детельствует о том, что такие оценки, по-видимому, достаточно верные, уже в сентябре-декабре отмечался существенный рост импорта свинины свежей и мороженой, молока, сыра, риса, несмотря на то, что еще не все условия ВТО вступили в силу.

И еще один немаловажный вопрос. В Плане действий Правительства по адаптации отраслей экономики к ВТО следовало бы предусмотреть подготовку в рамках второго высшего образования в крупнейших аграрных вузах страны достаточного числа специалистов, знающих специфику работы во ВТО, в том числе процессы, связанные с сельским хозяйством, с возможной стажировкой за рубежом. Это позволило бы сократить привлечение для таких целей зарубежных консалтинговых фирм и отдельных экспертов, которые вряд ли будут защищать интересы Российской Федерации.

Задача ученых всех отделений Россельхозакадемии — осуществлять по своим направлениям постоянный мониторинг ситуации, связанной с адаптации отраслей агропромышленного комплекса к условиям функционирования во ВТО и Едином экономическом пространстве России, Казахстана и Беларуси, своевременно готовить рекомендации по нейтрализации возникающих рисков и угроз.

Реализация Государственной программы потребует осуществления **ряда организационных мер.** Прежде всего, необходимо проработать систему внедрения достижений науки в производство. Следует продолжить совершенствование системы специального образования и повышения квалификации управленческих и рабочих кадров. Проблема кадрового обеспечения в полной мере относится и к научным учреждениям, особенно в части поддержки молодых ученых. При этом целесообразно создание специальных фондов их поддержки.

Более активно предстоит проводить работу по реальной интеграции сельскохозяйственной науки и образования. В этой сфере уже накоплен определенный опыт, в частности в Сибирском, Северо-Западном методических центрах, однако широкого распространения он пока не получил.

Мы полагаем, что аграрные научные учреждения сделают все возможное для реализации намеченных Государственной программой мероприятий, чтобы обеспечить устойчивый социально-экономический рост АПК.

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The position of the Polish food industry in the European Union

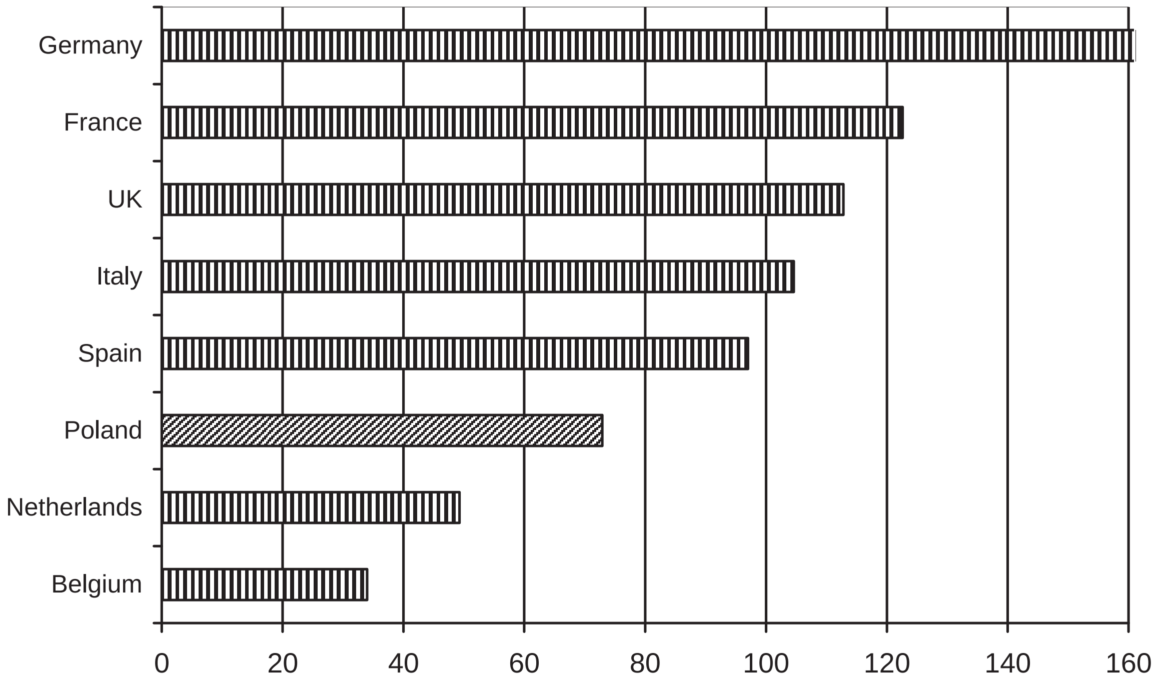
Topicality of the article. This article aims at assessing the position of the Polish food industry against the background of selected food producers in the EU.

