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Change talk: Levels of adaptability to the livestock sector transformation

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ABSTRACT

The livestock sector is facing numerous challenges due to a transformation process caused by animal welfare concerns and environmental impacts. Different stakeholders in this process have their own individual interests and depend on each other in several ways. The discussions of livestock sector transformation are complex and show, that change processes need special ways to communicate. Mainly the method of motivational interviews is used as a method-of-choice-instrument especially when it comes to goal conflicts. This article will help to better understand communication processes between farmers and consumers in group discussions based on qualitative data analysis. A special focus beside the way of communication is on the aspects of animal welfare and livestock reduction. Results show insights into perspectives for communication strategies for different stakeholders. For perspectives on future animal husbandry systems it can be seen that there are three differing groups that will have to be addressed differently in upcoming political communication strategies.

***Keywords**: change talk; animal welfare; livestock reduction; consumption patterns; communication.*

1 Introduction

In the light of high social expectations on animal welfare and numerous ecological as well as climate challenges, livestock farming is facing a transformative turning point in several developed countries (Heyen and Wolff, 2019; Sandhu, 2021). In Germany, the Competence Network for Livestock Farming (called "Borchert Commission" after its prominent head, a former federal minister of agriculture) as well as the Commission on the Future of Agriculture provided conceptual policy frameworks, implementation strategies and diverse instruments on how this transformative process might succeed; including recommendations on animal welfare, financing mechanisms, development of a regulatory framework and other details (Kompetenznetzwerk Nutztierhaltung, 2020; Deblitz *et al.*, 2021; Zukunftskommission Landwirtschaft, 2021). Both commissions are formed by representatives of interest groups from diverse civil society groups, agricultural associations, agribusiness associations and environmental organisations. Both commissions have been initiated and formed by former government representatives at the highest federal political level. Also, the German government in power 2023 has given clear signals that they would build on the results of these two commissions for the transformation of the German livestock sector. This constitutes a clear indication of short to medium term changes to be expected in the German livestock sector. These changes might radiate to the EU-policy framework due to Germany's relative weight in the EU policy space and in EU-meat and milk markets.

Transformational processes commonly imply feelings of insecurity among affected actors. Livestock farmers in their roles as entrepreneurs in a market-driven context are challenged in their adaptability and innovative capacity (De Jesus and Mendonca, 2018): It usually means an additional input of resources and the need to uncouple from more or less deeply rooted habitualities (Klonek and Kauffeld, 2012). This certainly counts for farmers who might feel the need for redesigning livestock husbandry systems and in particular the reconstruction of stables. They are further more challenged to overthink their entrepreneurial concept as financial income streams may shrink or diversify. Driving forces to opt for change are hard factors – such as economic or technical reasons (Joormann and Schmidt, 2017) – as well as soft factors – such as values, personality, family ties or education (De Jesus and Mendonca, 2018). Studies show that soft factors might play an important role in innovation and transformational processes (König *et al.*, 2012; Joormann and Schmidt, 2017) regarding animal welfare, sustainability or climate protection. Personal and professional commitment to the issue, competences in terms of content and experiences are mentioned to have an impact on operational decisions towards sustainability (Braun *et al.*, 2013; Joormann and Schmidt, 2017).

Also consumers are challenged within a transformation process as they might be confronted with new food products and new consumption habits. Consumers' behavior has been differentiated between vulnerable, confident and responsible consumers (Kenning and Wobker, 2013). Depending on their role, consumers face different challenges in executing purchase behavior in accordance with their preferences. As a result, they might be motivated politically to engage in transformative change processes of industries delivering unsatisfying products.

There is a need to better understand communication's role in transformative change processes as well as finding commonalities and differences in opinion regarding animal husbandry systems. This applies in particular for the intensive livestock sector's need for change. Therefore, the following research questions were developed for this study:

1 What kind of importance is attached to the communication processes of interest groups and what are ideas for improvement?

2 Which perspectives towards the livestock transformation can be identified in particular regarding animal welfare and a reduction in livestock numbers?

