

## THE LAMB MEAT MARKET IN THE EUROPEAN UNION COUNTRIES IN 2007–2017

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### ABSTRACT

The aim of the work was to show the situation and changes on the lamb meat market in the European Union countries. All European Union Member States, which belonged to the EU as of 31 December 2017 were selected for research. The research concerned the years from 2007 till 2017. The period of research concerned the years 2007–2017. Decrease in the sheep population in the EU has been found, the largest in the countries that keep the largest number of animals, such as Spain, the United Kingdom, France and Italy. The decline in the population of sheep influenced the decrease in the production of lamb meat. Another problem was the decline in lamb meat consumption. Nevertheless, the share of self-supply on the market was lower than 90%. The changes that took place on the lamb meat market did not affect the concentration of this production. It was still very high. In 2007–2017, the prices of lamb meat increased, while the decreases concerned a small number of countries. There was also a leveling up of prices. Across the EU, prices have risen by 16% on average. The production volume of lamb meat in EU countries was on average related to the parameters determining the potential of the economy and not related to per capita parameters. Production as well as lamb meat consumption, depend on many market factors and also on social and hard to measure factors.

**Key words:** European Union, meat market, sheep production, lamb meat

**JEL codes:** F00, Q02, Q11, Q13, Q18

### INTRODUCTION

The meat market for sheep and lamb meat is one of the agricultural markets covered by the Common Agricultural Policy (CAP) in the European Union. The markets of pork, poultry and beef have the greatest significance in the EU meat markets, due to the scale of production and consumption. The market for sheep meat is quite specific, because despite the low level of consumption, the production of lamb meat inside the EU has not covered the reported demand [Rokicki 2005, 2017].

Under the CAP, financial support for sheep production is provided for each Member State as part of direct payments. Other support instruments are also used,

such as compensatory payments for producers in less-favored areas and payment from the biological progress fund for stocks with biologically valuable sheep breeds [Niedziółka et al. 2005, FAPA 2008a, b]. In general, the CAP is an ever-changing set of regulations. Common Agricultural Policy purpose is quick adaptation to the changing conditions on agricultural markets, but also in their surroundings [Piyorowicz 2015]. The market for live sheep and mutton was covered by the CAP regulations in 1980 by Council Regulation (EEC) 1837/80 and Commission Regulation (EEC) 2966/80. An important regulation was Council Regulation (EC) 2529/2001 on the common organization of the sheep and goat meat market. It included a range of products

that included the mutton market in the EU. These were lambs (up to one year old), live sheep, fresh, chilled or frozen sheep meat, salted sheep meat, sheep meat in brine, dried or smoked (with bone and boneless), edible mutton offal (fresh and frozen), mutton fat, preserved mutton meat and offal [Rokicki 2015].

The determinants of the lamb market are varied. In many countries, sheep production is a traditional activity. For example, there are many meadows in Romania, and the sheep breeds are strictly adapted to local conditions [Soare et al. 2012, Cofas and Soare 2013]. The whole sector needs to be analyzed from an economic, ecological and social point of view. In the market economy, attention is paid to the profitability of production, which is influenced by many factors, such as lamb market prices, production costs, sheep breed, number of slaughter plants, marketing organization, lamb meat consumption, etc. [Soare and Cofas 2012]. The increasing awareness of consumers expecting healthy, safe food and reducing the adverse impact of agriculture on the environment is of great importance. Sheep production and lamb meat meet these market needs [Klepacka-Kołodziejka 2007, Brodzińska 2009].

Already in the 1980s, it was emphasized that the ability of sheep farms to respond to price and market conditions is limited [Regan 1980]. Modernly, not much has changed in this matter. The main factor of competition on the meat markets is sales prices. More and more attention is paid to quality, which may favor the production of lamb meat. Proper promotion and education of the client is required [Anderson 2001]. According to forecasts included in the EU Agriculture Perspectives report 2017–2030, it is planned to stabilize meat production and consumption in the EU. On the other hand, production and consumption of lamb meat will increase slightly by 2030. This increase will be the result of improved profitability and the use of voluntary support for farmers in some EU countries [EC 2018].

The main purpose of the paper was to show the situation and changes on the lamb meat market in the EU countries. The specific objectives were: to present changes in the production and consumption of lamb meat in the EU, to determine the degree of concentration of lamb production in the EU, to show the dynam-

ics of changes in the production of lamb meat. The paper puts forward a hypothesis according to which the production of lamb meat in the EU was highly concentrated in several EU countries.