Material and methods. The assessment of the position of the Polish food industry at the background of selected EU food producers was based on Eurostat data (value of production in various sectors of the food industry, employment and number of companies), including the production of tobacco products. Comparability of the food industry data in individual EU countries was obtained by adjusting the value of output in current prices with an indicator (parity).

1. Comparative assessment of the food industry development in the EU

The European Union has been a major world food producer for many years now. In 2000-2010, the value of food production (in current prices) of the EU-27 increased by 25% to EUR 916.4 billion in 2010 (in 2008 it was EUR 955.3 billion) [2], and in comparable prices to EUR 932 billion (Table 1). Over 80% of this production is manufactured in the EU-15 countries, and its main producers are: Germany with 17.3% share in the value of the EU food industry, France (13.2%), United Kingdom (12.1%), Italy (11.2%), Spain (10.4%). Poland is the 6th food producer in the EU with 7.8% share of the EU production in the food industry. In 2010, the Polish food production, including tobacco and alcohol (in comparable prices) amounted to EUR 72.9 billion, the highest was in the group of the EU-12 countries (Figure 1). This value is, however, more than two times lower than in Germany (EUR 161.2 billion), but higher than in the Netherlands (49.3) and Belgium (34.0).

Figure 1. Largest EU-27 food producers in 2010 in EUR billion (according to purchasing power parity)



Source: own compilation based on the Eurostat data.

Significance of the food industry for the Polish economy is considerably greater than in the European Community states, as evidenced by the ratio of the value of the food industry to GDP (Table 1). In 2010 the trading value of the Polish food industry was 12.4% of GDP produced, while the average in the EU-15 it was 7.3%, in the EU-12 - 9.8%, and in the entire EU - 7.6%. Only Ireland (13.8%) and Bulgaria (13%) noted a higher than in Poland value of this ratio in 2010. In Germany, in the UK and in France, it was lower by almost a half than in Poland and amounted to 7%.

The level of food industry development measured by the trading value per capita in 2010 amounted in Poland to EUR 1.91 thousand and it was similar to that noted in the countries of the largest food producers in the EU (Table 1), i.e.: Germany (1.97), France (1.89), the UK (1.82) and the EU-15 average (1. 96). In 2000-2010, the value of food industry production per capita in Poland increased on average by 4.7% annually, in Germany by 2.4%, while in the EU-15 the said turnover increased by 1.1% annually and in the EU-12 by 2.4%. In that period, the greatest average annual increase in turnover per capita was noted for Bulgaria (7.2 %), it was high in Romania (4.1%) and Lithuania (3.8%).

