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Changes in the EU Beef Market

Abstract. The article below discusses and compares changes in the beef market, occurring in the EU, to the global market. Global beef market is going through endless changes, although direction and rate of these changes vary depending on which region the analysis applies to. In recent years Polish beef market has been slowly becoming marginalized on the internal market, mainly because of the decreasing importance of beef consumption in the balance of meat consumption. The poultry market is becoming more and more important, both on the supply and demand sides. The study also draws attention to the fact that agricultural markets, the meat market in particular, are susceptible to the cyclical fluctuations on international markets. Because of that the EU policy, as well as the policy of a given country, play a big part to the individual agricultural markets.

Keywords: livestock and beef, conditions, changes, beef market, European Union

JEL Classification: Q13

Introduction

The meat market is one of the most important agricultural markets. The meat production Meat production undergoes some fluctuations, which depend on the size and structure of the animal population and meat consumption and on the level of purchase and retail prices of livestock and meat and its products. The foreign trade balance is also an important part of the meat market. The meat market is mutli-faceted. The economic changes taking place on the EU markets, as well as the markets of the individual countries, in the last 28 years have led to a clear separation of the livestock and meat market, and within it several sub-markets: pigs, beef and veal, poultry and others (Agriculture market, 2016, 2017, 2018). Individual countries are obligated to ensure the safety of food for its citizens (50 Years…, 2007). They also have to perform tasks related to the implementation of the provisions resulting from the integration with the EU. One of the areas they have to take care of is the implementation of tasks towards agriculture at the national level, in accordance with the requirements of the Common Agricultural Policy of the EU (Scientific protection…, 2014).

The EU beef market has been subjected to special protection since the beginning of the European Union in comparison to, for example, the pork market. Regulations on this market concerned all market participants, at all levels of goods turnover, i.e. both agricultural producers, as well as processors and sellers. Poland benefited from the support of the Common Agricultural Policy regarding the beef market after its accession to the EU in 2004.

In the changing environment, mainly resulting from the reformation of the milk market, trade globalization, requirements for sustainable development and environmental protection, appear new challenges for the beef sector. The Polish beef market has reserves

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to improve profitability of production by increasing its efficiency in the supply chain and marketing improvement, including beef promotion.

Material and methodology of the research

The source material for the surveys were Eurostat, USDA / FAS, GUS and IAFE-NRI data published in various statistical studies [2], including the agricultural industry annuals and the Institute of Agricultural Economics and Food Economy– the National Research Institute published in the form of market reports (meat and poultry market).

Dynamics and statistical averages as well as elements of descriptive analysis of data were applied.

Results

The global beef production in the analysed period of 2013-2017 has gone through some insignificant changes (Market Analysis. Meat market, June 2015, 2016, 2017 and 2018; October 2015, 2016 and 2017). The world's highest cattle population was recorded in 2013, when it slightly exceeded 1 billion units, however, we noted a decrease and then a slow increase in the following year. At the end of December 2017, the population reached again just over 1 billion units.

Table 1. World's cattle population in 2013-2017 (in millions of units)

Countries	2013	2014	2015	2016	2017
World in general, including:	1 008.6	979.6	988.6	995.3	1 001.8
Indie	300.6	301.1	302.6	303.6	305.0
Brazil	208.0	213.0	219.2	226.0	232.4
China	103.0	100.5	100.3	99.2	96.9
USA	88.5	89.1	91.9	93.7	94.4
UE-28	87.7	88.4	89.2	89.2	88.4
Argentina	51.5	51.5	52.6	53.5	53.8
Australia	29.3	29.1	27.4	25.0	25.5
Mexico	17.8	17.1	16.6	16.5	16.6
Russia	19.6	19.2	18.9	18.6	18.4
Turkey	14.2	14.3	14.1	14.2	14.5

Source: IAFE-NRI for the European Commission, USDA / FAS.