## MATERIAL AND METHODS

All EU Member States were selected for research purposefully as at 31 December 2017 (28 countries). The research period concerned the years 2007–2017. The sources of materials were Eurostat data, domestic and foreign literature. The analysis and presentation of materials used descriptive, tabular, graphical methods, dynamics indicators based on a constant and variable basis, Gini coefficient, concentration analysis using the Lorenz curve, Pearson's linear correlation coefficient.

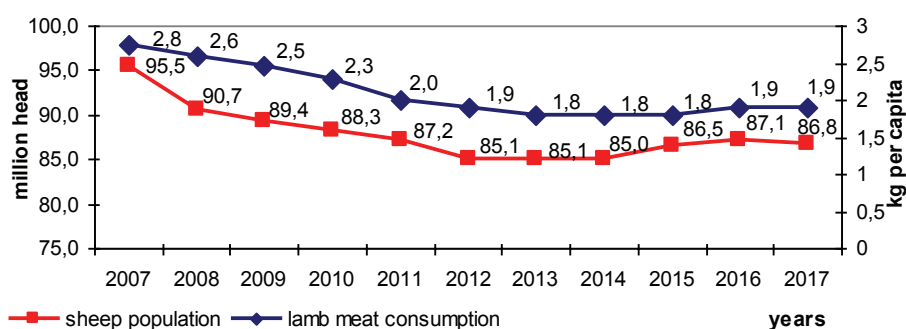
## RESULTS AND DISCUSSION

Lamb stock is the determining factor for sheep production, which determines the production possibilities, while the consumption of this kind of meat is connected with the demand. On the one hand, limited production reduces consumption, and on the other, the decline in consumer demand is an impulse to reduce production. Therefore, there are bilateral connections. One should also remember about the export and import of lamb meat in relations with non-EU countries. The sheep population in the EU systematically dropped from 95.5 million units in 2007 to 86.8 million in 2017, with a slight increase in the sheep population since 2015 (Fig. 1). The largest sheep population was maintained in the United Kingdom (23.3 million in 2017), Spain (16.0 million), Romania (10.0 million), Italy (7.2 million) and France (6.9 million). These were the countries with the largest area of land. In this situation, the exit of the UK from the EU can have a very strong impact on the situation in the market for lamb meat in EU. The smallest number of sheep was in the smallest countries, such as Luxembourg, Malta, Belgium and Estonia (less than 100,000 each). The population reduction was mainly in the dominant countries in sheep farming. In 2007–2017, the number of sheep in Spain decreased by as much as 6.2 million, in France by 1.4 million, and in Italy by 1 million. There were also countries in which the population grew, such as

Romania (by 1.5 million units) and Ireland (by 0.3 million units). The consumption of lamb meat was associated bilaterally with the sheep population. In 2007–2017, there was a drop in consumption from 2.8 to 1.9 kg per capita, with a slight increase since 2015. This meat is one of the most expensive ones, so the reason for reduced consumption could have been the worse income situation of the EU society during the economic crisis.

In the years 2007–2017, production of lamb meat in the EU decreased by 10% (Table 1). At the same time, consumption of this type of meat on the internal market has decreased by 18%. This means improving the self-sufficiency of the market, however, it was still necessary to import significant quantities of lamb. The main suppliers of this type of meat from outside the EU were New Zealand, followed by Australia and

the countries of South America (Uruguay, Argentina, Chile). In 2007–2017, import of sheep meat decreased by 23%, and imports of live animals were virtually absent. Every year, the EU allocates import quotas for each country, but never exceeds them. The most frequently imported is frozen meat, because such method allows to preserve the properties of the raw material during long-term transport. Despite the internal deficit of sheep meat, there was also export of lamb meat and livestock. In the years 2007–2017, meat exports increased from 5.9 thousand up to 20 thousand t in the case of meat and from 4.4 thousand up to 53 thousand t (calculated as livestock) for the transport of live animals. Animals and meat were mainly exported to African and Asian countries. There was also internal trade in the EU, for example, moving live animals from Poland to Italy or livestock from Ireland to France.



**Fig. 1.** Sheep population and consumption of lamb meat in the EU in 2007–2017

Source: The author’s own study based on Eurostat data.