1. The food industry in the EU states in 2010

Countries	Production value of food industry in EUR billion: in current prices	Production value of food industry in EUR billion: in comparable prices*	Share of the EU-27 countries in food industry production value in %	Value of food industry production per capita in EUR thousands	Ratio of the value of food industry production to GDP in %	Changes in 2000-2010: in the share of the EU-27 states in the value of food industry production* in p.p.	Changes in 2000-2010: in the value of food industry production* per capita in % per year	Changes in 2000-2010: in the ratio of the value of food industry production to GDP in p.p.
EU-27	***916.4***	***932.1***	***100.0***	***1.8***	***7.6***	***0.0***	***1.2***	***-0.7***
EU-15	***825.0***	***780.7***	***83.7***	***1.9***	***7.3***	***-1.2***	***1.1***	***-0.5***
EU-12	***91.4***	***151.4***	***16.3***	***1.4***	***9.8***	***1.2***	***2.4***	***-3.0***
Austria	17.4	15.8	1.7	1.9	6.1	0.3	3.9	0.7
Belgium	38.2	34.0	3.6	3.1	10.7	0.3	2.6	0.5
Germany	**169.7**	**161.2**	**17.3**	**1.9**	**6.8**	**0.7**	**2.4**	**0**
Denmark	19.6	14.1	1.5	2.5	8.1	-0.3	-0.4	-2.3
Spain	89.8	97.0	10.4	2.1	8.7	1.0	1.5	-0.9
France	144.3	122.6	13.2	1.9	7.1	-1.8	0	-1.5
Finland	9.3	7.8	0.8	1.4	5.2	-0.1	1.5	-0.4
Greece	13.0	13.9	1.5	1.2	5.7	0.2	2.9	-0.1
Ireland	21.8	19.5	2.1	4.3	13.8	0	0	-3.1
Italy	109.5	104.6	11.2	1.7	7.0	-0.7	0.6	-0.1
Netherlands	53.6	49.3	5.3	2.9	9.2	-0.5	0.7	-1.5
Portugal	12.6	15.4	1.7	1.4	7.4	0.1	1.5	-0.4
Sweden	14.8	12.0	1.3	1.3	4.2	-0.1	0.8	-0.8
United Kingdom	110.6	112.8	12.1	1.8	6.7	-0.1	1.2	-0.2
Poland	**44.2**	**72.9**	**7.8**	**1.9**	**12.4**	**1.4**	**4.7**	**-1.5**
Czech Rep.	11.7	16.6	1.8	1.6	8.1	-0.6	-0.5	-4.9
Hungary	9.1	14.5	1.6	1.4	9.1	-0.1	0.7	-3.4
Slovakia	3.2	4.7	0.5	0.9	4.8	-0.1	0	-4.3
Slovenia	1.8	2.2	0.2	1.1	5.2	-0.1	0	-2.1
Lithuania	3.0	5.2	0.6	1.6	11.3	0.1	3.8	-3.9
Latvia	1.5	2.4	0.3	1.1	8.7	0	3.2	-3.4
Estonia	1.2	1.7	0.2	1.3	8.2	0	0.8	-5.5
Romania	9.7	18.8	2.0	0.9	7.7	0.3	4.1	-4.1
Bulgaria	4.7	10.5	1.1	1.4	13.0	0.3	7.2	-0.8

* in comparable prices (adjusted by the EUR purchasing power parity in the above-mentioned states)

Source: own calculations based on Eurostat data

In the analysed period, the value of food production in the EU-27 countries has increased on average 2% per year, while in Poland the increase was 4.1%, and for comparison, in Germany it was 2.5%, UK - 1.9%, France 0.7% (Table 2). However, if we take into account the changes in the indicator for selected periods of the past decade, the best time in Poland were the years immediately after the accession 2004-2007. Then the value of the food industry production increased 7.2% per year, three times faster than in Germany and in the EU-15. The economic crisis of 2008-2010 contributed to the decrease in food production across the EU. In almost all EU states a drop in production was noted, with the exception of: Poland (+0.2% per year), the UK (+2.3%) and Ireland (+5.2%) [3].

2. The rate of changes in the value of the food industry production in selected EU-27 countries (% per year) in comparable prices

Countries	2000-2010	2000-2003	2004-2007	2008-2010
EU-15	1.9	3.3	2.1	-1.6
EU-12	0.8	5.0	4.5	-2.4
EU-27	2.0	3.5	2.5	-1.7
Belgium	3.0	4.3	3.4	2.1
Germany	2.5	3.1	2.1	-1.2
Spain	3.1	6.8	3.6	-2.6
France	0.7	2.6	5.0	-3.7
Ireland	1.8	4.5	-0.1	5.2

Продовження табл. 2

Italy	1.4	3.8	0.7	-3.0
Netherlands	1.2	1.1	3.4	-4.9
United Kingdom	1.9	1.2	-1.6	2.3
Poland	**4.1**	**5.4**	**7.2**	**0.2**
Czech Rep.	-0.7	2.5	-0.1	-5.2
Hungary	0.9	9.2	-2.5	-5.8
Lithuania	2.6	1.6	6.7	3.0
Romania	3.7	5.0	4.7	-5.1
Bulgaria	5.5	6.1	9.6	-4.2

Source: own compilation based on the Eurostat data.

2. Labour productivity in the EU food industry

The Polish food industry employs about 410 thousand persons, which accounts for ca. 10% of the total employees of the EU food industry. It ranks Poland as 4th among the EU-27 states. Higher employment (in thousands of persons) is reported only in Germany (838), France (599) and the United Kingdom (426), followed by slightly lower in Spain and Italy (ca. 350 each). In 2000-2010 the number of employees in the food industry in the EU-27 decreased by 7%, and by 5% in the EU-15 and by 11% in the EU-12. In Poland at that time, it decreased by 5%, with a drop by 0.2% annually in 2000-2007 and by 1.4% during the crisis (2008-2010). Thus the crisis has forced a reduction in employment in the food industry across the European Union [4].

