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## POLISH FOOD SECTOR 5 YEARS AFTER THE ACCESSION

### Abstract

*After Poland's accession to the EU, it turned out that the threats are smaller than forecasted and our food producers efficiently take advantage of the opportunities resulting from the opening of a large and wealthy European food market. Polish food economy is well-prepared to operate within the Common European Market.*

*Mutual full opening of markets was not a hindrance to the development of the Polish food economy; instead it became a strong impulse for its growth. Within the 5 years of our EU membership the export of agri-food products increased from EUR 4.0 billion to EUR 11.3 billion (2.8 times) whereas the import increased from EUR 3.6 billion to EUR 9.8 billion (also 2.8 times) and the surplus increased 3.3 times from EUR 0.4 billion to EUR 1.5 billion.*

*Despite the observed positive transformations, efficient competition with the other Community States is hampered by a relatively low concentration level of agricultural production and food processing, low labour efficiency in food industry and not very active marketing and promotion of Polish agri-food products. The creation of long-lasting competition advantages requires the formation of a highly productive, market-oriented segment of farms in Poland.*

The attempt to conduct an in-depth analysis of macroeconomic social and economic effects of Poland's membership in the EU after nearly 5 years is a risky task. Since it is a relatively short time, it is difficult to assure methodologically correct separation of permanent effects and the phenomena resulting from the economic cycle or accidental events. The macroeconomic and microeconomic results of Poland's adjustments to the legal and institutional solutions of the "old" EU were not fully materialised yet.

The course of economic processes in Poland was influenced by geopolitical threats, significant changes in raw material prices, especially crude oil price, as well as instability of financial markets. These phenomena would have affected Polish economy irrespective of our membership in the EU, however.

Mutual full opening of markets was not a hindrance to the development of the Polish food economy; instead, it became a strong impulse for its growth. The following phenomena serve as evidence for such a thesis:

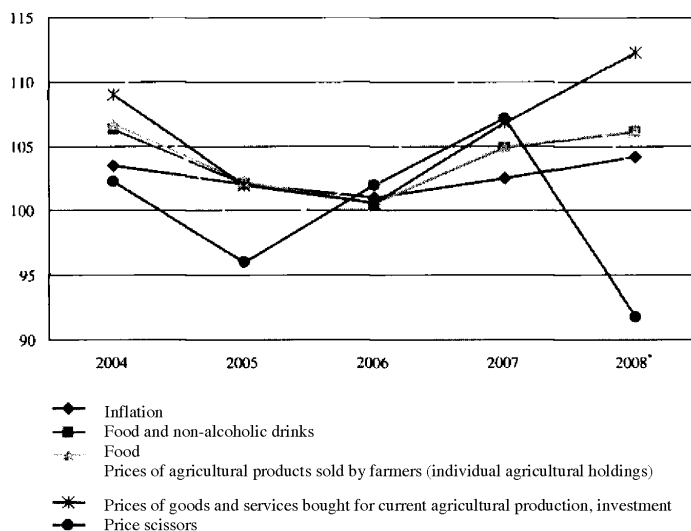
- Within the 5 years of our membership in the EU the export of agri-food products increased from **EUR 4.0 billion to EUR 11.3 billion (2.8 times)**, whereas the import increased from **EUR 3.6 billion to EUR 9.8 billion (also 2.8 times)**, and the surplus increased 3.3 times from **EUR 0.4 billion to EUR 1.5 billion**.
- The trade with other EU states grew even faster. Food deliveries from Poland to the EU-25 States in 2003-2005 increased by 248%, whereas import to Poland increased by 212%.
- The EU membership gave a new, very strong impulse to the export of Polish agri-food products to EU-10/12 countries. The increase in trade dynamics with these countries and the improvement of results were especially visible in recent years, whereas the trade with EU-15 noted a decrease in dynamics and lower results.
- The positive balance of foreign trade in agri-food products has improved:
  - in total from EUR 0.4 billion in 2003 to EUR 1.5 billion in 2008,
  - with EU-25 States from EUR 0.4 billion to EUR 2.3 billion in 2008,
  - with EU-15 States from EUR 0.2 billion to EUR 0.8 billion in 2008 (but in 2006-2007 it was EUR 1.5 billion)
  - with EU-12 States from EUR 0.2 billion to EUR 1.5 billion in 2008.

Therefore, the accession to the EC structures did not cause any inflow of the Polish market with EU-imported food, a threat which often appeared in pre-accession forecasts. Foreign trade in this period became an important factor of the development of the food industry and agriculture situation, since - with a relatively stable domestic demand - it absorbed the vital part of increase in domestic production. The share of the export in the production sold in 2008 reached 22%, as compared to 16.5% in 2004 and 10.5% in 2000.

