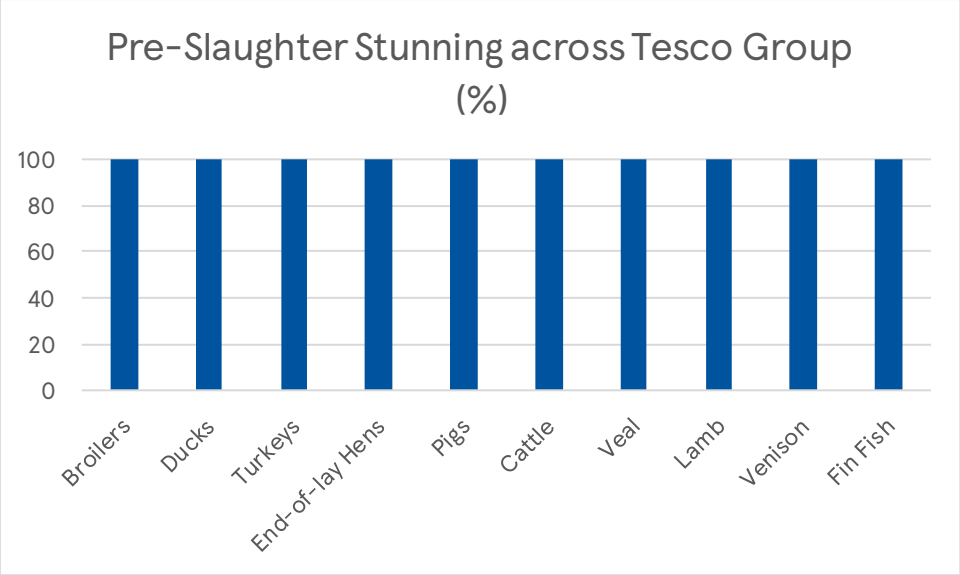
Slaughter

The Tesco Group Animal Welfare Policy requires that all livestock species are pre-stunned prior to slaughter in accordance with European regulatory requirements (Regulation 1099/2009 EC). This is irrespective of geography or species and includes branded products, with the exception of a small number of designated and clearly labelled branded concessions subject to religious slaughter policies. While there is currently no statutory requirement for fish to adhere to prescribed methods of stun and slaughter, Tesco Welfare Approved (TWA) standards require all Own-Label salmon, trout sea bass and sea bream to be stunned prior to slaughter as per industry best practice.

Where poultry species are sourced from Halal approved sites this is strictly limited to those that accept electrical stunning as part of the process. Stunning practice and procedure is verified during independent audit and the effectiveness of stun and slaughter processes constitute elements of our outcome measures.

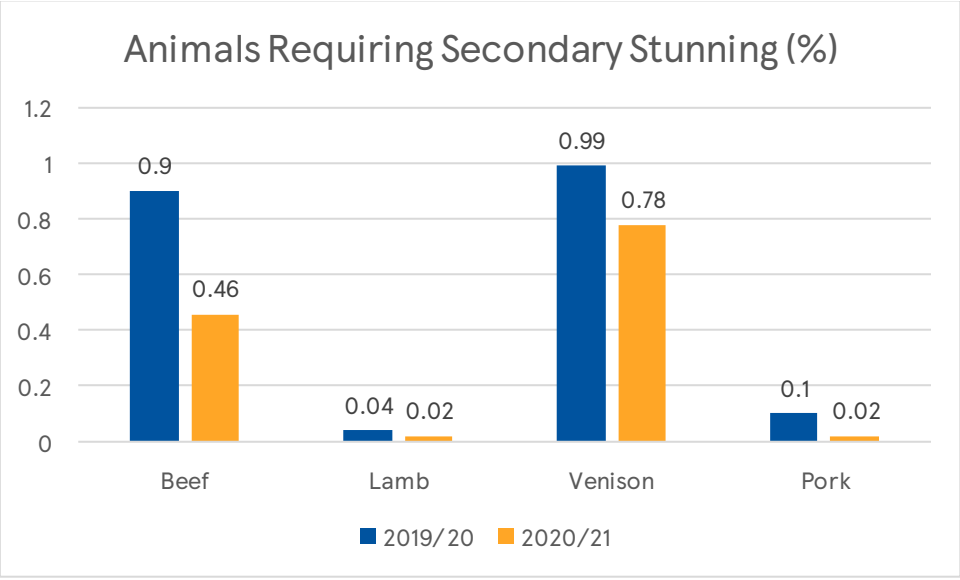
100% of all Tesco Group own-label and branded (excluding clearly labelled branded Halal concessions) products containing terrestrial and/or finfish species are stunned prior to slaughter. Where methods have been limited e.g. chill-kill of shrimp, the 2020/21 reporting period has seen the introduction of a novel system of instantaneous electrical stunning for shrimp (TESCO & HILTON SEAFOOD – IMPROVING THE WELFARE OF WHITELEG SHRIMP (PENNAUS VANNAMEI) AT HARVEST - https://www.compassioninfoodbusiness.com/case-studies/technical-case-studies/tesco-hilton-seafood-improving-the-welfare-of-whiteleg-shrimp-pennaus-vannamei-at-harvest/).

Accounting for the limited number of branded concessions subject to religious slaughter policies, at least 99% of animals destined for Tesco Group (own-label and branded) are stunned before slaughter and this position remains consistent across 2019/20 and 2020/21 reporting periods



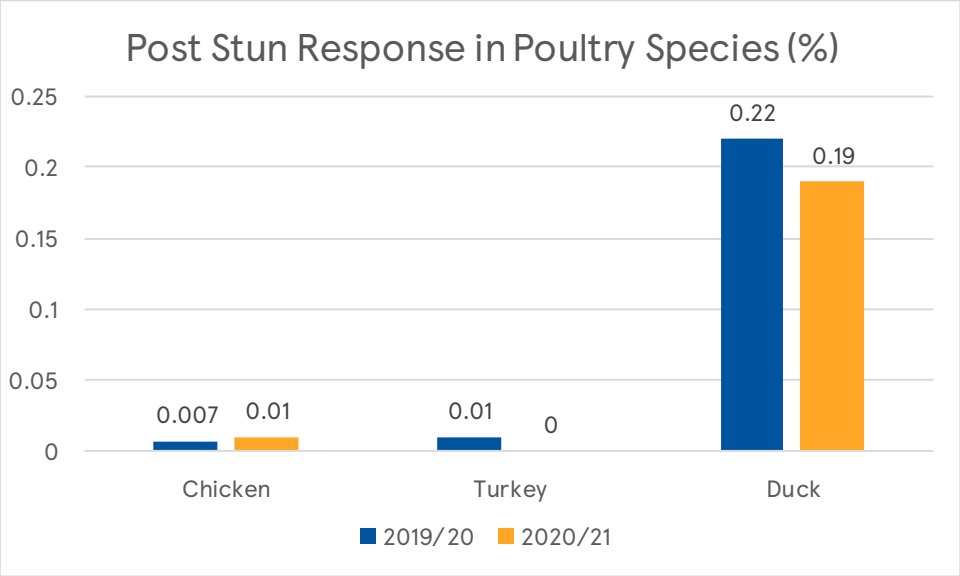
Secondary stunning

In addition to requiring that all species are pre-slaughter stunned we recognise that the effectiveness and consistency of stunning is crucial to animal welfare during the slaughter process. Where possible we favour the use of methods that result in an irrecoverable stun (stun-kill) such as Controlled Atmosphere Stunning (CAS) systems used in a majority of our pig and poultry supply chains. Where electrical or percussive systems are used then our suppliers report on the percentage of animals that require a secondary or 'back-up' stun. Across the Tesco Group (own-label products), the proportion of all animals requiring secondary stunning averaged less than 1%.



