DEVELOPMENT TRENDS AND CHALLENGES IN BEEF CATTLE BREEDING IN LATVIA

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Abstract. In the European Union (EU), the cattle sector is made up of meat and dairy farming. These sectors are closely interlinked, as a significant proportion of dairy cows are slaughtered for meat. In the mid-1990s, as market conditions changed in Latvia's agricultural sector, the development of specialised breeds of beef cattle began, so the aim of the research is to examine trends in the development of beef cattle breeding in Latvia. Dairy farming is still one of the largest agricultural sectors in Latvia, but between 2003 and 2023 the total number of specialised beef cattle herds in Latvia has decreased by 46.9%, while the number of specialised beef cattle themselves has increased almost four times compared to 2003. The results of the study show, in 2023, the most popular beef cattle breeds were Charolais, Limousine, Hereford and Aberdinangus, and these breeds accounted for 87% of the total number of beef cattle. The beef cattle industry showed a positive trend in the development of specialized beef cattle breeds with an increase in the number of herds of 3-49 and 50-199 cattle in 2023, which accounted for 86% of the total number of beef cattle. In Latvia, beef cattle are concentrated in certain districts in the eastern, western, and northern parts of the country where favourable conditions (pastures) are available for rearing them. Authors conclude that in the future, farms producing cattle of specialized beef breeds will have to review their production practices in order to adapt to environmentally friendly solutions and contribute to the achievement of the objectives of the European Green Deal.

Key words: beef cattle herds, beef cattle breeds, breeding, Latvia, development, farming.

JEL code: Q13, Q18

Introduction

In the world, there is a lot of public and scientific discussion on the further development of farming, especially livestock farming, as the sustainability of livestock farming is affected by concerns about the negative changes in climate, an increase in the global population and the quality of agroecosystem services provided to society (Bernués A. et al., 2011). Over the last few decades, European Union (EU) agricultural policies have supported extensive livestock farming systems as a sustainable way of agricultural production to meet urban consumer needs related not only to food supply but also to a wide range of public benefits and positive externalities, e.g., the preservation of rural cultural heritage, landscape, and biodiversity (Resano H. & Sanjuán A. I., 2018). Food of livestock origin is very important to sustainability, as it plays a critical role in providing good nutrition, reducing poverty, contributing to gender equality, increasing livelihoods and food security, as well as improving health (Adesogan, A. T. et al., 2020; Perry B. & Dijkman J., 2010). In the USA, for example, there is growing interest in producing beef by grazing the cattle on pasture rather than by feeding grain to the cattle, as it is believed to be more environmentally friendly and sustainable (Hayek M. et al., 2018). In Europe, extensive farming practices based on cattle grazing have been encouraged in recent decades, which provide healthier nutrients in the meat produced (Resano H. et al., 2018; Jamieson A., 2013). Usually, the origin of locally produced meat serves as the key indicator of quality for consumers (Kühl S. et al., 2021). However, maintaining domestic output requires making and adopting effective decisions that can deal with and solve some serious problems, in particular to reduce the negative environmental impacts of livestock farming (Cozzi G., 2007; Bernués A. et al., 2011). It is necessary to increase production efficiency, which reduces the impact on the environment, improves the economic viability of farms and social support to society (White R. R. & Capper J. L., 2013). In recent years, and especially during the coronavirus disease (COVID-19) pandemic, the important role of agricultural production, especially red meat, in household consumption has increased (Dorcheh R. F. et al., 2021). Global beef output is expected to grow by 8% (6 Mt) by 2031 and account for

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12% of total global meat output growth. Beef output in Europe is expected to decline by 8% over the next decade, as herd sizes are projected to decline in response to limited export opportunities and the high cost of stricter GHG mitigation measures (OECD/FAO, 2022). The beef industry in Europe faces unprecedented challenges related to animal welfare, environmental impacts, the origin, authenticity, and nutritional benefits of beef products, as well as effects of nutritional quality. These problems can affect the development of the industry, especially beef cattle farms. Therefore, it is important to conduct research studies to deal with the problems in order to maintain and develop an economically viable and sustainable beef cattle industry (Smith S. B. et al., 2018). The cattle sector consists of meat and dairy farming in Latvia. In the EU, dairy cattle account for two thirds of the total herd structure, and this has implications for the formation and development of specialised beef cattle herds (Vinci C., 2022). An overview of trends in the development of beef cattle farming in Latvia suggests that the beef industry is mostly export driven (Grinberga-Zalite G. et al., 2021; Pilvere I. et al., 2022a). After regaining independence in 1991, the production of cattle of specialized beef breeds in Latvia became an independent industry, but in European countries such as France, Spain, Ireland and Germany (Hocquette J. F. et al., 2018), and in countries around the world such as Argentina, Uruguay, the USA and Australia, the beef cattle breeding industry has long been highly developed (Scholtz M.M et al., 2011). In Latvia, dairy farming is still one of the largest agricultural sectors, with dairy cow quality meat still having a relatively high share in the total supply of this product compared to specialised beef breeds (Lujane B. et al., 2013). In Latvia, the specialised beef cattle breeding sector is a new industry. Therefore, **the aim of the research** is to examine trends in the development of beef cattle breeding in Latvia. However, there is a number of challenges for the industry, as it is fragmented, the supply of domestically produced quality carcasses of cattle of specialized beef breeds are not sufficient in the market and high energy prices and unfavourable external economic conditions in 2022 hindered the further development of the industry.