The countries with the largest cattle stock are India and Brazil (together they own over 53% of the world's cattle population). Then the next places are occupied by China and the USA (almost 100 million cattle units), which gives a total of about 19% of the world's population. In the analysed period in the EU-28 countries, the total population did not

[2] Agriculture Statistical Yearbook 2013 Ed. GUS. Warsaw 2013. See. Also: Forecast of the market prices of the basic agri-food products, Agricultural Market Agency, October 2015.

change significantly and amounted to about 90 million pieces (about 9% of the world's population).

The presented data indicates a quantitative concentration of cattle in Asia and the USA.

Similar tendencies as in the case of cattle stock were recorded in the case of beef production. At the end of 2017, the global beef production amounted to 61.6 million tons and was 1.8% higher than a year earlier. Production growth took place in most of the largest producer countries: USA, China, India, Mexico, Pakistan, Turkey and throughout the European Union.

The largest increase in beef production was observed in Turkey (although a slight decline was noted in the last year) and resulted from the beef subsidies program that was introduced there. The purpose of this program is to satisfy Turkey's internal demand for this kind of meat.

Table 2. World's production of beef in 2013-2017 (in thousand tons of post-slaughter weight)

Countries	2013	2014	2015	2016	2017
World in general, including:	60 556	60 814	59 710	60 482	61 557
USA	11 751	11 075	10 817	11 502	11 938
Brazil	9 675	9 723	9 425	9 284	9 550
UE-28	7 391	7 542	7 655	7 863	7 874
China	6 730	6 890	6 700	7 000	7 260
Indie	3 800	4 100	4 100	4 200	4 250
Argentina	2 850	2 700	2 720	2 650	2 830
Australia	2 359	2 595	2 547	2 125	2 149
Mexico	1 807	1 827	1 850	1 879	1 915
Russia	1 385	1 375	1 355	1 335	1 315
Turkey	1 217	1 245	1 423	1 484	1 382
Pakistan	1 630	1 685	1 710	1 750	1 780

Source: IAFE-NRI for the European Commission, USDA / FAS.

The size of world's beef production is caused by the size of the population. In the US, the upward tendencies in cattle stock have been recorded for two years. In China, a large increase in beef production was caused by the progressive reduction in the number of dairy cows, which is caused by the drop in milk prices (Market Analysis. Meat market, June 2015, 2016, 2017 and 2018; October 2015, 2016 and 2017).

The world's foreign trade in beef in the analysed period of time did not fluctuate (Market Analysis. Foreign trade…, April 2015, 2016, 2018). Export exceeded imports, so the positive balance of foreign trade remained. The likely cause of this is beef re-export, which results in a higher value of exports over imports (although the balance should be zeroed on a global scale).

The beef sector in the European Union accounts for 8.1% of total agricultural production and 18.8% of animal production. It should be remembered that beef production, as compared to the other segments of animal production in the EU, is characterized by the need for relatively large investments resulting from extremely restrictive standards and higher feed prices, which, with a small increase in consumption and cyclical production fluctuations, does not guarantee a maximum rate of return in short time.

Table 3. World's foreign trade in beef in 2013-2017 (in thousand tons of post-slaughter weight)

Countries	2013	2014	2015	2016	2017
Export, including:	9 122	9 992	9 536	9 420	9 969
Indie	1 765	2 082	1 806	1 764	1 849
Brazil	1 849	1 909	1 705	1 698	1 856
Australia	1 593	1 851	1 854	1 480	1 486
USA	1 174	1 167	1 028	1 159	1 298
New Zealand	529	579	639	587	593
Canada	332	378	390	441	469
Uruguay	340	350	373	421	435
UE-28	160	206	207	243	269
Import, including:	7 447	7 889	7 661	7 705	7 953
USA	1 020	1 337	1 529	1 367	1 358
Russia	1 023	932	621	522	509
Japan	760	739	707	719	817
UE-28	304	308	300	304	285
Balance	+1 675	+2 103	+1 875	+1 715	+2 016

Source: IAFE-NRI for the European Commission, USDA / FAS.

