Achieving more sustainable British beef and sheep food systems in a changing environment

AUTHORS

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RESEARCH BRIEF 1

Transparency in the beef and sheep meat food systems enables agency and fairness

Royal Veterinary College University of London

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SERIES INCLUDES

Research Brief 2 – Exploring opportunities and risks of the Animal Health and Welfare Pathway (AHWP)
Research Brief 3 – Exploring opportunities and risks of the Environmental Land Management schemes (ELMs)

KEY FINDINGS

1. There is a lack of price transparency at the producer-processor level.
2. There is more negotiation between processors and retailers, than with producers.
3. Selling through livestock markets may increase transparency and agency for the producer.
4. Consumers say they will pay more for higher animal welfare standards, but this does not necessarily translate into actual purchasing behaviour.
5. Consumers do not always understand or trust assurance labelling.

An unprecedented set of challenges now confronts livestock food systems in Britain. With household budgets being squeezed, producers, processors, retailers and wholesalers are under increasing pressure to maintain the affordability of their products despite rising input costs. At the same time, the need to achieve and demonstrate high standards in environmental sustainability, animal health and welfare, and nutritional quality only adds to the difficulties. Meanwhile, uncertainties over potential future trading, legal, and political arrangements following the UK's departure from the EU represent a yet further layer of complexity.

A research project focused on beef and sheep production and marketing systems in Great Britain jointly led by the University of Hertfordshire and the Royal Veterinary College, has been looking at how the sector might maintain and improve its economic, social and environmental sustainability in the face of these multiple challenges. A key issue being explored is the degree to which lack of transparency at various levels of the value chain is hindering the agency of key actors and undermining the value of consumer labels in meeting sustainability, animal welfare, and nutritional objectives.

01

About our project

Achieving more sustainable British beef and sheep food systems in a changing environment is a four-year project funded by the Cadogan Charity and jointly led by the University of Hertfordshire and the Royal Veterinary College. The work investigates how ruminant production and marketing systems in Great Britain can maximise quality food production and economic viability, while promoting sustainable land use and management, including environmental and antimicrobial stewardship. The **overall aim** is to identify public policies and private sector strategies to support the provision of reasonably priced beef and sheep products that are profitable, equitable and sustainable across the food value chain, in the post-Brexit agricultural and food policy context.

Adopting an interdisciplinary, multi-method approach, including literature reviews, modelling, value chain analyses, surveys and case studies, the project explored a wide range of topics, from farm-level decision-making, livestock production capacity and the use of antimicrobials and anthelmintics, to consumer preferences and government policy.

ACHIEVING MORE SUSTAINABLE BRITISH BEEF AND SHEEP FOOD SYSTEMS IN A CHANGING ENVIRONMENT

The following activities were conducted to explore how beef and sheep meat production and marketing can maximise quality food production and economic viability, while promoting sustainable land use and management including environmental and antimicrobial stewardship:

Literature reviews

Overview of production systems, metrics and disease impacts

Grassland modelling

Beef cattle and sheep production capacity on existing grassland

Case studies

Animal health management and farm-level decision making; antimicrobial and anthelmintic surveillance

Policy and governance

Analysis of existing and upcoming policies and governance mechanisms

Value chain analysis

Beef and sheep meat value chains

Surveys

Consumer perceptions and preferences

RVC Royal Veterinary College University of London

University of Hertfordshire UH

Three important interconnecting themes emerged during the research, each influencing the economic, social and environmental sustainability of the beef and sheep meat sector:

1. Transparency and agency
2. The Animal Health and Welfare Pathway (AHWP)
3. The Environmental Land Management schemes (ELMs)

These three themes form the basis of a series of three interconnected research briefings. In this research briefing, we discuss our work on transparency and relationships in beef and sheep meat food systems and how they might be improved, enabling agency and fairness for all actors involved, from producers through to end consumers.

02

What are the issues with transparency and agency?

Evidence points to unequal distribution of power across the British beef and sheep food system, with processors and retailers enjoying far greater agency and influence than producers. One example is the fact that the thousands of beef and sheep holdings across the country today depend on a relatively small number of large abattoirs to process their animals, and a lack of transparency over prices paid by these processors exacerbates the impacts. With few opportunities to 'shop around', producers typically find themselves to be price-takers in the system.

