SCAR Collaborative Working Group

Sustainable Animal Production

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Summary

SCAR CWG SAP Workshop
Workshop title: FROM A HOLISTIC PICTURE TOWARDS A COMMON VISION OF EUROPEAN LIVESTOCK PRODUCTION

Date: 18/19 October 2022
Place: BMEL, Rochusstr. 1, DE-53123 Bonn
Host: Dr. Bernhard Polten, BMEL (DE)

Number of participants: 20 (physical) plus 60 (online)

1. Structure and elements of the workshop

1.1 Keynotes

Experts held keynote speeches on eight topics:

1) Diversity
2) Consumption
3) Circularity
4) Resilience
5) Animal Health & Welfare
6) GHG emissions
7) Organic agriculture
8) Economy

1.2 Analysis of national strategies

National strategy papers from 20 European countries concerning livestock farming were analysed before the workshop. The objective was to identify commonalities and differences across the countries, thereby also considering possible gaps.

1.3 Discussion

The eight topics were discussed in breakout groups and in the plenary.

2. Results of the workshop

2.1 Diversity (including biodiversity)

Key note by Dr. Stephane Ingrand, National Research Institute for Agriculture, Food and the Environment (INRAE), France
Diversity of livestock farming can be divided in three components:

a) Diversity of resources: E.g. a multispecies sward reduces the need for fertiliser, functional diversity oppresses weeds and increases resilience, and the yield is enhanced.
b) Diversity of animals: E.g. multi-species systems in aquaculture take advantage of the complementarity of the trophic niche of each species.
c) Diversity of production systems: E.g. mixed livestock systems improve sward condition, reduce parasites, increase income and decrease income variability.

Analysis of national strategies
The strategies generally support a greater focus on diversity, specifically biodiversity and genetic diversity. Several strategies link genetic diversity and animal health and welfare. Less attention is paid to the possibility of competition for land: grazing and feed versus protected areas for nature conservation, in line with the targets of the EU Biodiversity Strategy.

Discussion

- Diversity is an underlying principle of resilience.
- There is still limited awareness of the positive effects of diversity for livestock farming.
- Regulations need to be aligned to facilitate the introduction of diversity on farms.

2.2 Consumption and Export

Key note by Prof. em. Sirpa Kurppa, Natural Resources Institute Finland (LUKE), Finland
One of the most holistic description of the situation can be found in the UN Millennium Ecosystem Assessment report, but also in the concept of planetary boundaries. Carbon footprint, water footprint and land use refer to food quantities. Including the nutritional value of food makes the situation very complex. In practice, the view on food systems is often narrow and fragmented, and the principal role of livestock is mostly neglected. But simplified solutions will not meet the challenges.

Analysis of national strategies
Some strategies point to the lack of clarity around nutritional recommendations for animal products. There is also recognition that consumption recommendations should align with cultural elements. There is limited discussion around sustainable diets or sustainable nutrition across the strategies, which represents a possible gap. With regards to export, at least one strategy is concerned about the impact changes to the EU market could have for other countries.

Discussion

- Economics play an essential role in food choices.
- A more plant-based diet would promote environmental and human health.
- Livestock farming may decrease in the western world.

2.3 Circularity

Key note by Dr. Catherine Pfeifer / Dr. Florian Leiber, Forschungsinstitut für Biologischen Landbau (FIbL), Switzerland
Livestock plays a central part in circular agri-food systems. Circularity is a holistic approach and would lead to fewer animals in Europe, particularly to less monogastrics. In circular systems, the number of animals kept is determined by the amount that can be fed with grass, crop residues and (food) waste. As ruminants play a crucial role, there are trade-offs between the circular food system and GHG emissions (but maybe less than what we currently think, as enteric methane is a highly potent, but relatively short lived GHG).