Research methods

Data and information from the Agricultural Data Centre (ADC), an authority supervised by the Ministry of Agriculture, have been collected and analysed to identify trends in the development of beef cattle breeding in Latvia. The ADC was established in 1997 as the State Animal Breeding Information and Data Processing Centre (SABIDPC) and was transformed into the state agency Agricultural Data Centre (ADC) in 2004. The analysis was carried out using the data available in the information system of the authority for the period from 1996 to 2023 on: 1) the number of beef cattle herds, 2) the distribution of beef cattle breeds, 3) the distribution of holdings by herd size, 4) the distribution of holdings in Latvia by region (ADC, 2023). The research employed the comprehensive analysis and synthesis methods, as well as performed a comprehensive analysis of ADC data, which meant collecting the data, analysing, and interpreting them, and presenting the data in a visually readable format.

The novelty of the research involves using the information obtained from the data analysis to determine whether, historically, conditions have been economically favourable for the development of the beef cattle breeding industry in Latvia, maintaining the authenticity of the origin of beef cattle breeds to ensure the supply of and demand for quality beef in the domestic and foreign markets in the future.

Research results and discussion

After the Soviet Union collapsed in the early 1990s, the livestock industry in Latvia lost its status of priority agricultural industry, and the output of livestock products decreased rapidly. As market conditions changed and it was possible to obtain government support in the form of subsidies in the mid-1990s, the

production of cattle of specialized beef breeds by farms began to expand. In 2004 when Latvia became an EU Member State and began receiving the diverse support of the EU Common Agricultural Policy (CAP), beef production continued increasing after a significant decrease in 2004-2010. Therefore, the development of this industry in Latvia after regaining independence could be divided into two main periods: 1) until 2003 – rapid development of the industry before joining the EU; 2) from 2004 onwards when after joining the EU, the industry experienced a significant decrease, adapting to the requirements of the EU single market, and slow growth since 2011.

1. Trends in the development of beef cattle farming in Latvia before joining the EU

The first official data on specialized beef cattle farms and beef cattle breeds in Latvia were published in 2000 for the period from 1996 to 1999, which were included in reports by the SABIDPC (2000; 2001) (Table 1).

Table 1

Distribution of beef cattle herds by breed in Latvia in 1996-1999

Breeds	1996		1997		1998		1999	
	Number of cattle	Number of herds	Number of cattle	Number of herds	Number of cattle	Number of herds	Number of cattle	Number of herds
Hereford	71	6	93	8	139	16	388	20
Charolais	28	9	67	16	101	21	348	24
Limousin	0	0	16	2	38	3	42	3
*Aberdinangus	0	0	0	0	10	1	9	1
Total beef breed herds	**99**	15	**176**	26	**288**	41	**787**	48

*Angus (Red, Black) Breed

Source: SABIDPC, 2000; 2001

Table 1 shows that in 1996, 15 specialized beef cattle herds with a total of 99 cattle were registered in Latvia (on average 7 cattle per herd; besides, the herds consisted of the cattle of the Charolais and Hereford breeds). In 1997, the number of herds increased to 26 (by 73%) with a total of 176 cattle (an increase of 78%), while the average number of cattle per herd was still low at only 7 cattle. In 1999, there were already 48 such herds with 787 cattle (on average 16 cattle per herd), which was an increase of 3.2 times in the number of herds and 7.9 times in the number of cattle compared with 1996. In the period 1996-1999 in Latvia, the most popular breed among beef cattle farmers was the Hereford breed (Table 1), which accounted for 51% of the total number of beef cattle, followed by the Charolais breed with 40%, the Limousine breed with 7% and the Aberdinangus breed with 2%.

An important day for beef cattle farmers was 14 May 1998, as the Latvian Association of Beef Cattle Breeders was established; its main purpose was and still is to foster the production of beef cattle in the country, develop the market for breeding cattle and high-quality beef and contribute to beef cattle production monitoring (The annual report..., 2002).

