



Animal Health and Welfare Report.

2022/23 Reporting Year



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Rearing livestock well and ensuring that high welfare standards apply throughout the animal's life are vital to ensuring high quality products of which we can be proud.

Animal health and welfare is a key component of our wider sustainable farming agenda and our requirements and approach in this area include:

- Tesco Welfare Approved (TWA) standards, which are species specific and follow the Five Freedoms proposed by the Farm Animal Welfare Committee, aim to ensure transparency across our supply chains and are designed and regularly reviewed to drive improvement.
- All farms must comply with a recognised farm assurance scheme, such as Red Tractor, in addition to meeting our TWA requirements.
- We are committed to the reduction in antibiotic usage as part of the Food Industry Initiative on Antimicrobials (FIIA) and publicly report progress.
- We do not support, commission or carry out animal testing on any of our products or the ingredients they contain, and nor do our suppliers on our behalf.

Being transparent about our policies, standards and progress is important

To help us identify animal welfare issues concerning physical, mental and behavioural wellbeing in our supply chain, we have a system of reporting on animal welfare outcome measures. In 2022/23 we achieved a compliance rate of 96% for Tesco UK and ROI, in terms of complete submissions for each reporting period.

Welfare outcome measures derived from animal-based indicators are increasingly used by industry to assess welfare impacts. These measures give an indicator of how animals are coping within a particular environment including on farm, during transport and up to and including the point of slaughter. Reporting data is used to evidence compliance with our overarching animal welfare policy requirements, e.g. close confinement, maximum transport times over land and pre-slaughter stunning, that are applicable to all species. These are then supplemented

with a range of species-specific measures. Currently this relates to red meat (beef, lamb and venison), pork, poultry (chicken, turkey and duck), laying hens, crustacea (warm water prawns), and fin-fish species (salmon, trout, bass, bream and pangasius).

Animal Welfare Indicators

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

These indicators are essentially the criteria which have traditionally underpinned the Five Freedoms but we also take into account the Five Domains model which recognises the impact on both the physical and mental well-being of animals and their standing as sentient beings. We support those management practices that actively promote positive welfare rather than just ensuring an 'absence of negatives'. We actively promote the importance of ensuring management practices allow animals to exhibit positive behaviours as well as ensuring the absence of negative outcomes. A good example of this is the requirement of cattle brushes across all our Tesco Sustainable Dairy Group farms.



How do we collect welfare outcome measure data?

Welfare outcome data is typically submitted by suppliers monthly and/or derived as part of our ongoing programme of independent Tesco Welfare Approved (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 improvement and good practice.

Key measures and trends are reported below. Unless otherwise specified the data relates to own-brand product supplied to Tesco UK (excluding Booker). (Tesco UK accounts for roughly 74% of all Tesco Group product by sales value). These are sector averages for the reporting

period March 2022 – February 2023 (across the whole supplying geography). Previously published comparative data is also illustrated for the previous two years. This illustrates our approach to performance monitoring and feedback.

As a consequence of the impact of COVID-19, the 2 years, up to March 2022 presented exceptional challenges to the supply base as a whole and disrupted both normal processing schedules and established procedures at farm level. There has been a gradual return to a normalised situation, but the impact of exceptional events still poses challenges when interpreting performance. This is reflected in some of the welfare outcome measure trends seen, which have been compounded by sector-specific health challenges such as Avian Influenza (globally) and African Swine Fever (in central Europe) and commercial events such as the closure of processing facilities.



Farm Assurance

In addition to our Tesco Welfare Approved (TWA) Standards, 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 (100%) of our British and Irish farms are assured by either Red Tractor, Quality Meat Scotland, Farm Assured Welsh Lamb, Bord Bia or RSPCA Assured and all imported products are assured to a recognised scheme benchmarked for direct UK equivalence. See below for the Farm Assurance Schemes that Tesco recognise (Table 1).

Table 1: Approved Independent Assurance Schemes Recognised within Tesco Supply Base

Scheme	Sector	Higher Welfare Standard
Aquaculture Stewardship Council	Aquaculture	
BEIC – Lion Code	Laying Hens	
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)	●
Englandsgrise	Pigs (Danish)	
FAWL	Farm Assured Welsh 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	Aquaculture	
NIFQAS	Pigs, Poultry, Beef & Lamb	
Organic* EU Regulation (EC) No 834/2007 and 889/20081	Warm water prawns	●
Organic* Farmers & Growers	All	●
Organic* Food Federation	All	●
Organic* Trust	Trout	●
PAI International Pig Standard	Pigs	
QS (+ Welfare Module for Pigs)	All	
Quality Meats Scotland	All	
Red Tractor	All	
Red Tractor – Enhanced Welfare Module	Chicken	●
RSPCA Assured	All	●
SKAL*	All (organic)	●
Soil Association*	All (organic)	●

*Compliant with Regulation (EU) 2018/848 as of January 2021



Close confinement.

The Tesco Animal Welfare Policy states, a commitment to the avoidance of close confinement systems for livestock.

Within the Tesco UK supply base we continue to make good progress on our cage free commitment with 82% of shell eggs are now produced in free-range or barn systems (Figure 1). This is despite significant challenges in overall egg supply exacerbated by the prevalence of Avian Influenza.

At Tesco Group level 73% of shell eggs are now cage free and parts of the business (Booker and Tesco ROI) are on track to be 100% cage free in advance of our 2025 deadline.



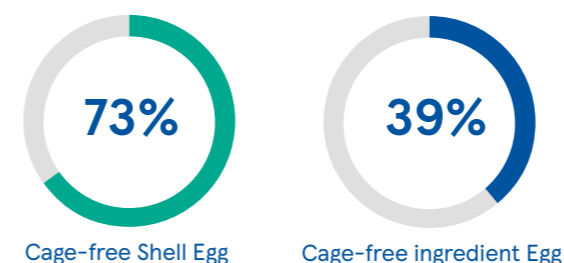
Cage free eggs Our commitment

Tesco have made a commitment to source 100% cage free shell eggs across own brand and branded products for Tesco UK and Onestop, ROI, Booker and CE by 2025. For ingredient egg Tesco has made a commitment to source 100% cage free ingredient egg for Tesco UK and Onestop in all own brand products by 2025.

Figure 1: Progress on Cage-Free Shell Egg Commitment (UK)



Figure 2: Attainment of Cage-Free Shell Egg Commitment (Tesco Group) and Cage-Free Ingredient Egg (Tesco UK and ROI)



The relative proportion of cage-free eggs within each division of Tesco Group is shown in table 2. For 2022/23 for shell egg this includes own brand and brand and for ingredient own brand only. This year the methodology has been amended for calculating the percentage of cage free shell egg to widen its scope and ensure its most accurate. When comparing like for like using 'units/packs' as the volume metric the figure for Tesco UK is 86%. We continue to report by volume rather than revenue to ensure there is no skew towards our premium ranges.



Table 2: Proportion of cage-free eggs across Tesco business units

Animal Welfare KPI 2022/23	UK	ROI	CE	Booker
% of Cage Free Shell Egg	82%	68%	33%	72%
% of Cage Free Ingredient Egg	39%	18%		

Key species specific policy commitments

100%...

- ...of own brand finfish across the Tesco Group are either wild caught or farmed in open water systems.
- ...of own brand finished pigs across the Tesco Group are housed in systems which meet or exceed weight specific space requirements and are never restrained or housed individually.
- ...of breeding females (dairy cattle, sows and ewes) within our supply chain for own brand products across the Tesco Group are never tethered during gestation.
- ...of cattle in Tesco Sustainable Dairy and Cheese groups are never housed in fully slatted systems.
- ...of sows producing own brand meat across Tesco UK are not confined in stalls during pregnancy at any point post-service.
- ...of our Tesco UK Finest* fresh pork, bacon and gammon is outdoor bred in systems where sows farrow in loose housed (arc) accommodation.
- ...of poultry species (Chicken, Turkey, Duck and Goose) for Tesco own brand products across the Tesco Group are never housed in caged systems and meet or exceed the space requirements as defined in EU/UK legislation.
- ...of own brand beef across Tesco Group are not finished in feedlot (Concentrated Animal Feeding Operation) systems.
- ...of own brand veal across Tesco Group is not produced in veal crates.
- Confinement and associated gavage (forced) feeding practices are not permitted for own brand poultry products across Tesco Group i.e. no production of Foie Gras.