**Table 1.** The balance of lamb meat in EU countries in 2007–2017

Specification	The balance of lamb meat in years (thousand t)										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross meat production	1 101	1 030	974	922	978	947	944	917	957	979	986
Import (meat)	272	270	271	239	222	190	200	189	202	206	208
Export (meat)	6	6	8	13	15	25	36	32	20	19	20
import of livestock	0.01	0.01	0.01	0.01	0	0	0	0	0	0	0
Export of livestock	4	3	4	11	22	27	34	36	38	51	53
Internal consumption	1 362	1 291	1 234	1 137	1 163	1 086	1 074	1 038	1 101	1 115	1 121
	Self-sufficiency indicator (%)										
	80.8	79.8	78.9	81.1	84.1	87.2	87.9	88.3	86.9	87.8	88.0

Source: The author’s own study based on Eurostat data.

The production of sheep meat was concentrated in countries with the largest stock of sheep, namely in the United Kingdom, Spain, France, Romania and Greece. The smallest production occurred in the Scandinavian and Baltic countries and Central and Eastern Europe.

In the years 2007–2017, there were changes in the production of sheep meat in individual countries. Table 2 presents the dynamics of changes in sheep meat production in individual EU countries in 2007–2017. The changes were shown using chain indexes, where

**Table 2.** The dynamics of changes in sheep meat production in individual EU countries in 2008–2017 (previous year =100)

Country	Changes in sheep meat production (%)									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
United Kingdom	106.1	92.2	96.7	95.5	95.2	105.1	101.1	100.4	98.7	102.4
Spain	76.2	84.2	95.9	108.9	89.7	99.0	95.5	100.3	101.5	97.2
Romania	96.2	104.8	94.4	101.9	103.2	100.6	99.0	102.8	97.7	101.9
Greece	97.8	101.3	99.9	104.4	95.5	87.3	96.2	93.0	97.1	96.8
France	92.0	95.6	91.6	82.9	97.8	95.5	100.7	99.4	102.4	97.4
Ireland	95.6	86.8	100.0	93.1	112.5	107.4	97.8	99.9	102.1	110.1
Italy	96.8	100.2	96.4	74.4	97.1	90.9	83.9	109.8	106.2	97.1
Portugal	90.1	83.7	94.2	103.5	96.3	97.1	104.1	101.1	93.5	94.5
Bulgaria	95.1	94.6	96.4	99.4	110.9	96.8	97.4	95.7	102.2	96.1
Germany	97.9	89.9	94.1	59.3	100.0	100.0	98.6	102.1	105.0	97.4
Hungary	71.1	103.7	98.7	113.6	112.0	101.2	102.6	104.2	103.4	100.6
Netherlands	72.1	103.4	100.0	65.2	100.0	100.0	94.2	98.9	98.6	97.3
Austria	122.4	92.9	90.3	107.9	100.4	100.6	102.6	97.1	92.7	105.4
Belgium	115.6	86.7	98.2	95.0	101.6	98.7	90.4	104.4	110.1	98.5
Croatia	100.0	95.9	95.6	84.1	108.1	97.5	108.2	120.9	112.1	116.3
Sweden	106.6	100.0	115.5	99.6	102.7	100.0	96.1	99.3	98.1	104.1
Slovakia	99.4	97.4	102.8	95.2	102.0	98.6	103.6	103.4	98.4	102.5
Cyprus	115.6	89.9	101.5	98.8	114.4	92.7	104.7	104.2	90.9	107.7
Slovenia	100.7	100.0	102.5	94.5	94.3	95.4	103.7	103.5	108.3	116.1
Poland	118.4	95.1	81.9	110.8	80.6	102.6	97.2	103.8	94.8	104.0
Czech Republic	124.6	102.7	111.0	107.1	91.0	105.1	89.7	93.6	101.7	104.1
Denmark	99.7	92.4	95.4	93.8	99.9	100.1	100.0	101.0	95.9	97.8
Latvia	117.9	118.1	101.4	119.2	106.8	100.4	99.0	116.0	138.6	121.3
Finland	106.8	101.5	100.0	117.9	99.4	99.0	107.8	114.1	107.0	99.9
Estonia	112.0	146.0	97.1	87.1	92.3	122.9	114.1	73.7	117.6	130.1
Lithuania	104.2	102.0	91.4	91.3	105.8	100.1	91.8	123.0	124.6	91.2
Luxembourg	98.8	101.3	97.5	100.0	102.5	98.8	103.5	99.0	113.2	104.3
Malta	0.0	0.0	200.0	103.1	103.0	94.1	135.6	102.1	110.6	118.2