For Tesco UK, the higher figures seen in our beef and venison supply chains are a reflection of a proportion of 'health and safety' stuns to minimise spontaneous post-stun movement. Importantly, there has been a reduction in the incidence of secondary stunning reported

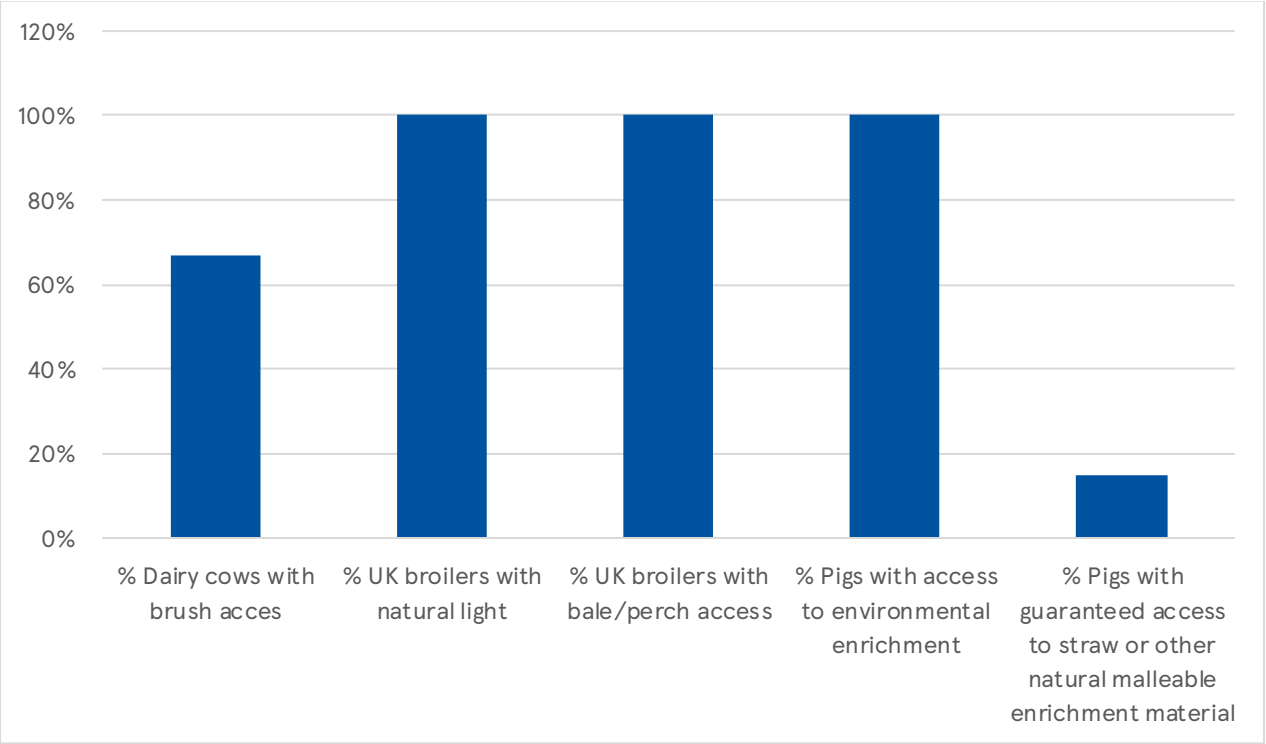
across every one of the red meat and pork species sectors ranging from 25-50% reduction in what were already low figures.



Electrically stunned poultry may show some post stun responsiveness in a minority of cases. Similarly, where an individual bird misses the automated neck cut a manual back up will ensure that 100% of birds are effectively processed. Both these parameters are carefully monitored to ensure animals are insensible throughout. Tesco promotes the use of CAS systems that induce an irrecoverable stun-kill. These systems are widely used in broiler and turkey supply chains (hence the lower values for responsiveness post stun). Duck physiology makes the application of CAS systems more difficult therefore the higher responsiveness figure is associated with electrical stunning systems. There has however been a significant reduction in post-stun responsiveness within the turkey supply chain. The figure reported for 2020/21 in the turkey supply base (0%) and the associated reduction relative to the 2019/20 figure is indicative that all suppliers now use CAS (stun-kill) systems.

The increase seen across the broiler supply base has been a subject of extensive discussion with the affected processors. It is another example of an indirect impact of Covid-19. Staff shortages at hatchery level have meant that birds have been placed 'as hatched' i.e. mixed sex. This creates many more production and sizing issues and has contributed to the increase in reported post-stun responsiveness. It is anticipated that this specific issue will resolve when standard procedures can be resumed.

Cross-species enrichment

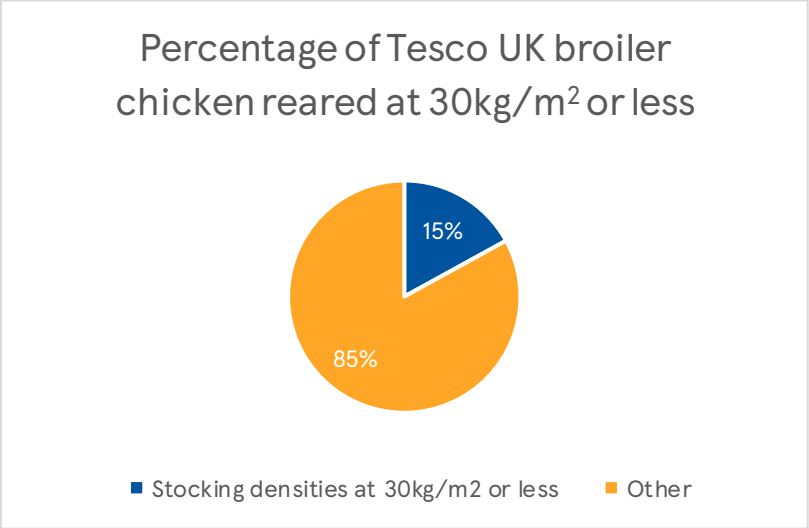


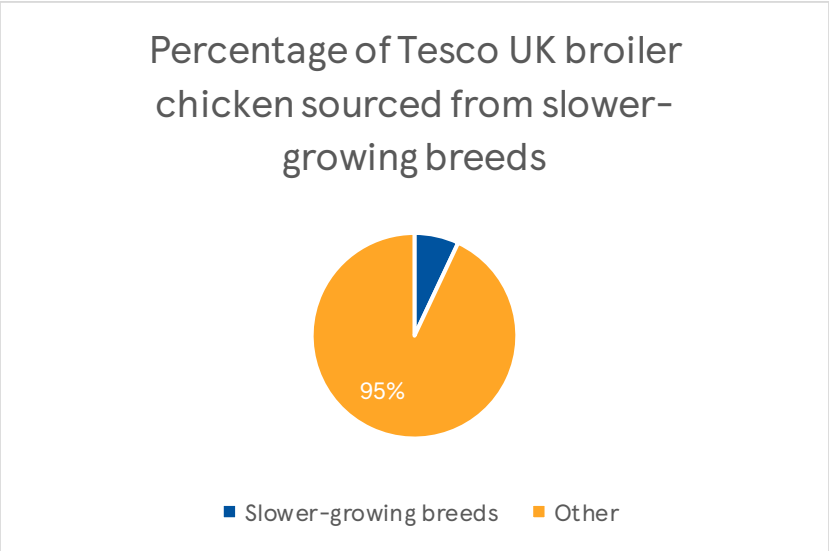
The provision of an environment that supports the display of a range of natural behaviours is crucial and can be important even in more extensive production systems e.g. dairy. We collate data in relation to those producers meeting aspirational standards including the provision of cow brushes (67%) as well as enrichment requirements which are absolute in other standards such as the provision of natural light and perches and bale substrates for UK broilers (100%) and the provision (and type) of enrichment supplied to pigs. Pig enrichment must satisfy key characteristics in order to be considered optimal (farm level guidance is that enrichment is compliant with COMMISSION RECOMMENDATION (EU) 2016/336 of 8 March 2016 on the application of Council Directive 2008/120/EC laying down minimum standards for the protection of pigs as regards measures to reduce the need for tail-docking) and where this cannot be achieved through the provision of a single substrate such as straw then a variety of different enrichment types must be provided which collectively meet behavioural needs.