In 2010 one person employed in the food industry in Poland generated EUR 178.1 thousand of production sold, which was slightly less than in Greece (EUR 187.8 thousand) and Germany (EUR 192.4 thousand.) In most EU-15 states, labour productivity in the food industry was, however, by ca. 40% higher than in Poland and it amounted on average to EUR 240 thousand per employee, and the highest was in Ireland (EUR 510 thousand). High labour productivity in the food industry is also characteristic of the Netherlands (EUR 392 thousand) and Belgium (EUR 378 thousand) (Table 3). Labour productivity in the Polish food industry is the highest among the EU-12 countries and higher by 27% than the average in these countries (EUR 143.3 thousand). It was considerably influenced by increased outlays on provision of technical equipment. This was the result of a significant investment boom, especially after the Poland’s accession to the EU and the reduction of the number of employees. In last decade improvement of labour productivity in the food industry was common for all EU Member States.

3. Labour productivity[a)] in the EU food industry in EUR thousand/1 employee

Countries	2000	2008	2010	Annual change in % in		
				2001-2007	2008-2010	2001-2010
EU-15	*189.3*	*254.5*	*241.3*	*3.4*	*-2.6*	*2.4*
EU-12	*95.9*	*141.5*	*143.3*	*5.2*	*0.6*	*4.1*
EU-27	*165.0*	*224.9*	*216.8*	*3.7*	*-1.8*	*2.7*
Ireland	332.6	432.4	510.5	3.3	8.6	4.4
Netherlands	301.4	435.0	391.6	4.9	-4.8	2.6
Belgium	271.0	355.9	378.6	3.4	3.1	3.4
Italy	274.7	314.6	298.0	0.9	-2.6	0.8
Spain	203.5	273.8	270.6	4.3	-0.6	2.9
United Kingdom	175.7	255.0	265.1	3.4	2.0	4.2
France	192.4	252.6	204.8	2.2	-9.0	0.6
Germany	**143.7**	**203.8**	**192.4**	**5.1**	**-2.7**	**2.9**
Greece	155.4	189.2	187.8	1.9	-0.3	1.9
Poland	**113.3**	**172.5**	**178.1**	**6.3**	**1.6**	**4.6**
Hungary	107.6	154.2	144.0	3.5	-3.2	2.9
Estonia	79.2	112.5	123.2	4.5	4.6	5.4
Lithuania	71.3	102.3	118.7	4.9	7.7	5.2
Bulgaria	63.5	107.5	101.1	6.2	-2.9	4.7
Romania	61.1	101.6	100.8	6.1	-0.3	5.1
Latvia	55.4	84.1	94.1	5.6	5.7	5.4

[a)] own compilation based on the Eurostat data.

In 2000-2010, labour productivity in the Polish food industry increased on average by 4.6% per year, while in the EU-15 by 2.4% per year and in the EU-12 at 4.1% per year. (Table 3). The highest growth rate of labour productivity in the last decade was reported in Baltic States, i.e. in Lithuania, Latvia and Estonia - ca. 5% per year. In 2000-2007, characterised by brisk development of the food sector in most of the EU Member States, average annual labour productivity growth in the EU-15 amounted to 3.4% and in the EU-12 - 5.2%. In 2000-2010, labour productivity in the Polish food industry increased on average by 6.3% per year, while in Germany by 5.1%. However, in 2008-2010 in most of the EU Member States there was a reduction in the indicator, forced by the aftermath of the global crisis. Only a few countries, including Poland (+1.6%) recorded an increase in labour productivity in the food industry.