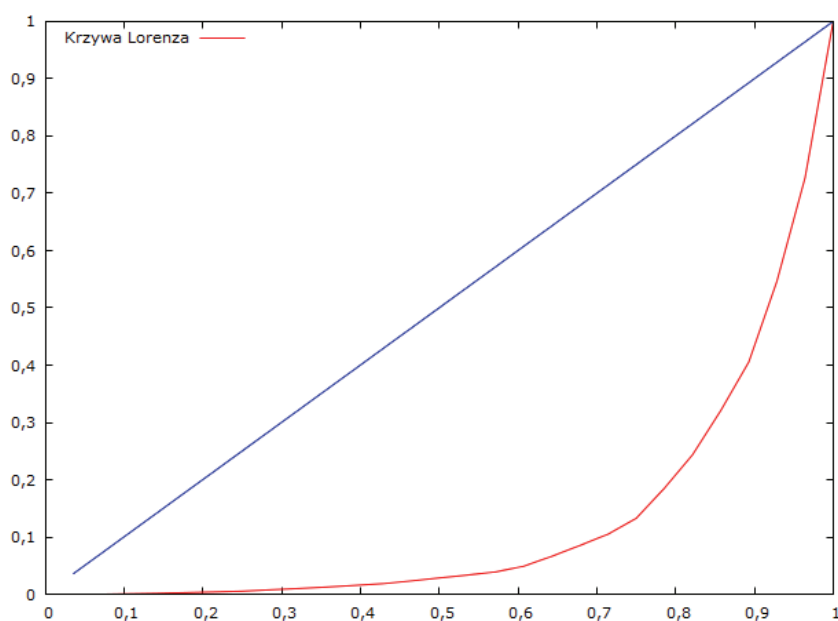
Source: The author's own study based on Eurostat data.

the previous year was accepted as 100. The countries were ranked in descending order according to the size of lamb meat production. Changes in individual countries varied. After a period of decline, the increase was most often recorded in subsequent years. The largest decreases in meat production were recorded in 2009, i.e. at the time of the economic crisis, and the largest increases in the years 2015–2017. This means that the production of lamb meat may be related to the economic situation or regulations supporting this production. In the years 2007–2017, the highest increase in sheep meat production was recorded in Latvia (by 248%), in the Czech Republic (by 29%) and in Lithuania (by 21%). However, these were countries with a small scale of production. Among the leading producers of lamb meat, a slight increase was recorded only in Ireland (by 3%) and Romania (by 2%). In other countries there were declines, the highest in Spain, by as much as 44%. Such a large decrease in meat production was also caused by a significant reduction in the sheep population.

The Gini coefficient was used to determine the concentration of lamb meat production in the EU countries. Data concerned the years 2007 and 2017, and the number of observations was 28. In 2017, the

Gini coefficient calculated from the sample was 0.75, and the estimated coefficient for the population 0.77. This means a very high concentration of lamb meat production and diversity in EU countries. In addition, these differences are presented in the Lorenz (Fig. 2). In 2007, Gini coefficients were at a similar level as in 2017. This means that the high concentration of lamb meat production has been maintained and no changes occurred.

The prices of lamb meat are set for “light” lambs (up to 22 kg live weight) and “heavy” lambs (over 22 kg). The higher the weight standard of the animal, the less was paid per kilogram of livestock. In the years 2007–2017 in the EU, average annual prices for “light” lambs decreased by 5% (to EUR 555 for 100 kg of post-slaughter weight) and for “heavy” ones they increased by 34% (up to EUR 494). There were countries specializing in the production of “light” lambs, in which the sheep were kept mainly to obtain milk. Then the lambs were weaned earlier. With the dominant meat direction of sheep use, the lambs were fattened to a higher weight. In individual EU countries, in 2007–2017 various price changes took place. Table 3 presents the dynamics of changes in lamb meat prices in individual EU countries in 2007–2017.



**Fig. 2.** The Lorenz concentration curve for the production of lamb meat in the EU countries in 2017  
Source: The author’s elaboration.