Source: SABIDPC, 2000

Fig. 1. **Distribution of beef breed cattle by district in Latvia at the beginning of 1999**

Figure 1 shows data on the number and locations of cattle of specialized beef breeds in the territory of the Republic of Latvia at the beginning of 1999 – the beef cattle was produced in 16 districts out of 26, and there were totally 48 herds with a total of 787 cattle. The herds of this size were appropriate at the beginning of the development of the beef cattle breeding industry. However, for the industry of specialized beef cattle to become a profitable one that would generate incomes from agricultural production, the herds had to be increased to at least 30-50 producing cows (SABIDPC, 2000). In Latvia, the largest populations of cattle of specialized beef breeds began to emerge in the regions of Vidzeme and Latgale – in areas with moderately fertile soils and enough fodder.

Table 2

Distribution of cattle of the most popular beef cattle breeds in Latvia in 2000-2003

| Breeds	2000	2001	2002	2003	2003/2000, %	2003/1999, *times*
Hereford	3943	3762	4281	4798	122	12
Charolais	3264	3336	3641	3862	118	11
Limousin	348	628	1285	1791	515	43
Aberdinangus*	484	888	1388	2125	439	236
Highland Cattle	1	1	5	6	600	x
Total cattle of beef breeds	7556	8615	10600	12582	167	16

*Angus (Red, Black) Breed

Source: authors' calculations based on ADC data, 2023

Before joining the EU, the number of beef cattle herds increased significantly in Latvia in 2000 compared with 1999, on average 16-fold, and for the Limousine breed even 43-fold. After that, in the period 2000-2003, an increase was smaller, although the number of Limousine and Aberdinangus cattle increased 5.2-fold and 4.4-fold, respectively (Table 2). In 2003, the total number of beef cattle herds was 9667 with a total of 25003 cattle. An analysis of the distribution of cattle by herd reveals that small herds with on average 1-2 cattle per farm prevailed. According to data for 1 January 2003, the beef cattle of the Charolais and Hereford breeds were still the most popular in Latvia; however, Limousine and Angus beef breed cattle were also farmed, with a total of 12576 cattle (Table 2), as these breeds could be well crossed with dairy cattle ones. Before joining the EU, farmers in Latvia were worried about how competitive the beef cattle breeding industry would be, considering the support of the CAP provided to the "old" EU Member States and the strict requirements of EU legislation for livestock farming.

2. Trends in the development of beef cattle breeding in Latvia after joining the EU.

2.1. The number of cattle herds, including specialized beef cattle herds, in Latvia

After the accession of Latvia to the EU, agriculture, including cattle farming, had access to CAP support from both pillars, which helped the industry to become technologically modernized and increase productivity, and a significant restructuring of the agricultural industry occurred (Upite I. & Pilvere I., 2011). On 1 January 2004, 74555 cattle herds were registered in Latvia, of which 9110 or 12% were specialized in beef cattle production (Figure 2). In 2005, the number of beef cattle herds decreased to 4509 or 7% of the total cattle herds because there were a lot of insects (gnats) in summer due to excessive humidity and because of the insects a lot of grazing cattle perished on pastures. The hot and dry summer of 2006 continued to negatively impact the livestock industry, and the number of beef cattle herds decreased to 2812 or 5% of the total cattle herds. Until 2013, the number of beef cattle herds was volatile, not exceeding 6% of the total cattle herds. Since 2011, the number of beef cattle herds has slightly increased every year, reaching 4536 herds at the beginning of 2023 or 60% more than in 2011, accounting for 31% of the total herds (Figure 2). This was due to CAP support payments, especially direct payments, including voluntary coupled support for cattle available from 2015 (Pilvere I. et al., 2022b).
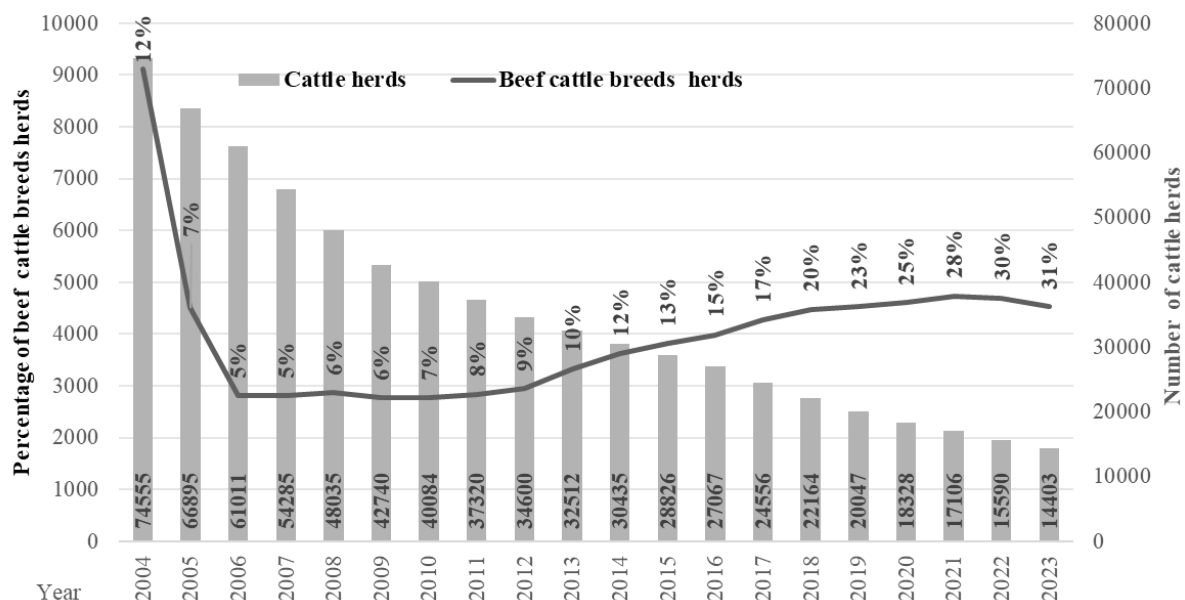
Source: author's calculations based on ADC data, 2023