Figure 3: Percentage of animals free from specified confinement conditions in Tesco UK and Group (%)



We updated our outcome measure reporting for the 2022/23 reporting period to provide greater visibility of both the proportion of units and associated sow numbers adopting conventional farrowing, outdoor farrowing systems and indoor enhanced farrowing systems (where sow and litter are loosed housed within 72 hours of farrowing) (Figure 4). 27% of sows in the Tesco UK supply chain are housed in either free farrowing or enhanced farrowing systems and as of January 2023 100% of sows associated with Tesco UK continental pork products are housed in an enhanced farrowing system (Figure 5); reflecting the progressive approaches being adopted within our supply chains.

Figure 4: Percentage of Tesco UK pork supply chain associated with specified farrowing systems (%)

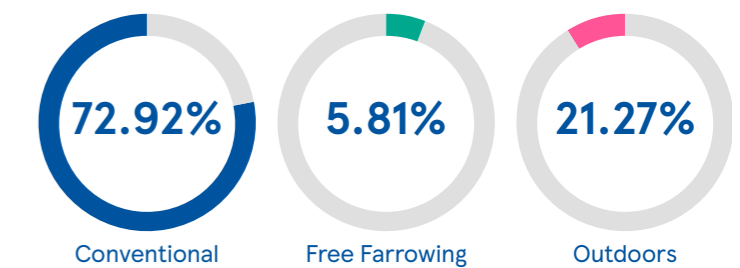


Figure 5: Percentage of Tesco UK continental pork supply chain associated with enhanced farrowing systems (%)





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,

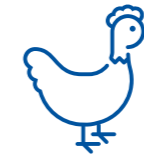
fin clipping of finfish, dubbing of cockerels and mulesing of lambs is not practiced by any producers across any Tesco businesses and geographies (own brand) (Table 3).

Table 3: Summary of surgical interventions excluded from Tesco supply base

Procedure	Species/Sector	Tesco Scope	% Free of Mutilation
Tail docking	Dairy Cattle	Group	100%
Mulesing	Lamb	Group	100%
Beak Trimming	Meat Chickens	Group	100%
Beak Trimming	Organic Layers	Group	100%
Dubbing	Breeder Chickens (Cockerels)	UK	100%
Castration	Finished pigs	UK	100%
Teeth Clipping	Finished Pigs	UK (Italy)	100%
Fin Clipping	Finfish	UK	100%



100%
of Tesco Group own label dairy supply chain is free from tail docking



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



Live plucking for feather and down production is prohibited across Tesco Group

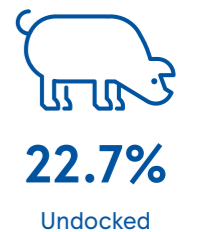
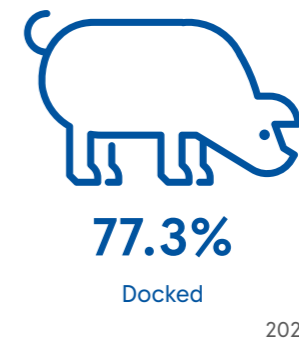
None of our pigs finished in the UK are castrated, and our Dutch and Danish supply chains have committed to increasing the proportion of entire male pigs as part of their overall sustainability strategies. Our Danish supply chains have quadrupled the total number of entire males from 450,000 pigs in 2022 to 1.65 million in 2023. 100% of our Italian finished pigs used in a range of our speciality continental meats for Tesco UK are free from tail docking and tooth clipping. We updated our outcome measure reporting for the 2021/22 reporting period to provide greater visibility on the proportion of pigs within our supply chain that are tail docked which showed that just under a quarter (22.7%) of pigs were undocked. We have seen a fractional increase in the 2022/2023 reporting year (23.1%) (Figure 6).



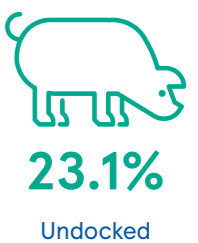
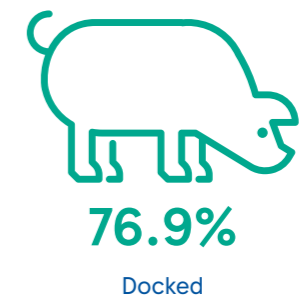
Figure 6: Relative proportion of docked versus non-docked finished pigs within Tesco UK Supply Chain (%)

We recognise the complex considerations that underpin the decision to undertake tail docking in pigs i.e. short term discomfort versus the potential for long term issues associated with tail biting. As such we will use this initial data set as a benchmark to track performance improvements in conjunction with greater visibility and evaluation of risk factors.

Tesco encourage farming practices that reduce the need for management mutilations



2021/22



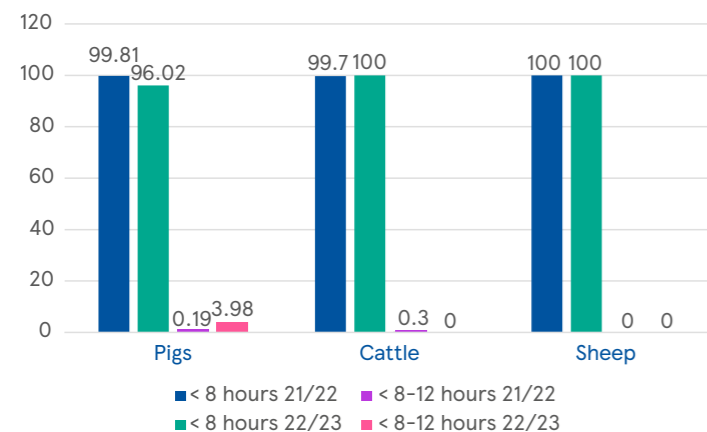
2022/23



Transport and fitness to travel.

As part of our TWA standards for all species (excluding aquaculture and the transport of laying hens), we require transport times to be limited to 8 hours or less. It is recognised however, that occasions arise that are outside processor or haulier control.

Figure 7: Percentage of deliveries (Pigs, Cattle and Sheep) completed within 8 hours for Tesco UK (%)



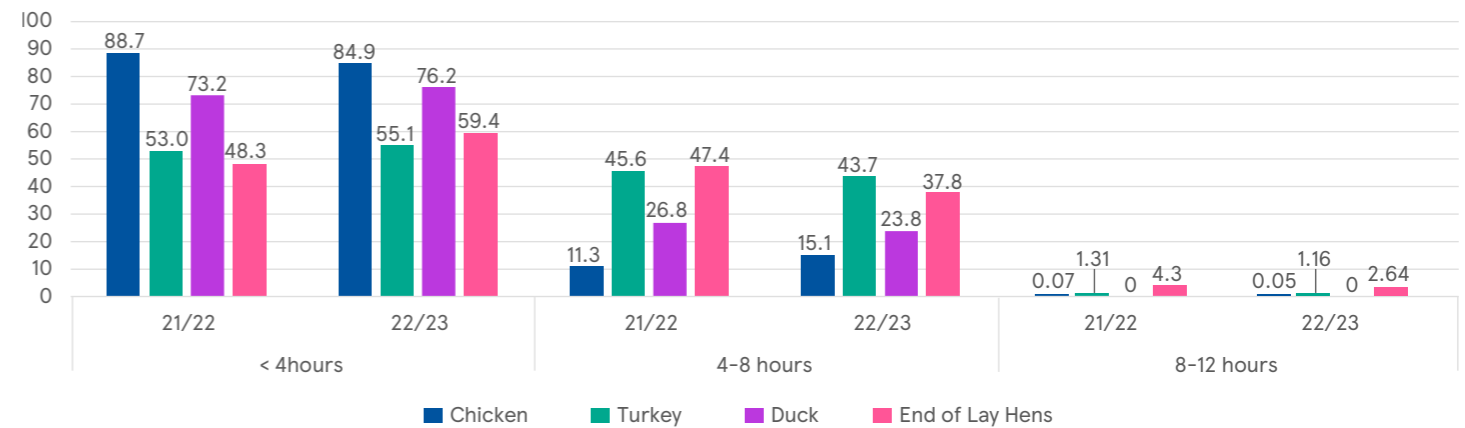
Over 90% of farm to slaughter transport times (own brand) across the Tesco Group are 8 hours or less over land (Figure 7).

Additional Outcome Measure reporting was introduced across Tesco UK poultry supply chains in 2021/2022 to give a further breakdown of transport times ranges. This shows that majority are completed within 4 hours (Figure 8).

Aquatic animal transport

Transportation of aquatic species poses different challenges. For this reason, Tesco actively encourages the humane slaughter of finfish and crustacea in-situ i.e. at the site of final grow out. 100% of farmed shrimp are slaughtered on farm with zero transport time and are required to not be out of water for greater than 15 seconds. It is known that 9% of *L. vannamei* shrimp are harvested using pump systems which minimises handling and minimises time out of water significantly. Where

Figure 8: Percentage of poultry deliveries (Chicken, Turkey, Duck and End-of-Lay Hens) completed within specified time frames during reporting period 2022/23 for Tesco UK and ROI (%)



on-farm slaughter is not possible our TWA standards stipulate strict criteria for water quality parameters e.g. dissolved oxygen and the associated monitoring required and supplementation where required. It is recognised 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 such as behavior and water quality monitoring maintain the welfare of the animals in transit.