**Table 3.** The dynamics of changes in average annual prices of lamb meat in individual EU countries in 2008–2017 (previous year = 100)

Countries	Changes in lamb meat proces (%)									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Estonia	108.5	107.3	90.5	109.2	101.5	96.6	88.1	100.1	100.1	115.3
Croatia	93.7	103.5	92.3	96.6	105.0	94.3	98.8	95.1	101.3	109.5
France	104.3	103.7	99.3	105.8	100.4	101.1	101.8	99.6	98.0	100.0
Italy	95.9	96.8	85.1	101.6	115.1	104.9	98.3	98.4	92.9	105.3
Bulgaria	107.1	99.4	126.8	98.5	104.3	100.0	118.9	103.6	81.2	101.3
Austria	101.3	106.7	99.5	102.8	103.0	100.1	99.5	102.7	104.2	100.8
Hungary	99.8	104.8	101.8	114.7	98.9	92.6	101.6	98.6	93.2	102.1
Germany	105.5	102.8	101.1	111.7	107.1	99.3	101.6	104.0	102.6	100.0
Spain	110.7	102.3	90.0	111.6	98.8	90.6	118.2	91.4	100.5	107.4
Slovenia	101.9	98.3	98.2	98.9	100.3	103.3	115.4	113.4	98.3	99.8
Cyprus	104.3	143.6	86.4	81.1	92.0	102.8	104.3	109.8	96.1	91.4
Belgium	108.4	100.9	97.8	104.4	107.7	94.1	108.5	99.8	100.6	97.4
Czech Republic	97.1	132.8	109.5	85.3	99.5	99.4	100.3	100.2	99.0	99.6
Sweden	100.7	88.8	119.6	109.7	111.5	106.6	98.9	106.3	95.3	98.8
United Kingdom	99.0	101.0	111.0	110.9	100.1	97.6	106.2	100.7	94.0	96.0
Slovakia	118.7	89.0	96.2	124.9	107.6	95.2	92.7	108.7	92.9	106.1
Greece	98.8	104.6	100.6	102.4	94.7	95.9	98.6	101.7	94.2	97.3
Ireland	103.9	103.1	117.7	110.0	94.2	98.9	104.7	102.4	98.1	99.6
Portugal	103.4	110.6	96.0	104.9	98.0	100.5	108.1	97.4	97.9	100.3
Lithuania	141.6	108.4	83.8	151.9	89.2	92.2	118.6	102.7	99.2	99.4
Netherlands	104.1	106.3	115.3	111.0	92.8	101.5	104.7	98.3	98.3	97.7
Malta	105.8	99.9	99.7	99.7	100.3	100.4	100.3	100.5	96.3	103.1
Finland	100.7	108.0	100.5	104.2	114.5	116.8	99.5	90.8	101.0	100.8
Poland	103.0	103.5	105.2	109.9	101.3	92.3	102.9	101.7	92.7	100.9
Latvia	109.3	101.9	101.9	87.4	95.6	90.6	119.1	91.5	101.5	102.0
Denmark	99.6	104.1	102.3	109.1	112.6	97.7	105.6	104.7	101.4	97.7
Luxembourg	98.8	104.0	98.9	103.0	95.7	101.6	104.2	98.8	99.2	103.7
Romania	104.2	96.5	105.2	125.1	97.9	101.7	103.7	98.8	91.4	94.9

Source: The author's own study based on Eurostat data.

Changes were shown using chain indexes, where the previous year was accepted as 100. The countries were ranked in descending order according to the price of lamb meat. Changes in individual countries varied. The largest increases were recorded in 2011, while declines in 2015. In 2007–2017, the highest increase in lamb meat prices occurred in Lithuania, followed by Germany, Bulgaria, Finland and Denmark (about 40% each). The declines concerned only Croatia and Greece (11% each), Italy (8%) and Latvia (3%). It should be emphasized that individual countries in 2007 had a different starting level. As a rule, however, there was a smoothing out of lamb meat prices in the EU. The disproportions in this area still occurring in 2007 were gradually eliminated.

In order to establish the relationship between the production volume of lamb meat in the EU countries and the basic parameters of the economy [Stańko 2008], Pearson's linear correlation coefficients were calculated (Table 4). The significance ( $p$ ) equal 0.05 was assumed as the threshold of significance level. Significant results have been marked with a grey background in the table. Correlation coefficients have been

calculated for the EU countries in individual years as well as in the entire period 2007–2017. The paper tried to check the correlation, which does not indicate that a given factor affects another, only that there is a strong or weak relationship between them.