100% of all pig management systems are provided with enrichment and all of our Finest* fresh pork, bacon and gammon is finished in straw-based systems satisfying the criteria for optimal enrichment at each life stage. Enrichment is key to pig production across all Tesco geographies. It applies to all product ranges including our Continental Meats.

In 2020 we also added an additional poultry higher welfare range 'Room to Roam' (a slower growing bird raised at 30kg/m^2 or below) to the existing higher welfare offerings of Finest* (Free-Range) and Organic. Across the global supply base delivering into Tesco UK, 15% of

broiler chicken comes from birds raised at 30kg/m^2 or below, and 5% from slower-growing breeds.





100% of our UK Finest* fresh pork, bacon and gammon is outdoor bred in systems where sows farrow in loose housed (arc) accommodation i.e. no farrowing crates. Whilst this represents all pork identified at point of sale as sourced from outdoor bred, free farrowing systems, it is known to be an underestimate of the total proportion of free farrowing pigs. To ensure greater visibility of units which adopt free-farrowing systems, this is to become a specific Outcome Measure for the 2021/22 reporting period.

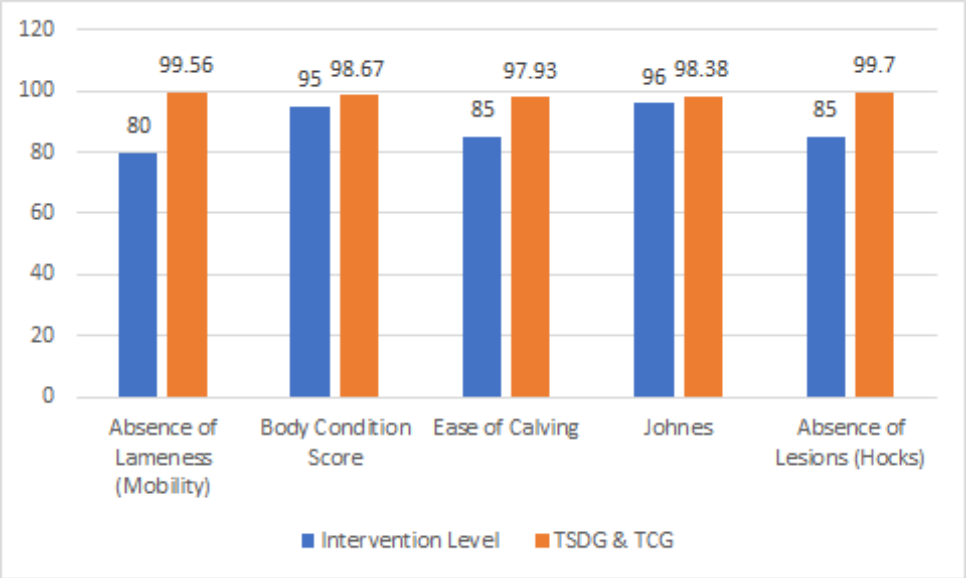
Species-specific

Dairy Cattle

Members of the Tesco Sustainable Dairy Group (TSDG) and Tesco Cheese Group (TCG) are independently assessed at farm level to track and trend performance against key welfare indicators. Variables and associated intervention levels are provided below. Data is submitted quarterly, on every cow.

Assessment Variable	Intervention Level
Mobility (lameness)	Herd average <20%
Johnes Disease	100% of farms with Johnes disease not present in 98% of herd
Calving	< 15% cows require assistance at calving
Skin (Hock) Lesions	< 5% cows demonstrate any form of hock lesion
Body Condition Score	95% of cows to achieve a body condition score of 2 or above.

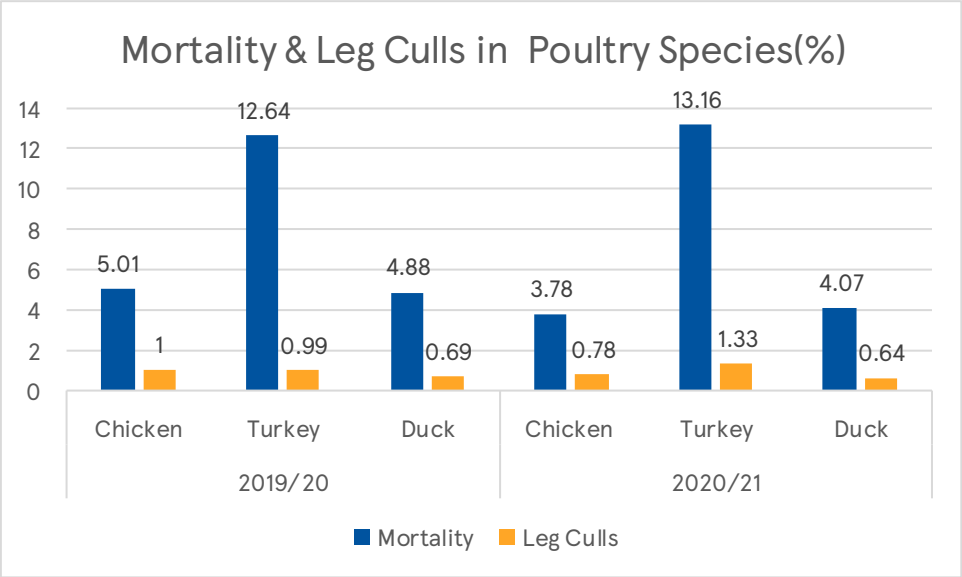
There is a very high proportion of farms meeting all compliance targets, indicating that key management considerations such as nutrition, housing and health care are consistently being met. More exacting targets set for absence of skin lesions and acceptable body condition reflects Tesco Sustainable Dairy Group and Sustainable Cheese Group continued driving of higher standards.



Poultry

Mortality

Mortality is the measure of those animals that die or are euthanased on farm as a consequence of disease or injury. It is a metric that is of value both in terms of considering animal health and welfare but additionally in terms of the net sustainability of a production system. Mortality levels vary with species and external factors such as seasonal fluctuation, health challenges and a range of environmental conditions, which in turn can be a consequence of geography. Understandably it is a key measure of on-farm welfare across our global poultry supply base and one which is closely monitored. In this way best practice, which minimises on-farm mortality, can be identified and shared across the supply base through targeted health plans. Mortality data is also reviewed within the context of antibiotic trends. The Tesco Antibiotic Commitments emphasise responsible use but this must not be at the expense of bird welfare. By tracking, trending and correlating mortality and antibiotic data we can identify if there is restriction in use at the expense of bird health.



