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Opinion paper: Role of standards in the transformation of the livestock sector



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Introduction

The way we currently produce and consume livestock products in countries of the Global North has a large environmental impact. Moreover, concerns about animal welfare, public health as well as the financial viability of family farming are increasingly expressed. In navigating the sector towards more sustainable means of production, policy and legislation used to play a key role. However, in recent years, in line with the development from the government to governance, the role of private initiatives, including corporate social responsibility efforts of the food industry, has become more prominent and is impacting current and future developments. Among such initiatives are, inter alia, voluntary private standards, which aim to set criteria that producers have to meet and that are guaranteed through certification. Over the past few years, such private certifications have increasingly been used with regard to specific sustainability themes (e.g. animal welfare or climate impacts), specific production practices (e.g. hay-milk or organic), or sustainability in general (e.g. Global G.A.P.). Thereby, such standards have increased their impact on the sector. For instance, 95% of dairy farmers in Ireland are certified under the Origin Green standard (Bord Bia, 2022), over 200 000 farmers across 134 countries are certified under Global G.A.P. (where G.A.P. stands for Good Agricultural Practices) (Global G.A.P., 2022), and in the Nether-

lands, 16% of the money consumers spent on food was on certified sustainable food products (Logatcheva, 2021). In Germany, the “Initiative for animal welfare”, a multi-stakeholder initiative aiming at improving farm animal welfare, includes 80% of broilers and turkeys and 34% of fattening pigs raised in Germany (Initiative Tierwohl, 2022). These certifications are often considered to provide a premium for producers at the same time as increasing possibilities for consumers to select products that meet their expectations and values with regard to sustainability.

While a considerable body of research focuses on the role and impact of standards in sectors such as aquaculture and fisheries, and internationally traded crops including coffee, cacao and cotton, attention to the role of standards in the livestock sector is lagging behind. Meanwhile, voluntary private standards are increasingly determining the direction for the livestock sector by stimulating certain practices (and suppressing others) and by paying attention to specific sustainability issues while rather ignoring others. In addition, such initiatives contribute to setting the agenda for public discussions and defining the ambition level of standards. While comparisons between countries and sectors are not yet available in the literature, we can observe differences between standards in terms of which sustainability issues get attention (e.g. animal welfare, grass-fed, biodiversity or climate impact) as well as differences in the ambition level of standards. This paper sets out a research agenda for animal and agricultural scientists to study the role that standards play in the transformation of the sector towards more sustainable production as we believe this develop-

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ment needs a critical discourse about its impacts on the sector. We have structured our paper in four sections, covering the four main stakeholders in the development of standards: standard developers, consumers, producers as well as animal and agricultural scientists.

Setting the standard – Standard developers

Often a Non-Governmental Organisation (NGO), retailer, or industry organisation defines a set of criteria that needs to be met by producers (Fig. 1). These criteria are often developed in consultation with a committee or advisory board consisting of other stakeholders such as retailers, processors, NGOs and scientists. Once standards are set, on-site audits, commonly carried out by a third party, are executed to check whether the producers comply with the label requirements. When a producer meets the required criteria, he or she qualifies for certification, and in case of a certification communicated to consumers, can translate it into a labelled product. The governance of standards shows the high level of influence the standard organisation and its advisors have in (1) determining which sustainability themes to cover (e.g. animal welfare, climate change, resource use, biodiversity, labour conditions), (2) which sustainability sub-themes and indicators to include, (3) how to measure the performance of the producers on these indicators (i.e. using target, practice or performance-based indicators), (4) where to set the benchmark (i.e. what is an acceptable or sustainable level for each indicator), (5) what the requirements for certification are (e.g. meeting all criteria, or only a certain number, or distinguishing different levels (e.g. bronze, silver, gold) and finally, (6) to specify what happens in the case of standard violations. These decisions are often guided by balancing criteria such as precision, practicability, data availability, societal relevance, time and costs but also (economic) interests of the developers. Altogether, these decisions set the standard and thereby determine which practices are considered sustainable for the future of livestock farming. This offers opportunities for pushing a certain topic but also bares the risk that standards are too low

to meet sustainability goals, not coherent with public policies, or not based on a fair representation of stakeholder interests. Research questions that arise from this context are as follows:

- Which directions are livestock farmers steered towards by standards, based on what decisions, made by whom?
- How do voluntary private standards relate to scientific sustainability assessments in terms of the type of indicators, measurements and benchmarks?
- To what extent are standards influenced by the profit motive of standard developers versus the public good?