The choice of parameters for analysis was made on the basis of previous studies by Stańko [2008] and Rokicki et al. [2019]. There were significant average and high positive associations of lamb meat production volume with the value of GDP. These dependencies were particularly strong during the economic crisis. After this period, the dependence power decreased. In the case of economy parameters per person (GDP and household consumption), no significant dependence was found on the production volume of sheep meat. There was also a positive correlation between lamb meat production and export and import values. The impact strength was average and affected only selected years, i.e. before, during and after the crisis, after the economic situation stabilized.

The literature on the lamb meat market in the EU is quite poor. Canali [2006] predicted that the cessation of support for sheep production for the benefit of

**Table 4.** Pearson's linear correlation coefficients between the volume of lamb meat production and selected economic parameters in 2007–2017

Parameters	Pearson's linear correlation coefficients											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2007–2017
Value of GDP	0.59	0.59	0.56	0.56	0.48	0.49	0.48	0.49	0.53	0.51	0.49	0.52
<i>p</i> -value	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
GDP per capita	0.07	0.03	0.01	-0.01	-0.05	-0.05	-0.05	-0.03	0.01	-0.03	-0.04	-0.02
<i>p</i> -value	0.74	0.89	0.98	0.97	0.80	0.81	0.80	0.87	0.99	0.90	0.84	0.78
Household consumption per capita	0.26	0.22	0.16	0.16	0.10	0.10	0.10	0.13	0.19	0.15	0.12	0.15
<i>p</i> -value	0.18	0.27	0.41	0.41	0.62	0.60	0.63	0.50	0.34	0.46	0.53	0.01
Value of export	0.38	0.37	0.38	0.36	0.30	0.31	0.31	0.31	0.33	0.32	0.31	0.32
<i>p</i> -value	0.05	0.05	0.05	0.06	0.12	0.12	0.11	0.11	0.09	0.01	0.11	0.01
Value of import	0.49	0.47	0.45	0.44	0.35	0.36	0.36	0.37	0.39	0.38	0.37	0.39
<i>p</i> -value	0.01	0.01	0.02	0.02	0.06	0.06	0.06	0.05	0.04	0.04	0.05	0.01

Source: The authors' elaboration.

unrelated production subsidies could directly and indirectly affect the population reduction and production cessation. As a result, the production of lamb meat was to decrease. The deterioration of the situation on the meat market in Northern Europe was foreseen by Dyrmondsson [2006]. In addition, it linked the unfavorable situation with the liberalization of trade in the world. Similar analyzes were carried out by Niznikowski et al. [2006], but they concerned the future situation on the lamb meat market in Central and Eastern Europe. The prospects were not promising. Balkhausen et al. [2008], using simulation models, concluded that as a result of separating payments from production, among others production of beef and lamb meat will decrease. Lisiak et al. [2011] emphasized that the decrease in the sheep population in the EU was not compensated by the increase in the import of this meat. That is why the consumption of lamb has decreased.

## CONCLUSIONS

The purpose of the paper was to recognize the situation and changes on the lamb meat market in the EU countries. The determinant of production potential is the sheep population. Great decreases occurred in the countries that kept the most sheep, such as Spain, UK, France and Italy. The decline in the population affected the decline in the production of lamb meat. Although the EU imported certain quantities of meat (mainly from New Zealand), the imports were inadequate. At the same time, the export of lamb meat to non-EU countries increased. The problem was the decline in lamb meat consumption. Nevertheless, the share of self-supply on the market was lower than 90%.

The changes that took place on the lamb meat market practically did not affect the concentration of this production. It was still focused on several major producers. The research hypothesis was confirmed. The status quo can be upset in the case of Brexit, because the UK was the largest producer of lamb meat in the EU.

The prices of lamb meat were the highest in the world. There was a great diversity in the EU in this area. It was influenced by the weight of lambs sold. The lighter lambs were more expensive in calcula-

tion per kg of post-slaughter weight. In 2007–2017, the prices of lamb meat mainly increased (in the entire EU they increased by 16%), while the decreases concerned a small number of countries. There was also a leveling up of prices.

The production volume of lamb meat in the EU countries was on average related to the parameters determining the potential of the economy. Sheep production was still conducted in the largest EU economies, while in small countries it was marginal. It was also found that dependencies were more visible due to the impact of the economic crisis than in the conditions of stabilizing the economy and agriculture. Such regularities were also demonstrated in the studies of other authors [Tomkiewicz 2011, Rachwał 2014, Dzikowska et al. 2016]. In the case of parameters calculated as per capita, no dependence was found.

