

FARMANIMAL WEIGE SUMMARY REPORT

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This report summarises the findings on a global animal welfare review across six livestock sectors, carried out by Evidence Group on behalf of National Farmers Union (NFU).

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Executive Summary

UK Standing on Farm Animal Welfare

There is little doubt that the UK offers some of the best farm animal welfare in the world, and this should not be downplayed. The UK has one of the most robust and comprehensive legal frameworks protecting animal welfare, extremely mature and well-developed industry bodies that recognise the importance of animal welfare, and a significant number of credible quality assurance and welfare schemes and/or initiatives. In general, the principal producing and exporting countries located in South America, North America, Oceania and Asia have a much less developed legal framework compared to the UK.

While UK legislation relating to animal welfare is more comprehensive than most other major exporting countries, government-lead Codes of Practice exist in some nations (including the UK and NZ) which make non-enforceable recommendations towards animal welfare. This leaves a grey area under which some nations could argue their case for having high levels of welfare, although it is unlikely any could demonstrate degree of compliance.

Other European States

The comparison of UK welfare standards with other European nations is unsurprisingly nuanced, given that a reasonably comprehensive set of legislative requirements are demanded of EU members. In broad terms the UK, alongside some of the Nordic countries, goes noticeably beyond baseline legislation in a number of areas across multiple sectors. While significant, to non-European nations with less developed welfare legislation and schemes, they could appear trivial, especially as it is very difficult to quickly or objectively compare standards. There are a number of well-developed assurance schemes within European countries that would compare reasonably well to UK legal and voluntary assurance scheme standards.

South America

South American countries also offer little protective legislation for animal welfare. While there has been some engagement with international quality assurance/welfare schemes, adoption of these is thought to be relatively limited in absolute terms. For beef, the principal livestock product export, the use of extensive ranching systems again resonates with most consumers, although the challenges of maintaining adequate nutrition and water access, shelter, stress during mustering, and a lack of pain relief during routine procedures/mutilations are unlikely to be appreciated. While extensive systems are promoted, there has been an increasing move to finishing beef in feed-lot systems.

Australasia and Oceania

Australia and New Zealand are significant exporters of milk produce, beef and lamb. While their national legislation is lacking compared to the UK, they have well-organised industries with a number of quality assurance/welfare assurance schemes. With agricultural exports a significant part of the national economy and good industry organisation, they are likely to be extremely reactive to market demand changes with respect to welfare.

North America

The USA is both a significant producer of, and significant exporter of all livestock products, with the exception of lamb. Despite its place as one of the world leading developed economies, it's libertarian approach to regulation and systems of government (i.e. Federal vs. State legislation) has resulted in a surprising gap in terms of animal welfare legislation, which appears to lead to a lower baseline of welfare standards compared to UK standards that are frequently actualised. However, as a well organised industry sensitive to a wide variety of consumer requirements, there exist a large number of small, regional quality assurance/ welfare assurance schemes in the US, alongside a small number of large-scale initiatives. These initiatives are likely to be market responsive if suitable opportunities present.

Asia

There is a relative paucity of protective legislation for animal welfare in most Asian countries, although individual nations such as India provide notable exceptions. While it is difficult to objectively benchmark animal welfare due to a lack of universally agreed standards and a lack of available data, personal experiences suggest that animal welfare in general does not carry the same priority as in Western European culture.

African Nations

The welfare of African livestock, of which small and large ruminants traditionally play a significant role, would be considered unfavourable if framed in, or compared to, a European context. This does not necessarily diminish their importance to livestock keepers, and many of the welfare concerns relate to the challenging environment under which many are kept. While there are examples of individual countries that have developed export industries, most African nations are importers of commodity livestock products.

Protecting the "public good" of Farm Animal Welfare

Research suggests that when people are acting as citizens, they consider animal welfare as important and something they wish to see promoted (either from anthropocentric or zoocentric standpoints). However, when acting as consumers or purchasers of livestock products, animal welfare is likely to represent only one of several considerations at the point of purchase. Many consumers cope with the "guilt" of buying livestock products (in particular those associated with reduced welfare) by either mentally dissociating the product with the animal from which it originated, or by convincing themselves that they cannot directly influence welfare.