Leg culls

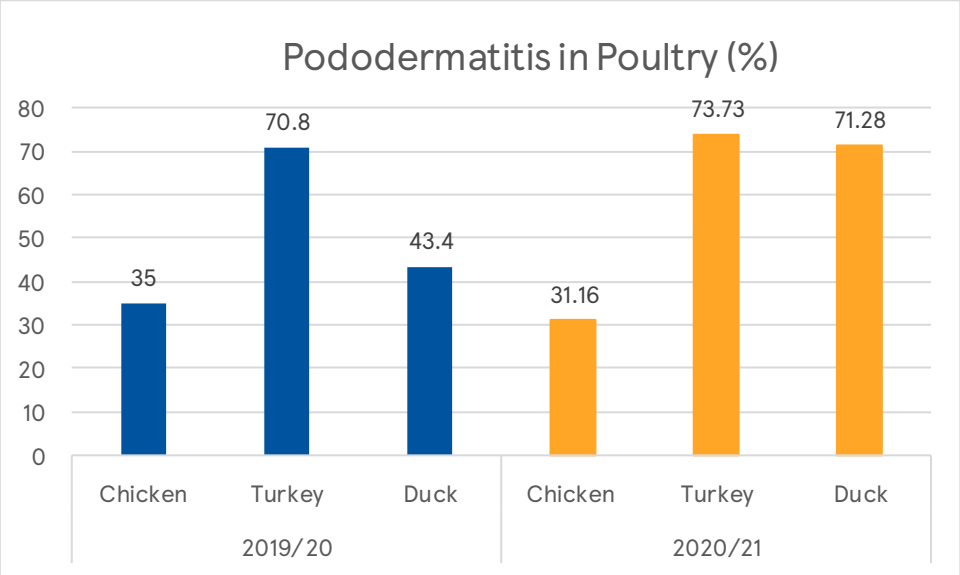
A specific data sub-set within mortality figures relates to the proportion of birds requiring culling for reasons associated with leg weakness. Mobility in poultry species is an area of focus hence leg health is key irrespective of breed. The percentage of birds culled for leg issues is consistent across species and is fairly static and remains proportional with any changes in absolute mortality levels. It also indicates that farmers are taking a proactive approach to managing bird mobility.

Overall there have been reductions in mortality and rate of leg culls in both chicken and duck supply chains. There has been an increase in both metrics within the turkey supply chain but

this is consistent with reported challenges identified within the antibiotic data sets, specifically industry-wide issues with enteric disease.

Lesions

Tesco is committed to housing systems and environmental management that ensure the occurrence of foot pad lesions (pododermatitis) in chickens, ducks and turkeys, leg lesions (hockburn) in chickens and breast blisters in turkeys are minimised. Tesco liaise with individual suppliers and communicate evidence of good practice and associated on-farm management where individual suppliers or farmers are achieving significantly lower figures than the average but equally endeavour to recognise and understand those factors including seasonality and environmental challenges which have a significant impact on recorded levels.

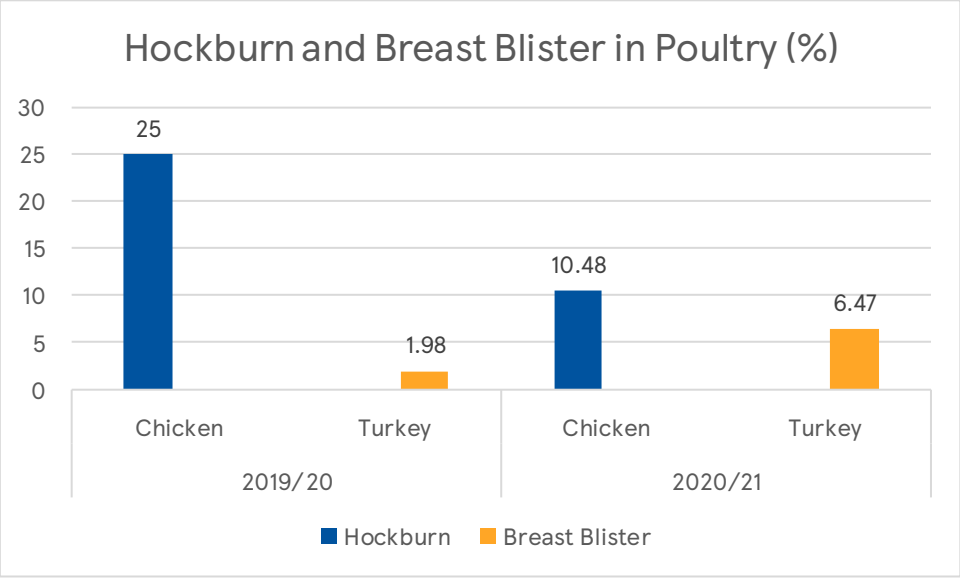


It is important to note that Tesco does not recognise the incidence of an acceptable level of pododermatitis or hockburn and unlike many scoring systems which only report on the presence of more severe lesions the Tesco figures represent absolute values i.e. where there is any indication of contact redness or abrasion, however minimal.

It has long been known that levels of pododermatitis vary by geography. There has been a relative reduction in pododermatitis in broiler chickens but this average includes considerable geographic variation. However, as a result of some changes to sourcing, there has been an increase in pododermatitis levels in ducks. There has also been a marginal trend increase in incidence in the turkey supply base (and an associated increase in levels of breast blister in the 2020/21 reporting period) but this is believed to be attributable to underlying enteric health challenges and the associated difficulties in maintaining optimal litter quality.

In contrast to the reported increase in pododermatitis, levels of hockburn have decreased in chicken. Pododermatitis is associated with foot pad/litter contact whereas hockburn tends to be associated with more inactive birds. The change in the relative proportion of each potentially indicates that patterns of bird motility have improved i.e. fewer individuals

demonstrating periods of prolonged inactivity. Alongside our suppliers we continue to engage in discussion around strategies to improve litter quality.

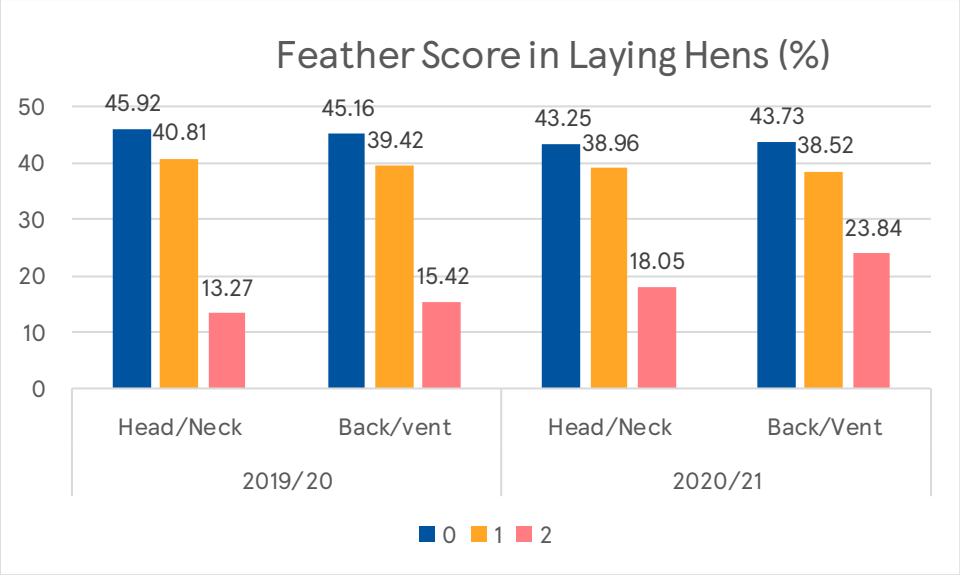


All the figures for mortality, leg culls and lesions are evaluated in the context of trend usage of antibiotics, as it is recognised that responsible use and reduction strategies can pose additional management challenges and this cannot be at the expense of animal welfare.