Where transport of aquatic animals is necessary, a risk assessment to establish fitness to travel must be conducted and transport times kept to a minimum. Locations of hatcheries is an important factor, our shrimp farms in the most part will be situated close to hatcheries and transport to farm will be less than 8 hours.

Capture, slaughter and transport of wild aquatic animals, including decapod crustacea, is widely variable depending on species, fishery, vessel type, gear, holding facilities and human interaction. Tesco are committed to better understanding and reducing any negative impact of this part of the supply chain and are actively improving our data gathering to identify any further action that is required.

Tesco do not support the sale of live aquatic animals in stores and do not sell live aquatic animals in any stores across our Group.

Additionally, within the TWA standard we require that all handling of farmed aquatic animals is carried out by persons trained in aquatic animal welfare including species specific considerations and compliance is audited. Fasting prior to transport is considered an important factor to mitigate poor water quality in transit which is itself a stressor. However, excessive fast times can impact on aquatic animal welfare therefore, we require that these are kept to a minimum and only implemented under the guidance of a veterinarian. 100% of farmed salmon smolts are free from fasting >72 hours prior to sea transfer. 100% of farmed salmon are fasted <72 hours prior to handling events, excluding harvest (Figure 9). We are aware of and support industry efforts to make improvements in this area such as Seafish best practice guidance for industry initiatives and the crustacean industry welfare hub.

Figure 9: Percentage of Salmon fasted for <72 hours prior to key management events (%)



Red Meat

The cumulative proportion of animals considered not fit for transport, dead on arrival or requiring euthanasia is recorded and monitored to look for seasonal trends, impact of weather conditions etc.

Inter-site variation is a significant aspect which we work with suppliers to understand and address as necessary. Where there has been an apparent increase in total average in any sector this is evaluated further.

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 figure (Figure 11). There are species specific differences in that values are lower in turkeys and ducks reflecting both the relative robustness of each and that typically farms are in closer proximity to slaughter sites.

Overall levels across the broiler (chicken) supply base have remained comparatively static since 2020 while there appears to be a trend reduction in total dead on arrival for end of lay hens.

Figure 10: Cumulative percentage of casualty animals (Cattle, Sheep, Venison)in Tesco UK and ROI (%)

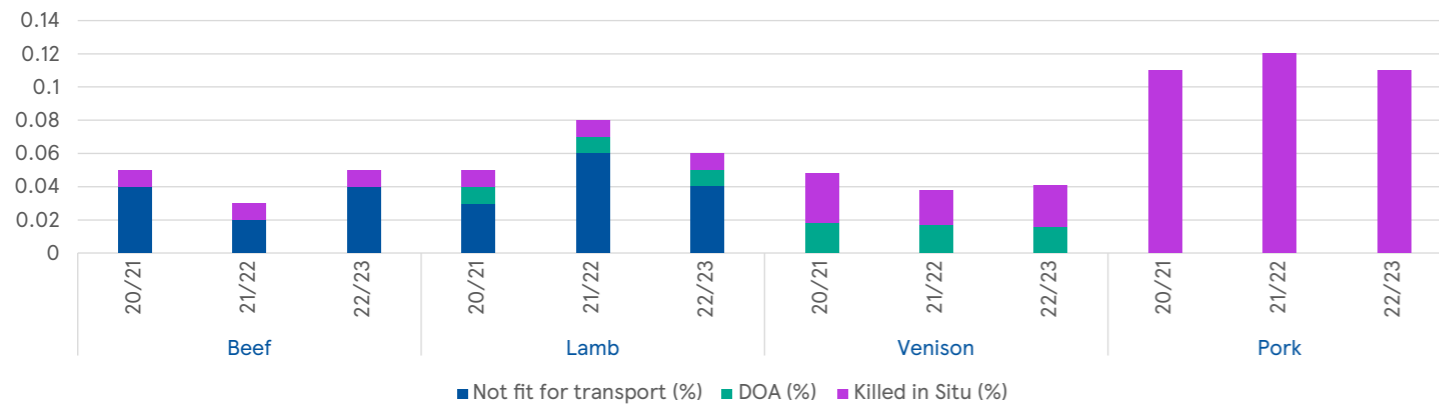
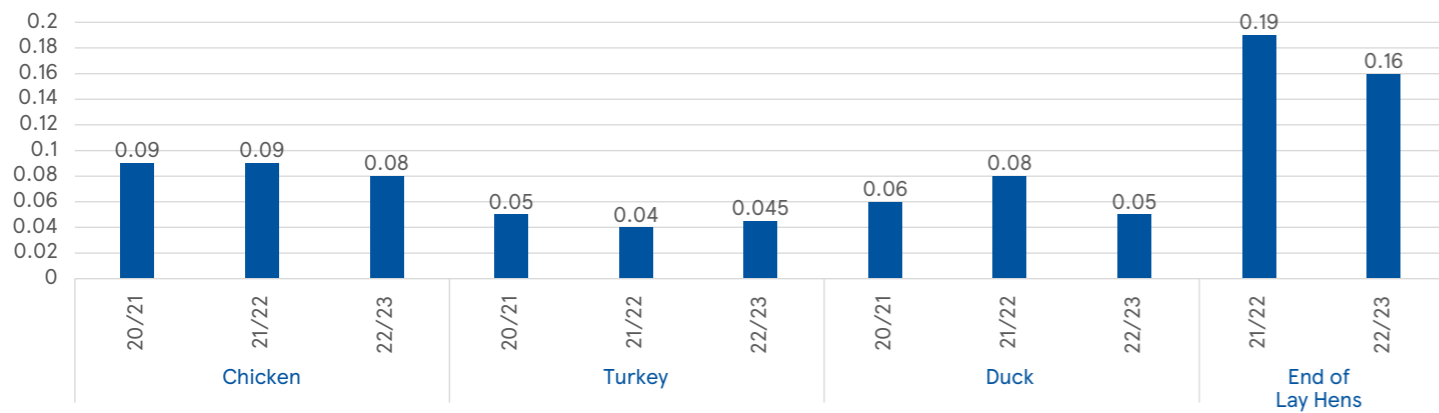


Figure 11: In transit mortality (Poultry) (%)





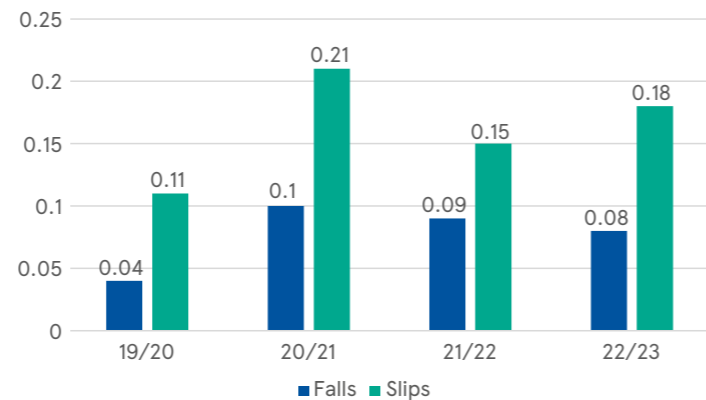
Animal handling.

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 were monitored for cattle and pigs until 2022. However, numbers reported for cattle were both negligible and static and in 2022 the decision was taken to amend outcome measures for cattle and sheep to remove the requirement to report unloading metrics but instead focus on post mortem inspection data as a measure of farm and in transit management approaches.

The percentage of slips and falls across the pig supply base has been comparatively stable for the last 2 years. Accuracy and consistency of reporting is being aided by an increasing number of suppliers adopting AI technology to automate the process.

Figure 12: Percentage incidence of slips and falls at unloading (Pork) for Tesco UK (%)



Goad use

Goad use is prohibited across the Tesco Group for veal, lamb and finished pigs. It is permitted (subject to strict conditions of use) for beef and venison, where the size of the animal and the safety of personnel must be considered when trying to ensure animals are moved with least overall intervention and net welfare impact. Where goad use is high and/or accompanied by other welfare indicators such as bruising, Tesco would require review of handling facilities and practices to resolve any issues. Comparative data sets indicate a consistent (and low) level of goad use in cattle but a continuous reduction in use across the venison supply chain.