Fig. 2. **Changes in the number of cattle herds and a percentage of beef cattle breeds herds in Latvia in 2004-2023**

In 2016, there were 1.3 million herds in the EU (excluding herds in the UK). Of these, 370.3 thousand were specialised beef cattle breeding and fattening herds. More than 57% of specialised beef herds (212.6 thousand) were in just four Member States - Ireland, France, Spain, and Germany - while the remaining 43% were distributed among the other EU Member States (Portugal, Romania, Denmark, Slovenia, Latvia, Lithuania, Estonia, etc.), with a total of 99.1 thousand herds. (Vinci C. et.al 2022). In 2016, the number of herds of specialised beef cattle breeds registered in Latvia was only 1.1% or 3988 herds of the EU total. This means that the number of registered beef cattle breeders in Latvia is small, that efficient performance in the beef sector depends on herd size, structure, economic profitability, income level and the country's geographical and natural conditions.

2.2. Distribution of herds of beef pure breeds, crossbreeds and mixed breeds and changes in the number of the herds

At EU entry in 2004, Latvia had 4194 Hereford, 3563 Charolais, 2611 Aberdinangus and 1914 Limousin herds, for a total of 12282 animals of these meat breeds (Figure 3). An analysis of Figure 3 data on the distribution of beef cattle herds by breed and the changes in the period 2004-2023 reveals that the most popular breeds were Charolais, Limousine, Hereford and Aberdinangus; in total, there were 3926 herds with 56416 cattle of the mentioned breeds in 2023. The number of herds of the mentioned beef cattle breeds increased, which could be explained by government subsidies granted to the beef industry and aimed at increasing the proportion of domestically produced, high-quality beef in the market and implementing a breeding programme to shape beef cattle production as an independent industry (Agriculture and Rural..., 2004).

This was also facilitated by additional national direct payments available from 2004:1) a slaughter premium was paid for cattle (older than 8 months); 2) a premium for suckling cows. However, the main problem was a lack of purebred breeding beef cattle (Agriculture and Rural..., 2005). In Latvia, beef cattle farming was impacted by the global financial crisis in 2008-2009, as the purchase price of milk in the related industry (milk production) decreased and the exports of dairy products decreased.
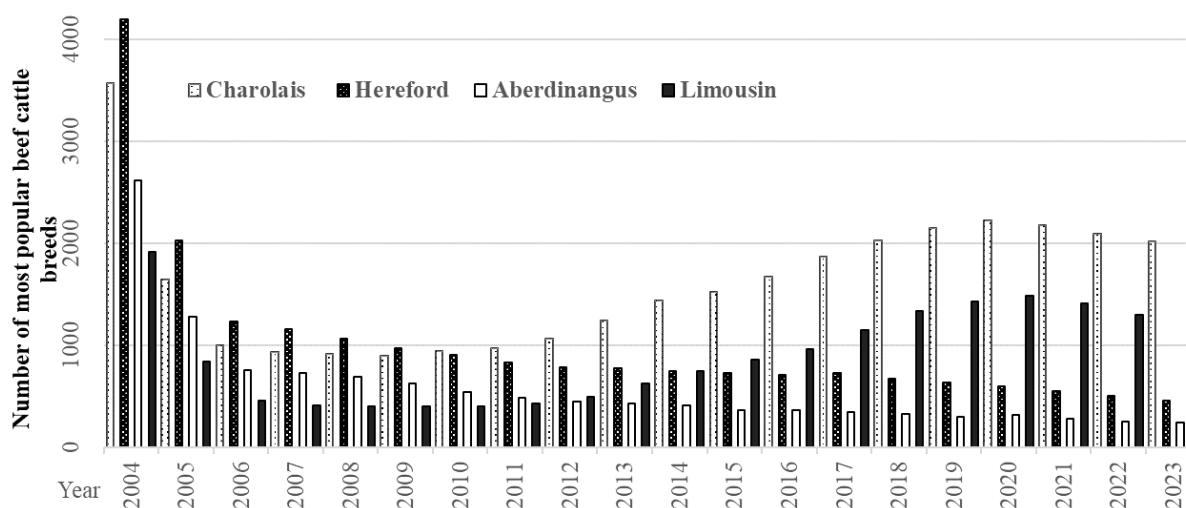