Laying Hens

Feather Coverage

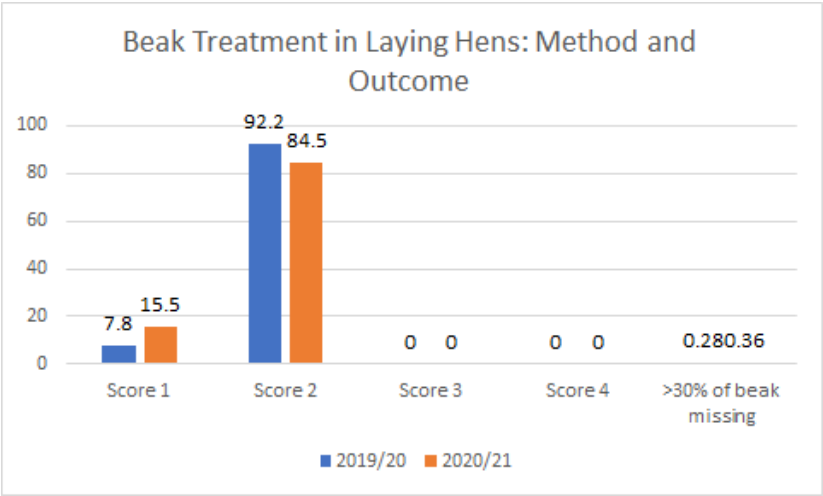
Tesco recognises the impact that injurious pecking behaviours have in laying hen flocks and encourages the implementation of strategies as outlined by the Bristol University FeatherWel initiative in order to minimise occurrence. Tesco require that the incidence of agonistic (vocalisation) and injurious (pecking) behaviours are recorded and that feather coverage is assessed and scored in all commercial egg laying flocks from 40 weeks of age. This enables producers to monitor conditions or behaviours that may result in feather loss and respond accordingly. A score of 0 indicates complete feather coverage, while a score of 2 indicates a degree of feather loss. These scores are independently verified during assessments. The majority of birds retain all or most of their feather coverage whilst in lay and only a minority of flocks have evidence of agonistic behaviours. Given the significance of these metrics to the overall assessment of laying hen welfare, video training has been developed and delivered in the 2020/21 reporting cycle to ensure absolute consistency of approach by suppliers and TWA assessors.



Between 2018 and the 2019/20 reporting cycles there had been an improvement in feather coverage and associated scores with a reduction of approximately 6% in the total number of birds assessed as scoring 2 for either head/neck or back/vent coverage. Similarly the number of birds scoring 0 (full feather coverage) throughout the laying period has increased. While figures still remain better than 2018 equivalents there has been a reduction in birds showing complete feather coverage in the 2020/21 data set. This is potentially because of a number of variables, including an increase in the average age at which flocks are depopulated. Average flock age has increased both as a consequence of improved bird production longevity but additionally Covid-19 has had an impact on scheduled depopulation and repopulation.

Beak Treatment

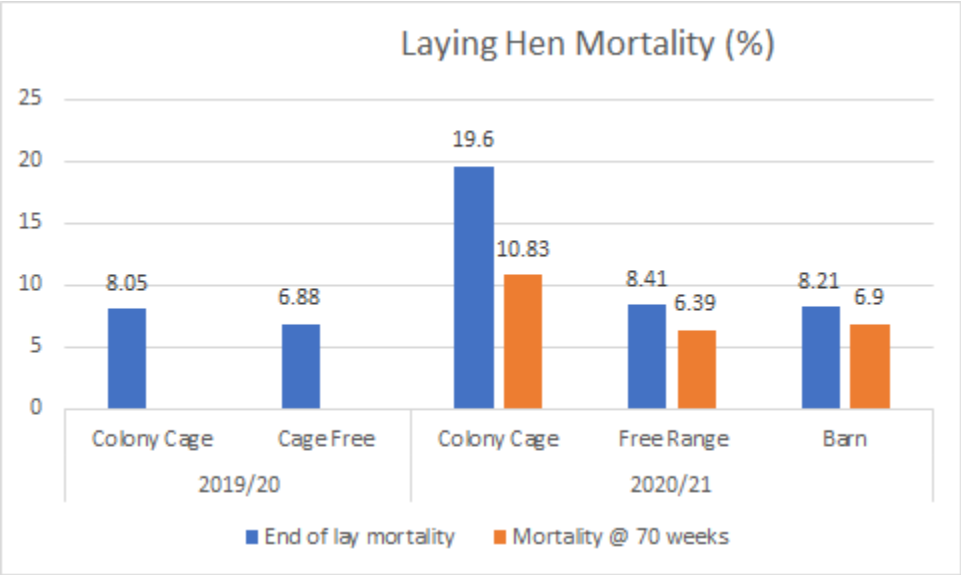
As part of the Tesco commitment towards the avoidance of routine physical interventions we collect detailed information on both the instances and method of beak treatment. Beak treatment should be avoided or methods used which effect least bird discomfort and result in minimal damage. All birds either receive no beak treatment (1) or are treated at day old in the hatchery (2) reducing total beak integrity by less than 30% in the majority. No birds are beak treated on farm (3) or as a result of emergency intervention (4).

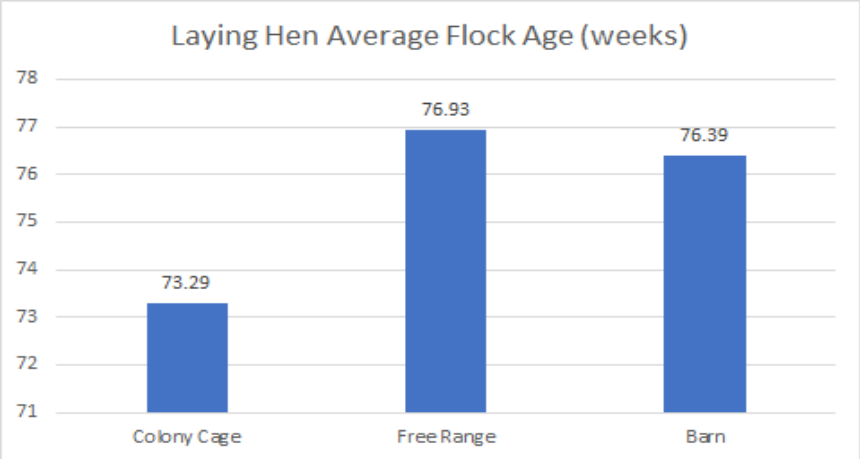


Progress is being made in relation to beak treatment. In the first half of 2020 there has already been a significant increase in the number of untreated flocks, which currently stands at 16% for hens producing shell eggs, representing nearly a 7% improvement on the 12 months to March 2020 and 10% since 2018. Across the Tesco Group, less than 5% of all laying hens would be free from beak treatment.