The EU-15 markets are characterized by an advanced degree of automation and modern agricultural solutions, characteristic for countries with a high economic level, enabling effective beef production. For this reason, the number of stocks in the EU-15 is several times higher than in the EU-13. In addition, the EU-15 countries have a higher percentage of flocks with the participation of meat and mixed breeds, valued mainly for high quality meat (compared to dairy breeds).

On the other hand, in the group of the "new" EU-13 countries, in recent years a tendency of a dynamic development of the beef sector has been observed, mainly due to the reorganization of the agricultural sector after entering the EU structures and significant financial support for reformations seeking equalizing the economic differences of the Old Continent.

The cattle population in the EU-28 countries grew in the period of 2013-2016. In 2017, there was a slight decrease. The countries with the highest cattle stock in the EU are: France, Germany, Great Britain, Ireland, Italy and Spain (in total, these countries have 68% of the EU population). The smallest stock of cattle (except Malta and Cyprus) have: Luxembourg, Estonia, Latvia, Bulgaria and Greece (together only 2.2% of the EU population).

There are no significant changes in the head of the EU Member States during the years. Also the analysed countries, according to the size of the population during these five years, have maintained their position.

The most active countries in the area of beef production include Poland (+189,000 tons) and Spain (+60,000 tons). In the group of countries of the Community, noticeable development in the production of beef was also noted in Romania and Ireland. On the other hand, the drop in volumes in Italy or Denmark is the result of the implementation of agricultural policy, oriented at the dairy industry.

Table 4. Cattle population in the EU in 2013-2017 (in thousands of units)

Countries	2013	2014	2015	2016	2017
UE-28	87 734	88 405	89 152	89 152	88 424
UE-15	74 598	75 066	75 681	75 541	74 806
UE-13	13 136	13 339	13 472	13 611	13 617
Belgium	2 441	2 477	2 503	2 501	2 386
Bulgaria	586	562	561	570	552
Czech Republic	1 332	1 373	1 366	1 340	1 366
Denmark	1 583	1 553	1 566	1 554	1 558
Germany	12 686	12 742	12 635	12 467	12 281
Estonia	261	265	256	248	251
Ireland	6 309	6 243	6 422	6 613	6 674
Greece	653	659	582	554	555
Spain	5 802	6 079	6 183	6 257	6 467
France	19 129	19 271	19 406	19 004	18 580
Croatia	442	441	455	462	470
Italy	6 249	6 125	6 156	6 315	6 350
Cyprus	57	60	59	63	67
Latvia	406	422	419	412	406
Lithuania	714	737	723	695	676
Luxembourg	198	201	201	202	198
Hungary	782	802	821	852	870
Malta	15	15	15	14	14
Netherlands	4 090	4 169	4 315	4 294	4 030
Austria	1 958	1 961	1 958	1 954	1 943
Poland	5 590	5 660	5 763	5 970	6 036
Portugal	1 471	1 549	1 606	1 635	1 670
Romania	2 022	2 069	2 092	2 050	1 989
Slovenia	461	468	484	489	480
Slovakia	468	466	457	446	440
Finland	903	907	903	887	875
Sweden	1 444	1 436	1 428	1 436	1 449
United Kingdom	9 682	9 693	9 816	9 806	9 791

Source: IAFE-NRI for the European Commission, USDA / FAS.