Insufficient transparency also means that accurate, comparable and easy-to-understand information on the environmental sustainability impacts of beef and sheep production does not freely flow across the value chain. The same is true for information on the health and welfare of livestock, as well as the provenance and nutritional quality of meat products. As a result, accreditation labels intended to signal environmental, animal welfare and nutritional standards are poorly understood by consumers and disputed by sector stakeholders.

A key goal of the research was therefore to understand how transparency in the beef and sheep meat food systems might be improved to enable agency and fairness.

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03 What did we do?

To better understand the key factors that influence transparency and agency, we reviewed literature on governance of the British beef and sheep meat value chains and interviewed stakeholders in the red meat industry on beef and sheep value chains. We also surveyed consumers to understand how well they understood animal welfare and environmental labels on meat products in the UK. We used these findings to suggest pathways to change for discussion in a stakeholder workshop with representatives from the Animal Health and Welfare Board, National Farmers Union, National Beef Association, Pasture for Life, Sustainable Control of Parasites in Sheep, British Cattle Veterinary Association, British Meat Packers Association, Euro Quality Lambs, MSD Pharmaceuticals, Ruminant Health and Welfare Group, Animal and Horticulture Development Board, and beef and sheep farmers. Their reflections are summarised below (Section 05).

04 What did we find?

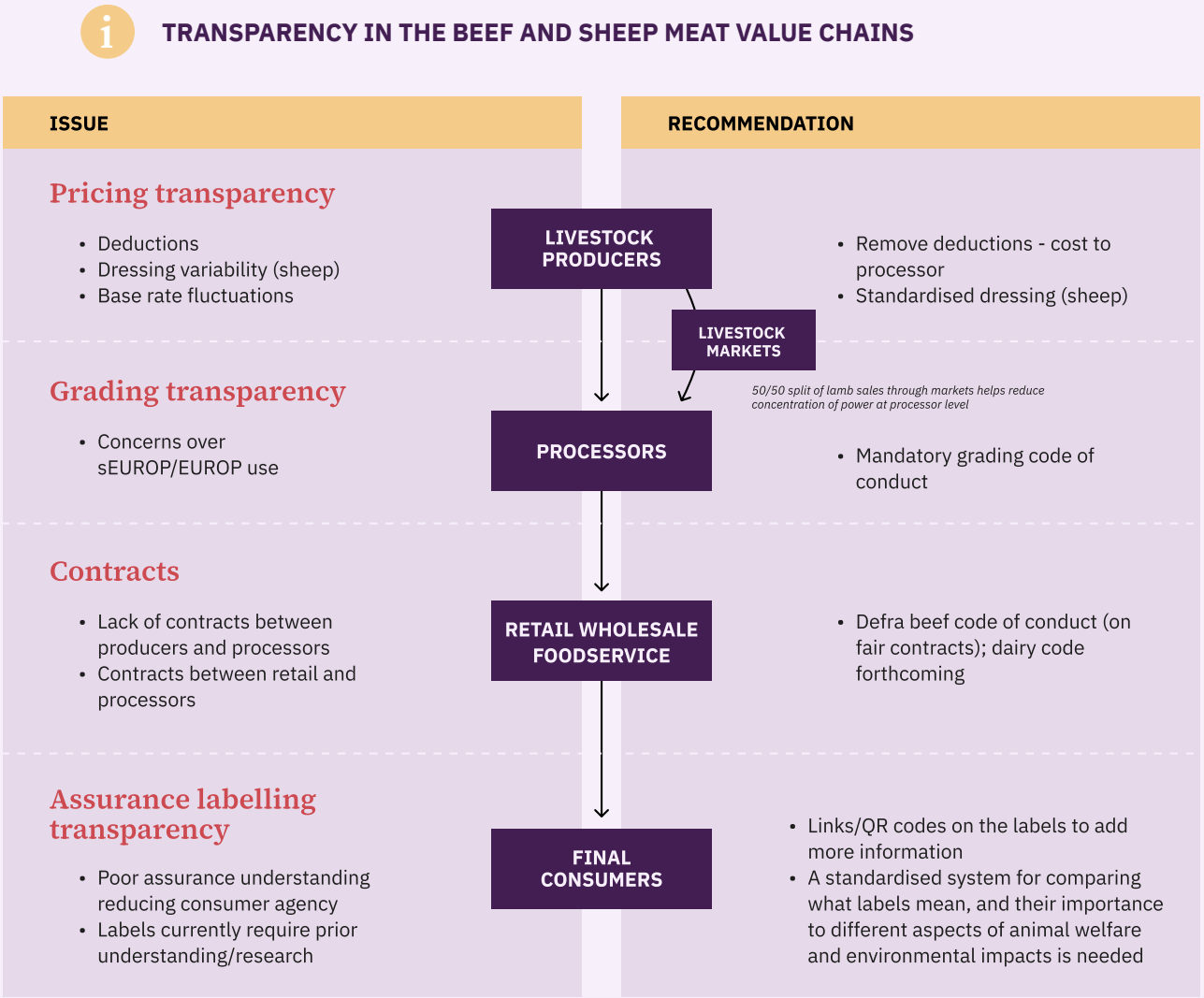

Figure 1: Overview of findings relating to transparency along the beef and sheep meat value chains.

There is a lack of price transparency at the producer-processor level.

Livestock producers find that the daily base rates they are paid for their animals by processors fluctuate and are hard to predict at the start of the 12–36-month production cycles for sheep and beef respectively. Moreover, interviewees stated that the way that each processor overlays the EUROP (and sEUROP) grids (for grading carcases according to muscling and fatness) on their own payment grid is not transparent as producers never see the payment grid with their own eyes; pricing is only relayed to them verbally. Interviewees said that adding to the problems is that processors make multiple deductions, some which are predictable and some which are not, such as for damage to the carcase. These are nominally to cover post-mortem costs, waste disposal, insurance and a statutory levy; yet clarity is lacking in exactly how the deductions are calculated. Moreover, since some are, arguably, processing costs, there is a suggestion that they should be borne by the processor not the producer.