Fig. 3. **Distribution of the most popular beef cattle breeds in herds in Latvia in 2004-2023**

An analysis of data (Figure 4) on beef cattle crossbreeds and the breed of dual-purpose cattle (e.g., Simmental) reveals that from 1 January 2008 to 1 January 2023, the number of herds of beef cattle crossed with Latvian brown breed cattle and the number of herds that raised mixed breed cattle (Simmental) increased rapidly in Latvia, as dairy farms shifted to meat production (Figure 4).
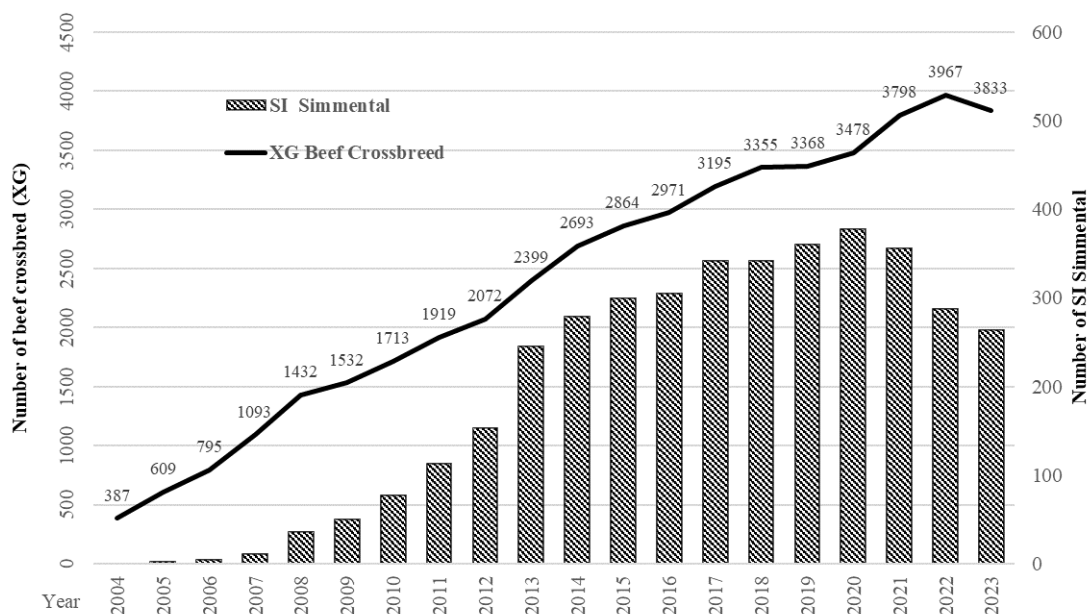
Fig. 4. **Number of beef crossbreed (XG) and Simmental breed in Latvia in 2004-2023**

In 2008, there were 36 herds of Simmental dual-purpose breed cattle; the other herds continued to be restructured towards meat production so that the farms could continue farming in rural areas. From 2011 to 2023, the number of herds of dual-purpose breed cattle (Simmental) continued to increase, reaching a total of 264. This could be explained by government support for a suckling cow of a beef breed or a suckling cow that represented a breed crossed with a beef breed, as well as for cows of dairy breeds in order to support and promote the development of the beef cattle industry. Over 15 years since 2008, the number of beef crossbreed (XG) and Simmental dual-purpose breed cattle has increased from 1468 to 4097 cattle at the beginning of 2023.

This trend could also be explained by the fact that many farms, especially small ones, could not supply quality milk to the milk processor because the quality requirements for milk to be purchased increased; therefore, they sought alternative solutions to continue farming profitably. In Europe has diverse range of beef production system depending on factors including widely varying agro-climatic regions, the scale of dairy production within regions, and market requirements. Most European beef is produced as a by product from dairy farms which have two-thirds of European cattle (Greenwood P.L, 2021). Crossbreeding has been shown to be the most productive system for commercial beef production, and the use of crossbreed cows give the biggest boost to the program. Crossbreed cows exceed straitghtbreeds by up to 30% in productivity, such differences cannot long be ignored to fit into a viable crossbreeding program and that should have the best chance of retaining a place in the industry (Berg R.T.,1984).