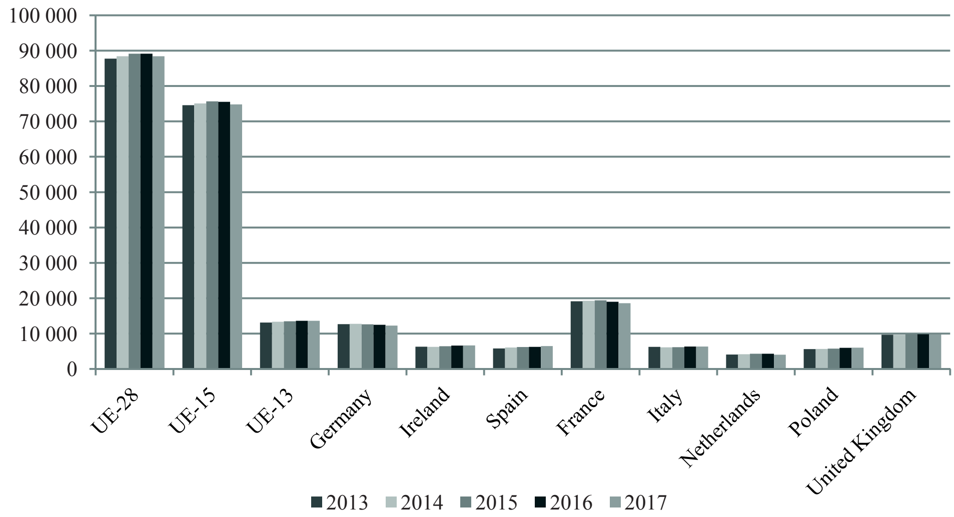

Fig. 1. Size of the cattle population in the selected EU-28 countries in 2013-2017 (in thousands of units)
Source: Eurostat; IAFE-NRI.

After lower results in 2012-2013, the level of beef production in the European Union has been increasing since 2014, which is also visible in years 2015-2017. The current situation is a natural consequence of the significant reformations of the European Union's dairy market. At this point, it is worth mentioning that about 2/3 of the European beef comes from dairy herds that require cyclical changes, involving the withdrawal of some animals and the successive restocking of the stock, which took place recently. In addition, the abolition of milk prices in the EU had a positive impact on the development of the flock and a slower rate of decrease in dairy cows, while not causing any major changes in their productivity. As a result of these changes, the European beef market has recently seen surplus production.

According to the European Commission data, which predicted an upward tendency, beef production in the EU countries in 2017 amounted to 7.9 million tons. Production growth took place both in the EU-15 countries (despite a slight decrease in 2017) and in the EU-13, which was higher in the EU-13 countries. In the countries with the largest production, i.e. France and Germany, there were slight decreases. In the next highest-production countries, i.e. in the United Kingdom and Italy, declines were also recorded, while in Spain and Ireland, production increased by 0.6-4.9%. In the Netherlands, the growth rate was 5.5% and in Belgium 1.4%. In the following years, experts predict stabilization of the sector and a slow decline in volumes, which was already observed in 2017 in the case of countries that are leading in the beef production.

The structure of beef production has been dominated by France for years. Next, the most beef on the EU market is produced by Germany, the United Kingdom and Italy. Among other EU-28 countries, Poland has a significant share (over 7% of the EU beef production).

To make certain strategic decisions both on the EU level and in the individual countries the forecasts and expectations in relation to tendencies and changes as well as their rate are important (Zjalic, 2013).

Table 5. Beef production in the EU in 2013-2017 (in thousand tons of post-slaughter weight)

Countries	2013	2014	2015	2016	2017
UE-28	7 391	7 542	7 655	7 868	7 874
UE-15	6 678	6 753	6 817	6 971	6 922
UE-13	712	790	838	896	952
France	1 418	1 420	1 451	1 462	1 442
Germany	1 116	1 137	1 132	1 150	1 130
Italy	853	813	788	810	756
United Kingdom	848	878	883	912	893
Spain	581	579	626	637	641
Ireland	518	582	564	588	617
Netherlands	379	376	383	416	439
Belgium	250	258	268	278	282
Austria	227	222	229	227	226
Denmark	126	127	122	130	125
Poland	373	421	476	501	562
Romania	95	96	79	101	111
Czech Republic	65	66	69	73	69
Lithuania	38	40	45	43	42

Source: Eurostat; IAFE-NRI.