3. Production concentration in the EU food industry

In 2010 ca. 14.3 thousand Polish entrepreneurs were engaged in food production. This represents 5% of the EU's food companies, and ranks Poland in the 6th place among the EU-27 countries. In 2000-2010, this number in Poland decreased by almost 30%, while in the EU-15 by 13% and in the EU-12 by 5%. In recent years, there was the largest decrease in the number of companies in the Polish food industry following from the economic crisis, whose effects the industry suffered in 2009 and the first half of 2010. In Poland, at this time there was a decrease by 11% in the number of food enterprises while in the EU this number was reduced by 2%. Turnover of an average company demonstrates the increase in economic power and competitiveness of the Polish food enterprises in the European market. In 2010 the trading value of food processing enterprises in Poland amounted to EUR 5.11 million per an enterprise and was twice higher than in 2000 and 13% higher than in 2008. In 2010, the average turnover of a food company in the EU-15 was at level of EUR 3.29 million. The position of Polish food companies against the EU is rather good. The average turnover generated by these enterprises in Poland is higher than German enterprises (EUR 4.9 million), and much higher than in Greece, Italy, Portugal, and France. However, it is much lower than in Ireland (EUR 32.5 million), the UK (EUR 15.3 million) and the Netherlands (EUR 10.8 million) [6].

4. The average value of the average turnover of the food enterprise in the EU in EUR million

Countries	2000	2008	2010	Changes in % per year in		
				2001-2007	2008-2010	2001-2010
EU-15	*2.37*	*3.33*	*3.29*	*3.4*	*-0.6*	*3.4*
EU-12	*2.27*	*3.22*	*3.14*	*5.0*	*-1.3*	*3.3*
EU-27	*2.36*	*3.31*	*3.26*	*3.7*	*-0.7*	*3.3*
Ireland	23.82	29.33	32.50	2.6	5.2	3.1
United Kingdom	11.76	14.47	15.28	2.3	2.7	2.6
Netherlands	8.64	12.86	10.81	5.6	-7.6	2.2
Germany	**2.86**	**5.33**	**4.89**	**8.5**	**-4.0**	**5.5**
Lithuania	2.41	3.95	4.33	8.0	4.7	6.0
Poland	**2.41**	**4.52**	**5.11**	**10.2**	**6.2**	**7.8**
Belgium	2.90	4.15	4.43	5.4	3.4	4.3
Spain	2.11	3.57	3.46	7.6	-1.4	5.1
France	1.68	2.08	2.05	1.5	-0.8	2.0
Bulgaria	0.95	2.26	1.91	11.3	-7.6	7.2
Romania	1.30	2.19	2.19	5.7	0.0	5.3
Italy	1.31	1.84	1.81	2.0	-0.8	3.3
Greece	0.70	0.85	0.83	2.2	-1.2	1.7

Source: own compilation based on the Eurostat data.

The process of concentration and consolidation of the food industry is progressing throughout the European Union. In Poland, it runs much faster than in most of the other EU Member States. The gap between Poland and other EU Member States of high production concentration in this sector has been decreasing.

4. The Development of the food industry in Poland and the EU

In 2000-2010, the concentration process of food industry continued in Poland and the EU. The process consisted in the decrease in the number and share of the smallest companies (micro-companies) in the sector production (from 8.8% in 2000, 9% in 2003 to 5.4% in 2010), and an increase of the share of large companies (from 45% and 43.5% to 54.1% respectively). Previously, the transformation process [5] in this sector headed in an opposite direction, i.e. towards dispersion and fragmentation of activity, which was reflected by an increase in the share of small and medium-sized companies sector in the turnover and employment. In the pre-accession period and in the first years of membership in the EU, the Polish food industry, which is characterised by diversified and smooth structure of enterprises favourable to competition, underwent fundamental changes.

At the time in the EU, the share of large producers in turnover of food industry decreased slightly from 52.1% to 49.8% and it is now on lower than in Poland. Moreover, in 2010 the turnover of the EU micro, small and medium-sized companies (Table 4) differed only slightly from the level before the enlargement of the EU (i.e. 2003).

5. Structure by entity of the food industry in Poland and the EU (%) in 2010

Specification	Production value		Employment		Companies	
	Poland	**EU**	**Poland**	**EU**	**Poland**	**EU**
Large companies (>250 employees)	54.1	49.8	36.9	38.7	1.7	0.9
Medium-sized companies (50-249 employees)	25.8	28.1	27.5	27.2	7.4	3.8
Small companies (10-49 employees)	14.7	15.1	21.3	21.7	31.4	16.7
Micro-companies (up to 9 employees)	5.4	7.0	143	12.4	59.5	78.6