2 Data and Methods

Group discussions with farmers and consumers have been conducted to better understand communication in transformative change processes. Data are based on 18 online group discussions with an average length of 143 minutes. Each group discussion took place with two or three consumers and two or three farmers, including a separate session for consumers and farmers of 20 minutes. Participants were recruited in six livestock intensive areas in Germany in the vicinity of the towns of Vechta and Magdeburg for poultry, Flensburg and Kempten for dairy, Borken and Güstrow for pig production.

In total, 48 consumers were recruited with the help of a market research institute. They were selected to have a basic understanding of agriculture in order to allow appropriate inputs to the discussion. Further criteria were

age, gender, diet and employment status. Farmers were recruited individually based on a snowball sampling approach. In total, 47 farmers participated, including 15 poultry producers, 16 dairy farmers and 16 pig producers. They all differed in their type of farming, number of livestock and animal husbandry. Only people with a full-time occupation as farmer and a running or intergenerational business were considered in order to allow for envisioning inputs and new ideas. All participants received a financial compensation and were assured anonymity. Due to data protection rules and anonymity assurance no socio-demographic summary statistics are available for the participants.

The discussions were moderated with an interview guideline based on the "motivational interviewing" approach (Kröger *et al.*, 2016) used in cognitive behavioral psychology (Lombardi *et al.*, 2014). Usually being applied to health contexts in individual therapy, it is also useful for organizational or group processes facing change. The method intends to induce statements from participants that make any reference to change processes (Klonek und Kauffeld, 2012). The main questions guiding the participants were: "How would your ideal perception of animal husbandry look like in the future?" and "How would your ideal communication between farmers and consumers look like in the future?". The discussions were audio-recorded and transcribed manually.

Data were analyzed by qualitative content analysis. Any statements that refer to a desire for change, give reasons for a change or show the necessity for change were classified as part of a "change talk" (Table 1). This "change talk" is again differentiated between "preparatory change talk" and "mobilizing change talk". The first is characterized by statements that bring into the possibility or the alternative of change; usually using the subjunctive. The latter is characterized by statements that describe a made decision or actual steps to change behavior; usually using the indicative (Kröger, 2016). Statements that justify and strive for the maintenance of a status quo were classified as "sustain talk" (Miller and Rollnick, 2013).

Table 1.

Categories for qualitative content analysis

change talk	mobilizing	• stating a decision or steps that show a change of behavior • use of indicative
	preparatory	• stating the possibility or the alternative of change • use of subjunctive
sustain talk		• justify and strive for the maintenance of a status quo

Since people usually show a mixture of all three classifications, participants were assessed according to statements that were repeatedly and most dominantly expressed in the respective group discussion. This typology - based on suggestions by Käpplinger (2011), differentiates between specific behavioral patterns among farmers and consumers, and between perspectives towards the ideal animal husbandry, livestock reduction and demographic or other characteristics of respective target group.

As for perspectives on future animal husbandry, participants were asked for their best imaginable communication strategy between consumers and farmers. Statements that gave an indication of an idea, expectation or a wish were identified per person and inductively gathered according to the typology classification as proposed by Fleiß (2010). Subsequently, interest groups and respective areas of responsibility mentioned by the participants were identified and arranged accordingly as shown in Figure 1.

3 Results

3.1 Communication processes

According to consumers and farmers, the ideal communication between them would be more transparent, honest and respectful. Critical issues would be discussed openly, unbiased and sensitively from both sides. Notably from consumer´s point of view, realistic images with good information are important. These images would allow to specifically differentiate between the value of the products to make up a decent opinion and purchase decision. This would increase reliability and their confidence in the product. Both sides agree on a communication at eye level. Farmers mention that they themselves should be self critically reflecting their husbandry system – not meaning that they degrade it. In contrast, tell the positive and negative sides of it. That way they would better integrate social concerns and both come down to the same level. Aiming to reach all groups of society, it would be helpful to use target group oriented channels of communication. Any communication format should somehow be related to a farm or farmer – making communication personal and authentic. With regard to this discussion about communication, there were no general differences of opinion during the discussion. Properly speaking, both

groups agreed very much on above mentioned aspects and wish for a convergence between them in terms of content and in person.