For 2017, the European Commission predicted a further increase in beef production. The largest increases were to be made in countries such as Ireland, the Netherlands, Belgium and Spain. However, in the markets with the highest production level, a decline of 1-5% was expected.

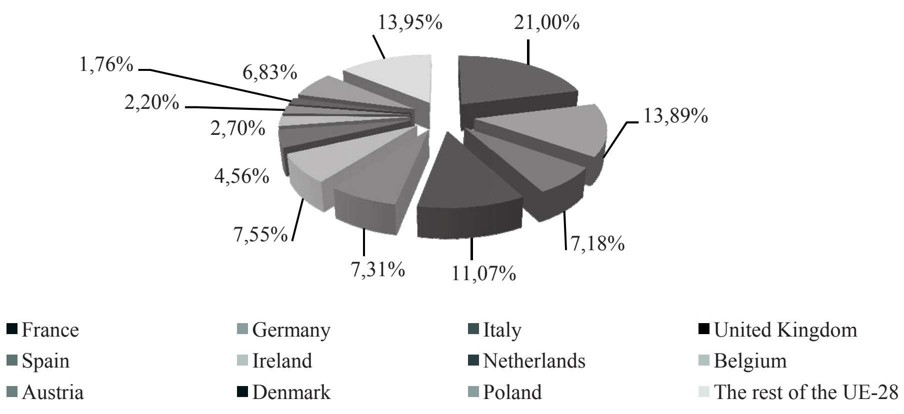

Fig. 2. The structure of beef production in 2017 (in %)

Source: own elaboration based on Eurostat and IAFE-NRI data.

In the EU-13 countries, the increase in production may be characterized by Romania. Declines are expected from countries such as the Czech Republic, Estonia, Latvia and Lithuania.

The European Union is one of the leading beef producers alongside the US, Brazil and Argentina. The current economic situation, related to the economic recession in Brazil, or the increase in domestic consumption in the United States and South America, constitute an increase in the export potential of meat from the Community. An additional advantage of the Old Continent's commercial offer are the properties of meat originating from there. Values such as the taste and quality of European beef, based on strict safety standards and full transparency of production, are the decisive factors in the purchasing decision process for today's business partners and demanding consumers. In addition to Lebanon, Turkey is the main recipient of European cattle. Other popular destinations are Norway, Vietnam, Israel, Libya and Côte d'Ivoire.

On the basis of market analyses, the European Commission's experts also set new export areas for European beef. Among the most promising markets are Asian countries such as: Hong Kong, China, Philippines, Thailand and South Korea and Middle East countries. A larger share of exports is also expected to the US or Saudi Arabia, where the ban on beef imports has been recently lifted for some European Union countries. Experts in their forecasts also drew attention to the need to better match trade policy with the specifics of the target market, and thus change the proportion of the share of exports of various forms of beef. For example, countries with high potential for business cooperation, such as Turkey or UAE, where recipients' preferences resulting from the necessity to slaughter halal, will determine a significant share of exports of only live animals. International economic agreements, based on the export of high quality beef, are, according to the Community authorities, another effective form of building solid business relationships and gaining consumer’s confidence around the world.

Growing volumes in the production of European beef are also reflected in its consumption. The level of consumption in the European Union has already increased slightly in 2014, especially in the EU-13 countries, reaching the level of 10.5 kg per capita. In 2015, the revival in consumption in the EU increased by another nearly 2%, thus reaching the level of 10.7 kg per capita. According to the European Commission's estimates, this trend continued also in the next two years, gaining another 1.6%. According to experts, these changes were driven by factors such as the improvement of the economic and price situation as a result of increased supply in the beef sector (Short-Term Outlook…).