From this information, it can be argued that in protecting UK consumers (and producers) from lower-welfare, imported livestock products, there is a need to emphasise and promote legislative equivalence as a condition of trade. As welfare is acknowledged as a public good, but an issue which consumers do not want to navigate at the point of purchase, ensuring approximate equivalence of welfare standards to domestic production is a necessary part of the government providing and protecting this public good. Approximate equivalence still allows for consumer choice either through selection of country of origin (e.g. as a shortcut to specific welfare standards), or through quality assurance/welfare assurance schemes with associated labelling and/or supply stewardship. This could potentially walk the line between maintaining a functional and competitive market and managing market externalities.

While the World Organisation for Animal Health (OIE) Animal Health Codes may be enforceable as trade restrictions between OIE members who are also World Trade Organisation (WTO) this does not extend to animal welfare. The prevailing opinion is still that trade restrictions applied on the basis of animal welfare are likely not to be enforceable under the General Agreement on Tariffs and Trade (GATT). This has come under question recently, however, after a successful ruling in favour of the EU in their ban of seal products from Norway and Canada was upheld, under the 'public protection of morals' exception in Article 20(a) of GATT. Clearly unless this exception can be successfully evoked in other circumstances, EU exit and subsequent free trade agreements represent a real threat to the public good of farm animal welfare.

Welfare as a Route to Market Access

The UK currently enjoys one of the highest levels of welfare internationally. As the livestock revolution continues, it is most likely that we will see a decrease in demand for livestock products in the most developed/post-industrial economies (as identified by "Engel's law") but demand for high-welfare, environmentally-sensitive products increase in these nations. For developing economies reaching maturity, there will most likely be more emphasis placed on the provenance of products, including the welfare of the animals involved in the production systems supplying these products. It is therefore not unreasonable to assume that there will be an increasing global demand for high welfare products as well as, naturally, opportunities in meeting global demand for the basic livestock-product commodity markets. With an export-orientated outlook, national legislation still provides a potential mark of welfare quality when negotiating trade relationships at a national or international level, and should be complementary to industry-lead market initiatives.

While there are clearly a number of UK producers who can compete with world market prices for livestock products through efficient, low cost of production systems, this is unlikely to be the norm; the UK does not, in general, appear to hold a comparative advantage in the production of basic livestock commodities. As a result, a focus on any value-added markets would seem a more realistic prospect for the UK in terms of international trade.

While 'higher welfare' markets may exist, they will likely be competitive. Smaller countries with high welfare standards (e.g. Sweden and Switzerland) and established international and regional Farm Assurance schemes will no doubt be keen to retain or develop market access.

Summary

Farm animal welfare involves complicated issues. While several models for assessing welfare and other ethical issues of animal production exist and are utilised by industry, both decision-makers and citizens tend to simply conflate 'naturalness' with high welfare.

In the global context, the UK's regulations set, and British livestock farmers operate to, amongst the best animal welfare standards. Voluntary codes of practice and a well-developed system of farm assurance further build on legislative standards to offer a high level of welfare protection.

The primary trading competitors for livestock products (such as NZ, Australia, USA and South America) have less well developed animal welfare regulations than those in the UK, but have organised industries that may quickly respond if opportunities to supply the UK market present. While most EU countries would be a little way behind UK standards, differences are usually relatively small. Animal welfare is of real concern to UK citizens and should be regarded as a public good. As such, it cannot be effectively managed by the market alone and requires central regulation. Ensuring equivalence of welfare standards in imported goods is essential to protect UK citizens and producers, but there is limited precedence for this under free trade agreements.

High animal welfare standards confer some opportunities for growing UK livestock exports to discerning markets, although the size of these markets is uncertain and are likely to be competitive.

UK livestock sectors vary in their approach to animal welfare, but all sectors need to keep moving forward to keep pace with or ahead of international standards. In particular, a move away from basic 'input measures' and towards more objective and quantifiable 'outcome measures' of welfare.

Defining Animal Welfare

While there are a significant number of persons throughout history that have recognised and campaigned for animal welfare, it is only relatively recently that it has been widely recognised as a social good.