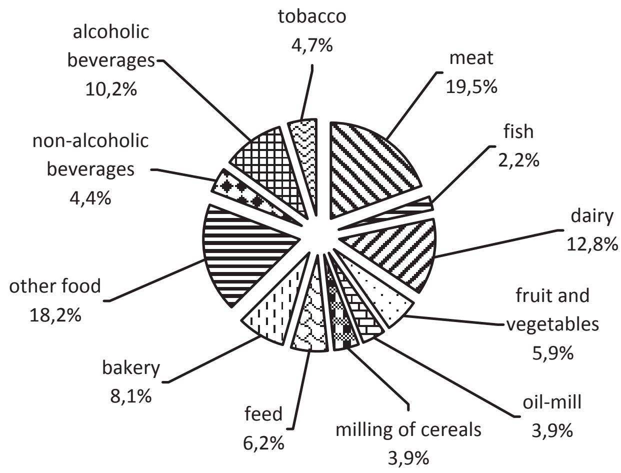
Source: own compilation based on the Eurostat data.

Similarity of the structures by entity of the food sector concerns both the structure of production, employment and enterprises (companies). In the Polish and the EU food industry over 50% of food production originates from large companies, representing respectively 36.9% and 38.7% of employment in the food sector, nearly 30% of production originates from medium-sized companies, and 20% from micro- and small enterprises. Medium-sized companies employ 27% of employees, and small enterprises, both in the EU and Poland, employ at the level of 21%, whereas in micro-companies the indices reach, respectively: 14% and 12% for employment [1].

In Poland, a common phenomenon in that industry is reducing the number of micro-companies. In 2000, they accounted for ca. 68.1% of the total number of Polish companies of the food industry, and in 2010 - 59.5%. The share of small and medium sized companies increased to 31.4 and 7.4%, respectively. The share of large enterprises in the structure by entity of the Polish food industry is only 1.7% and it increased compared to 2000 by 0.3 p.p. In the structure of the EU-27 companies, there are more micro-companies than in Poland, which represent 78.6% of all companies operating in this sector, and smaller is the share of small companies (16.7%), medium-sized (3.8%) and large (0.9%).

The structure of the EU food industry production (Figure 2) is dominated by meat industry (including poultry) with a 20% share, in the second place with 18% market share, was the production of other food products, which include: cakes, confectionery, sugar, spices and sauces, ready meals, and others. These were followed by: dairy industry (13%), alcoholic beverages (10%), tobacco products (5%), bakery (8%), feed (6%), fruit and vegetables products (6%), non-alcoholic beverages (4%), milling of cereals (4%) and oil-mill (4%) sectors.

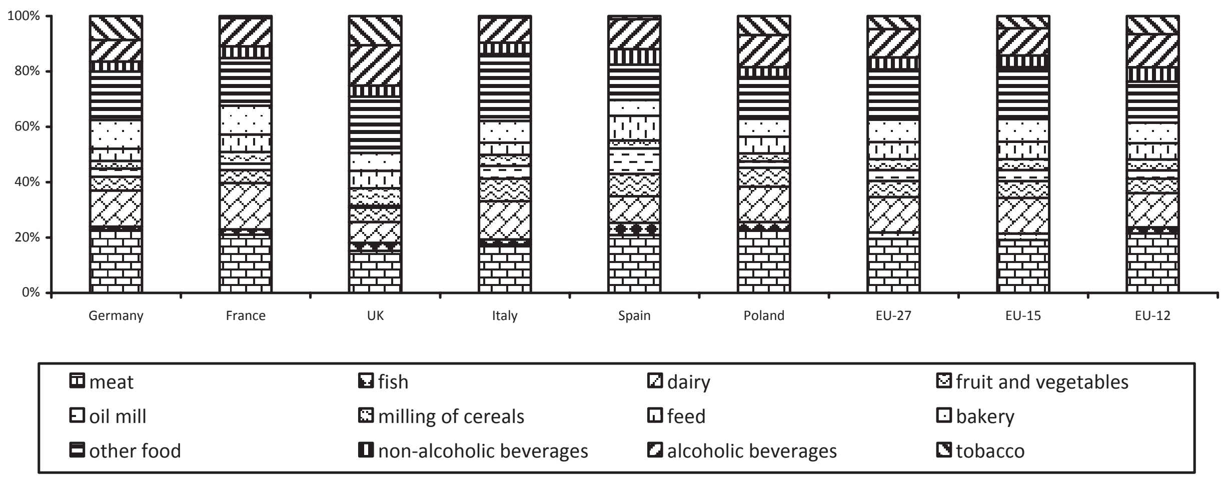
Figure 2. The structure of the EU food industry production in 2010



Source: own compilation based on the Eurostat data.