One of the key factors affecting beef consumption is its prices. Their amount in 2015 remained stable, quite high. Despite the increase in production and market surpluses, EU prices, both for young and adult bulls, ranged from 10 to 15 euros more per 100 kg, compared to 2014. The tendency of a price drop in the cattle sector was noticeable only in the case of cows and heifers. Price forecasts for the coming years are difficult to determine due to a number of dynamic changes on the international arena, such as a revival of demand especially in the United States and Asian countries, the unstable economic situation in Brazil, or uncertainty of beef supplies from Australia or Argentina.

Conclusions

In the European beef meat sector, dynamic changes in the area of trade relations, production system priorities, ecology as well as consumer needs have been observed for several years. Their evaluation is influenced by changes in the global hierarchy beef producers and reforms of the world economy, trends, focusing consumers' attention on healthy lifestyle and conscious nutrition, or, finally, the growing importance of corporate social responsibility. The result of these factors is the formation of completely new directions for the development of the meat industry, which is worth the attention (Characteristics and directions…, 2016).

The internal processes of effective management and cooperation have a priority importance for the European beef production sector, especially in the aspect of the industry consolidation trend. The agreements and norms developed at the central level were, until recently, an extremely comprehensive strategy for the functioning of the entire agricultural market of the Community (EU Agricultural Outlook, 2015). Today, however, in the era of unified standards and the growing number of EU countries, domestic markets have to face the challenge of building a competitive advantage (Rytko, 2015). Created on fundamental values, transparency of production, security and restrictive standards of the agreement, they constitute an effective mechanism for industry meetings as well as solving disputable issues and misunderstandings. More and more often one can observe the trend of the formation of working groups, unions or industry associations whose task is to represent individual links in the production chain, initiate the debate in public opinion or public affairs activities. In addition, the habit of inviting external specialists, clients or representatives of the world of science to the interviews allows developing solutions whose effectiveness has been verified and accepted by all entities creating the environment. This form of community building is not only the only chance of relatively rapid implementation of reforms necessary at a given moment, but it is also increasingly the starting point for the creation of local agreements, publications or quality certificates building a competitive advantage in the eyes of contemporary consumers or business partners. Strengthening relations between individual participants in the beef production chain is also one of the integral factors of the ongoing consolidation of this sector, which, in order to constantly improve its standards and meet the expectations of customers, decides to combine the productive forces with other entities.

In addition to changes in the industry itself, in the past few years, increasingly exposed consumer needs and expectations have also become more important (Kanevra, 2013). The contemporary client is well educated - he knows not only his rights, but he also knows what he wants from the product. Thanks to the huge availability of information and the free flow of goods, it knows the specific taste and quality of beef, such as the appropriate level of marbling, tenderness, or softness (Zymon, 2012, 2014). This situation reflects the current trend of healthy and conscious nutrition as well as a response to intense climate change. Customers are more and more willing to pay more with the certainty that the beef they buy has been produced in the plant, where animal welfare and ecology are respected, and the meat retains freshness and all nutritional values through advanced processing.

Beef producers are becoming more and more aware that, to increase the level of sales, it is necessary to build solid foundations in the form of marketing strategies for beef products, which will allow distinguishing or highlighting specific features of a given product. Over recent years, strategies for building meat brands or original quality certificates have become particularly important, especially while being implemented in Scotland or Ireland (Kołczak, 2007). Their regular communication, eg in the group of business partners, combined with building brand awareness, brings long-term results in the form of consumer's confidence, and thus the increase in the demand of the market.

However, in business terms, the challenge for the European beef market is to create a stable offer for non-Community markets, created for the needs and expectations of local consumers and implemented with the active support of Veterinary Inspectorates. An example is a halal beef, which in such promising growth markets as Turkey or the United Arab Emirates is an attractive export offer for EU production. In this situation, building a solid position of a business partner meeting a number of restrictive standards is the opportunity to build a unique competitive advantage and establish long-term business relationships. Over the next years, the combination of activities supporting trade and conducting active negotiations that remove the production and sanitary barriers between specific exchange markets may constitute the future of European exports of high-quality beef.

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