A solution was to keep suckling cows, as it required less investment and partly gave an opportunity to preserve the usual way of farming – to keep cattle of beef crossbreeds and of mixed breeds.

3. Changes in the distribution of herds of beef breeds

An analysis of data on changes in the distribution of cattle of specialized beef breeds by herd size (Figure 5) reveals that in 2004 beef cattle herds were heterogeneous and the largest number of herds had a total of 3-49 cattle, accounting for 57% of the total cattle, and together with small farms (1-2 cattle) accounted for 91% of the total beef cattle. Despite the problem caused by the drought to livestock farming in 2005 and 2006, there was still a large number of farms with 1 to 2 cattle used for self-consumption.
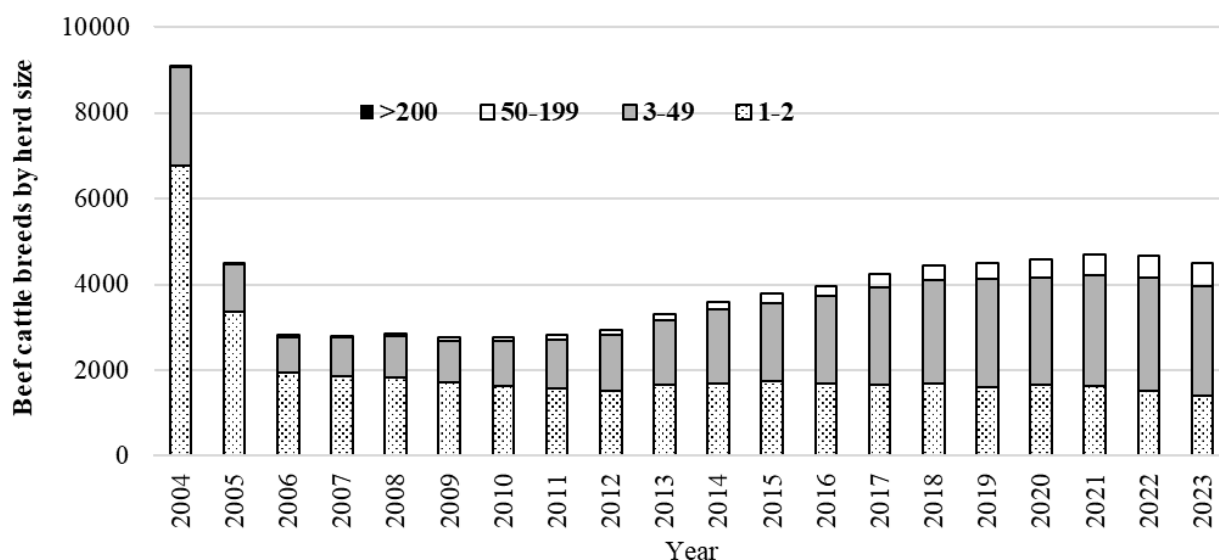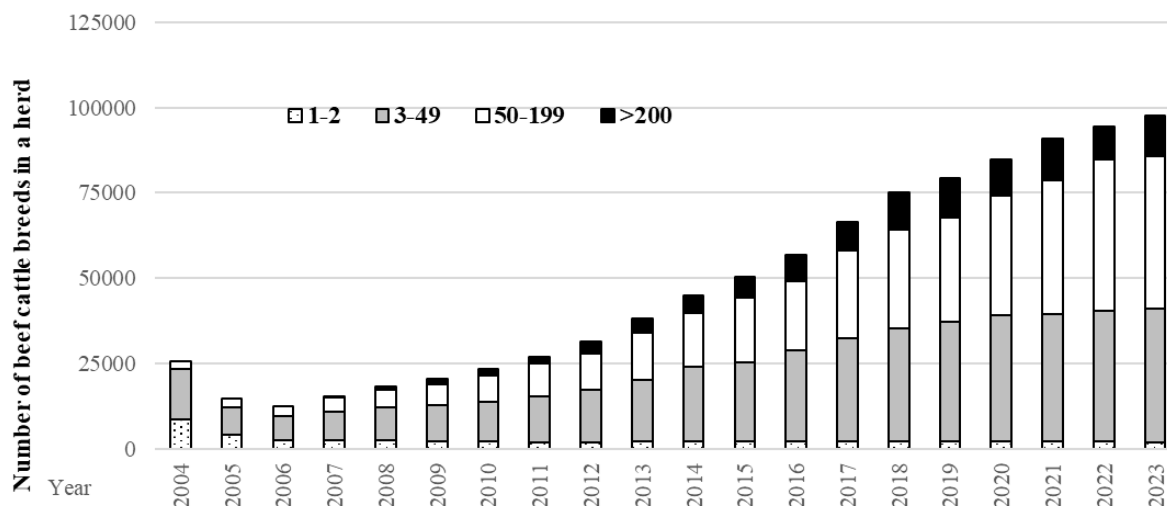
Source: author's calculations based on ADC data, 2023