Mortality

As with other poultry (meat) species Tesco collates mortality information in relation to commercial laying flocks. This is in order to understand seasonal trends and those factors which may result in bird losses, specifically disease challenge. As the proportion of colony cage production decreases and the proportion of barn production increases (consistent with progress on cage-free commitment) we have asked suppliers to report each method of production separately. Additionally, as average flock age appears to be increasing, we have standardised mortality data at 70 weeks of age and then at final depopulation, with a requirement to declare flock age.

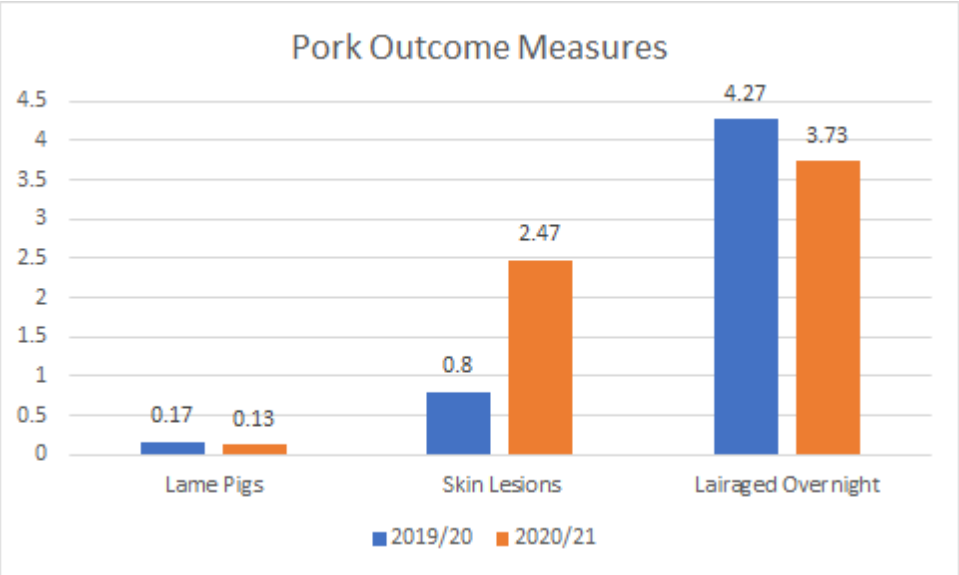




There is consistency in the mortality data sets reported for barn and free-range production at both 70-weeks and end of lay. Additionally average flock age at depopulation is similar for both. The mortality figures and average flock age for colony cage production are very different in comparison and there are a number of reasons for this. Average flock age data indicates that a number of flocks have been taken out of production early due to health challenges (and hence higher mortality) but also as part of the commercial transition to cage free production. Mortality figures for colony cage production must be interpreted cautiously due to the relative decrease in sample size i.e. increased mortality in a limited number of flocks has a disproportionate impact on sector average as a whole.

Pigs

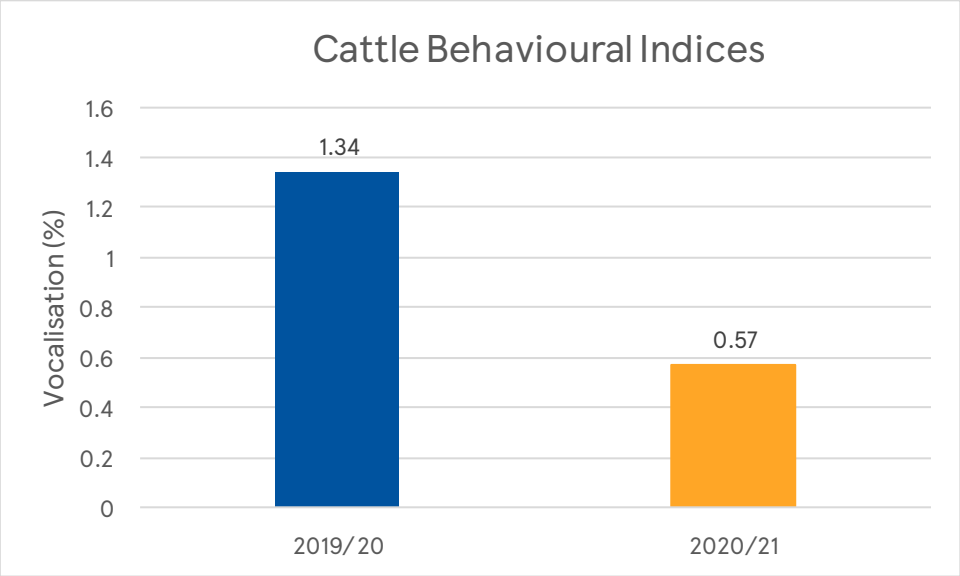
Lameness is recognized as a key welfare indicator in pigs. Skin lesions or 'fight damage' can arise due to mixing unfamiliar groups of pigs or pigs being held in unfamiliar surroundings. We require that pigs are kept in farm groups during transport and lairage and that the time which pigs are held in the lairage is minimised. All processing sites now consistently ensure that the minimum numbers of pigs are held overnight and don't exceed 25% of total daily pig numbers being slaughtered on any individual occasion. Pig welfare post-transit is further monitored by assessment of lameness and skin damage; the levels of which are consistently low across our supply base indicating housing and transit handling are to a good standard.



There has been a year-on-year reduction in both the incidence of lame pigs and the proportion of pigs lairaged overnight. It is unclear why the proportion of skin lesions has increased but again it is known that over the last 18 months disruption to processing due to Covid-19, may have resulted in increased lairage times and also the proportion of animals going via off-site facilities to manage transport logistics.

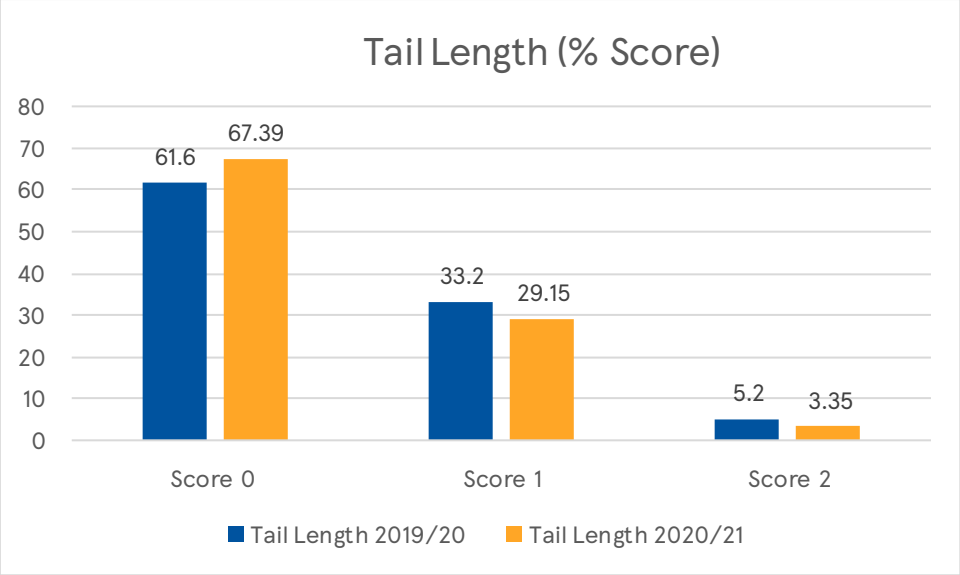
Beef Cattle

Vocalisation in the lairage area, specifically during handling, is recorded to provide a measure of the likely stresses and associated welfare status of the animals. There has been a net reduction in total average incidence in successive reporting years. However, it is recognised that vocalisation values do vary year-on-year but again, more markedly between sites and it is this that is reviewed and independently validated as part of our TWA audits, on an ongoing basis. Vocalisation can be associated with animal type (cows and young bulls vocalise more) rather than necessarily reflecting handling as a single factor and we use these insights to focus on priority areas.