There is no universally agreed definition of what constitutes animal welfare, but the World Organisation for Animal Health's (OIE) is the most accepted for practical purposes and is effectively a summary of the Five Freedoms of animal welfare, which were initially codified by the Farm Animal Welfare Committee (FAWC):

- 1 Freedom from thirst, hunger and malnutrition
- 2 Freedom from discomfort and exposure
- **3** Freedom from pain, injury, and disease
- 4 Freedom from fear and distress
- 5 Freedom to express normal behaviour

The majority of welfare schemes, and much international legislation, are modelled around the Five Freedoms. Despite their popularity, the Five Freedoms have received some criticism that they focus on only the negative aspects of animal welfare, and that their fulfilment may not imply a positive experience of life. FAWC responded to these issues in a 2009 report, which outlined a framework for analysis on animal welfare and outlined a position that farm animals should at least:

"Have a life worth living, from their point of view, and that an increasing proportion should have a 'good' life." While animal welfare science is still often framed around the Five Freedoms, the ethical aspects of animal welfare are often examined around the "Three Circles" model, which looks at welfare issues in the context of:

Affective State

examining the positive and negative emotional states of animals

Natural Living

focusing on the ability of animals to lead a reasonably natural life

Basic Health and Functioning

essentially the effects on physical health and fitness

These different models and approaches are important to consider, as different stakeholders and cultures will tend to use differing frameworks to make judgements on what is good or 'higher' animal welfare.

There is a large body of research that has examined consumer attitudes towards animal welfare (e.g. Clark et al., 2016¹). In general, most consumers have a poor understanding of farming and production systems, but understand that there are both physical and psychological aspects to animal welfare, and acknowledge relationships between health and welfare in animals and potential cost and benefits to themselves. While there is clear variation as to what constitutes good welfare, the priorities are considered to be humane treatment and 'naturalness' – often perceived to be aspects of extensive systems but not systems that improve aspects of production such as hygiene.

1. Clark et al. (2016). A Systematic Review of Public Attitudes, Perceptions and Behaviours Towards Production Diseases Associated with Farm Animal Welfare. J Agric Environ Ethics 29:455

International Animal Welfare Law and Agreements

European Union Animal Welfare Law

The EU is unique in having successively introduced an international legal framework for animal welfare and enshrining animal sentience (White, 2013²).

The EU has a wide range of legislative provisions that safeguard animal welfare. Most EU laws concerning animal welfare are Directives which are binding and form an effective baseline for member states. A number of countries have additional legal requirements for animal welfare that exceed this baseline, which may be because:

- They were present before the relevant country gained EU membership
- The introduction of relevant Directives and Regulations followed national legislation
- National interests and values exceed baseline legislative requirements

The European Commission has expressed an intention to move to "science-based animal welfare indicators as a possible means to simplify the legal framework" which is likely to translate to quantifiable, outcome-based welfare indicators developed by the European Food Standards Agency. This is likely to be a slow process, but should it succeed there will be potential implications for EU trade with third countries such as the UK.

World Organisation for Animal Health

The World Organisation for Animal Health (OIE) is a globally-reaching organisation with the goal of control and prevention of animal disease. They have put together Animal Health Codes (inclusive of welfare) which may be enforceable as trade restrictions between OIE members who are also World Trade Organisation (WTO) members, the WTO does not extend its recognition of the OIE as the international standard-setting body for animal health to animal welfare. The prevailing opinion is still that trade restrictions applied on the basis of animal welfare are likely not to be enforceable under the General Agreement on Tariffs and Trade (GATT). This has come under question recently, however, after a successful ruling in favour of the EU in their ban of seal products from Norway and Canada was upheld, under the 'public protection of morals' exception in Article 20(a) of GATT. It remains to be seen if OIE standards on animal welfare will be included by the WTO.

DAIRY Key Findings

Economic Landscape

- In 2014 the UK was the 10th largest producer of milk in the world; the national milking herd has reduced from 2.1 million to 1.9 million adults but yearly output per cow has increased from 7,000 to 7,900 litres which has therefore resulted in a net increase in national milk production.
- The average cost of production in UK dairy systems is estimated to be relatively high compared to many other European nations, and international exporting countries; all but the most competitive farms would struggle to compete with world prices. The UK market is therefore likely to be restricted to domestic supply and to high end/high value products for domestic consumption and export. This is synergistic with higher welfare aspirations, which could be used to promote or support high-value, export-orientated products such as regional or long-maturation cheese.
- The high price of land in the UK (and to a certain extent labour) and nature of agricultural land ownership means that there is unlikely to be significant for expansion of milk production via a low-input, low-output dairy systems (grazed).
- These changes may have implications for potential export opportunities – attitudes towards grazing as a desirable 'welfare good' are reflected in the current UK market and internationally, with recent moves by major retailers towards grazed provenance.