Live Clipping

There is an expectation that animals are presented to processing plants at point of unloading in a clean and healthy condition. This is both a measure of animal welfare and a food safety requirement. There are occasions however, where the fleece or hide of an animal is heavily soiled on arrival and some degree of clipping is required. Live clipping is discouraged as it is another handling procedure requiring animal restraint and as such the incidence must be reported. Figures for beef are higher than for lamb but the relative incidence of each is now broadly static (lamb) or continuing to show a trend decrease (beef) year-on-year (Figure 14).

Figure 13: Percentage use of handling aids (proportion of beef and venison requiring goad use) for Tesco UK (%)

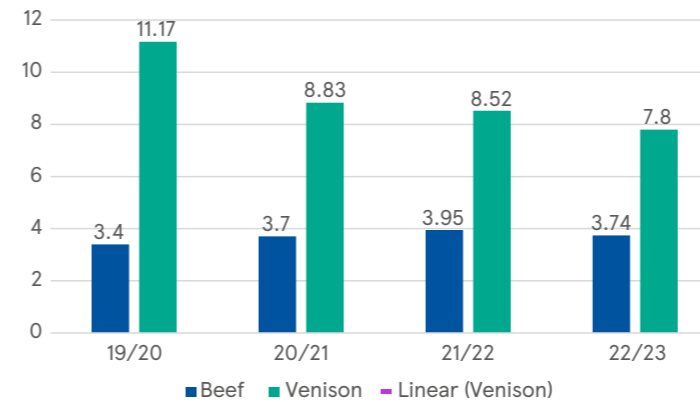
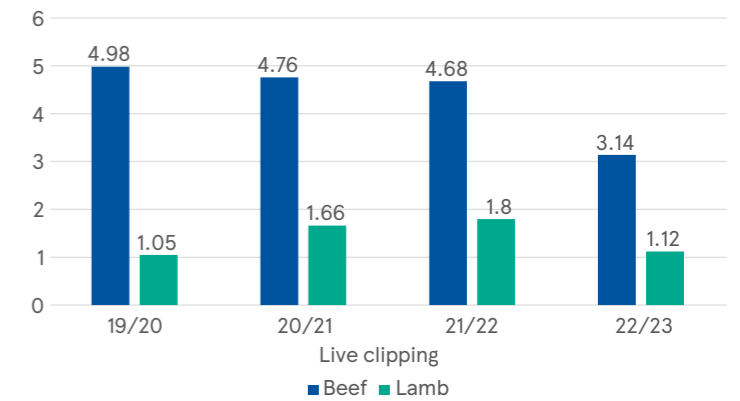
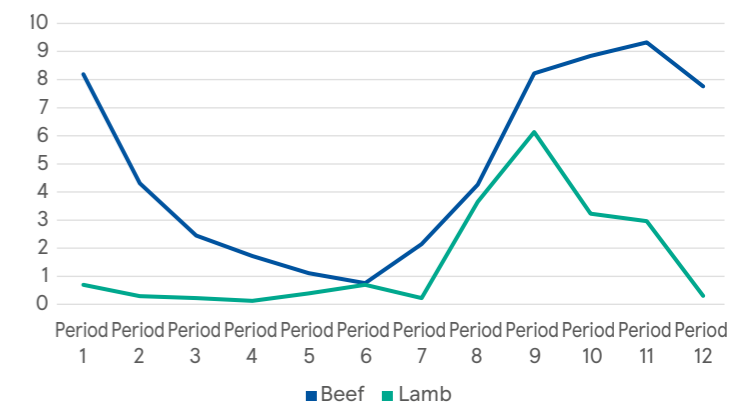


Figure 14: Percentage of animals live clipped at slaughter intake (beef & lamb) for Tesco UK and ROI (%)



Variation tends to be a function of environment (location, housing type and seasonality), geography (high rainfall) and season (autumn/winter) generating periods where live clipping is far more likely compared to the rest of the production year, as illustrated by trend graph (Figure 15).

Figure 15: Seasonal variation in percentage incidence of live clipping (beef & lamb) for Tesco UK and ROI (%)





Slaughter.

The Tesco Group Animal Welfare Policy requires that all livestock species are pre-stunned in accordance with European regulatory requirements (Regulation 1099/2009 EC).

There is 100% pre-slaughter stunning of all terrestrial and finfish species supplying all own label products for Tesco Group.

We do however, in a small number of stores, sell branded meat or host concessions that sell un-stunned halal and kosher meat. This is to serve customers who specifically wish to purchase un-stunned meat. This meat is clearly labelled Halal or Kosher, so that our customers are able to make informed choices. At least 99% of animals destined for Tesco Group (own-label and branded) are stunned before slaughter and this position remains consistent across reporting periods.

While there is currently no statutory requirement for fish to adhere to prescribed methods of stun and slaughter, Tesco Group suppliers of salmon, trout, sea bass, sea bream and pangasius have adopted industry best practice i.e. electrical stunning or automated percussive stunning prior to slaughter. This is applied across 100% of supply base and methods such as chill-kill or gill cut without prior stunning are explicitly prohibited.

After a successful pilot in 2021, we supported the commercial adoption of a novel system of instantaneous electrical stunning for shrimp. While the pilot outcomes are reviewed and commercial adoption is refined, warm water shrimp suppliers continue to use a standardised best practice rapid chill-kill method.

Tesco support academic and industry advances in this area and will encourage uptake when a proven humane method is available. Currently 16.3% of warm water prawns are electrically stunned (Figure 16).

The majority (93%) of all birds processed across Tesco Group are stunned using biphasic or inert gas Controlled Atmosphere Systems (CAS) (Figure 17). This is also the case for our pig supply chain with 92% of pigs processed across Tesco Group being stunned using CAS.

Tesco supports initiatives to develop commercially viable alternatives to the use of high concentration carbon dioxide during stunning as long as they ensure the same handling benefits and guarantee of irrecoverable stun.

Figure 16: The percentage of warm water prawns (Tesco UK and ROI) stunned by stated method

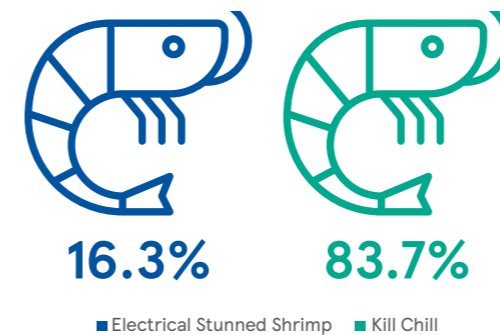


Figure 17: The percentage of poultry stunned by stated method across Tesco Group (%)

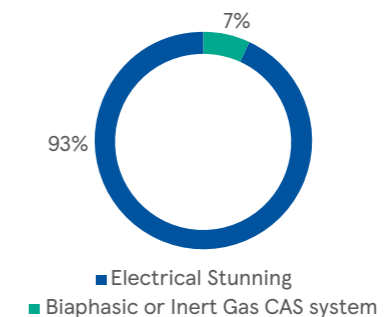


Figure 18: The percentage of pigs stunned by stated method across Tesco Group (%)

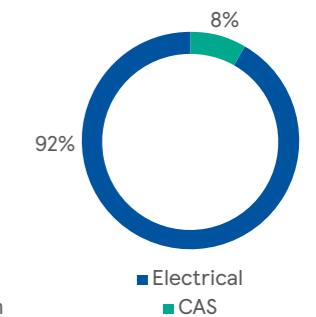


Figure 18: The percentage of animals pre-slaughter stunned across Tesco Group (own-brand %)



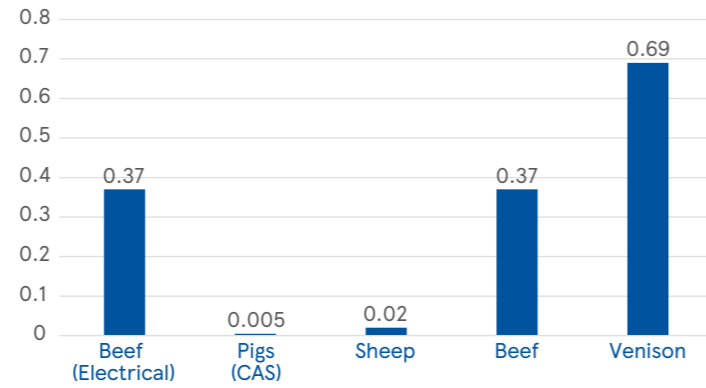
Secondary stunning

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 the majority of our pig and poultry supply chains. We recognise the debate in relation to the use of Carbon Dioxide in CAS systems for pigs but in the absence of commercially viable, scientifically validated alternatives, Outcome Measure data continues to illustrate the net benefits of the system (relative to electrical stunning) in terms of effectiveness of primary stun. Where electrical or percussive systems are used then our suppliers report on the percentage of animals that require a secondary or 'back-up' stun.