More negotiation apparently happens between processors and retailers, than with producers.

Farmers report a lack of contracts between themselves and processors, and concerns over price-setting, which fuels a sense of powerlessness, frustration and mistrust. Farming interviewees reported very few formal production contracts, while processing interviewees reported formal contracts between 3-7 years and a collaborative negotiation process. This negotiation process sometimes involved breaking down assumed overheads, volume and quality of meat, seasonal demand and assumed seasonal price fluctuations.

Selling through livestock markets may increase transparency and agency for the producer.

About 50% of all sheep reared in the UK are sold through livestock markets versus straight to abattoirs, whereas for beef production the proportion sold in markets is only 10%. At live markets, farmers are physically present on the day to see how their animals compare to those of other producers, so they feel more reassured than when dealing directly with the processor. Transparency would be further increased at live markets should kill sheets be systematically given to producers following slaughter, providing farmers with critically important post-mortem information on the disease status of their animals.

Photo by Kevin Angelsø on Unsplash.

Consumers say they will pay more for higher animal welfare standards, but this does not always translate into actual purchasing behaviour.

Among surveyed consumers, animal welfare was found to be the attribute most frequently considered when buying meat, and the most important for more

than 60% of respondents. Environmental labelling was considered less important, ranked above only the position of meat on the retailer's shelf and its branding (Figure 2) (Survey of 131 respondents identified through Facebook, Twitter and Email, 90% from England, 86% female; 36% with an average age of 25-34).

A willingness to pay survey of 80 consumers asked about beef found that 55% worried about the environmental impact of the red meat industry and 66% were concerned about animal welfare standards, yet only 35% have changed eating habits to reduce their impact on global emissions and 21% had made sure to buy organic beef. Previous research suggests that, in practice, other factors determine buying decisions, such as access to better quality products and ability to pay.

Consumers do not always understand or trust assurance labelling.

A survey on public perceptions of labels indicating animal welfare, provenance and environment standards of animal-based products, found many to be poorly understood and in need of additional, explanatory information. For instance, over 40% of respondents are unclear as to the meaning of the Soil Association Organic label, while almost 90% are unsure about the LEAF Marque environmental standard (Figure 3). At present, prior knowledge of, or research into, the assurance schemes is required to fully understand the labelling.