### **The economic situation of the Polish agri-business following 1 May 2004**

The price fluctuations in the market environment have been still unfavourable for farmers as well as food processing entities. Price growth rates of agricultural and food products have been and are still lower than the inflation rates and the dynamics in prices of means of production for agriculture.

Among the products bought by farmers the fastest growth was noted for prices of investment goods (mostly machines), followed by prices of working means of production (fertilizers, diesel oil), while prices of consumer goods grew the slowest. In the group of products sold by farmers, the prices of plant products decreased the most and more slowly – only relatively and temporarily – products of animal origin.



**Fig. 1.** Price rates of agricultural and food products and inflation rates in 2004-2008 (previous year=100)

Source: Own calculations on the basis of the CSO data.

Following Poland's accession to the EU, first of all, there was a great increase in market deliveries of red and poultry meat as well as of meat products. It stems from the industrialisation of agri-food processing and its concentration forced by the processes of adaptation to EU standards. The upward tendency for deliveries of ripening cheeses, dairy drinks and desserts, chocolate products and beer, as well as non-alcoholic drinks continued.

Poland's accession to the EU did not have any significant impact on the level of production of important segments of the Polish agriculture, such as cereals, milk and pork. There has been a downward trend in root plants production, especially potatoes and fodder root crops. After the accession to the EU the production of fruit decreased slightly, but its current level is by about 15% higher than in 1998-2000. The segments of agriculture which show the increase of production after the accession to the EU are poultry sector and rape cultivation sector, which results, *inter alia*, from the growing demand for biofuels.

After Poland's accession to the EU, the global agricultural production in fixed prices amounted to about PLN 58.5 billion and was on average by 2.5% higher than in 2001-2003. In that period animal production increased by 6.9% and plant production decreased by 1.1%. The important feature of plant production development is the higher growth rate of final production and commodity production than global production, which means that internal absorption decreases, both in respect to production and consumption, and the level of commodity production increases.

The decrease in food consumption occurred only in the first year of Poland's accession to the EU and it resulted mostly from the great increase in prices of food and non-alcoholic drinks. The decrease of food consumption was hampered in 2005, and since 2006 the increase in demand for agri-food products on most markets has been noted again.

In 2003-2008 important changes in the income situation of agricultural holdings in Poland occurred. The incomes of Polish farmers grew significantly after Poland became an EU Member State in 2004. The income received from agricultural holdings in the pre-accession period increased over 2 times per 1 full-time employee (working at least 2,200 hours in an agricultural holding annually). The subsidies received by farmers from non-market sources had a fundamental impact on this favourable change of income situation. Although in 2003 the subsidies amounted to 9.4% share of income, in the following year their share increased to 39%. The greatest share of subsidies in generating income in the discussed period was noted in 2006, when subsidies were of even greater importance than production activity. After the accession, the profitability of farmers in relation to other occupational groups has also improved. The average agricultural income per 1 full-time employee amounted to 24.2% of the average net remuneration in the national economy in the pre-accession period, but in the first year after the accession this index more than doubled and reached 56.2%. In the following years these relations ranged from 43.3% in 2005 to 57.5% in 2007, a very good year for agriculture.

Table 1

**Selected data on income and subsidies in the sector of agricultural holdings  
in Poland in 2003-2008**

Specification	Unit	Years					
		2003	2004	2005	2006	2007	2008
Average net remuneration in national economy	PLN	17,622	18,325	19,060	19,840	21,570	23,330
Income per one full-time employee	PLN	4,259	10,290	8,252	9,984	12411	10062
Index of income to average remuneration	%	24.2	56.2	43.3	50.3	57.5	43.1
Subsidies per one full-time employee	PLN	402	4,009	3,882	5,198	5,352	5019
Share of subsidies in income	%	9.4	39.0	47.0	52.1	43.1	49.9

Source: Calculations of Z. Floriańczyk and L. Goraj on the basis of macroeconomic calculations for agriculture – EAA and the CSO data.

According to estimates conducted in line with the method of Economic Accounts for Agriculture, the production value of the Polish agricultural sector calculated in the market prices in 2004-2008 increased by over 18.7% while the value of subsidies by 38.5%. At the same time, the value of indirect absorption increased by 28.1%. As a result the income per full-time employee in agriculture decreased in that period by 2.2%, whereas the average net remuneration in

national economy increased by 27.3%. Now let us consider the assumptions and results of the forecast of farmers' income drawn up by the European Commission for 2005-2014. They indicate that the real income calculated per full-time employee will increase by 32.2% in 10 countries which entered the European Union in 2004 on condition that the employment (measured by the number of full-time employees) in agriculture is at the same time lowered by 21.8%. In order to achieve this increase in income, the employment in agriculture has to decrease in the same period by 2.4% on average per year.