The higher figures seen in our beef and venison supply chains reflect a proportion of 'health and safety' stuns to minimise spontaneous post-stun movement. In 2022,

Figure 19: Percentage incidence of animals requiring secondary stunning for Tesco UK (%)

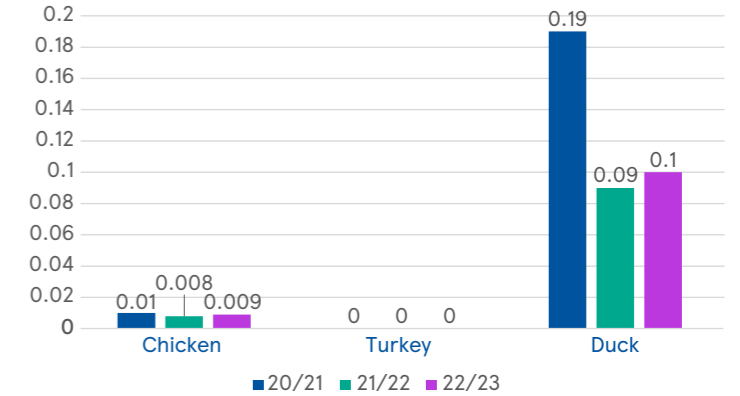


differentiation of secondary stuns in terms of 'health and safety' as opposed to 'stun failure' has been included in reporting requirements to provide absolute visibility and better cross-species comparative data. Importantly, however there has been a continued reduction in the incidence of secondary stunning in the 2022/2023 reporting year across every one of the red meat and pork species sectors ranging from 25-50% reduction in what were already low figures (Figure 19).

Electrically stunned poultry may show some post stun responsiveness in a minority of cases. Similarly, where a bird misses the automated neck cut, a manual back up will be used to ensure that 100% of birds are effectively stunned and slaughtered. Both these parameters are carefully monitored to ensure animals are insensible throughout (Figure 20).

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). However, duck physiology makes the application of CAS systems more difficult, and the higher responsiveness figure is associated with the necessary use of electrical stunning systems. There has nevertheless been a significant reduction in post-stun responsiveness within the duck supply chain.

Figure 20. Percentage of birds requiring secondary stunning in poultry (chicken, turkey & duck) (%)



We are committed to trialling suitable methods of stunning when they become commercially available.



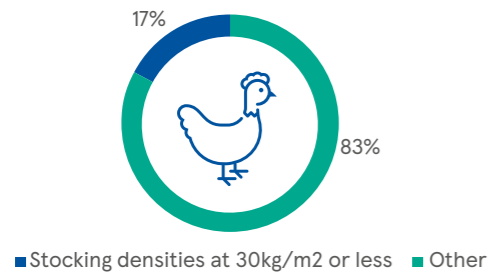


Cross-species enrichment.

The provision of an environment that supports the display of a range of natural behaviours is crucial to the mental and physical well-being of animals.

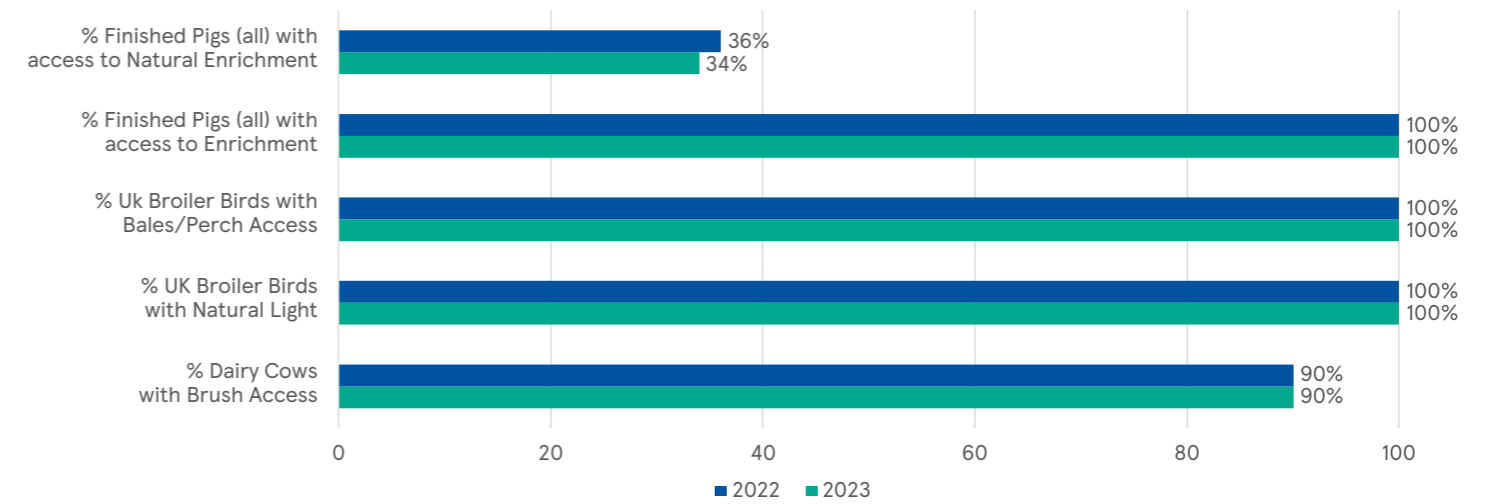
The table (Figure 22) gives an overview of some of the enrichment types used across our supply chain.

Figure 21: Percentage of broiler birds stocked at 30kg/m2 or below for Tesco UK (%)



Pig enrichment must satisfy key characteristics to be considered optimal. 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 pigs supplied into own brand product across Tesco Group are provided with enrichment and all of our Finest* pork is finished in straw-based systems satisfying the criteria for optimal enrichment at each life stage. Additionally, all of our pork sourced from Germany for Tesco UK is provided with natural enrichment sources e.g. straw, hay, shavings or wood, reflecting in-country legislative requirements.

Figure 22: Percentage provision of environmental enrichment in Tesco UK

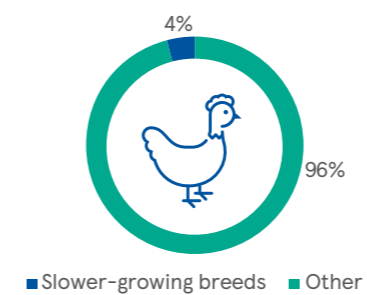


Enhanced Welfare Systems

Tesco UK have introduced a 'Room to Roam' chicken range, in addition to the existing higher welfare offerings of Finest* Free Range chicken and Organic chicken. 'Room to Roam' systems use a slower growing bird, which have a maximum stocking density of 30kg/ m2 or below. Within the Tesco UK global supply base, 17% of broiler chicken comes from birds raised at or below stocking densities of 30kg/m2 (Figure 21), and 4% from slower-growing breeds (Figure 23).

Within Salmon organic accounts for 0.6% so would equate to the proportion stocked at 10kg/m3 or lower.

Figure 23: Percentage of Tesco UK broiler chicken sourced from slower-growing breeds (%)





Species Deep Dive.

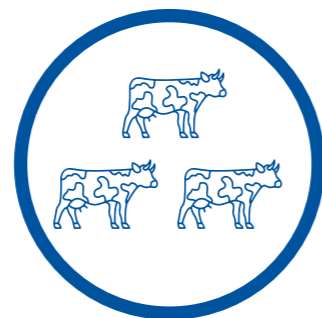
Dairy cattle

Members of the Tesco Sustainable Dairy Group (TSDG) and Sustainable Cheese Group (TCG) are independently assessed at farm level to track and trend performance against key welfare outcome measures and targets.

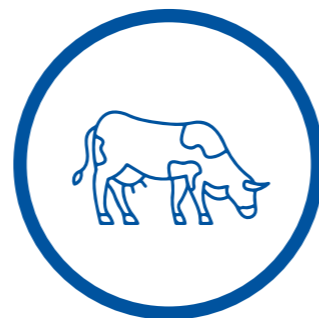
Our TSDG supplies all of our liquid fresh milk into Tesco UK

There is a high proportion of farms meeting compliance targets, indicating that key management considerations such as nutrition, housing and health care are consistently being met. It is encouraging that despite targets being increased year on year, the proportion of TSDG producers meeting those targets has remained statistically unchanged (Figure 24) indicating relative improvement. In addition to this we can verify that 0% of TSDG and TCG animals are housed in fully slatted systems.