CONSUMER PERCEPTION OF MEAT PRODUCT LABELS

Consumers were asked to rank these attributes from most important (1) to least important (7) when purchasing meet:

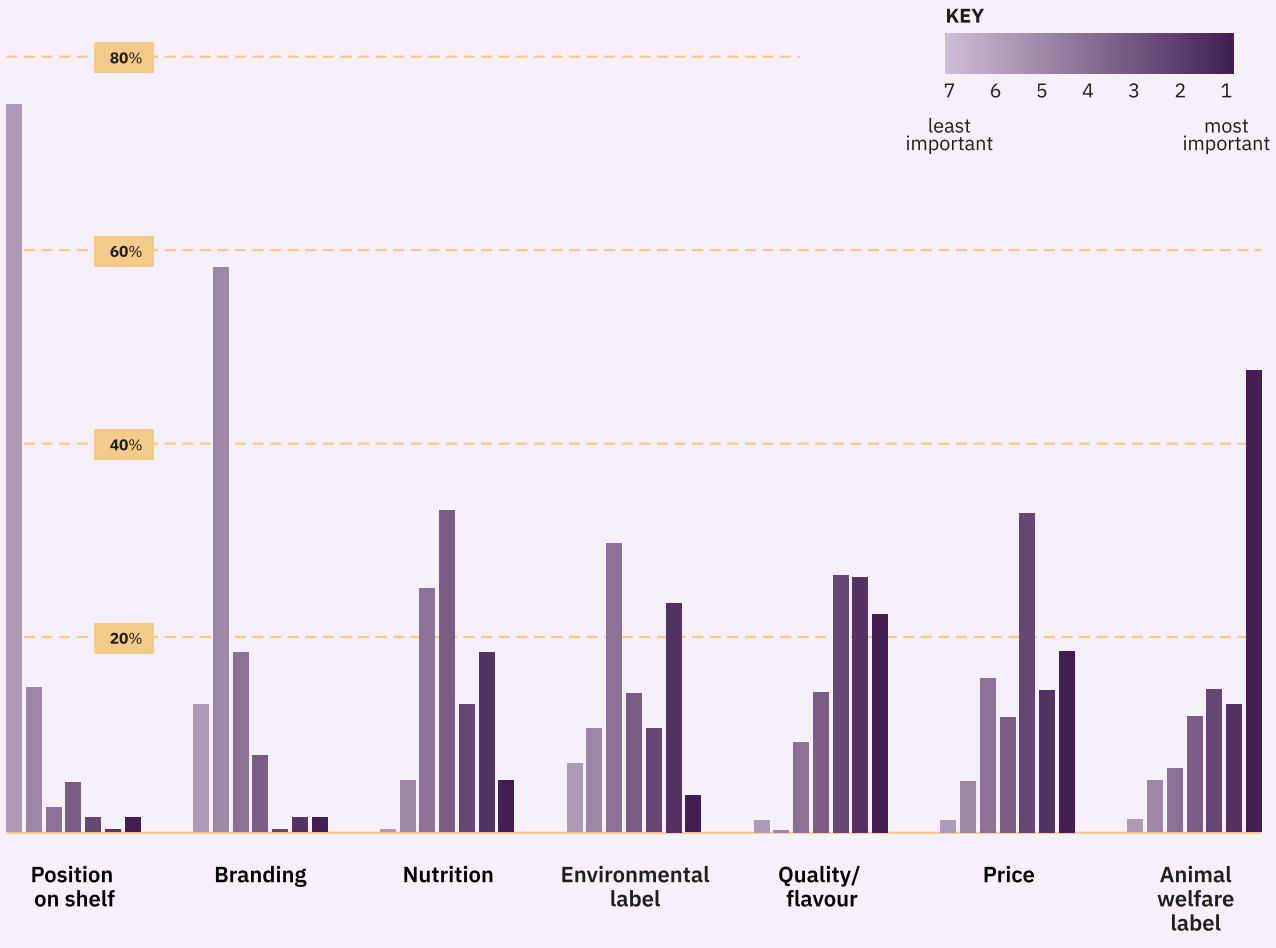

Figure 2: What study participants consider to be the most important attribute when buying meat products. (131 respondents Participants identified through Facebook, Twitter and Email and consisted of 90% from England, 86% female: 36% with an average age of 25-34. Taken from 'Consumer perception of animal welfare and environmental labels on meat products' (2021). BSc dissertation. Royal Veterinary College.