The UK's Position

- With respect to dairy cattle and calves, UK legislation often exceeds the 'baseline' level set by the EU, but there are other countries (typically smaller EU states such as Sweden) that could be considered competitive. UK legislation relating to animal welfare is more comprehensive than most other major exporting countries, including Australia, France, Germany and the US.
- However, government-led Codes of Practice exist in some countries that make non-enforceable recommendations towards animal welfare, leaving a grey area under which some nations

could argue their case for having high levels of welfare. It is unlikely that degree of compliance to these could be easily proved though.

- International animal welfare legislation is a shifting landscape, and there are examples of animal welfare legislation being developed and revised, as is currently the case in France and New Zealand. For the time being, the UK holds a strong position with regard to cattle welfare credentials.
- Farm assurance schemes in general build on legislation and all arrive at a similar, but by no means identical, set of standards in most areas. Red Tractor would generally compare well to many of these schemes, but does not stand a long way ahead. RSPCA Assured and Animal Welfare Approved are significantly more progressive schemes, although they still compare less-favourably compared to many of the smaller assurance schemes (e.g. those of the UK Food Retailers).
- The fact that virtually every dairy farm within the UK is part of some voluntary assurance scheme (Red Tractor being the effective industry standard) is considered a huge advantage in terms of engagement regarding dairy cattle welfare with both domestic and export markets. The potential disadvantage of this position is a reduction in agility.

Opportunities for the UK

Once of the most challenging aspects to the development and adoption of higher welfare assurance schemes in the dairy sector is the high transport (farm collection) costs and processing costs associated with a segregated milk pool. This effectively limits any welfare assurance schemes focused on a segregated product for domestic or export sale to a tight geographical area (at least initially), a critical mass of membership (volume) to allow scale in processing costs and – particularly in cheese production – high operating costs through grading-associated value losses.

- As such, the most likely route to 'higher' welfare assurance schemes for assured dairy produce will come from existing processor-led initiatives. Arla, one of the largest UK processors, is already committed to a pan-European, in-house assurance scheme, Arlagården. It is difficult to say currently what the appetite of other processors is for movements to their own or preexisting welfare assurance, but clearly it will be dictated my market opportunities.
- While most would accept that the welfare of cattle is affected by their environment, there have been comparatively few scientific studies that have attempted to relate welfare and environmental management in a quantitative fashion. It is suspected that some recommendations within voluntary schemes are chosen more as a point of differentiation and on the principal that 'more is better'.
- From a central perspective, there is also an opportunity in the re-evaluation of UK welfare legislation and industry Code of Practices, further securing the UK as a worldwide welfare leader.
- Very few industry assurance schemes have standards and/or compliance assessments based around welfare outcome measures for cattle. Those that do tend to focus on measures that are easily enumerated at inspection, and are not necessarily those that have the strongest associations with welfare. Progression in farm data capture, collation and processing systems, allowing for a move towards outcome based welfare measures, remains an opportunity for the UK Dairy industry.

BEEF Key Findings

Economic Landscape

- In 2013 the UK was the 13th largest producer of cattle meat in the world. The UK differs from many other European countries in that a significant proportion (historically around half) of beef originates from suckler cows (beef-bred dams). The current trend, however, is towards more dairy-bred beef, and many expect the UK to end up at approximately a 70:30 dairy-bred, beefbred split in volumetric terms.
- The UK differs considerably from the main principal beef producing nations who would typically have a rangeland-based production system often with intensive (usually outdoor) finishing units – very low productivity per hectare, but high productivity per labour unit with a cost of production that is competitive overall.
- The UK remains a net importer of beef products, with the vast majority coming from Ireland, which has a high prevalence of intensive rearing systems.
- Currently South American beef represents a small proportion of imports, most likely due to trade barriers/tariffs set by the EU. While there are clearly welfare challenges for extensive beef, the standard of welfare (outwith mutilations and mustering stresses) could be considered favourable, especially by those that consider the 'natural living' component of welfare important.