Table 3: TSDG Welfare Outcome Measures



Mobility (lameness)
Herd average <20%



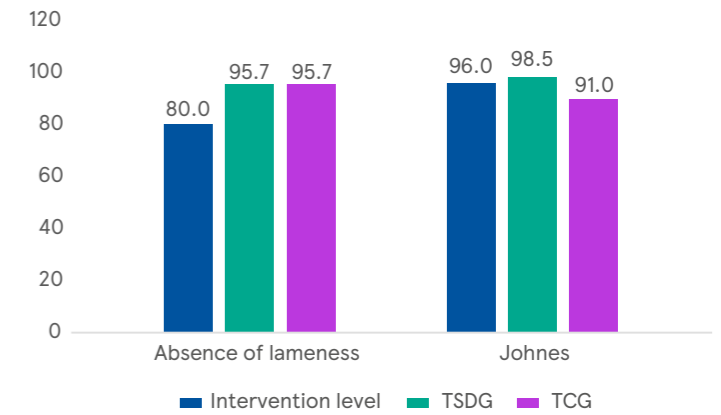
Johnes Disease
100% of farms with Johnes disease not present in 98% of herd

Poultry

Mortality

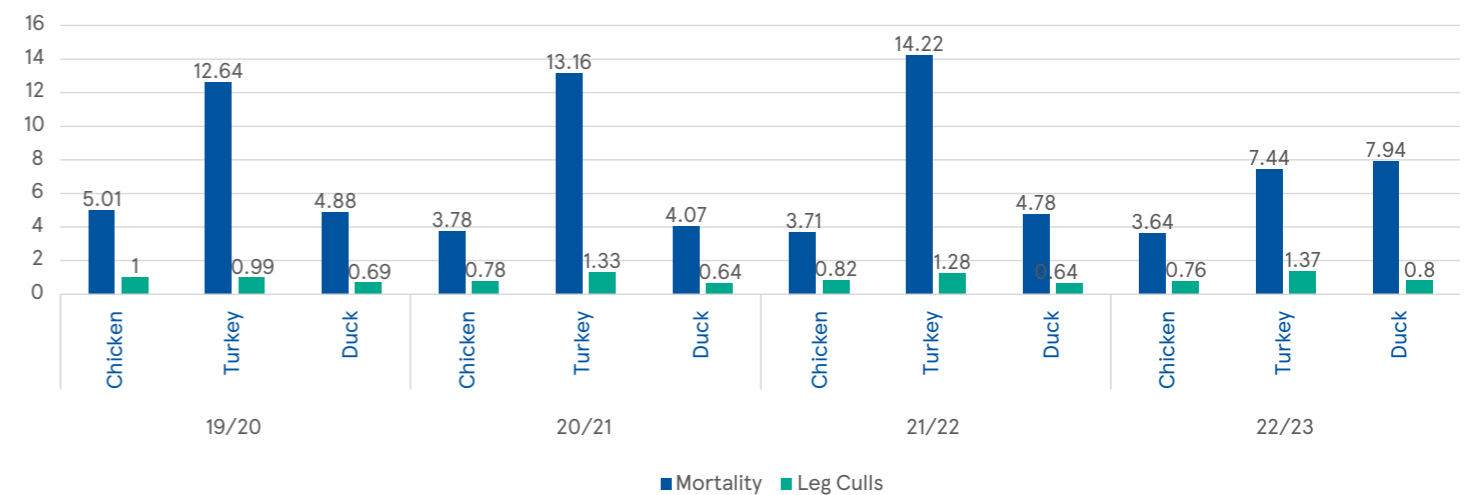
Mortality is the measure of those animals that die or are euthanased on farm as a consequence of disease or injury. Mortality levels vary with species and external factors such as seasonal fluctuation, health challenges and a range of environmental conditions, which in turn can be a consequence of geography. 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 supported across the supply base through the application of targeted health plans. Mortality data is also reviewed within the context of antibiotic trends. The Tesco Antibiotic Commitments emphasise responsible use (and specifically no prophylactic or routine metaphylaxis), but this must not be at the expense of bird welfare.

Figure 24: Proportion of TSDG and TSG dairy farms meeting compliance targets 2022/23 (%)



By tracking, trending and correlating mortality and antibiotic data we can ensure there isn't a restriction in use of antibiotics at the expense of bird health.

Figure 25: Percentage mortality and incidence of leg culls within Tesco UK & ROI poultry supply chains (chicken, turkey & duck) (%)



Leg culls associated with leg weakness

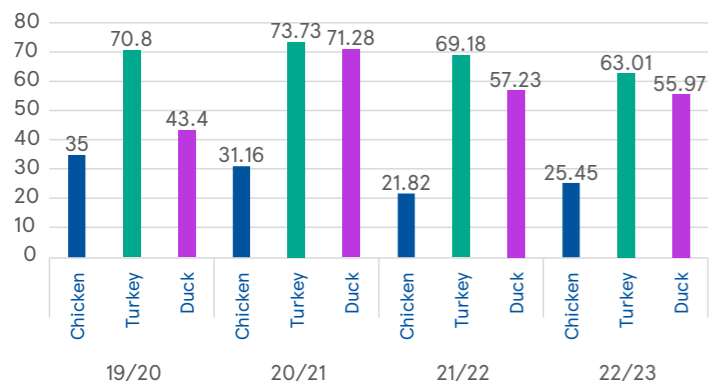
A specific data sub-set within mortality figures relates to the proportion of birds requiring culling for reasons associated with leg weakness. The percentage of birds culled for leg issues is consistent across species and is fairly static and remains proportional with any changes in absolute mortality levels. It also indicates that sites take 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 (hock burn) 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 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

Figure 26: Percentage incidence of pododermatitis within Tesco UK & ROI poultry supply chains (chicken, turkey & duck) (%)



It is important to note that Tesco do not recognise the incidence of an acceptable level of pododermatitis or hock burn 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.

There has been a relative reduction in pododermatitis in broiler chickens but this average includes considerable geographic variation. It has long been known that the levels of pododermatitis are higher in the UK and Northern Europe compared to Thailand. A similar variation has driven the apparent increase in levels in ducks in the 2022/23 reporting period, as historically the only 52-week supplier was located in Thailand with the fresh seasonal supply base coming from the UK. There is now UK production received on a 52 week basis.

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 to minimise occurrence. Feather coverage is assessed and scored in all commercial egg laying flocks supplying into Tesco UK and ROI from 40 weeks of age. This enables producers to monitor conditions or behaviours that may result in feather loss

Figure 27: Percentage incidence of hock burn (chickens) and breast blister (turkey) within Tesco UK and ROI supply chains (%)

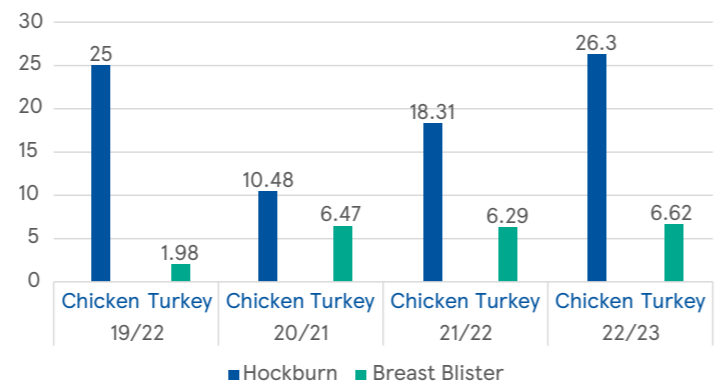
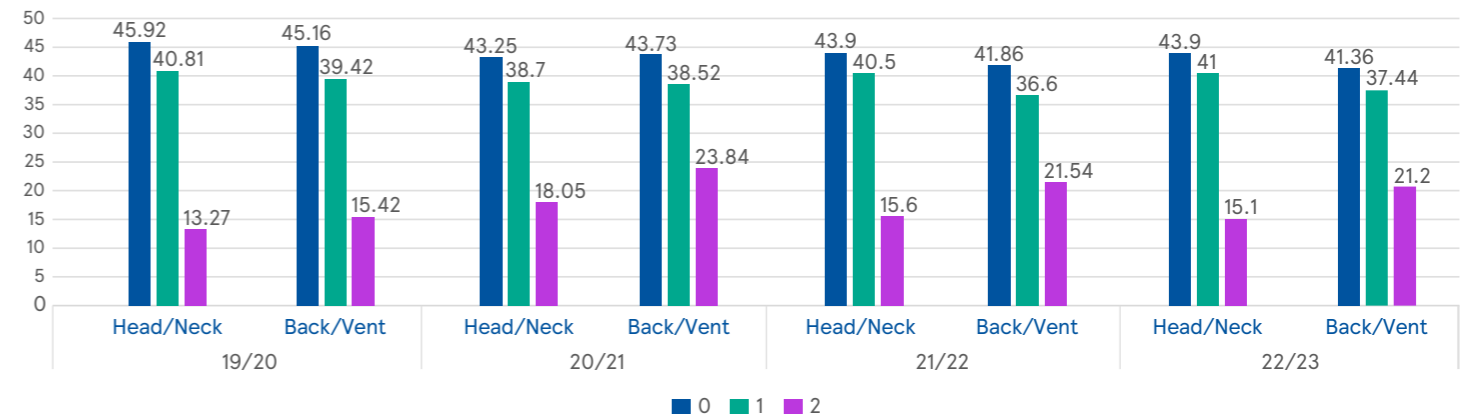