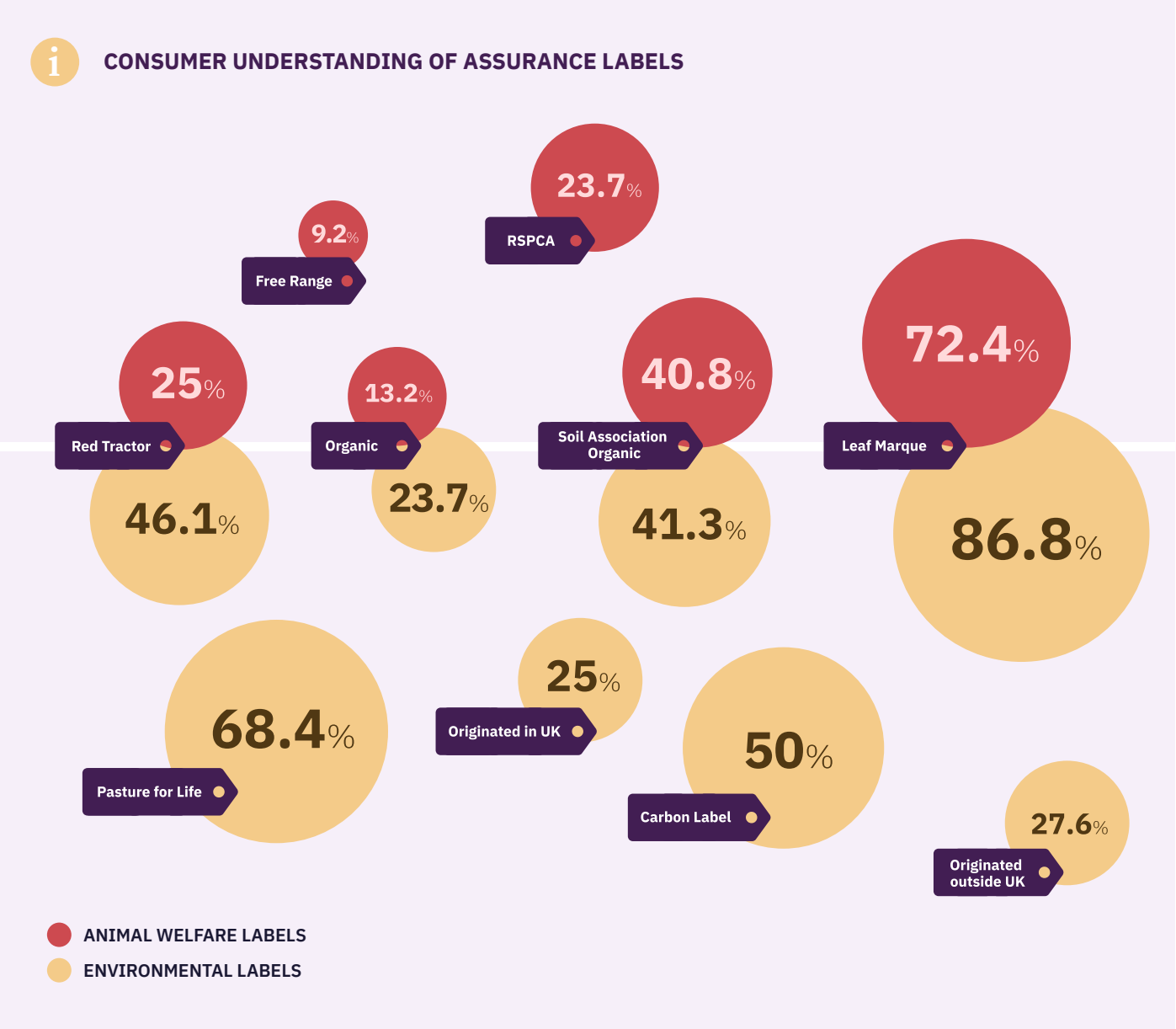

Figure 3: Percent of people who do not know what assurance labels mean. The top-half of the figure is related to animal welfare labels; the bottom-half of the figure is related to environmental labels. (Total of 131 respondents). Taken from 'Consumer perception of animal welfare and environmental labels on meat products', BSc dissertation. Royal Veterinary College.

The results of this work were used to construct 'pathways to change', setting out possible mechanisms to improve transparency, agency and fairness in the system. The pathways – which were constructed at the levels of the producer-processor and consumer - included suggestions from stakeholder interviews and highlighted potential positive and negative outcomes. The findings and pathways were discussed at a stakeholder workshop with representatives from across the sector.

