Evolution in animal husbandry – fitting animals, fitting systems, or fitting farmers? The role and agency of animal farmers in designing future animal production systems

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1 Animal farming today

Ethical concerns for the welfare of animals kept in intensive production systems and related environmental impacts are prominent among European citizens and are also rising in emerging economies (Fraser, 2014). At the same time, the consumers' preferences for low-cost animal products remain high, leading to an "attitude-behaviour gap" that manifests in a "meat paradox" (Oleschuk et al., 2019) and a "milk paradox" (Wellbrock et al., 2019). This ambiguity creates a field of tension for animal farmers (Wellbrock and Knierim, 2019; SocialLab, 2019), which was recently also politically acknowledged by the German Federal Agricultural Minister Julia Klöckner. She summarised the expectations of the public as follows: "[F]armers should keep animals under the best conditions, but hardly anyone wants to pay more for it. Most people want to feel like eating meat from animals that have never been slaughtered ... [T]he creeping bad conscience is usually dumped solely on the farmer" (Klöckner, 2019; translation of the authors). Apparently, there are considerable mismatches between current animal production systems and socially acceptable forms of animal production (BMEL, 2019), and it is argued that the German agricultural system is at a turning point, transitioning from the traditional to the modern (Klöckner, 2019).

The 'traditional-modern' transition anticipated in Germany leads away from the productivist mindset that has guided production over the past 70 years in the EU and the US (Clay et al., 2019) and has created super-productivist rural areas (Mackay and Perkins, 2019). It leads towards a postproductivist form of agriculture supported by a post-modern society, in which animals are increasingly perceived as sentient beings with feelings and individuality rather than as resources or food (Buller and Morris, 2003). At the same time, this transition contrasts the 'traditional-modern' transition in developing countries, where intensive milk, pork, and poultry production systems are increasing in number in order to satisfy the demand for animal products of the growing middle class (FAO/OECD, 2019). What both transitions have in common is that they entail financial and structural insecurities for animal producers because they create an ambiguous socio-economic environment with contradictory production incentives; what farmers would need instead is reliable policy and market frameworks to develop meaningful, long-term production strategies (BMEL, 2019).

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We therefore argue that the role and agency of animal farmers need to be placed at the centre of attention when aiming for a sustainable transition towards socio-culturally acceptable animal husbandry. Following this line of thought, we use empirical findings of the global North and South to illustrate three areas of tension for animal farmers and explore the ethical dimensions of the farmers' agency.

2 Animal husbandry practices

For farmers, livestock has an ambivalent character, being composed of sentient beings and a natural resource at the same time (Gotter, 2018; SocialLab, 2019). Thus, they are operating within a highly ambiguous human-animal relationship, in which subjectively perceived personal values and feelings contrast with objectively verifiable economic and production-oriented results (Jürgens, 2008). This ambiguity leads, for example, to a caring-killing paradox (Reeve et al., 2005) and to a morally difficult behaviour representing a conflict between a person's moral values and their behaviour, which is nevertheless justified to protect their interests (Loughnan et al., 2014). An extreme case of such an ethical conflict is bobby calves and their economically (almost) useless life in intensive dairy production. It was shown in a study analysing online comments that dairy farmers oppose such handling of male dairy calves, despite facing the entrepreneurial challenge (Wellbrock and Knierim, 2019). Individual farmers everywhere try to develop and implement strategies for sustainable animal husbandry in harmony with animal welfare and their own ethical understanding (e.g. suckler-cow herds, double-purpose breeds). However, they often come up against political and market boundaries, so that alternatives remain niche solutions.

3 Rural development

Intensification has created high-intensity, productivist, and even super-productivist landscapes in many regions of the world (Wilson and Burton, 2015). In emerging economies, the evolution of super-productivist landscapes is particularly prominent, characterised by highly intensive production methods and transportation of products over long distances. Super-productivism results in great environmental, social, and economic damage of the rural area they are situated in (Wilson and Burton, 2015). Arguably, the livelihoods of animal peasant farmers, which make up 70% of the rural poor (FAO/OECD, 2019), are put at particularly high risk through super-productivism as they cannot compete with the associated output quantity and low-cost production. The increasing post-modern view of animals as sentient beings, in Europe as well as emerging economies (e.g. Boogaard et al., 2011; Wellbrock et al., 2019; Cardoso et al., 2018), opens new opportunities for post-productivist forms of animal production, promoting integration of animal production into rural landscapes through alternative, down-scaled, and multifunctional forms of agriculture (Clay et al., 2019). What is needed is research on how to anchor animal production sites regionally, adapt husbandry conditions to the landscape, and link them with other economic sectors such as tourism and services. Focusing on the education, cooperation, and market integration of peasant, small-scale, and multifunctional farmers may in the long-term create more socio-culturally sustainable animal farming systems than investing in largescale, multinational, and highly industrial agglomerates. Careful consideration of local circumstances is necessary to create production systems that fit the socio-cultural and economic specificity of their place of production.

4 Changing social values

The SocialLab Konsortium (2019) argues that consumers and citizens in Germany paint a picture of 'museum-agriculture' that depicts a romanticised vision of human-animal interactions and the profession of the animal producer. This, as is argued further, is contrasted by reality, in which animal producers keep animals for economic profit and where animal farms are larger than imagined (SocialLab, 2019). At the same time, citizens become more concerned about health issues related to the consumption of animal products and the environmental effects animal production has on the environment and climate. Similarly, in Colombia (Wellbrock et al., 2019), as well as the US, Brazil, and other European countries, citizens prefer extensive, small-scale animal production systems over large-scale industrial production systems. To close such framing gaps between consumers and producers and overcome ethical and value conflicts, it is necessary to develop joint visions and and create dialogue for future animal production systems that are supported by animal farmers as well as consumers and citizens. In Germany and other European countries, farmers have started numerous initiatives to initiate dialogue with the wider society using a range of online and offline communication tools. These include social media channels, blogs, live web-cams, as well as organising farm visits and initiating face-to-face dialogue with non-farming citizens (e.g. 'Ask a Farmer' booths at public fairs). These initiatives help to close the gap between consumers and producers and open doors for dialogue, discussions, and the creation of joint visions.

5 Conclusions

With respect to political interventions, it has become obvious that tensions around animal production systems need to be addressed with an integrative approach in order to achieve socio-cultural sustainability. In practice, sustainable animal production systems are developed by and with farmers and thus, must reflect farmers' roles and agencies as perceived by them and enacted in the social contexts they are situated in, reflecting the values and culture of the society they produce for. The transition to sustainable husbandry systems may thus be facilitated by government policy which supports farmer-led innovation of animal production systems.

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