The UK's Position

- The majority of beef cows in the UK are managed under conditions where they are protected from exposure, starvation and drought and as such, additional regulation to codify what would be considered standard practice in the UK would differentiate UK husbandry practices from those of the major global beef exporters. This however would only be beneficial if it was accompanied by an improvement in the understanding of the consumer as to welfare challenges associated with ranching systems.
- Whilst protections for housed beef cattle in the UK are somewhat vague, they are completely lacking in many of the major beef producing countries outside the EU. Feedlots carry negative

consumer perceptions and those that do exist in the UK are few and far between and nowhere near the scale seen internationally, but it would be difficult to differentiate UK beef production based on objective measures such as bedding availability and space allocations.

- In terms of mutilations and veterinary oversight, the EU compares well to international standards, however the UK does not differentiate itself from the rest of the EU in this respect. Proactive health planning and veterinary oversight of beef units is behind that of many of the other livestock sectors and unlikely to be an area where UK beef production could be differentiated.
- Transport is one area where the UK compares favourably. Underpinned in part by strong EU legislation in this area, but also the geography of the country and relatively good provision of abattoirs. Beef animals in the UK are therefore not subjected to the prolonged transportation times seen elsewhere in the world and given the problems associated with welfare at transport, prolonged travelling times are an area where the UK can differentiate itself.
- There is a significant focus on improved welfare at slaughter, with the major meat processors in the UK putting in place robust systems for protecting welfare at this critical time, including the widespread use of CCTV and benchmarking of signs of distress and suffering prior to or at slaughter. These strong processes, which often aim to exceed basic legal requirements, represent an area where the UK leads internationally.
- Feeding practices are poorly defined both in legislation internationally and health schemes and are conflated by arguments relating to animal welfare. There is already a 'value added' consumer association between forage reared versus concentrate-fed animals, however the welfare benefits of forage based rearing systems are poorly quantified and communicated e.g. rumen damage, liver abscessation and lameness. UK production represents both systems and therefore any moves to differentiate product on this basis, would have to be farm specific.

- On farm assessments of welfare are rarely undertaken in the UK currently and there is potential to move to assessing outcome measures further. Whilst no farm assurance schemes are currently collecting and monitoring outcomes, some retailers are moving in this direction, particularly with measures collected at the abattoir, for example lameness or post mortem health conditions. Outcome measures at slaughter however would not take into account welfare for large amounts of the animal's life, and any moves to gather outcomes at a farm level could prove beneficial.
- The fragmented and stratified nature of the industry make it difficult to define what is 'good' and 'bad' welfare at an industry level, with very different considerations for a cow in a suckler herd versus a six week calf born to a dairy cow. A more focussed approach to the varying beef systems may be useful in better quantifying and/ or monitoring levels of welfare within the UK.
- The structural changes necessary to make the beef industry viable in the long term are likely to have significant implications on the UK's ability to differentiate a 'high welfare' beef product, therefore further consideration of key strengths that differentiate the UK from other beef producing and exporting countries, particularly for the growing dairy beef sector, could be advantageous.
- In terms of industry structure, further integration of supply chains could have welfare benefits through better relationships and improved communications between farms, for example sharing of disease and medicine information from seller to buyer.
- Further participation of national disease schemes such as BVDFree England will also have welfare and productivity benefits for the beef industry.

LAMB Key Findings

Economic Landscape

- The UK is a significant producer of sheep meat and the fifth largest producer on a global scale.
- In any one year, the volume of sheep meat exported from UK generally matches the volume of imported sheep meat, though this is largely due to the seasonal nature of lamb production. Currently the European export market, largely France, with smaller volumes going to Germany, Ireland and Belgium, is hugely important in underpinning the value of all UK produced prime lamb.
- Average sheep farms throughout the UK struggle to be profitable and largely depend on payment support, though flocks run by the top third of producers, are able to turn an annual profit on a per ewe or per hectare basis.