05 What issues emerged at our stakeholder workshop?

KEY FINDINGS FROM THE WORKSHOP

- Far greater transparency is needed from processors on how prices paid to producers are determined, although the EUROP grid should be kept.
- Providing producers with kill sheets from livestock markets would be valuable but is not currently practical.
- The plethora of consumer labels, with varying scope and criteria, confuses customers and prevents fair assessment of the animal health and welfare standard of a product.
- Current eco-labels are based on global averages, and do not capture the specifics of particular production systems, potentially disadvantaging systems with sustainable and efficient practices.
- Label accreditation compliance is not sufficiently monitored, leading to a risk of 'greenwashing'.
- Labels should communicate the full nutritional value of products, not purely calories.
- Existing consumer label schemes should be expanded to include animal health and welfare, rather than introducing new ones.
- Both on-pack labels and QR codes are important.
- The jury is still out on whether eco-labelling would actually work.

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At a workshop held in London in June 2023, leading stakeholders[1] were invited to comment on and critique the pathways, with discussions guided by the following questions:

1. Does producer agency need improving and why? If yes, how could this be achieved?
2. What is needed to improve the connection and information flow between processors and producers?
3. Do you think the EUROP system is fit for purpose?
4. How can the disconnect between the premium priced carcasses for farmers and the carcasses that the retailers/consumers want be overcome?
5. What is needed to help consumers improve the understanding of accreditation labels?
6. Given the government's recent consultation on animal welfare labelling and the more recent side-lining of the Kept Animals Bill, what should the Government be doing?

[1] Workshop participants included representatives from Defra (Department for Environment, Food and Rural Affairs), farmers, NFU, SCOPS, processors, pharmaceutical industry, health and welfare groups.

The following critical issues and reflections emerged during the discussion:

The plethora of consumer labels, with varying scope and criteria, confuses customers and prevents fair assessment of the environmental, welfare and nutritional standards of a product.

A major discussion point among workshop participants was the 'Wild West' of consumer labels, particularly for ecolabels and animal welfare labels. One of the biggest barriers faced by consumers in choosing the products based on their animal health and welfare standards is the lack of clear, consistent, easily recognised and comparable information. Numerous voluntary labelling systems with varying criteria for environmental impact, sustainability or ethical considerations, led by different parts of the food industry, have entered the market in recent years – and continue to do so: an essentially unmanageable dynamic. Unfortunately, these labels lack standardised criteria and definitions, and confuse consumers, who are often assumed to have a background understanding of the different ways beef and lamb products are farmed or produced. The presence of multiple labels with different criteria and standards prevents consumers accurately comparing the relative performance of different beef and sheep meat products, potentially leading to decision paralysis or a loss of trust in (eco)labels.

Moreover, many eco-labelling schemes focus on a narrow set of environmental considerations, and overlook other important aspects, so fail to capture the full sustainability profile of a product or address broader systemic issues, such as supply chain practices or social sustainability.

Current eco-labels are based on global averages, and do not capture the specifics of particular production systems, potentially disadvantaging systems with sustainable and efficient practices.

Participants were concerned about new eco-labels popping up everywhere without documentation of a strong evidence base and which were instead based on global data and averages. These therefore fail to account for the nuances of a wide variety of production systems. When global averages, such as greenhouse gas emissions (GHG) labels, are used, these might trump the country of origin. But different countries may employ varying production methods in their beef sectors, including differences in animal feeding, herd management, land use, and transportation practices, which lead to differences in GHG emissions associated with beef cattle and sheep production. Factors such as climate, soil type, availability of natural resources can also influence the emissions intensity of beef production. Likewise, the use (or otherwise) of fertilisers, energy, feed sources, waste management techniques and technologies such as methane capture, differs between countries and will have an influence.

By using international averages, the GHG labels for beef cattle and sheep emissions might overlook such variations, generalising emissions intensity across all countries to the disadvantage of production systems with more sustainable and efficient practices, as their emissions may be higher than the average, despite being relatively lower compared to other countries. Stakeholders stressed the importance of considering the context and specific circumstances of each country's beef and sheep meat production system when labelling GHG emissions. They emphasised that country-specific emission calculations should be developed to provide a more accurate representation of the environmental impact of beef production in the country. They proposed that it is essential to use primary data in these labels and that the data needed to be "honest". Therefore, there were strong calls for more evidence-based, nuanced labels, which could be informed by data already being collected – i.e., without adding to significant reporting burdens to which farmers are already subject.

There is a lack of monitoring and a risk of 'greenwashing'.

Concerns exist regarding the enforcement and monitoring of certain labels that may lack robust verification processes and adequate oversight, raising questions about the reliability of the claims made on the labels. There is also concern that some labels are primarily used as marketing tools rather than representing meaningful improvements. Greenwashing has become a big issue for companies themselves as the standards are unclear.