The review of the literature shows that only a few authors dealing with lamb meat issues concordantly predicted a decline in lamb production in individual EU countries and regions, as well as throughout the EU. It was found that the reason for the smaller consumption of lamb meat was less imports. In fact, both production and consumption of lamb meat depend on many market factors, but also social and the ones that are hard to measure. They were not the subject of research in the article. Extensive research is required to identify these connections.

## REFERENCES

- Anderson, J.M.L. (2001). Sheep Meat: Can We Adapt to Forthcoming Demands. *Production Systems and Product Quality in Sheep and Goats. Options Méditerranéennes: Série A. Séminaires Méditerranéennes*, 46, 11–17.
- Balkhausen, O., Banse, M., Grethe, H. (2008). Modelling CAP Decoupling in the EU: A Comparison of Selected Simulation Models and Results. *Journal of Agricultural Economics*, 59 (1), 57–71. DOI: 10.1111/j.1477-9552.2007.00135.x
- Brodzińska, K. (2009). Perspektywy rozwoju rolnictwa w kontekście standardów w ochronie środowiska. *Zeszyty Naukowe SGGW. Problemy Rolnictwa Światowego*, 23 (8), 24–33.
- Canali, G. (2006). Common Agricultural Policy Reform and its Effects on Sheep and Goat Market and Rare



- Breeds Conservation, *Small Ruminant Research*, 62 (3), 207–213. DOI: 10.1016/j.smallrumres.2005.08.021
- Cofas, E., Soare, E. (2013). Quantitative Study of the World Market of Meat, *Scientific Papers, Series: Management. Economic Engineering in Agriculture and Rural Development*, 13 (2), 71–74.
- Commission Regulation (EEC) No 2966/80 of 14 November 1980 amending certain Regulations on the common organization of the markets in beef and veal, pigmeat and sheepmeat and goatmeat and Regulations (EEC) Nos 827/68 and 950/68. OJ L 307/5 of 18.11.1980.
- Council Regulation (EC) No 2529/2001 of 19 December 2001 on the common organisation of the market in sheepmeat and goatmeat. OJ L 341 of 22.12.2001.
- Council Regulation (EEC) No 1837/80 of 27 June 1980 on the common organization of the market in sheepmeat and goatmeat. OJ L 183/1 of 16.07.1980.
- Dyrmondsson, Ó.R. (2006). Sustainability of Sheep and Goat Production in North European Countries – From the Arctic to the Alps, *Small Ruminant Research*, 62 (3), 151–157. DOI: 10.1016/j.smallrumres.2005.08.010
- Dzikowska, M., Gorynia, M., Jankowska, B. (2016). Determinanty pozycji konkurencyjnej przedsiębiorstwa w okresie globalnego kryzysu gospodarczego 2009 roku i po jego wystąpieniu, *Przegląd Organizacji*, 4, 29–36.
- European Commission (2018). *EU Agricultural Outlook for the Agricultural Markets and Income 2017–2030* (European Commission, DG Agriculture and Rural Development, Brussels).
- Fundacja Programów Pomocy dla Rolnictwa (2008a). Rynek mięsa, drobiu i miodu. Bieżące informacje i analizy funkcjonowania Wspólnej Polityki Rolnej UE – XII. Zespół Monitoringu Zagranicznych Rynków Rolnych (FAMMU/FAPA), Warszawa.
- Fundacja Programów Pomocy dla Rolnictwa (2008b). Rynek mięsa, drobiu i miodu. Bieżące informacje i analizy funkcjonowania Wspólnej Polityki Rolnej UE – III. Zespół Monitoringu Zagranicznych Rynków Rolnych (FAMMU/FAPA), Warszawa.
- Klepacka-Kołodziejska, D. (2007). Wsparcie obszarów o niekorzystnych warunkach gospodarowania jako instrument zmieniającej się Wspólnej Polityki Rolnej. [In:] M. Bład, D. Klepacka-Kołodziejska (Eds.), *Społeczno-ekonomiczne aspekty rozwoju polskiej wsi. IRWiR PAN i Europejski Fundusz Rozwoju Wsi Polskiej*, Warszawa, 211–224.
- Lisiak, D., Borys, A., Lisiak, B. (2011). Rynek mięsa owczego i koziego w Polsce i na świecie. *Wiadomości Zootechniczne*, 49 (3), 85–90.
- Niedziółka, R., Pieniak-Lendzion, K., Borkowska, T. (2005). *Handel zagraniczny na rynku mięsa baraniego po wstąpieniu do UE. Monografie 59. Wydawnictwo Akademii Podlaskiej, Siedlce.*
- Niżnikowski, R., Strzelec, E., Popielarczyk, D. (2006). Economics and Profitability of Sheep and Goat Production under New Support Regimes and Market Conditions in Central and Eastern Europe. *Small Ruminant Research*, 62 (3), 159–165. DOI: 10.1016/j.smallrumres.2005.08.011
- Piworowicz, J. (2015). *Wspólna Polityka Rolna i jej wpływ na rozwój rolnictwa w Polsce. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego w Olsztynie, Olsztyn.*
- Rachwał, T. (2014). Zmiany strukturalne przemysłu Polski w warunkach kryzysu gospodarczego. *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego*, 27, 148–163.
- Regan, E. (1980). *The Sheep Market: Problems and Prospects. OECD, Paris.*
- Rokicki, T. (2005). Regulacje rynku mięsa baraniego i jagnięcego w Unii Europejskiej. *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu*, 7 (2), 188–193
- Rokicki, T. (2015). Regulacja prawne dotyczące gospodarstw owczarskich w Polsce. [In:] *Prawne mechanizmy wspierania i ochrony rolnictwa rodzinnego w Polsce i innych państwach Unii Europejskiej. Ministerstwo Rolnictwa i Rozwoju Wsi, Fundacja Programów Pomocy dla Rolnictwa FAPA, Warszawa*, 407–417.
- Rokicki, T. (2017). Zmiany w produkcji mięsa jagnięcego w UE. *Gospodarka Mięsna*, 6, 22–25.
- Rokicki, T., Ratajczak, M., Golonko, M. (2019). The production of sheep's milk in EU countries. [In:] *Proceedings of the 2019 International Conference "Economic Science for Rural Development"*, Jelgava, LLU ESAF, 9–10.05.2019, 375–381.
- Soare, E., Cofas, E. (2012). Research on European Union Meat Market. *Annals of Constantin Brancusi University*, 9, 288–291.
- Soare, E., Cofas, E., Balan, A., David, L. (2012). Researches and Results About the Meat Market in Romania. *Scientific Papers, Series I, Agricultural Management*, 14 (2), 185–192.
- Stańko, S. (2008). Zewnętrzne uwarunkowania rozwoju rolnictwa. *Roczniki Nauk Rolniczych, Seria G*, 94 (2), 65–79.
- Tomkiewicz, J. (2011). Reakcja państwa na kryzys gospodarczy – podstawowe dylematy. *Master of Business Administration*, 5 (162), 56–64.