The typological evaluation of the statements made in the group discussions show that communication processes are considered as an integrated approach between various stakeholders (Figure 1). Participants assigned responsibilities to the following key actors by ascribing various ideas of how to design communication formats to each of them: Farmers, farmer´s association, food retail industry and the policy level. Although consumers take an essential part in it, their responsibilities rather appear as an intrinsic motivation than an extrinsic one, as are activities assigned to above mentioned stakeholder groups. Most participants perceive transparency between consumers and farmers as the main aim to be achieved by communication processes. In general, suggestions include a change of marketing strategies of the food retail industry, farmer´s commitment to initialize and open up personal and / or digital communication channels, the farmer´s association commitment establish network opportunities, and a reasonable political strategy that addresses various social groups.

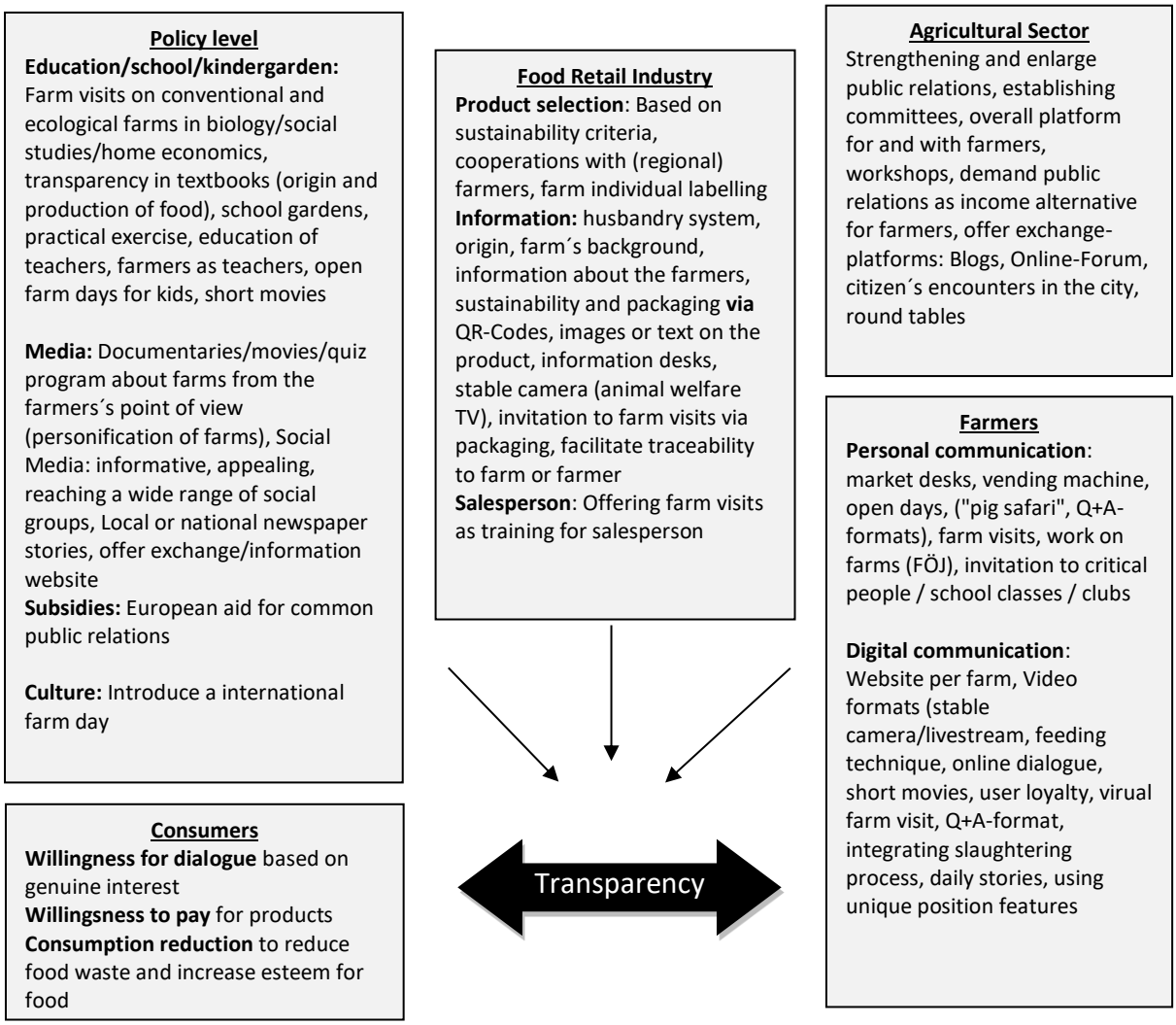

Figure 1. Integrated evaluation approach.

3.2 Animal welfare and livestock number

Most of the interviewees prefer animal welfare to be improved. Some state that animal husbandry has reached a very high level of animal welfare, but improvements would still be possible. The latter is especially the case among dairy farmers. It is noticeable that most consumers put the exercise of farmer´s profession in the first place, however emphasizing the need for more animal welfare. Statements show that most consumers would accept and understand a higher product price for higher animal welfare levels. At the same time, they would not start paying higher prices as long as there is the low price alternative.

Participants of group discussions can be assigned to three different change attitudes. The first group practices "mobilizing change talk" and consist of very few consumers and almost a third of farmers (Table 2).

Table 2.
Output of group discussions classified into "mobilized change talk" indicating characteristics of target groups, the most ideal imaginable animal husbandry and perspectives on livestock reduction - differentiating between farmers and consumers

	Target group	Characteristics of target group	Ideal animal husbandry	livestock reduction (hindering and driving forces)