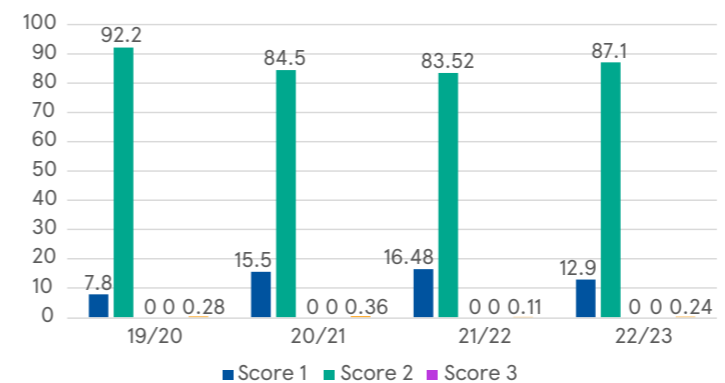
Figure 28: Feather coverage in Laying Hens in Tesco UK and ROI (%)



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. Most 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 had been developed and delivered in the 2020/21 reporting cycle to ensure absolute consistency of approach by suppliers and 3rd party assessors.

Feather scores have remained remarkably consistent between 2021/2022 and 2022/2023 reporting periods suggesting a broad consistency of management approach and bird health status across the supply base as a whole (Figure 28).

Figure 29: Method of beak treatment and associated outcomes across Tesco UK and ROI (%)

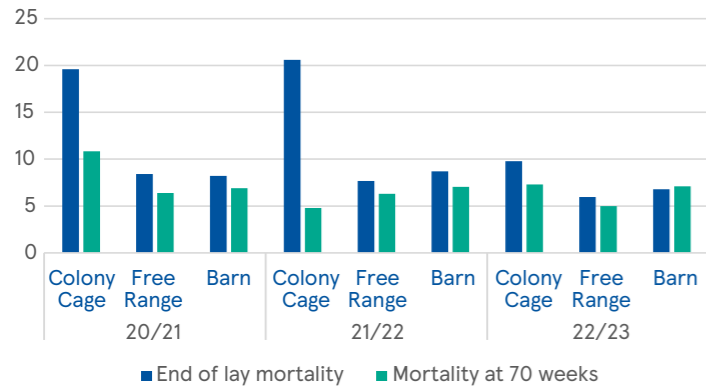


Beak treatment

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 (Figure 29). Beak treatment should be avoided or only use methods which least effect bird discomfort and result in minimal damage. All birds either receive no beak treatment (score 1) or are treated at day old in the hatchery (score 2). No birds are beak treated on farm (score 3) or because of emergency intervention (score 4). The proportion of non-beak treated birds has declined slightly. This includes derogations issued due to concerns regarding organic/free-range flocks likely to be subject to seasonal housing order as non-treated birds are at increased risk of demonstrating injurious behaviours. This has been cited as a reason for taking birds out of lay earlier than intended and is reflected in the reduction in average flock age in free-range systems.

Across the Tesco Group, approximately 5% of laying hens would be free from beak treatment.

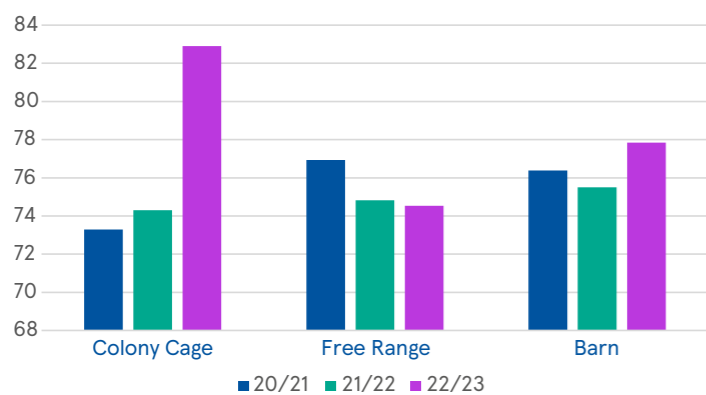
Figure 30: Flock Mortality at 70-weeks for laying hens supplying Tesco UK and ROI (%)



Mortality – laying hens

As with other poultry species Tesco collates mortality information in relation to commercial laying flocks. This is to understand seasonal trends and those factors which may result in bird losses, specifically disease challenge. However, there are several ongoing changes within the egg supply base which have impacted on reporting metrics. As the proportion of colony cage production decreases and the proportion of barn production increases (consistent with progress on Tesco cage-free commitment) we have asked suppliers to report each method of production separately.

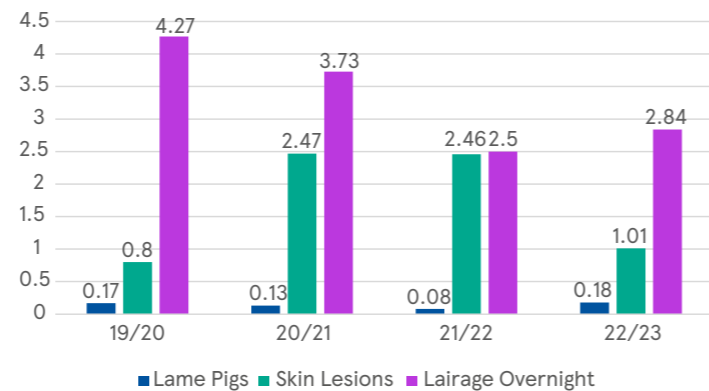
Figure 31: Average age of laying hen flocks at depletion supplying into Tesco UK and ROI (%)



Pigs

Lameness is recognised as a key welfare indicator in pigs and reflects historic housing and handling conditions. Skin lesions or ‘fight damage’ can arise due to mixing unfamiliar groups of pigs or 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 minimum numbers are held overnight and don’t exceed 25% 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 (Figure 32) indicating housing and transit handling are to a good standard.

Figure 32: Pork Outcome Measures for Tesco UK and ROI (%)

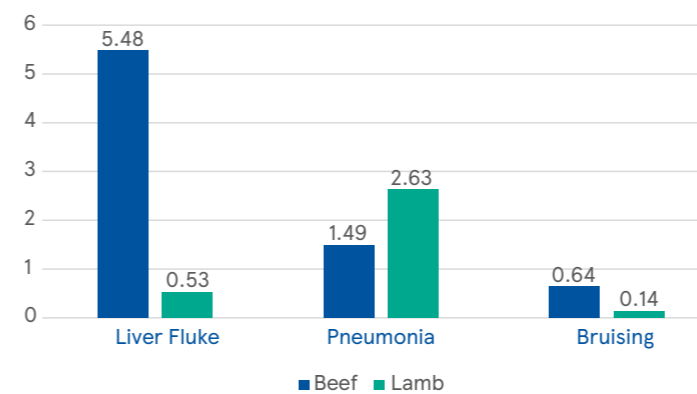


There has been a year-on-year reduction in both the incidence of lame pigs and the proportion of pigs lairaged overnight. It was unclear why the proportion of skin lesions had increased in 2020/2021 and has been maintained at a similar level in 2021/2022 but levels have resolved to approximately 2019 levels again.

Beef Cattle & Lamb

Post Mortem inspection data is of increasing value in terms of providing indices reflecting animal experience on farm (e.g. incidence of pneumonia/liver fluke) and/or transit and handling (e.g. bruising). These metrics were introduced into the Tesco Outcome Measures programme for cattle and sheep in 2022 (Figure 33)

Figure 33: Post- Mortem Inspection Data in Red Meat for Tesco UK and ROI (%)



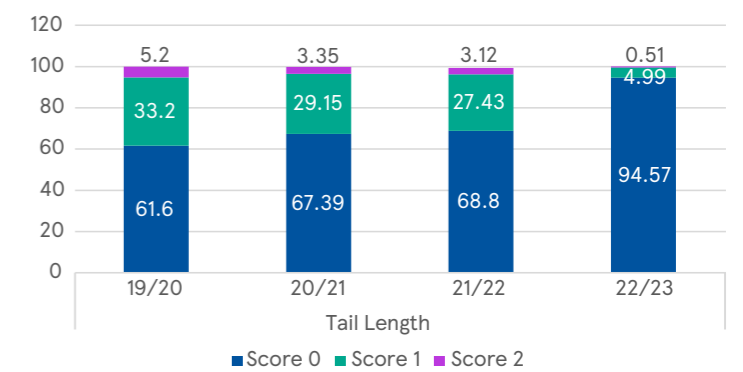
There are distinct regional observations in the incidence of fluke and it is notable that incidence is much greater in beef than sheep (reflecting relative age at slaughter and seasonal influence of fluke exposure). Conversely lung pathologies associated with pneumonia occur more frequently in sheep (potentially associated with a greater proportion/duration of housed accommodation). Bruising occurs infrequently in both.