## **RYNEK MIĘSA JAGNIĘCEGO W KRAJACH UNII EUROPEJSKIEJ W LATACH 2007–2017**

### **STRESZCZENIE**

Celem głównym pracy było ukazanie sytuacji i zmian na rynku mięsa jagnięcego w krajach Unii Europejskiej. W sposób celowy wybrano do badań wszystkie kraje członkowskie Unii Europejskiej według stanu na 31 grudnia 2017 roku (28 państw). Okres badań dotyczył lat 2007–2017. Stwierdzono spadek pogłowia owiec w UE; największy w państwach, w których hoduje się najwięcej tych zwierząt, takich jak: Hiszpania, Wielka Brytania, Francja i Włochy. Spadek pogłowia wpływał na zmniejszenie się produkcji mięsa jagnięcego. Problemem był też spadek spożycia mięsa jagnięcego. Pomimo to na rynku udział samozaopatrzenia był mniejszy niż 90%. Zmiany, które dokonały się na rynku mięsa jagnięcego, nie miały wpływu na koncentrację tej produkcji. Ciągle była ona na bardzo wysokim poziomie. W latach 2007–2017 ceny mięsa jagnięcego głównie rosły, a spadki dotyczyły niewielkiej liczby krajów. Następowало też wyrównanie się cen. W całej UE ceny wzrosły średnio o 16%. Wielkość produkcji mięsa jagnięcego w krajach UE była przeciętnie związana z parametrami określającymi potencjał gospodarki, lecz nie była związana z parametrami per capita. Produkcja mięsa jagnięcego i jego spożycie zależą zarówno od wielu czynników rynkowych, jak i społecznych i trudno mierzalnych.

**Słowa kluczowe:** Unia Europejska, rynek mięsa, produkcja owczarska, mięso jagnięce