The UK's Position

- The UK sheep industry produces prime lamb which is a high quality premium protein that is produced extensively on a largely grass-based diet. Sheep fill a niche alongside many of the UK farming systems, whether in mixed livestock farms in the uplands, on the hills within national parks, or in lowland systems as part of arable rotations.
- Lamb is the protein that can most easily fit with the 'naturalness' agenda. As sheep are kept in largely extensive systems, the most important welfare issues are arguably those relating to transport times and painful procedures (e.g. castration, tail-docking and mulesing which is a procedure largely confined to Australia).
- The issues associated with painful procedures are complex with a need to address the harmbenefit balance. UK Government standards, Red Tractor requirements (which involves 65% UK sheep farmers) and the higher welfare RSPCA standards allows for the achievable as well as higher welfare standards. They provide a practical midway to ensure that certain painful procedures are permitted in circumstances where they are considered necessary to allow for optimum welfare through the rest of life.
- A significant quantity of research and consideration by Farm Animal Welfare Committee (FAWC) underpins UK legislation on both travel times and painful procedures – giving confidence in the evidence base for the timings which are notably

more stringent than requirements overseas.

 Higher welfare standard schemes (such as Red Tractor, RSPCA and Soil Association) are incorporating recently identified outcome measures at both an individual and a flock level.

- Currently the majority of international standards appear to have been originally based on UK standards. The UK sheep industry welfare codes of practice require updating and this may be an opportunity to re-evaluate both legislation and codes of practice to further secure the UK as a global leader in this area.
- There is considerable scope within the UK to develop and promote higher flock health status and welfare standards for progressive farms alongside increased veterinary engagement and active use of data recording of outcome measures. This aspiration would be achievable for the same higher performing flocks that are currently able to operate without a dependency on payment support.
- Within the UK there is good access to laboratories, expertise and research into endemic disease as well as established knowledge exchange platforms and flock bench-marking (e.g. through levy boards, membership organisations, veterinary-led flock health clubs). The challenge is to encourage greater uptake of active data recording and improved awareness of the risks of endemic disease to minimise the impact that these have on the health status of the national flock.
- Within the UK there is an active lobby within the veterinary profession to cease slaughter without pre-stunning or at least to have meat clearly labelled. So far, the outcome of raising this issue has actually led to an increase in the number of animals slaughtered without pre-stunning. Currently a significant proportion of cull ewes are slaughtered without stunning to satisfy the religious requirements of the dominant market. A move to prevent all commercial non-stun slaughter (as seen in New Zealand) would have significant welfare advantages but it would also have significant implications for the sheep meat industry and potentially alienate two important home markets for opposite reasons.

PORK Key Findings

Economic Landscape

- UK pig production ranks 20th in the world with China and USA dominating as individual countries but with the EU collectively also a major contributor. The major European competition comes from Germany, Spain, Denmark, Netherlands and France who are not only larger producers of pig meat but have substantial export trade.
- The UK industry underwent a major contraction at the turn of the century with sow numbers dropping by approximately 50% as producers closed farms – largely driven by a collapse in price, old buildings and the need for major investment in sow housing following the introduction of the ban on close confinement of sows 1999. Sow numbers have remained reasonable static over the last 10 years or so but productivity has steadily risen in terms of numbers of pigs and weight of pig meat produced.
- The UK is heavily dependent on imported pig meat, now importing more than it produces mostly from European neighbours. Approximately 25% of UK production by weight is exported mainly to the EU, due to consumer preferences for specific cuts and a general rejection of low value parts of the carcass. There is growing trade with the US and China – the latter particularly comprising '5th quarter' product (ears, trotters, tails etc,).
- Cost of production in the UK is high relative to major European (and US) production. This is the result of a combination of lower productivity in the UK associated with more extensive husbandry and higher fixed costs, particularly relating to the welfare standards. It is generally regarded as a high cost high welfare industry but it is variable that industry receives a premium for this product.

The UK's Position

• A national quality assurance system has applied within the UK pig industry for 25 years or more with the current national standard operating under the banner of Red Tractor. Whilst operated by separate bodies within different administrative parts of the UK (e.g. QMS in Scotland) the standards are to all intents and purposes identical. They cover 92% of all pigs produced representing the majority of the commercial sector on about 1600 farms. A comparable structural approach is applied in Denmark, Germany and the Netherlands. Such a 'national' standard takes national and supranational law as its base but adds to that in terms of animal welfare (e.g. UK quality assurance bans castration of pigs) and demands regular veterinary attendance on the premises (typically every three months).