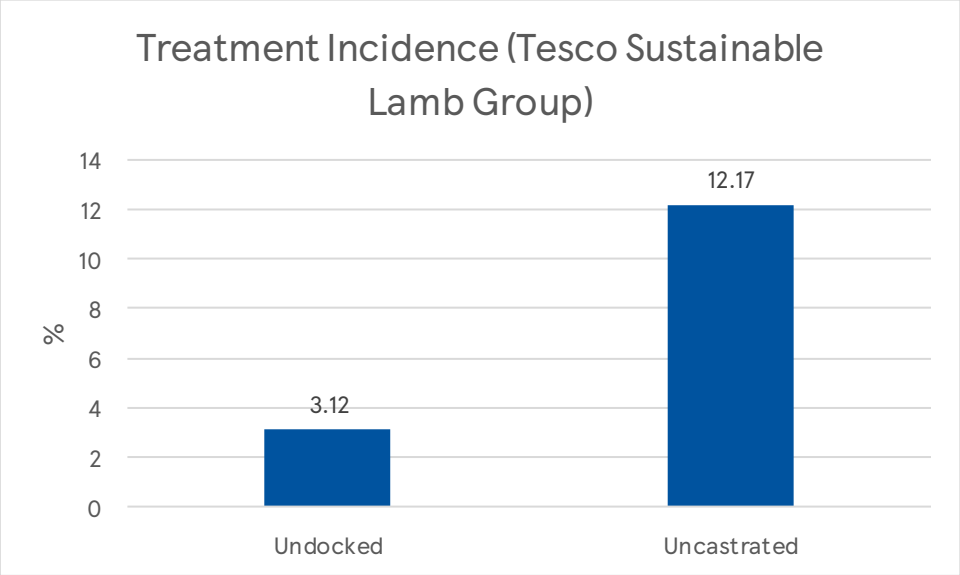
Lamb

Wherever possible we support a move away from processes such as tail docking and castration. However, this has to be balanced against the potential welfare impact of associated challenges in pasture-based systems, such as 'fly strike'. Given the relationship between tail length and discomfort associated with the docking process (the longer the tail the less the impact) we actively monitor tail length and prohibit short docking (score 2) and require the maximum possible length to remain (score 0) while still retaining the long term management benefits of docking where strictly necessary.



Across the supply base as a whole there has been a proportional increase in the number of animals with tail score 0 (long dock or no dock) and a resultant reduction in those which score 2. Score 2 is exclusively associated with the New Zealand supply base and is a reflection of the challenges in highly extensive systems where mulesing is prohibited. There has been a significant year-on-year improvement in that incidence of short-docked tails has declined from over 10% in 2015 to 3.35% in the last reporting period.

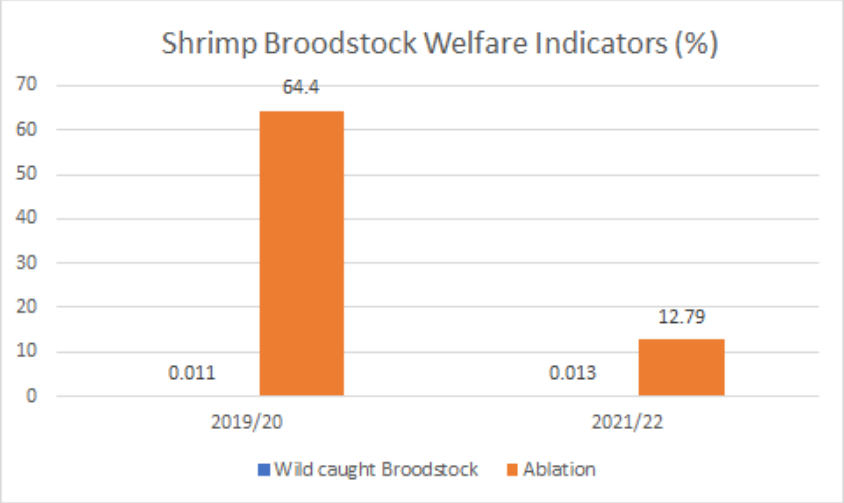
Additionally, within the Tesco Sustainable Lamb Group there is a proportion of producers that do not tail dock or castrate. Visibility of this data has been collated for the first time in the 2020/21 reporting period but will be monitored and reviewed on an ongoing basis.



Aquaculture

Shrimp

There is increasing focus on the welfare of aquaculture species including invertebrate crustacea such as shrimp. Tesco is moving towards non-ablated production from non-wild caught brood stock and have made significant improvements in this respect from an initial starting point of 100% ablation in 2016 to a reduction in incidence of over 80% The wildcaught broodstock is a minimal percentage of total and is associated with Paneus Monodon (Giant Tiger Shrimp) production in extensive systems. There is no ablation of wildcaught broodstock.



Innovation

We believe innovation, research and development are an integral part of ensuring that our supply chains are efficient, safe, responsible and sustainable. The key focus of Tesco supported research and development in agriculture is to ensure there is direct positive impact at a farm level including improvements in animal health and welfare. Our approach to enable innovation sits across a number of key workstreams including our Tesco Sustainable Farming Groups, supporting Government Innovation Centres, championing young farmers through the Tesco Future Farmer Foundation, information sharing on the Tesco Supplier Network, working closely with our innovative suppliers through the Tesco R&D Committee, and our flagship event – the Agri T-Jam. Recent outputs include advisory infographics aimed at optimising farm level litter management for chickens, the evaluation and adoption of a novel system of electric stunning in our shrimp supply chain and trialling an automated means of lameness detection in dairy cows.

Agri T-Jam

We held our first Agri T-Jam in 2018. It has the ambition of helping to make a positive difference within our supply chains on the key challenges facing the agricultural sector. Exciting agri-tech companies with solutions to some of our current and future challenges and opportunities get the chance to pitch their technologies to us, our supply chain partners, and investors. Novel approaches to addressing health and welfare issues are one of the priority criteria. Past T-Jam winners, as well as a number of finalists, have gone on to set up trials in our supply base.

We have collaborated extensively with 2019 winners RoboScientific, who have trials underway in a number of areas drawing on the established link between changes in environmental levels of volatile gases and early onset of key disease pathologies, with the potential to develop continuous real-time monitoring of animal health. The versatility of their solution enables us to continue to plan new trials in response to changing disease challenges.

Our 2020 Agri T-Jam winner was Senesino, with a simple solution called Numnuts, that administers targeted pain relief to lambs during the processes of castration and tail docking. Numnuts has the potential to improve the welfare of animals at substantial scale and we are currently planning a trial with some farmers in our Tesco Sustainable Lamb Group. https://worldagritechinnovation.com/senesinos-numnuts-wins-tesco-agri-t-jam-and-world-agri-tech-pitch-day-2020/

Government Innovation Centres

We are active supporters of UK Government initiatives to bring together the food industry and academic researchers to transform the productivity of the UK livestock industry. We were the first retail member of the Centre of Innovation Excellence in Livestock (CIEL), a £70 million research hub opened in 2016, and engage with members of their team on a regular basis via individual and group meetings. This close and collaborative relationship ensures proactive knowledge exchange. We are a partner of Crop Health and Protection (CHAP) and member of Agri Epi Centre and the Scottish Aquaculture Innovation Centre (SAIC). We also have representation on the BBSRC Animal Welfare Research Network.