Lamb

Wherever possible we support a move away from processes such as tail docking and castration. However, this must be balanced against the potential welfare impact of associated welfare challenges in a pasture-based system, 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, there has been a proportional year-on-year increase in the number of animals with tail score 0 (long dock or no dock) and a concomitant reduction in those which score 2 (Figure 34). Score 2 has been exclusively associated with the New Zealand supply base and reflects the challenges in highly extensive systems where mulesing is absolutely prohibited. There has however, been a very significant improvement in docking length specifically across the New Zealand supply base in the last 12 months and this has driven the increase of over 25% in score 0. Score 2 is now virtually negligible.

Figure 34: Relative percentage of tail length scores for lambs supplying into Tesco UK and ROI (%)





Aquatic Animals

Shrimp

There is increasing focus on the welfare of aquatic species including decapod crustacea such as shrimp. Tesco has held and implemented farm welfare standards in shrimp since 2014. These standards cover requirements for welfare of shrimp during the hatchery, transport, farming and harvest. Our farmers report on their performance in moving toward ablation free monthly and we are happy to say there has been significant progress with 100% of shrimp from Central America being ablation free. Other regions are moving toward this target (figure 35). From an

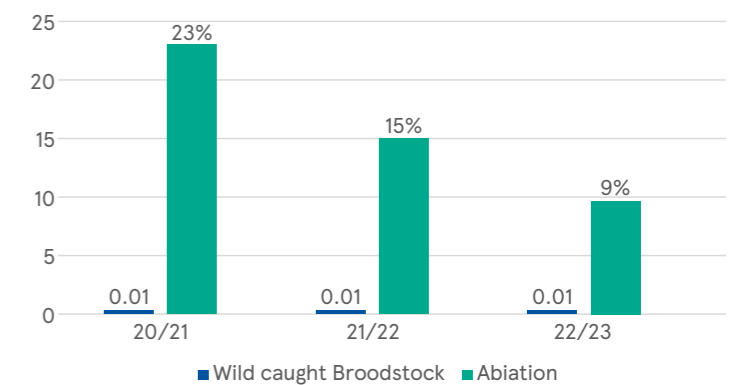
initial starting point in 2016 of 100% ablation, in 2022/23 our supply chain reported ablated broodstock to be 0% in Central America, 18% in Thailand and 45% in Indonesia. Wild caught broodstock is a minimal percentage of total and is associated with Panneus Monodon (Giant Tiger Shrimp) production in extensive systems. There is no ablation of wild caught broodstock.

We recognise that Southeast Asian shrimp producers in our supply chain are using a proportion of ablated broodstock. We are working with producers and standards bodies to understand the challenges limiting a move to 100% ablation free and have a target to facilitate this

move in line with industry. We will achieve this through working with producers and encourage sharing of best practice. Where ablation does occur we require that this is performed by individuals trained in shrimp welfare and to follow best practice welfare procedure.

we have an aim to survey our wild fishery supply chain to understand the prevalence of impactful procedures such as declawing and claw nicking, which, if found, we will then form an action to address.

Figure 35: Shrimp broodstock welfare indicators (%)





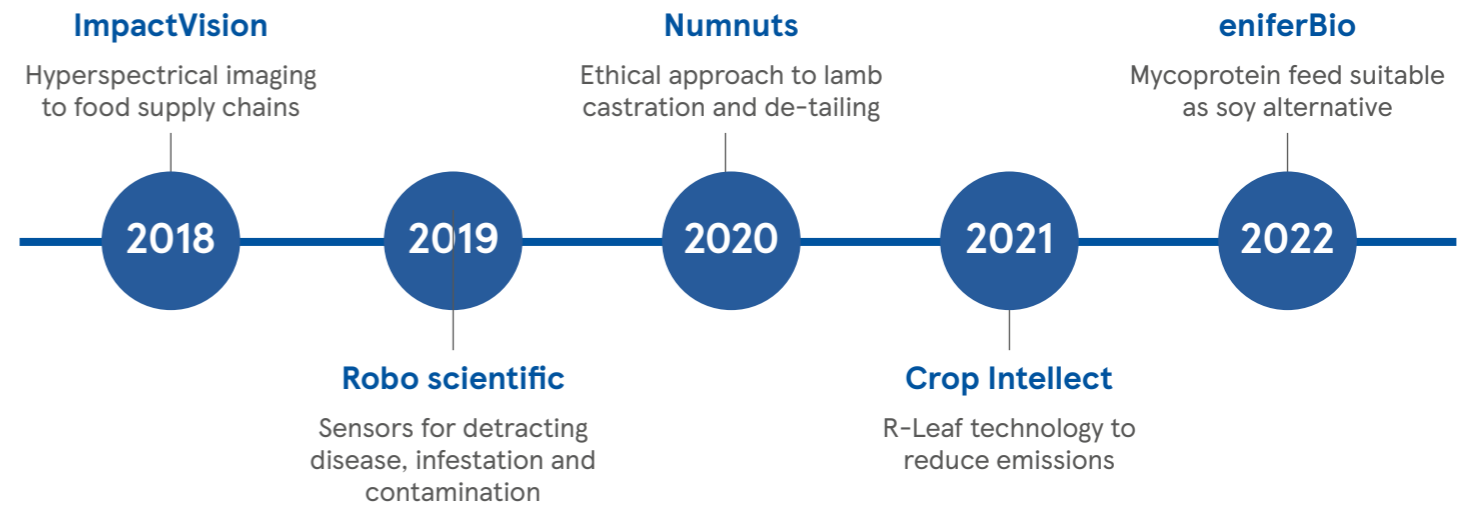
Innovation.

We believe innovation, research and development are integral to ensuring 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.

Enabling innovation sits across a number of key workstreams including our Tesco Sustainable Farming Groups, supporting Government Innovation Centres, 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.

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 several finalists, have gone on to set up trials in our supply base. Crop Intellect who won the 2021 T-Jam are now part of Tesco's low-carbon fertiliser trial, which is a large-scale commercial field trial with five major fresh produce suppliers.



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 are a member of the of the Centre of Innovation Excellence in Livestock (CIEL), a £70 million research hub opened in 2016, and we are actively working to develop CIEL through our participation on the Interim Management Board. Livestock health and welfare continues to be a priority area of focus. We are a partner of Crop Health and Protection (CHAP) and member of the Scottish Aquaculture Innovation Centre (SAIC). We also have representation on the BBSRC Animal Welfare Research Network.

Tesco Supplier Network

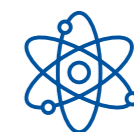
Keeping close channels of communication with our many suppliers and producers around the world is an essential part of how we trade responsibly. In part this is made possible by our online supplier community, The Tesco Supplier Network, which give members a direct line to Tesco colleagues, industry experts 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:



Share knowledge, best practice, and expertise



Build a more collaborative supply chain



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.



Celebrating success in our supply chain.

In 2022, we received recognition from **Compassion in World Farming (CIWF)** for leading the way in crustacean welfare. Specifically for the introduction of a humane slaughter system for Whiteleg Shrimp (pennaus Vannamei) into commercial practice.

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 public to their farms – both virtually and in person – to educate them on food production standards, particularly animal health and welfare.



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.



In 2021, 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**. 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.



Example publications

AWRN 2023: Animal Welfare Science and Society

Exploring The Motivation Of A UK Retail Beef Sustainable Farming Group To Implement Preventative Health And Welfare Strategies

AWSELVA Conference 2023: The Economics of Animal Welfare in Financially Challenging Times

Reframing Welfare metrics as Farm Gate Losses

HSA International Conference: Livestock Welfare during Transport, Marketing & Slaughter 2022

The Assessment Of Dry Electric Stunning As A Commercial Method For The Humane Dispatch Of Farmed White Leg Shrimp (*Litopenaeus Vannamei*) (2022)

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

Additionally, we showcase the commitment and best practice of our suppliers and the care shown to animals through our **Tesco blog** and our Tesco Magazine. For example, the work undertaken to progress our **2030 commitment** to responsible sourcing and certification of seafood.

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