Mobilizing change talk	farmers	High level of knowledge and commitment, ecological/ conventional farming, cooperating with food retailing sector or own commercialization or supply association, implementation of circular economy	Pig farming: Functional/climatic (and outdoor) areas allowing for grubbing and wallowing, straw, non-GMO feed Cattle farming: Pasture, open stable with cow comfort, (nurse/mother cow upbringing), horn, lowering of performance, less concentrated feeding Poultry farming: Outdoors with protective vegetation (laying hens), stable with generous space and structural material (fattening), slow fattening breeding, robustness	**Yes, because:** acceptance of delivery is assured, ethically justifiable and necessary, increase of product quality, facilitation of circular economy, increasing animal welfare, groundwater protection, selling is assured via good trade relations **Yes, if:** increase of prices, environmental/climatic balance, lower animal welfare levels **No, because:** national self-sufficiency not assured (poultry)
	consumers	Political or social voluntary commitment, committed to the transmission of knowledge regarding agriculture or sustainability, profession related to agricultural area, good agricultural knowledge, high environmental awareness, normal/low consumption of meat		**Yes, because:** Culinary delight, increase of quality of animal products, groundwater protection

The latter representing all three types of animal husbandry with organic or conventional farming. They either decided for ethical and / or environmental and animal welfare reasons for a circular economy, nurse or mother cow upbringing, cooperation with the food retailing industry or cooperative or associative structures. Each farmer here can be described as a visionary who is taking the initiative and responsibility for change on its own. Some demand a certain price level and a high contract longevity for their animal welfare products before cooperating with the food retailing industry. Here, farmers state that patience and consistency were necessary in order to agree on a fair deal. Consumers from that group are usually politically or socially committed and have some kind of professional experience that is related to the wide range of agricultural topics. Their network allows them to have a broad perspective and spread the word for more conscious consumption habits. Both their ideal of animal husbandry are generally more outdoor areas, animal related possibilities for activity or comfort and decreasing animal performance. Both prefer animal livestock to be reduced and ideally supported with an increase of selling prices and a ban on lower animal welfare levels.