- 40% of UK sows are housed outdoors in systems perceived as higher welfare and the remaining sows indoors are largely housed during pregnancy on solid floor straw based housing in groups. Close confinement of the non-farrowing/lactating sow is not permitted unlike all main competitor countries where confinement is allowed for all (US) or part (EU) of the dry period. More than 40% of sows farrow unconfined. A high proportion of young pigs remain outdoors to three months of age or are otherwise housed on straw based systems. 75% of finishing pigs are housed on straw systems with the remainder on either part or fully slatted systems. A very small proportion of growing pigs remain outdoors throughout their lives. Within most of the competitor countries fully slatted accommodation predominates.
- Allied to these more extensive straw based systems is a value added quality assurance scheme operated by the RSPCA with which a premium would normally be enjoyed for the product. A very small part of the industry (~1%) operates under organic standards which are broadly matched by comparable voluntary standards in competitor countries, but these are niche markets and have limited impact on the industry as a whole or for international trade purposes.

- In recent years two additional unique requirements have been placed on UK producers under the Red Tractor quality assurance standards
 - Measurement of welfare outcomes an assessment and scoring system based on actual signs shown by the pigs in terms of injury, illness, damage and behaviour.
 - Compulsory central recording of antibiotic use by farm to enable benchmarking and to assist the drive to reduction in overall use of antibiotics towards 2020 and beyond.

- Over the last 15-20 years the UK pig industry has developed into a specialised producer of pig meat utilising systems - particular outdoor systems and straw based housing - to differentiate it from competitor countries. Such systems are perceived to be of higher welfare standards as they correspond to a more natural approach. However even the more intensive systems in operation are subject to increasing focus on animal welfare, with limits on stocking rates, increasing requirements to enrich the environment, ban on castration, veterinary supervision. As such the UK strives to maintain and build on its reputation of placing pig welfare at the forefront of industry, irrespective of the type of system in place. Work continues to explore alternatives to confinement of the farrowing sow with the expectation that alternatives will emerge within the commercial sector and will gradually take over from the traditional farrowing crate.
- Measuring how pigs actually react and behave within their environment is now recognised as a vital component of assessing welfare, overtaking the significance of measuring inputs and infrastructure. Measuring welfare outcomes is the basis for the Real Welfare programme and nearly five years of measurements by veterinary surgeons are available. These can be used to adapt and refine the programme in future to demonstrate improvements in welfare incorporating more extensive measurements and possible use of technology to monitor behaviour.
- Antimicrobial resistance is now a major threat to human and animal health. The pig industry has acknowledged that it must improve its approach to the use of antibiotics with major reductions already occurring (34% reduction from 2015-6). The industry is working towards being a low user of antibiotics compared to competitor countries whilst ensuring that the health and welfare of the pigs is maintained and improved. The focus is on improving health to drive antibiotic reduction.
- The approach taken by the UK pig industry through national law, universal quality assurance standards and voluntary add on quality assurance standards comes at a cost to production. It is essential that the points of differentiation continue to be rewarded and not undermined by importation of cheaper product from countries whose welfare standards fall below those of the UK.

CHICKEN Key Findings

Economic Landscape

- The UK is the 13th largest producer of poultry meat globally. The UK is a net importer of poultry meat with most trade currently being with other European nations. Some of the UK's trade is driven by a domestic imbalance in carcass utilisation (a greater demand for white poultry meat in the UK meaning some of the darker meat is exported and vice-versa).
- The UK has a relatively high cost of production in comparison to 'big' poultry meat producing nations such as the USA and Brazil. However, these countries have little in the way of animal welfare legislation
- Unlike other agricultural sectors, the UK poultry industry has not been subsidised and as such will be unaffected by potential changes to agricultural payments.