Consumers: comprehensibility versus complexity

Many sustainability topics in food production and livestock farming are quite complex, especially if considered in a holistic way. Even for experts, it is often impossible to account for all sustainability aspects in a supply chain and to evaluate them. For the majority of consumers who shop for food habitually, breaking down complexity into understandable components is necessary. Otherwise, information is not accessible and not considered in buying decisions at the point of sale. This leads to the need for making trade-offs between complexity (that is somehow necessary in sustainability certification) and comprehensibility (that is needed for consumers to consider certification in buying decisions). Oversimplified messages risk consumers making wrong shortcuts and decisions not in accordance with their values and attitudes, whereas too complex information might lead to consumers suffering from information overload and a reluctance to engage. The role certifiers play in standard setting and communication to consumers has a crucial impact on consumer perceptions of the sustainability debate and sustainability perceptions of a sector in the public eye, such as in the case of livestock. Even highly involved consumers are only able to express full market power if standards are complex enough to be meaningful but still understandable. Nevertheless, the challenge is that there are certain trade-offs to consider within sustainability, for example with

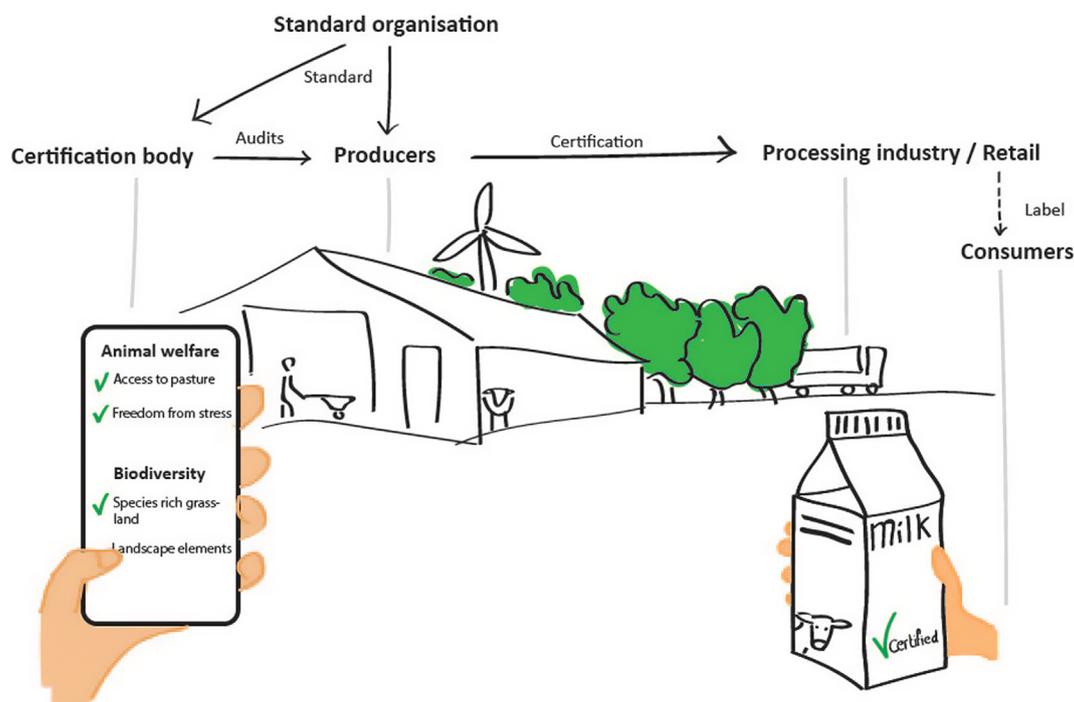


Fig. 1. Sustainability standard development and certification.

regard to animal welfare versus environmental sustainability, themes that currently play a crucial role in the sustainability discourse on livestock in certain countries, such as Germany or The Netherlands. Improved animal welfare is commonly debated with increased outdoor access for the animals which might have detrimental effects on emissions. Acknowledging trade-offs, and the fact that a standard might not be able to perform well on all sustainability themes, is therefore crucial. So far, information on the behaviour of consumers when being confronted with sustainability trade-offs is scarce. Research questions in the consumer domain might include the following:

- How are complexity and trade-offs between sustainability themes communicated to the general public in the case of standards in animal products and how do consumers react?
- What impacts have private standards on the public perception of the sustainability debate in livestock farming?
- How can markets activate the 'willingness to pay' of consumers, and what else needs to be remunerated or regulated by policy?