The second group practices "preparatory change talk" and consists of almost the half of farmers and the half of consumers (Table 3). Farmers represent all three types of animal husbandry, but mostly poultry and dairy farmers practicing conventional or ecological farming. They are very open and (self-) critical to their own farming system. Those farmers show a high willingness to improve animal welfare although not necessarily demanding outdoor areas for cows nor for pigs. They want to put added value in order to keep up with market structures; perceiving diversification, innovation or change in animal husbandry systems as a possible solution. However, they make many aspects a condition to actually implement any change processes on farm level: They demand improvements in antitrust law at processing and retail level, higher retail prices and subsidies bound to animal welfare initiatives and flexible regional adaptation possibilities. In general, they prioritize being enabled to take part in the European market. Livestock reduction is perceived as being necessary in areas where national provision is not assured. They emphasize their willingness to keep production for inhabitants in Germany and avoid import of animal products. Consumers agree on many aspects farmers state during the discussion. With regard to their own behavior, they emphasize the need to reduce their general consumption of animal products and increase culinary delight. Partly, they demand an increase of prices also on consumer level, but mainly for farmers.

Most consumers state their awareness and responsibility in making adequate and fair purchase decisions, but do not seem to resolutely realize their endeavor. Only few seem inhibited by financial reasons.

Table 3.
Output of group discussions classified into "preparatory change talk" indicating characteristics of target groups, the most ideal imaginable animal husbandry and perspectives on livestock reduction - differentiating between farmers and consumers

	Target group	Characteristics of target group	Ideal animal husbandry	livestock reduction (hindering and driving forces)
Preparatory change talk	farmers	High level of knowledge, self- critical, prefer to increase added value and loosen dependency on subsidies, keep responsibility at policy and/or consumer level, ecological/conventional farming	Pig farming: Functional (and outdoor) areas, material for occupation Cattle farming: Open stable with cow comfort, automatic milking, (more than) sufficient eating and rest areas per cow Poultry farming: Outdoors (with protective vegetation) (laying hens), stable with generous space and structural material (fattening)	**Yes, because:** Own marketing via cooperation, ethically justifiable and necessary, higher quality, increase in animal welfare via reduction, better animal care, less work load **Yes, if;** Number of animals bound to area, antitrust improvements, increase of retail prices, cooperation among farmers, change of consumption patterns, animal welfare bound to subsidies and regional conditions, national self-sufficiency is assured, market participation assured **No, because:** National self-sufficiency insufficient, animal welfare through optimization
	consumers	All kind of diets, mostly (rather) good or very good agricultural knowledge, self-critical, (partly) low financial resources, strives for peace of conscience, sustainability and environmental protection		**Yes, because:** To ensure sustainable farming: environmental protection, keep diversity of farming, higher esteem for animal products, no overproduction **Yes, if:** Change of power relations, change/reduction of consumption patterns **No, because:** National self-sufficiency insufficient

The third group practices "sustain talk" and consists of half consumers and almost a third of farmers of whom most are pig farmers. Most of the farmers practice conventional farming. Almost none actually insist on keeping the status quo but have not much complaints about the current system. Ideally, pigs would have more functional areas in their stable, cows would have more space than currently legally required and hens would be kept outside or in a big stable with daylight, structural material and a lot of possibilities for movement. Some prefer animal husbandry bound to the area. Most of them perceive animal welfare improvement as a purely economic decision and assign responsibility to consumers and the food retailing industry. Increase in prices and animal welfare should be compensated by market mechanisms and cooperation between food retailing enterprises. Livestock should only be reduced when prices can be assured (by i.e. the food retail industry) and planning reliability increases. Consumers have a slightly more extended ideal of animal husbandry: They prefer having outdoor areas for animals. They do not directly criticize their own purchase behavior, but rather state low confidence in production systems and labelling. Some justify their striving for low prices in the supermarket with few financial resources, others admit their very pragmatic point of view by buying low-cost-products due to convenience or habit. Quality and origin of the product are mentioned as important factors when purchasing food products. Consumers from this group also show high sympathy for the farmer´s situation.