Analysis of national strategies
The use of the term circularity differs greatly across the strategies. Agreement around what circularity means in an agricultural context could support policy coherence and strengthen future collaboration. We note the possibility to engage more actively with the EU's Circular Economy Action Plan, which was released after most of the strategies were analysed.

Discussion
- Stop demonizing livestock but see it as part of the solution in a sustainable system.
- Insects are also an asset to circularity (use of waste from e.g. the food industry).
- LCA as a method may have weaknesses when analysing circular systems.

2.4 Resilience

Key note by Prof. Miranda Meuwissen, Wageningen University and Research (WUR), The Netherlands
Sustainability and resilience are complementary. Use both concepts in all decisions. Guiding principles for resilience are diversity, (financial) reserves and feedback, complemented by business models and risk management. Local production and marketing alone does not guarantee resilience.
Challenges are currently accumulating: Climate change, COVID19, war in Europe, food prices. Be prepared to look at different levels (farm, landscape, regions, ..).

Analysis of national strategies
Much like with circularity, we see that there is limited agreement or coherence across the strategies on what resilience means for the EU livestock sector. Addressing this gap by clarifying what makes a resilient EU livestock sector could be a useful exercise. This could include developments and indicators (e.g. antimicrobial resistance, zoonotic pandemics) that need to be considered to ensure that the sector can be resilient in the face of crises.

Discussion
- In an ideal future, economy will not mainly focus on profit and competition but also on cooperation between actors and on building financial buffers to persevere in times of crises.
- We should pay more attention to old livestock breeds.
- Climate change challenges us to find the right balance between adaptation and mitigation, and to achieve targets.

2.5 Animal Health and Welfare

Key note by Prof. Azucena Mora, University Santiago de Compostela, Spain
The One Health approach recognises that human, animal and environmental health cannot be separated. Antimicrobial resistance (AMR) directly affects human and animal health and creates an economic burden due to prolonged sickness and higher mortality. The European Commission established a Community Strategy against AMR in the year 2000 and has been progressing on the issue ever since. Further progress requires harmonised monitoring, standardised methods, joint work to fill knowledge gaps, and (global) collaboration.

Analysis of national strategies
The importance of science-based approaches and evidence was noted in many strategies. Some member states support the view that systematic risk-based monitoring shall be the basis to control animal health and welfare rules. Even though animal welfare is a widely shared goal across the strategies, no precise welfare targets were provided.
There is awareness of potential trade-offs between animal welfare and environmental impact, and the difficulty of weighing one side against the other.

Discussion
- More (scientific) evidence is needed on animal welfare.
- A future market must valorise a high animal welfare level.
- The new EU animal welfare regulation could be more ambitious; differences between animal welfare levels in member states will remain.

2.6 Greenhouse gas emissions

Key note by Prof. Barbara Amon, Leibniz-Institut für Agrartechnik und Bioökonomie (ATB), Potsdam, Germany
The Kyoto Protocol was adopted in 1997 and sets internationally binding emission reduction targets. The German climate law (2019) sets permissible annual emission budgets and requires a 17 % reduction of greenhouse gas emissions between 2020 and 2030. In 2021, livestock in Germany accounted for 59 % of greenhouse gas emissions from agriculture. The currently available technologies alone cannot meet existing targets. Livestock should be part of integrated agricultural systems with full nutrient recycling.

Analysis of national strategies
Many member states note that efforts to reduce GHGs need to be complemented by improved monitoring methods, including refined and standardised measurement. This requires more research and innovation. Greenhouse gases is the theme with the most explicit targets. There appears to be broad commitment to reducing GHG emissions through a diversity of practices. However, most strategies tended to aim for technology based win-win solutions. Exploring possible trade-offs and costs, as well as the possibility of non-technical strategies (e.g. reducing livestock numbers) is given less room.

Discussion
- Zero emissions is not possible in the livestock sector – emissions are part of a natural process.
- We should not only focus on GHGs but also on other (N) emissions.
- GHG emissions in the entire food chain should be considered (holistic view).