Investments and uncertainty for farmers

While sustainability standards are often considered as a way for farmers to receive a premium for their produce, this is not always the case. To enter certain markets, farmers need to be certified as a precondition to market their products, without receiving any additional payment for the certification costs or investments made. Although investments are expected to pay off, there is no guarantee that there will be sufficient demand for these certified products, and in several cases, farmers decided to switch back to previous systems. Moreover, changing practices and housing system to meet the requirements for a specific standard or processor creates new dependencies as it becomes more difficult to sell products to others, both because of the investments made and because of possible mismatches in requirements of other standards or processors. As processors and retailers aim to distinguish themselves in their sustainability efforts, farmers risk being caught between the continuously changing production requirements. Finding the balance between sufficient financial incentives for farmers to participate without overstocking markets is key but tricky. Research questions of importance are as follows:

- How to achieve sufficient income security for farmers to encourage investments without over-subsidising the sector?
- Where do we need policy interventions to govern the livestock sector?

The role of animal and agricultural scientists

The expertise of scientists lies in understanding the animal and its context (e.g. animal health and behaviour, production system, sustainability issues, and for agricultural economists in consumer relations and markets). Based on reliable and valid information, scientists therefore must play a role in reflecting on the 'promise' of sustainable livestock production expressed by standards, by studying their impact, both in terms of farm impact (e.g. monitoring whether energy or water consumption decreases, impacts on animal welfare), but also in terms of process (e.g. how does it affect relationships in the supply chain, dependencies in getting market access). Researchers can advise standard organisations on relevant indicators to study animal production (e.g. animal welfare, greenhouse gases, farm income). While the focus of academic efforts lies in the development of new indicators, comprehensive tools and models for sustainability assessment, today's farming practices

are highly influenced by the wide implementation of private standards. Focusing the attention of scientists on evaluating and improving the quality of standards might therefore be an important step to support the livestock sector in becoming more sustainable. Interdisciplinary work and the use of a system approach are keys to have an integrated perspective on sustainability, livestock production and markets. Questions to be answered are as follows:

- Are voluntary standards effective in increasing sustainability of livestock production?
- How can different disciplines work more effectively together in order to answer questions related to the impacts of standards?
- How to balance academic perspectives and market interests in the development of reliable and effective standards?

Conclusion

The sustainability of livestock production is currently fiercely under debate, especially in North-western Europe and North America. While policy-driven requirements have aimed to steer livestock into more sustainable modes of production, market-driven initiatives are now moving much more rapidly by setting sustainability standards for farmers to comply with. Whereas this market-driven transformation can certainly support the livestock sector in becoming more sustainable and at least partly compensate for lengthy legislation processes, it also requires a critical eye to ensure that the standards are reliable, based on valid indicators and really increase sustainability. In addition to that, consumers need to be able to rely on standards in their decision-making, and farmers should be able to earn an adequate income for the sustainability efforts they make. Otherwise, sooner or later, standards will fail and a sustainable transformation of the livestock sector will stagnate. Therefore, the role of animal and agricultural scientists, in collaboration with other scientific fields, should be two-fold: critically monitoring current standards, and giving advice on how to improve these, both in terms of scientific validity and impact on sustainability and stakeholders. In conclusion, on the road to a sustainable livestock production, there are still many questions unanswered – a good starting point for setting a research agenda towards more sustainable future livestock farming.

Ethics approval

Not applicable.

Data and model availability statement

Not applicable.

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Declaration of interest

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References

- Bord Bia, 2022. Origin Green. Progress Update Report 2021. Bord Bia Irish Food Board. Retrieved on 22 March 2022 from <https://www.origingreen.ie/globalassets/origin-green/progress-update-report/bord-bia--origin-green-2021-progress-update-report.pdf>.
- Global G.A.P., 2022. GLOBALG.A.P. Putting Food Safety and Sustainability on the Map. GlobalG.A.P. Retrieved on 22 March 2022 from https://www.globalgap.org/uk_en/who-we-are/about-us.
- Initiative Tierwohl, 2022. Unser Tierwohl Siegel. Initiative Tierwohl. Retrieved on 22 March 2022 from <https://initiative-tierwohl.de/verbraucher/unser-tierwohl-siegel>.
- Logatcheva, K., 2021. Monitor Duurzaam Voedsel 2020. Consumentenbestedingen. Wageningen Economic Research. Wageningen University & Research. Retrieved on 22 March 2022 from <https://library.wur.nl/WebQuery/wurpubs/fulltext/551814>.