

Global Agriculture and Food Systems Symposium 2025: The Future of Livestock in Global Food Systems

Session Title: Role of livestock in nutrition and health

Session Overview: This was the first session of the symposium, chaired by PhD student and early career researcher Deksha Kapoor, from Division of Global Agriculture and Food Systems. We had 2 speakers-**Jacqueline Tereza da Silva**, final year PhD student at the Division of Global Agriculture and Food Systems, University of Edinburgh. Jacqueline presented on “**Temporal trends in meat consumption and burden of diseases in Brazil**” and **Prof. Lindsay Jaacks**, Personal Chair of Global Health and Nutrition, Division of Global Agriculture and Food Systems, Royal (Dick) School of Veterinary Studies, spoke on “**Human health co-benefits and trade-offs for transitioning to plant-forward diets**”

Key presentation highlights: Jacqueline Tereza da Silva’s talk examined the evolving patterns of meat consumption in Brazil and their implications for public health and sustainability. She presented data showing that livestock currently contributes around 23% of daily caloric intake, with a notable increase in the consumption of processed and ultra-processed animal products over time. She highlighted that excessive red meat intake is widespread—affecting around 40% of the population, also quantifying the health burden in economic terms — US\$ 8.5 million in colorectal cancer costs were attributed to red meat consumption, and US\$ 12.6 million to processed meats. Jacqueline explored the drivers behind these trends, citing Brazil’s rich biodiversity and land availability, along with influence of agribusiness lobbies, culinary traditions, and the symbolic value of meat as a sign of prosperity. The presentation concluded with a call for structural changes—including economic diversification and support for alternative livelihoods—to reduce meat consumption and its health and environmental impacts.

Lindsay Jaacks’ talk introduced the concept of *Plant-Forward Diets*, which emphasize increasing the intake of plant-based foods while reducing consumption of animal-derived products such as meat, dairy, and eggs. She highlighted that the health impact of this transition depends not only on what is removed (e.g., red meat) but also on what replaces it (e.g., whole legumes vs. ultra-processed plant-based alternatives). The discussion addressed the nutritional trade-offs of reducing meat and dairy, particularly in the context of existing dietary patterns, with a focus on prevalent micronutrient deficiencies in the UK—especially iron and iodine among adolescents and adults. She also presented evidence distinguishing *healthful plant-based diets* (rich in whole grains, fruits, and vegetables) from *unhealthful plant-based diets* (high in refined grains, sugary beverages, and processed plant foods), emphasizing their differing associations with health outcomes such as type 2 diabetes risk.

Audience engagement was done through table discussions and questions which have been summarised in the themes below:

(I) Challenges in Nutrition and Policy

The challenges of policy-making in the field of nutrition were discussed, particularly in light of conflicting scientific evidence and media headlines that contribute to public confusion. The conversation emphasized the need for clearer and more direct communication of scientific findings to the public, even when those findings are nuanced or complex. Participants highlighted the importance of tailoring policy recommendations to specific regional contexts, recognizing that a one-size-fits-all approach is ineffective. The potential for applying lessons learned from successful dietary changes in one country to other regions was also explored, with

an emphasis on the need for careful adaptation rather than direct replication. It was further noted that political resistance remains a significant barrier to the implementation of strong, evidence-based policies aimed at guiding consumer food choices.

(II) Cultural Influences on Food Choices

The discussion focused on the cultural significance of barbecuing and the associated social perceptions of shame linked to not consuming meat. While this phenomenon was noted in the Brazilian context, its relevance in the UK was also acknowledged. Participants highlighted how these attitudes are influenced by factors such as class dynamics and generational change. It was noted that there is an increasing disconnect between individuals and the production of their food. Traditional knowledge of food preparation has been largely lost over generations. However, a shift in attitudes is emerging, with plant-forward diets becoming increasingly aspirational. Concerns were raised regarding the rising consumption of ultra-processed foods, which has been paralleled by an increase in disease prevalence. This trend was attributed, in part, to the significant time demands associated with home cooking and food preparation, representing a critical trade-off in modern lifestyles.

(III) Livestock Farming and Support for Farmers

There was agreement that massive support and reform is needed for farmers, considering the possibility of supporting livestock farmers through payments for public benefits/ecosystem services and allowing farmers to receive more income for less production. The group deliberated on understanding the concept of "wellbeing economy" for food to support benefits beyond economic gain and developing clear communication for the larger public to raise awareness. More unpacking of the term "meat packaging" is needed as sometimes facility is slaughter + packaging, sometimes just one or the other. Discussion was held on power dynamics and the role of meat packers (often middlemen), farmers and smaller abattoirs who are most impacted.

(IV) Meat vs. Plants and Dietary Diversity

There was discussion about the need of careful communication regarding benefit of replacing meat with more plant based whole foods versus meat with ultra-processed plant-based foods. Participants raised concern over the lack of a solid definition of the term "flexitarian" and hence can be interpreted in different ways. There was interest in how different framings affect meat consumption behaviour- "Meat-free Monday" vs "plant-forward Friday". Sometimes, it may not be a personal choice but rather what is available or affordable. Example: involuntary vegetarianism in some areas because of costs of meat. We need to consider the multifactorial aspect to shifting to plant - forward diets, and communication around alternate sources of protein need to be more attractive to reduce meat consumption.

Overall, the session explored the complex intersection of nutrition, health, policy and food culture in the context of sustainability focusing on meat. Panellists discussed the challenges of conflicting evidence and headlines around nutrition, economic and cultural influences of livestock on farming and food choices, and the concept of a "flexitarian" diet.