Labels should communicate the full nutritional value of products, not purely calories.

Some commented on the importance of moving away from labels that were using emissions or environmental impact per quantity of product produced or per total calories and to communicate the nutritional value of the product. This would consider the overall composition of a food item, including macronutrients (such as protein, fat, and carbohydrates) and micronutrients (such as vitamins and minerals). Red meat is a source of essential nutrients like protein, iron, zinc, and vitamin B12. Assessing the nutritional value provides a more meaningful understanding of the benefits and drawbacks of consuming beef and sheep meat beyond just calorie content. Measuring emissions based on nutritional value accounts for the fact that different foods provide vary-

ing amounts of nutrients per calorie. This approach considers the efficiency and environmental impact of producing specific nutrients rather than solely focusing on the energy content.

Existing consumer label schemes should be expanded to include animal health and welfare, rather than introducing new ones.

Some workshop participants thought it necessary to have the same standard labelling approach for all foods. Linked to this is the need for robust and independent verification, oversight and auditing processes to ensure consumer trust and effective use of labels. As noted, insufficient monitoring and enforcement may undermine the integrity of the labelling system. The best way to accelerate progress, according to workshop stakeholders, would be to expand long-established labels and standards, such as Red Tractor, to encompass environmental and animal health and welfare issues. Such schemes enjoy far wider market penetration and greater brand recognition among customers than do newer labels. (NB. The survey conducted for this research focused on the most established labels, see Figure 3).

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Moreover, these are already subject to robust, independent monitoring and enforcement processes ensuring that the claims made on labels are accurate and verifiable. On animal health and welfare, specifically, some suggested that producers verified as compliant with the Animal Health and Welfare Pathway should automatically qualify for Red Tractor accreditation, given the high degree of duplication between the two schemes. This would be subject to agreement with the Red Tractor scheme. The alternative of replacing the Red Tractor would not however be advisable due to its familiarity among consumers.

Both on-pack labels and QR codes are important.

There was a feeling that it may be necessary for the sheep and beef meat sector 'to jump on the bandwagon', and different options for labelling were discussed by stakeholders. There was a general sense that on-the-pack labels with direct information would work better than alternative approaches, such as QR codes, which would require shoppers to spend time gaining more detailed information about their products before putting it into their basket. However, QR codes can offer consumers a quick and convenient way to access detailed information about a product. It was recognised that there is a clash between the need for simple, on the pack information that is easy to understand and trustworthy and the complex demands generated by multiple product attributes and their measurements.

The jury is still out on whether eco-labelling would actually work.

Finally, while the trend towards labelling appears unstoppable and arguably generates some agency for consumers, uncertainty remains as to whether it does indeed translate into the desired behaviours; in practice, do consumers choose products with the highest environmental or animal health and welfare standards – and thus send enough of a market signal to improve the overall food system and support British production? Participants felt that other incentives might be needed and noted that the call to 'support British beef and lamb' assumes that local standards are superior to those elsewhere, which "is part perception, part factual depending on the country of comparison."

Far greater transparency is needed from processors on how prices paid to producers are determined, although the EUROP grid should be kept.

Workshop participants felt that despite possible unpredictability in the application of deductions, the beef industry was now so familiar with the EUROP grid that it would be best to continue with it. However, stakeholders insisted that the reasons for the price deductions made by processors be more transparent.

Providing all producers with kill sheets from livestock markets would be valuable but is not currently practical.

On the issue of kill sheets in livestock markets, attendees stressed that providing producers with postmortem information was important but felt that sending kill sheets back to producers is currently impractical. The way forward needs to be guided by a food standards development.

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To conclude

Our research indicates that a concerning lack of transparency and trust persists in the UK beef and sheep food system, with producers in particular feeling disconnected and disempowered in their relationships with meat processors and other supply chain actors. Another symptom of the failure to ensure that reliable information flows freely across the livestock food system is today's unregulated 'Wild West' of consumer labels. Intended to communicate the sustainability, nutritional and animal health and welfare credentials of products and thus improve performance across the sector, they more often confuse rather than enlighten. Urgent steps to improve trust and transparency are therefore needed for the sector to thrive amid the multiple economic, social and environmental sustainability challenges it faces. Progress will be facilitated through closer cooperation with stakeholders in the food systems and by good evidence and awareness of these issues.

Acknowledgements

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Further information

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https://www.rvc.ac.uk/research/projects/veeph/sustainable-beef-sheep-food-systems