4 Conclusions

Results have shown insights into perspectives for communication strategies for different stakeholders. For perspectives on future animal husbandry systems it could be seen that there are three differing groups that will have to be addressed differently in upcoming political communication strategies. With regard to the first research question: Transparent communication is repeatedly mentioned as essential to narrow the communication gap between consumers and farmers. Consumers oppose images that greenwahs and that generate the assumption of a natural living environment for the animal, when in fact it is not. Farmers, especially those practicing change talk,

state to not have a problem opening their stable doors and communicating the positive as well as the negative aspects of current animal husbandry systems.

Table 4:
Output of group discussions classified into "sustain talk" indicating characteristics of target groups, the most ideal imaginable animal husbandry and perspectives on livestock reduction - differentiating between farmers and consumers

	Target group	Characteristics of target group	Ideal animal husbandry	livestock reduction (hindering and driving forces)
Sustain change talk	**Farmers**	Satisfied with status quo of livestock farming, mostly conventional farming, participating in „Tierwohl-Initiative", strive for more cooperation with food retailing, keep responsibility at consumer level, perceive themselves as market-actors	Pig farming: Functional (and roofed outdoor/pasture) areas, material for occupation, airy stable with daylight, generous space Cattle husbandry: Open stable with cow comfort, (not necessarily pasture), sufficient eating and rest areas per cow, no horns, no nurse/mother cow upbringing Poultry farming: Outdoors (with protective vegetation) (laying hens), stable with generous space and structural material (fattening), litter, only daylight, race diversity (no poultry farming at all), dual purpose breed	**Yes, because:** low production as a chance for market participation, increase in animal welfare **Yes, if:** Number of animals bound to area, increase of prices including work load, predictability, speed-up of building permits, risk-splitting with food-retailing, market participation assured **No, because:** Performance improvement not possible National self-sufficiency not assured (poultry)
	Consumers	Any type of diet, mostly (rather) good agricultural knowledge, weak confidence in agricultural production and/or labelling, striving for low-cost products due to convenience, habit or limited financial resources, prefer good product quality, product origin is important		**Yes, because:** Substitution by in-vitro-meat, increase in animal welfare: space, higher esteem for animal products, (preferably no poultry farming), ground water protection **Yes, if:** Economically viable for farmers, national self-sufficiency assured **No, because:** National self-sufficiency not assured (poultry)

This perception appears as an ideal starting point for more honesty and veracity in communication. Studies confirm the importance of transparency to generate confidence (Rumble and Irani, 2016). Specifically, the Millennial Generation values transparent communication having more balanced attitudes towards animal husbandry, not meaning to have necessarily more positive attitudes. Visibility can be increased by using channels being commonly used by the target audience and generating age-appropriate content. For some actors, this implies the need to use social media especially for Millennials. Content is recommended to address shared values between the target audience and the farmer helping to process the information (Rumble and Irani, 2016). On farmer´s side, transparency is certainly also eliciting personal challenges, as for example the way weaknesses of animal husbandry systems are handled in public, that need to be dealt with (Rumble and Irani, 2016). Both social media and personification of the livestock industry are iteratively stated in the group discussion as important future communication instruments for farmers and politics.

Personal communication is perceived as very important for an actual exchange and a better understanding of animal husbandry systems (Berkes *et al.*, 2021a and 2021b). Notably farm visits are valued as a useful instrument to increase confidence, acceptance and generate images related to the reality of husbandry systems. It is assumed, that those kind of encounters have a positive effect on perspectives towards agricultural production. However, studies reveal ambivalent results on farm visits (Ventura *et al.*, 2016). Some critical perceptions could be released, such as the worry about inadequate food or access to pasture. Some critical demands on a natural living environment could not be solved or even did elicit worries as for the early separation of cow and calf. Nevertheless, it should be raised the question if personal communication is supposed to strive for acceptance of the current

system, - or if communication should rather be an instrument for awareness raising and contribute to shape opinions and consequently influence consumption patterns. In this regard, farm visits might be an effective way to strengthen awareness, increase gain in knowledge and ultimately change and improve purchase decisions.