Over the last decade the industrial structure of food production in Poland was very similar to the structure in the EU's largest food producers (Figure 3). In the structure of the Polish food industry the largest share has meat industry, which accounts for 22.5% of the total value of production, the second position has the industry of other food products (biscuit, confectionery) with a 15.1% share, followed by: dairy industry (12.8%), alcoholic beverages (11.6%), processing of fruit and vegetables (6.8%), tobacco products (6.8%), bakery (6.5%), feed (6.0%), non-alcoholic beverages (3.6%), fish (3.1%), milling of cereal (2.9%) and oil mill (2.3%) sectors.

Figure 3. The structure of the food industry production value* of major food producers in the European Union (%)



* value in comparable prices

Source: own compilation based on the Eurostat data.

Labour productivity in respective sectors of the food industry in the EU is rather diversified. This indicator is very high in the following industries: tobacco, oil mill, feed and alcoholic beverages. In Poland, in the basic sectors of the food industry such as: meat, cereal milling, dairy and fruit and vegetable it is on the average level of labour productivity in the food industry as a whole (EUR 217 thousand per 1 employee). In the EU-12 countries the indicator is lower by ca. EUR 100 thousand per 1 employee, than in the EU-15 countries.

In Poland, the labour productivity in key sectors of food industry is slightly higher than the average in the EU-12. In 2010, the highest labour productivity in the Polish food industry, as well as in the EU, characterised the following sectors: tobacco, alcoholic beverages, oil mill and feed. In the main sectors of the Polish food industry, i.e. meat, dairy, milling or fruit and vegetable, labour productivity was by ca. EUR 50 thousand per 1 employee lower than in the EU-15, although those differences tend to decrease with every year. The lowest labour productivity was noted in the bakery sector.

Conclusions

The share of Poland in the EU-27 food industry production amounts to ca. 7.8%. In terms of the value of production sold, Poland is the 6th food producer in the EU. In 2000-2010 the value of food industry production in Poland increased by 52%, compared to 25% in the "old" EU countries and to 32% in the EU-12. Employment in the EU food industry has fallen in nearly all Member States. The process of eliminating the development gap in the food industry between Poland and the EU-15 is ongoing, which results in strengthening of Poland's position on the Single European Market.

Against the background of the EU's food industry as a whole, the Polish food industry excels in tobacco processing (11.2% of the EU production) and is the third producer of tobacco products in the EU. In the processing of fish we are on the 4th position with 10.6% share of the EU production. We are also ranked in the 4th place in the production of dairy products (7.8% of the EU production). In the meat processing, Poland is in sixth place (almost 10%), as in the processing of fruits and vegetables (9.0%), bakery (6.3%), oil mill (4.8%) and alcoholic beverages (8,9%). We are ranked seven in the EU in processing of cereals (5.9%), feed (7.6%) and non-alcoholic beverages (6.4%), and Poland is in the eighth place in the production of confectionery and sweets (6%). This means that Poland is a major food producer in the European Community. This reduces the distance between us and the largest food producers in the EU.

References

1. Data & Trends of the European Food and Drink Industry (Reports 2005-2011).
2. Eurostat http://epp.eurostat.ec.europa.eu
3. *Mroczek R.* Procesy dostosowawcze polskiego przemysłu spożywczego do zmieniającego się otoczenia rynkowego (1), series: Multiannual Programme 2011-2014, Report No. 4, IAFE-NRI, Warsaw 2011.
4. *Mroczek R.*, Procesy dostosowawcze polskiego przemysłu spożywczego do zmieniającego się otoczenia rynkowego (2), series: Multiannual Programme 2011-2014, Report No. 35, IAFE-NRI, Warsaw 2012.
5. *Urban R.*, Stan polskiej gospodarki żywnościowej po przystąpieniu do Unii Europejskiej Raport 6 (synteza), series: Multiannual Programme 2005-2009, Report No. 145, IAFE-NRI, Warsaw 2009.
6. *Urban R., Mroczek R.* Postępy integracji europejskiej w sektorze żywnościowym. „Zagadnienia Ekonomiki Rolnej" 2011, No. 2 (327).

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