MOTIVATIONS TOWARDS GRASSLAND IN GERMANY. VALUE CHAIN ACTORS' PERSPECTIVES

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1. Background & Research Question

Since the Green Revolution and increasing mechanization after World War 2, grassland usage has lost importance in German agriculture (Schramek & Nitsch 2013). According to the ministry of agriculture (BMEL 2020a), animal production was intensified and all-year housing of cows with grass silage is the predominant system. Extensive sites on the other hand were often abandoned. The output-oriented animal production system is reinforced by the centralized value chains of few large retailers (Franz et al. 2010). With low, fluctuating product prices for conventional milk and meat (BMEL 2020b), labour costs have to be kept to a minimum, thus affecting farmers and farm workers. Products considering societal demands for animal welfare, the aesthetic and recreational value of grassland landscapes and the biodiversity of more extensively grazed grasslands, represent niches at the moment (Stampa et al. 2020). With increasing critical attention towards animal production conditions, as well as an increasing demand for more versatile agrarian environments (Schaak & Musshoff 2020), we aim to explore how 33 stakeholders along the grassland value chain, such as farmers, contractors, consultants, administration, research and processors perceive the grassland situation in Germany at the moment. The stakeholders are located in three contrasting grassland regions, the region Wesermarsch with grass-based milk production, the hilly South of Lower Saxony with extensive suckler herding on ecologically highly valuable grasslands, and Eastern Brandenburg with grassland riverbeds with large-scale extensive suckler herding. The research provides insights which motivational aspects are important to enhance pasture-based farming, and which frame conditions represent a barrier.

2. Methods & Materials

From fall 2019 to spring 2020, grassland stakeholders in the three regions were interviewed with a semi-structured questionnaire and open questions, divided into three parts: the past, the present and the future of grassland. We started with project partners of the overarching GreenGrass project that develops technologies for grassland. Also, the scientists of this project were interviewed. From this point, we contacted proposed interview partners who represented the diversity of stakeholder perspectives on grassland in the three regions. The questionnaires were slightly adapted, according to expected knowledge and according to the regions. Some interviewees preferred to answer questions in writing. In these cases, the questionnaire was sent and returned via mail.

The interviews were transcribed fully where the permission for recording was given, and notes were used in the other cases. From the transcripts, the farming systems (Meuwissen et al. 2019) relevant to grassland were described in the three regions, and the perspectives of the interviewees were categorized according to their interest in grassland. The different reasons for grassland usage, and the desires for the future were captured.

3. Results

The scientists with backgrounds in different disciplines provide a wide range of information on grassland on the national level. They agree that grassland agriculture was reduced since the 1950s. The reasons for these developments are seen in the change of practices in grassland agriculture, increasingly large machines and respective land homogenization requirements, progress in genetic breeding of high-output cows and cattle, and a parallel development of adapted feed products, as well as increased quality and hygiene demands by the market. Most researchers confirm though that societal demands, such as political restrictions, increasing animal welfare movements and environmental agencies caused a halt in the decrease of grassland during the last decade. In the future, the scientists hope to see three developments: political support for biodiverse grasslands (e.g. through certificates), an increasing number of environmentally conscious- and animal welfare-based niche products and more differentiated solutions to the diverse practical issues in grassland agriculture (particularly related to the environment) in the different regions in Germany.

Because of high precipitation and marsh and peat soils with high water holding capacities, the agricultural area in the Wesermarsch region is mostly used for grass-based milk production. Also

here, production intensification over the last decades decreased the importance of grazing. But many of the farms still provide access to pasture for their dairy cows, therefore reducing labour input, feed costs and contributing to better animal health. Farmers with a grazing routine are particularly supported by some of the local dairy processors who certify the milk as 'pasture milk' and pay a higher price. The dairy sector strives at the moment, but the continued expansion of the pasture milk could exceed demand of the retail sector in the future, with a consequent reduction of milk prices. For the future, the farmers and other actors hope for better rewards for nature protection measures and equally expect higher regulations. Positive environmental effects of outdoor herding on the grass sward are commonly agreed on by the stakeholders. But a risk of monotonous high protein grasslands with limited biodiversity, and few habitats for birds and insects, is acknowledged by a local environmental agency.

The project region in the South of Lower Saxony, a highland region in central Germany, is characterized by biodiverse grasslands in the valleys. The region is part of a national nature park programme that supports biodiversity and sensitive landscape management. For this reason and due to natural limitations of hilly areas, the nature park's small, dispersed grassland parcels are exclusively utilized for small scale extensive herding. Labour input is high and young cows, extensive suckler cows and sheep farms are only financially self-supporting due to environmental payments by the federal state, which is why part-time farming is predominant. A driver for pasture agriculture is the motivated team of the nature park who have started projects for environmental consultancy and a cooperative for the land management and marketing of nature park meat. However, the restrictions within the nature park areas are perceived as particularly high by the farmers, and economically efficient grassland usage is restricted. The agriculture authorities in the area therefore do not see a future in grassland, just like the farmers in the neighbouring areas who cultivate mostly crops and use grass silage for feed and biogas. The stakeholders inside the nature park hope that agricultural policy will improve remuneration of landscape management by herding and adapt it to the actual labour demands of the hilly landscapes.

In the third region, grassland is mostly located in the river beds or lower lands close to the rivers and canals (marshlands). Grassland areas are stable because they cannot be easily converted to croplands due to the high (seasonal) water levels. The grassland areas of the predominantly mixed-system, large scale farms are either used intensively for mowing (feed or biogas), or for extensive suckler herding. Extensive programs support the farms financially for environmental reasons, and ban nutrient input, set late mowing dates and restrict animals per area. Extensive farmers therefore see major problems in the soil fertility and grass regrowth. Over the last years, summers have been hot and dry which limits grass growth, and considerations about water retention through the drainage system exist. While organic farmers often have diversified marketing options, the majority of farms in this region is conventional, with the outputs going to intermediaries and large retailers. With a lack of local processors, the potential for diversified distribution and marketing of grass-based products is considered low. The farms' profits are dependent on the market prices, which affirms the farmers' desire for economies of scale (lower cost per unit can balance the low product prices), and labour reduction by mechanization. The environmental programs are perceived as not adapted to farmers' needs and they hope for less 'restrictions' by political measures, and more support against foreign competition on the food market.

4. Conclusions

In summary, grassland agriculture remains undervalued in Germany, both economically and motivationally. Two pathways are commonly described as contradictory – environmental protection and economic efficiency. To promote usage of grassland, both farmers' needs, such as remuneration and long-term planning as well as environmental benefits, such as diverse grasslands as habitat for many wild animals, need to be further examined. Technologies reducing labour and creating ecologic benefits could be one way for the future, but the frame conditions need to be considered.

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