Farmers with respective agricultural technology, consumers and their changing purchase behavior as well as policy-makers should play an important role for transparent communication processes and develop sustainable food systems (Sandhu, 2021). Up to now, publications of the Borchert Commission and the Commission on the Future of Agriculture show that there is no actual strategy for a proper communication strategy designated. However, for a legitimate and inclusive transformation, relevant interest groups should have a voice in accompanying transparent participation and communication processes (Schröter *et al.*, 2016; Richter *et al.*, 2016; Holsterkamp und Radke, 2018). With regard to the energy transition, this has been a successful strategy in order to involve any relevant interest group (Richter *et al.*, 2016). Results show a strong interest in improved communication processes and better involvement and representation of farmer´s concerns.

With regard to the second research question: Results show main differences between groups of farmers and consumers with regard to their ideal animal husbandry, livestock reduction and respective demographic and socio-economic characteristics. With regard to the first, our present study shows that the ideal animal husbandry system is far from today´s system within current's legal standards. Thus, both practitioners and consumers agree on the necessity to improve the current animal husbandry system. However, the level of necessary improvement for animal welfare is perceived differently. One part, that can be identified as the "mobilizing change talkers", has not just internalized societal and environmental developments but actually jumps into action in order to adapt to them. They seem to successfully access and compete with transformed markets by investing in higher-value products, enter commercialization chains or building-up cooperative structures on farmer´s or retail level (Narayanan and Gulati, 2003; Hazell and Wood, 2008). They aim for a more integrative sustainable practice of agriculture, pursuing environmental, economic and social interests and can be described as "agroecologists", though not necessarily fully fulfilling this approach. Apart from them, "preparatory change talkers" are rather aiming for sustainable intensification, one of the globally perceived solutions to combat hunger through increased food production and climate change through efficiencies gains (Rockström *et al.*, 2017). Therefore, agricultural intensification strives for an increase of production levels and to reduce environmental impacts. Yet, agricultural intensification does not necessarily include all aspects of sustainability. They strive for resource-use efficiency and food productivity (Hazell and Wood, 2008; Rockström *et al.*, 2017). This might be a possible explanation for the fact that they prefer high levels of self-sufficiency to be produced in Germany, a better market integration and an improved antitrust law to better compete within the European market. There might be the need to politically develop a common strategy for agricultural production as agricultural production is perceived very differently at the moment. This strategy should be reflected in a respective subsidy system, administrative law and other support systems in order to intercept negative economic consequences and retrieve food producers from where they stand now.

On the other side, there is a high number of participants that were classified in „sustain talk". König *et al.* (2012) offers a possible explanation for this: In order to implement innovations, a good basis of confidence in trade relations and consumption patterns should exist. Only when those groups are part of a wider cooperation network, there is a chance to strengthen adaptability and the willingness to change among farmers. Thus mechanisms have to be found to activate and include these actors into participation, communication and transformational processes. There is a research need to identify and explicate incentives how to reach and include these actors not being involved yet.

Some of those being classified as „change talkers" started engaging in marketing processes of their own products – no matter which animal species or what kind of production (conventionally or ecologically) they apply for. It is evident that those farmers who proactively integrated in commercialization, cooperatives or started cooperating with the food retail industry are more confident in reducing the number of animals. The flip side of this is that farmers in more passive marketing relations – where they are mainly anonymous raw material suppliers – depend more strongly on large volumes to be marketed. For those farmers, prices are given data on which they have no influence. The only action space to grow and develop their farm business is increasing the number of marketed animals. Therefore, a reduction of animal numbers to them constitutes a thread. Those farmers with individually initiated marketing arrangements have a broader action space: They can vary the number of animals marketed but can also influence their marketing prices. Therefore, reduction in the number of animals constitutes an opportunity rather than a thread.