Future Farmer Foundation

We are passionate about supporting future generations of farmers. That's why we established the Tesco Future Farmer Foundation in 2014, with the aim of inspiring young people in British and Irish farming. The programme is open to people aged 20-35 years from all farming sectors, including new entrants and next generation farmers, who are looking to develop a successful future in agriculture and aquaculture.

The Covid-19 pandemic has forced Tesco, our suppliers and Future Farmers to adapt to a virtual programme. Whilst face-to-face workshops and supply chain visits have been postponed, Future Farmers have benefitted from a range of webinars where industry experts have discussed topics including animal health and welfare and environmental sustainability.

Tesco Supplier Network

Keeping close channels of communication with our many suppliers and producers around the world is an essential part of how we trade responsibly. In part this is made possible by our online supplier community, The Tesco Supplier Network, which give members a direct line to Tesco colleagues, industry experts and other suppliers around the world. The Tesco Supplier Network was launched in January 2015 and builds on the success of our previous online communities - the Tesco Knowledge Hub and Producer Network.

This new community gives us the opportunity to improve communication with our suppliers, to share ideas and address common challenges, and to drive sustainability and innovation, both throughout our supply chain and ultimately in the products that our customers enjoy.

Our aims:

1. Share knowledge, best practice and expertise
2. Build a more collaborative supply chain

3. Create and develop innovative solutions together

Not only can Tesco Supplier Network members learn more about our strategy, they are also able to connect directly with Tesco teams and seek advice from peers facing similar challenges. This is key for our Tesco Sustainable Farming Groups, where farmers and the Tesco team have access to dedicated channels for discussion and knowledge sharing around topics such as animal health and welfare and environmental sustainability.

Example publications

Fardy, E, Maddocks, C and Roberts F.G (2016) Knowledge transfer within a retail supply chain: The Tesco Supplier Network. European Federation of Animal Science (EAAP)

Hutchings C, B Green, J Kirkpatrick and FG Roberts (2020) Ventilation attributes: Impact on litter quality and associated bird welfare outcome measures P23 Recent Advances in Animal Welfare Science VII

Maddocks, C, Roberts F.G and Lucas A.J (2016) Training to embed understanding of Welfare and drive management improvement in the Asian Tropical Prawn supply base of a major UK retailer. European Federation of Animal Science (EAAP)

Roberts, F.G., Lucas, A.J and Johnson, S. (2012) The use of a single empirical outcome measure to assess welfare in slaughter plants: between and within sector comparisons of the supply base for a major retail multiple Animal Welfare. Special Issue. Proceedings of the Humane Slaughter Association Centenary International Symposium: Recent Advances in the Welfare of Livestock at Slaughter

FG Roberts, E Fardy and AJ Lucas (2017) Practical challenges to the implementation of controlled atmosphere stunning: A case study in an Italian pig supply chain. UFAW

Roberts F.G., Kirkpatrick, K. & Crown, G. (2017) Antibiotic use: balancing consumer concerns and animal welfare in Proceedings of the 7th International Conference on the Assessment of Animal Welfare at Farm and Group Level p. 76

Roberts F.G., Lucas A.J and Mason R (2015) A review of enrichment provision in the European supply base of a Major UK retailer: analysis of compliance trends following the introduction of agricultural code of practice requirements. Proceedings of the International Conference on Pig Welfare: Improving Pig Welfare - what are the ways forward? pp117

Roberts F.G (2016) Antibiotic concerns prompt a different approach in: Pig Progress (Online) http://www.pigprogress.net/Health/Articles/2016/10/Antibiotic-concerns-prompt-a-different-approach-2898076W/?intcmp=related-content

Celebrating success in our supply chain

In 2017, we received a Best Retailer Innovation award from Compassion in World Farming (CIWF) for leading the way in farmed fish welfare. The award recognised our work to improve the welfare of two of our farmed fish species, and specifically the introduction of a humane slaughter system for sea bass (Dicenntrarcuhs labrax) and sea bream (Sparus aurta) into commercial practice.

In 2019 Tesco was also awarded a CIWF Good Dairy Calf award. This recognised the work of our farmers and the Tesco Agriculture team to promote socialisation in calf rearing, for example by introducing minimum pair grouping of calves from birth in our Tesco Welfare Approved (TWA) requirements across our Sustainable Dairy Group & Tesco Cheese Group.

This year, we published a case study on our work with Hilton Seafood to trial a humane electrical stunning system for warmwater prawns (https://www.compassioninfoodbusiness.com/case-studies/technical-case-studies/tesco-hilton-seafood-improving-the-welfare-of-whiteleg-shrimp-pennaus-vannamei-at-harvest/). This system, now approved for use in Tesco and Hilton Seafoods supply chains, is the first, large scale electrical stunning system of its kind designed for the humane slaughter of hundreds of millions of prawns. Hilton subsequently received a Special Recognition Award in the 2021 CIWF Good Farm Animal Welfare Awards.

We are proud to be a principal sponsor of Open Farm Sunday and want to help our customers understand how their food is produced, from the experts who produce it. Every year, we support suppliers and farmers who welcome the general public to their farms – both virtually and in person - to educate them on food production standards, particularly animal health and welfare.

Every year, we attend the UK's major agricultural shows, taking the opportunity to welcome customers to our stand to taste some of our products and learn about the way in which they're produced. Our Agriculture team is always in attendance, giving customers the chance to better understand the standards of animal welfare upheld in our supply chains and their importance. Here is a video recorded at the Royal Welsh Show: https://www.youtube.com/watch?v=eGVtAxAXX4M

The Fair For Farmers Guarantee is another way that we communicate the great work of our producers, tell the story of our food and show customers how our farmers meet our welfare standards and care for their cows. This is communicated on every single bottle of fresh milk.

Additionally we showcase the commitment and best practice of our suppliers and the care shown to animals through our Tesco blog (https://www.tescoplc.com/updates/2019/it-s-a-family-affair-life-on-a-modern-dairy-farm/) and our Tesco Magazine. For example, last summer (https://issuu.com/tesco_magazine/docs/tesco_magazine_july_aug_issuu), we talked about the reintroduction of white eggs, keeping the consumer informed of steps taken during Covid-19 to safe guard supply while ensuring animal welfare is not compromised. Alongside providing recipe inspiration, we aim to help educate readers on animal welfare wherever possible.


Ultimately, though, it's about the happiness of the animals. "We love our animals, we rear them from a day old all the way through," says Pickervance.

The Pickervances (Harry, Christine, Harrison and Thomas) are fourth-generation farmers working at Roseacre Hall in Lancashire.

"Cows are massively sociable; they've got rankings and hierarchies and are incredibly intelligent animals," he says. "The whole idea of the farm is to make the cows as well looked-after, happy and comfortable as possible. On our farm, all the beds for the cows are deep sand bedding, which they love. They're basically lying on a beach."

Last year, we worked closely with the RSCPA on TV and social media adverts educating customers about our new Room to Roam chicken range and the high welfare standards to which the chickens are raised.

Additionally, our customers are now able to check which Tesco stores stock their favourite RSPCA products (https://www.rspcaassured.org.uk/where-to-buy/tesco/).

Our Room to Roam chicken is now available to more customers. The front-of-pack label provides an insight into the higher welfare standards to which the birds are raised and clearly showcases the RSPCA Assured mark.