The UK's Position

- British chicken meat production has some of the highest welfare standards in the world as regulated by the EU broiler welfare directive. This Directive applies to all EU countries and is seen as a template for broiler welfare globally.
- 90% of the UK's broiler chicken are grown under Red Tractor standards. Red Tractor poultry standards cover a wide range of areas including; welfare, medicine usage (the use of critically important antimicrobials has been banned), transport and processing. Red Tractor standards are much more comprehensive than other schemes globally which tend to focus on specific areas e.g. the German QS scheme focuses solely on antibiotic usage, whilst the Dutch Beter Leven scheme focuses on welfare with no real governance of medicine usage.
- The UK broiler industry has voluntarily (through Red Tractor) demonstrated an ongoing commitment to reducing antimicrobial usage, illustrating its commitment to One Health.

- The RSPCA Assured scheme has lower stocking densities and requires the use of a slow growing breed. The use of environmental enrichment is also required. Whilst the RSPCA assured poultry have a high standard of welfare this system has high costs of production and has not been widely taken up in the UK.
- In the Netherlands the Beter Leven scheme has three tiers, with increasing animal welfare requirements in terms of stocking density and enrichment. The scheme also requires monthly veterinary visits and the use of a slow growing breed is mandated. As with the RSPCA assured scheme, the cost of production is undoubtedly high.
- The major global producers of poultry meat such as the USA, Brazil and China have little or no welfare regulation and as such our high welfare standards are a major selling point for UK poultry meat.

- Whilst the UK has a higher cost of production than other global exporters of poultry meat, the main opportunity is to promote the high broiler welfare standards. The widespread uptake of Red Tractor standards means that the UK is not only producing poultry meat to welfare standards above and beyond legislative requirements, but is also producing poultry meat with good governance of antimicrobial usage.
- The Food Standards Agency ensures very high standards food hygiene.

EGGS Key Findings

Economic Landscape

- The UK is the 18th largest producer of eggs. The UK is a net importer of eggs and is currently 86% self-sufficient.
- Unlike most other countries, the UK's egg industry is approximately 50% Free Range – this is associated with higher costs of production. This is likely to shift with many retailers pledging to stop retailing eggs from hens kept in colony units over the coming years. Currently colony egg production represents 48% of UK egg production.
- As with poultry meat production, the UK egg industry has not traditionally received government subsidies and as such will be less affected by changes to the Single Farm Payments than other sectors.
- The UK has relatively high production costs (feed) but high welfare standards compared to other global egg producers such as the USA and China.

The UK's Position

- The UK (along with other EU countries) has very high welfare standards for laying hens. These standards cover areas of welfare concern such as the prohibiting of moulting. These standards form the benchmark for laying hen welfare standards globally.
- 90% of the UK's egg production is carried out under the British Egg Industry Council's Lion Code standards. The Lion Code covers a wide range of areas including: welfare, Salmonella control, transport and medication usage (the scheme prohibits the use of 3rd and 4th generation cephalosporins and Colistin).
- The Lion Code focusses highly on Salmonella control, and also has extremely high standards for the use of critically important antimicrobials.
- Conventional cages are banned in the EU and UK. The UK's large Free Range sector is seen by consumers as being positive for layer welfare.

- The UK egg industry has voluntarily (through the Lion code) demonstrated an ongoing commitment to reducing antimicrobial usage, illustrating its commitment to One Health.
- The RSPCA quality assurance scheme offers some benefits in terms of transport and slaughter of end of lay hens.
- The UK has a high percentage of Free Range layers (44%) and this is likely to grow with major UK retailers committing to stop selling eggs from enriched cages from 2025. This brings both benefits and risks to the UK egg industry. The main selling point is that the general public perceive free range hens to have high welfare than their housed counterparts. However, free range production increases the risk of diseases including Avian Influenza (AI). Any AI housing order could necessitate Free Range producers having to house their birds for prolonged periods of time. This would prevent the eggs being sold as free range, damaging profitability.
- Free range hens are also more at risk of feather pecking. Should beak treatments to be banned in the UK it would have a potentially a large impact on the welfare and performance of the national flock.

- The main selling point for the UK egg sector is higher welfare along with high food standards. This is accentuated by the high uptake of the Lion Code.
- The size of the UK's Free Range egg industry helps to differentiate the UK from other nations both European and globally and allows the UK egg industry to market British provenance.
- The size of the UK free range sector brings both benefits and risks to the UK egg industry.

This report summarises the findings on a global animal welfare review carried out by Evidence Group on behalf of NFU.



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