Up to now, livestock reduction is usually discussed in the context of climate change and environmental protection (Röös *et al.*, 2017; Hünecke *et al.*, 2020; Hayek *et al.*, 2021). However, consumers and farmers do rather think about it in the context of market prices, reduction of consumption and national self-sufficiency and do rarely associate positive effects with livestock reduction. Only after having discussed necessary conditions for a livestock

reduction, some advantages with regard to decrease of work load, increase of culinary delight and animal welfare came through. As all participants have grown up with a well-established or even growing livestock sector, for most it seems to be out imagination to have a greatly reduced livestock sector. Consumers put emphasis on the need to reduce the consumption of animal products and increase their willingness to pay for animal products produced with higher animal welfare standards.

General improvement of animal welfare appears as the common ground among participants. Some participants might accept this only if livestock numbers are reduced at the same time – in order to limit nitrogen exposures. Some farmers would only accept this under various improvements of political and economic circumstances. As increasing animal welfare is most often linked to higher space requirements with more outdoor contact, animal welfare improvements without reduction of animal numbers would lead to higher emissions. In order to reduce emissions and increase animal welfare, reductions in the total number of animals is a necessary precondition. A second technical aspect might contribute: increasing animal welfare is often linked to lower feed efficiencies as more robust animal breeds are kept and as feed with higher fiber content is fed. Without reduction of total animal numbers this would also lead to higher emissions. Thus, to acknowledge that higher animal welfare and lower emissions as conflicting objectives can only be achieved by reducing the total number of animals is a challenging conclusion for those actors in the German livestock sector which have been oriented for quantitative growth in the recent past.

Different types of consumers shown in this study can roughly be compared to those identified by Kenning and Wobker (2013) and Micklitz *et al.* (2010): Vulnerable consumers, confident consumers, and responsible consumers. The group of confident consumers might in the present sample also include people with an undesigned or passive point of view but with financial resources. In this sample, it does not mean that those consumers are purposefully against a transformation of the livestock sector but simply that their lower level of involvement has not confronted them with any action imperative (yet). Furthermore, our results indicate a considerable consumer-citizen-gap similar to previous studies (Mergenthaler and Schröter, 2020; Yeh and Hartmann, 2021). Consumers are aware of their responsibility as consumers being able to influence production methods by purchase decisions. Still, they acknowledge that their purchase decisions are not necessarily in line with their stated preferences. At the same time, they wish for more information on the products themselves to understand price differences better. Some confident consumers might be retrieved at this point: More recent research puts a stronger focus on food environments and choice architecture as decisive factors to facilitate purchase decisions in line with stated preferences (Vigors, 2018). Thus, salience of products would reduce complexity and improve deliberation in decision-making.

There is also some learning from our empirical strategy. Since the method of motivational interviewing usually induces cognitive dissonances among interviewees (Kröger 2016), it might be a useful instrument to reveal and discuss common and uncommon goal conflicts within and between environmental, social and economic interests of the agricultural sector. Motivational Interviewing can further be used to trigger change processes in enterprises (Klonek und Kauffeld, 2012). This might be of further interest especially in the light of new political pathways drawn for agricultural production in Germany. To generate directly useable results for policy-making, closer integration within and official legitimation from political institution would be required. Citizen assemblies might be a suitable framework.

We also have to mention some limitations of our study. By definition of an interviewing approach, our research does not include groups of consumers or farmers that were not willing to share their views on agricultural issues. This is obvious as nobody can be forced to participate. Although there was financial compensation and anonymity assured, it might have excluded people who do not dare to speak in the presence of others or who do not have access to digital media. Additionally, it has to be noted that mainly consumers with a kind of relation to agricultural issues were recruited. For an entirely integrated approach or a representative study, consumers with and without an understanding of agricultural processes should be included as well as a representative range of farmers. For such an approach official administrative support would be required as it is increasingly implemented within citizen assemblies.

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