Fig. 5. **Distribution of beef cattle breeds herds by size in Latvia in 2004-2023**

Since 2013, there has been a positive trend in the number of herds of specialized beef breeds in Latvia, as the herds with the number of cattle from 3 to 49 and 50 to 199 increased, while the number of herds with one or two cattle decreased. During the period of analysis, there was a positive trend in the number of beef cattle herds. According to data for 1 January 2023, specialized beef cattle herds with 1-2 cattle represented only 31%, herds with 3-49 cattle made up 57%, herds with 50-199 cattle accounted for 11% and herds with >200 animals represented 1 % of the total herds. On 1 January 2004, the herds of specialized beef breeds with 1-2 cattle totalled 6765, while on 1 January 2023, the number of the herds has decreased to 1398 or by 79%. However, as the number of small herds decreased, the number of medium-sized herds with 3-49 cattle (2575 herds or 258 more than in 2004) and the number of herds with 50-199 beef cattle (522 herds or a 19-fold increase) tended to increase (Figure 5). In 2023 in Latvia, there were 41 herds with >200 cattle, while in 2004 there were none at all, meaning that there was a small but upward trend.

An analysis of data on changes in the number of herds of specialized beef breeds by size (Figure 6) reveals that in 2004 the largest number of cattle (14661) was in herds with 3-49 cattle. In 2023, the number of herds with 3-49 cattle was larger, which raised a total of 39287 beef cattle, and herds with 50-199 cattle raised 44492 beef cattle. The number of large herds has increased, i.e., 11937 beef cattle were raised in herds of more than 200 cattle.

Source: author's calculations based on ADC data,2023

Fig. 6. **Distribution of beef cattle breeds in a herd in Latvia in 2004-2023**

Such changes indicate more efficient management in the beef cattle industry, the ability to adapt to endogenous factors and create an opportunity for long-term growth for the industry as a whole. From an economic point of view, one of the major problems and challenges facing the specialised beef cattle sector in Europe is its heterogeneity. There are significant differences in per capita beef consumption and in the distribution of beef breeds, farm size and economic profitability between EU countries (Hocquette J.F et.al. 2018). The competitiveness of specialised meat breeds in the EU is also linked to herd structure. The smaller and more uneven the development of the beef cattle sector, the more vulnerable it becomes. The sector has fewer opportunities for investment and innovation and may face economic difficulties. The market is also affected by changes in the flow of dairy cattle to slaughter (Vinci C., 2022).

3.1. Distribution of pure breed and crossbreed beef cattle by municipality in Latvia

A comparison of data on the locations of beef cattle in 1999 and at the beginning of 2023 (Figures 1 and 7) reveals how the geographical distribution of pure breed and crossbreed beef cattle has changed over a period of 24 years. In 2023 in Latvia, the largest number of beef cattle was reported in some municipalities of Vidzeme region (northern part of Latvia): Cesis and Madona, Latgale region (eastern part of Latvia) – Augsdaugava municipality and Kurzeme region (western part of Latvia) – South Kurzeme and Kuldiga municipalities because the mentioned municipalities had suitable conditions for pastures, smaller areas of fertile agricultural land used for growing fodder for dairy farming, as well as vast, still unused land areas suitable for beef cattle farming. The beef industry is suitable for organic farming. Herds of specialized beef breeds play an important role in the preservation of natural and perennial grasslands. They have high scenic, biodiversity and recreational value. They form important buffer zones between arable land and water, absorbing plant nutrients leached from arable land and protecting rivers, lakes, and the sea from eutrophication.

The beef industry should share responsibility for contributing to climate change, as a relatively large amount of greenhouse gases are released during the digestion process in cattle and from the manure. Therefore, it is important to identify where and how cattle of specialized beef breeds that we consume in our diet have been raised (Jamieson A., 2013; Bernués A. et al., 2011; Resano H. & Sanjuán A.I., 2018). Livestock farming can reduce poverty in rural areas by contributing to GDP and employment, which benefits consumers, traders, and other actors of the value chain more than meat producers (Perry B. & Dijkman J.,