2.7 Organic Agriculture

Key note by Prof. Katrin Zander, Kassel University, Germany
The market share of organic products in 2022 varies between 3.5 % (Italy) and 13.0 % (Denmark) in selected countries. The share of land cultivated by organic standards in these countries is generally lower. In the EU-27, about 45 % of organic land use is arable land and permanent grassland, respectively. The remaining 10 % area are other permanent crops. However, these shares vary widely between countries. “Organic” consumers typically consume less meat in total, and more meat from ruminants than the average.

Analysis of national strategies
Some strategies raised concerns over the rigidity of organic certification standards and called for more flexibility in the standards.
While organic farming was mentioned in several strategies, it was done mostly in relation to emissions, while other environmental considerations, such as biodiversity or water quality, were less pronounced. There were conflicting messages across the strategies, particularly regarding carbon emissions. Notably given the target for organic farming under the Farm to Fork Strategy, there appears to be a need for more agreement of the benefits and limitations of organic production systems.

Discussion
- Will the higher profit margins for organic products prevail?
- In an ideal future, consumers are educated about food production and willing and able to pay more for higher quality.
- Higher prices should be supported by policy because there are benefits for society and the environment (externalities, not reflected by market prices).

2.8 Economy (including social costs)

Key note by Prof. Harald Grethe, Humboldt-University Berlin, Germany
The current husbandry conditions for most livestock in Germany will not be viable in the future. There is political agreement in Germany to increase animal welfare standards. National payments for high welfare standards may be hampered by current rules at EU level. Reduced consumption of animal products in Europe could be a central lever to reduce GHG emissions from livestock. Furthermore, a reduced number of farm animals (reduced demand for land) can benefit the rewetting of peatland as a measure to mitigate GHG emissions.

Analysis of national strategies
Across the strategies, a strong focus remains on existing market prices, with less attention paid to other costs (i.e. environmental and social). This ties into limited attention to addressing trade-offs (i.e. loss of jobs or changes to production and consumption practices). There thus remains a gap across all strategies around the identification of costs, but also considering the social, ecological and economic costs of not adequately investing in a sustainable livestock transition.

Discussion
- Higher prices must be understood and accepted. Social implications must be addressed.
- The true costs need to be translated into true market prices.
- Any delay of political decisions to enhance sustainability is associated with costs for society.

3. Conclusions

3.1 Looking ahead after the analysis of national strategies

Further work on a vision for sustainable livestock in Europe could benefit from:

1) Clarification of concepts: A common understanding of concepts like resilience and circularity will facilitate the drafting of a common vision.

2) Taking a systems approach: This would support thinking around relationships and impacts in different areas, and align the vision.

3) Paying attention to governance: Policy mechanisms should be evaluated and considered to facilitate just transitions (i.e. public procurement schemes, social protection policies).

4) Identifying trade-offs: Knowledge about possible trade-offs resulting from sustainability transitions can be key to limiting unwanted side-effects.

3.2 Conclusions from the general discussion

- Livestock is often underrepresented in development plans for sustainable future agri-food systems. Instead, livestock should make essential contributions to it. The consumption of animal products in Europe, however, may have to decrease.
- Models for future livestock farming need to be flexible and consider the diversity of systems and conditions across Europe: No “one size fits all”.
- There is a need for science to fill knowledge gaps, and for European collaboration and harmonisation of methods, monitoring and definitions.
- Economy and knowledge played a decisive role for the development in all eight key topics discussed. Overall, sustainable products will be more economic in the long run. However, the costs must be calculated over the whole food system and regarding the whole of society.
- Public policy is crucial to provide the conditions for a functioning socio-ecological market economy. A long term perspective is required. Countries may have to develop at different speeds towards sustainable agri-food systems.
- A common European vision/strategy for livestock farming would be an important driver for the transformation of the sector. This workshop can be seen as a step in this direction.