2010). The CAP Strategic Plan of Latvia for 2023-2027 also states that it is necessary for beef cattle farmers to increase value added by cooperating and producing competitive products for the domestic and export markets, as well as to create and maintain a healthier and sustainable EU food system (CAP Strategic Plan for…, 2022).
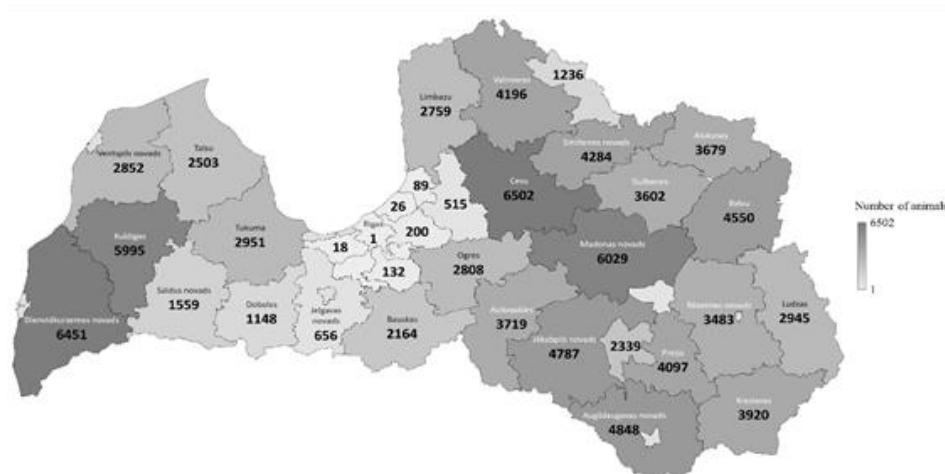
Source: author's calculations based on ADC data, 2023

Fig. 7. **Distribution of beef pure breed and crossbreed cattle by municipality in Latvia on 1 January 2023**

Future challenges for livestock farming are biodiversity, traceability of products, reduced delivery time and environmental protection. This is in line with the objective of the European Green Deal – to increase biodiversity by developing beef cattle breeds, protecting unique genetic resources, as livestock farming no longer serves only to provide food but also performs very important environmental and nature-related functions, especially by reducing emissions from cattle farming (Pilvere I. et al., 2022b). From Farm to Fork Strategy states that by 2030, the EU must reduce the use of fertilizers by 20%, the amount of pesticides by half and the amount of antibiotics used in livestock farming by 50%. Beef cattle farmers will have to count on the European Green Deal to further increase biodiversity and reduce greenhouse gas emissions and environmental impacts. This is a response to new consumer needs (European Commission, 2020).

Economic aspects: the livestock industries are mostly located in areas adversely affected by economic globalisation and by the opening of borders in the agri-food industry and beyond. Often isolated, they do not immediately benefit from the economic dynamics generated by the opening of new markets and the development of new technologies. They face a multifaceted challenge: The difficulty the sector faces in controlling its own destiny, given the competition posed by the dairy herd on the beef market, which provides around 60% of the beef consumed in Europe (Farm Europe …, 2018). Economic and trade globalization will affect the beef cattle industry, especially small farms, which will not benefit equally from market opening. Consequently, a paradox arises for meat cattle breeders - they have to look for opportunities in the world market, but at the same time they are weakened by the strong competition in this market (Vinci C., 2022).

Conclusions, proposals, recommendations

1. Before joining the EU.

- the first official data on specialized beef cattle farms and beef cattle breeds in Latvia were published in 2000 for the period from 1996 to 1999. In 1999, there were already 48 such herds with 787 cattle (on

average 16 cattle per herd), which was an increase of 3.2 times in the number of herds and 7.9 times in the number of cattle compared with 1996.

- an important day for beef cattle sector was 14 May 1998, as the Latvian Association of Beef Cattle Breeders was established; its main purpose was and still is to foster the production of beef cattle in the country, develop the market for breeding cattle and high-quality beef and contribute to beef cattle production monitoring.

2. After joining the EU:

- the number of herds and the number of cattle in them significant decreased; however, since 2011, a slow growth of the industry was reported, which was influenced by the CAP and national support payments. At the beginning of 2023, there were 4536 beef cattle herds in Latvia, or 31% of the total cattle herds;
- from 2004 to 2023, Charolais, Limousine, Hereford and Aberdinangus were the most popular beef breeds. At the beginning of 2023, there were 3926 herds of the mentioned beef breeds with a total of 56416 cattle, accounting for 87% of the total cattle herds;
- the beef cattle industry showed a positive trend in the development of specialized beef cattle farms, as the number of herds with 3-49 and 50-199 cattle increased in 2023, accounting for 86% of the total beef cattle;
- beef cattle herds are located in several municipalities in the eastern, western, and northern parts of Latvia, where favourable conditions (pastures) are available for beef cattle.

3. In the future,

specialized beef cattle farms need to revise their farming practice: review animal welfare requirements in the country in relation to the production of beef breeds or beef meat, draw up a strategy for the development of the specialised beef breeds sector in order to focus on better market organisation and segmentation and to promote the development of the sector towards a more sustainable model , in order to be able to successfully implement environmentally friendly farming and contribute to the objectives of the European Green Deal, including reducing greenhouse gas emissions.

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