After Poland's accession to the EU a production revival in food industry could be observed. The value of sold production of food industry has been increasing since 2003 at the rate of 6-7% annually. This revival has durable foundation because:

- under the impact of the income growth, the national food and drink market has been developing,
- the export orientation of food industry companies grows, which is expressed in the increase of the share of export in the sales.

The impact of these two factors of food industry production growth differed between the phases of Poland's economy integration with the EU. The production revival in the period just before Poland's accession to the Community, was caused mainly by inflation threats which led to the increase of national demand at the end of 2003 and in the first months of 2004. In that period some revival in the export of agri-food products could also be observed. The price increase in the first months of 2004, however, caused the deterioration of the national demand, but at the same time the rate of export growth was high. However, this weakening of the national demand was temporary, because since the mid-2005 the increase in population incomes has been observed as well as next revival of the national market caused by the accelerated economic growth of Poland. This phenomenon manifested itself especially in 2007. At the same time, high growth rate of agri-food export has remained at the same level, which despite the downward tendencies (from almost 30% in 2004-2006 to 18% in 2007) is still very high.

Since the mid-2005 the development of food processing has solid roots which result from the increase of both the national demand, and export demand. Following great fluctuations of the production growth rate in the food industry in 2003-2004 and at the beginning of 2005, since the mid-2005 the growth rate in this sector stabilised on a high level of approximately 6% per year. In 2008 a slight decrease of the growth rate in the food industry occurred – to the level of about 3% annually. The slowdown of this branch of the industry has been observed especially since May 2008.

After the accession to the EU – like in the previous years – secondary processing was developing best, i.e. production of compound goods, highly-processed goods and goods facilitating preparation of meals. In 2003-2008 the production value of processing (in fixed prices) increased by about 36%. In 2003-2008 the growth rate of this production amounted to only 2% annually.



After the accession to the EU, the financial indicators of the entire food industry improved considerably. Between 2004 and 2007, as compared to 2003:

- net profitability doubled to about 4% of the value, and ROE increased 2.5 times to about 12-13%, i.e. to the level over double as high as the basic percentage rate of the National Bank of Poland,
- profitability rates increased to a smaller degree: gross profit (from 2.5%-3.0% to 4.5-5%), cash revenues (from about 5% to 7%) and operational surplus (from 8.5% to 9.5%),
- cost-burdens of financial revenue decreased (from 2.3% to 1.2-1.3%) along with profit income tax-burdens (from 40% to about 20%); these are main sources of the improvement of net profitability rates.

As a result of a great profitability improvement, growth was observed in the previous years:

- the net profit amount increased from PLN 1.6 billion in 2003 to PLN 6.5 billion in 2007, i.e. 4-times,
- equity capital, which increased respectively from PLN 30.1 billion to PLN 44.8 billion (by 49%), including the circulating capital from PLN 5.1 billion to PLN 10.8 billion.

Under such circumstances it was possible to finance the increased (by 41%) investment outlays as well as to stabilise relative level of long-term debt, whose amount increased just as the equity did.

After Poland's accession to the EU and in the next years neither any significant changes in the organizational structure of the food industry nor mass bankruptcy of domestic enterprises were observed. The processes of merger, takeovers or consolidations of whole sectors did not intensify either. In that period the number of industrial companies decreased slightly, mostly small and micro-enterprises.

### **Financial support for the agri-food sector from the EU budget**

The years immediately preceding the accession and the first 5 years of Poland's membership were a period when agriculture and rural areas were receiving financial support from the EU budget. In 2004-2008 the funds for the development of agriculture and rural areas came from 4 multi-annual programmes: SAPARD Pre-Accession Programme (although SAPARD programming process was finalised at the beginning of 2004, but due to the n+2 rule, according to which projects could be implemented and settled in the year of the inclusion in the programme and in the next 2 years, the great part of SAPARD funds was disbursed already during the membership), Rural Development Plan for 2004-2006, Sectoral Operational Programme "Restructuring and Modernisation of Food Sector and Rural Development" (both programmes were settled financially on 31 December 2008) and Rural Development Programme for 2007-2013. The total sum of public funds, both national and EU, which were transferred to rural areas through these programmes in the period of the membership, are estimated at PLN 26 billion at least, i.e. over PLN 5 billion a year.

Table 2

**Public funds co-financing rural programmes in 2004-2008 (national and EU public funds in PLN million, paid to beneficiaries) – estimates**

Programme name	Funds paid (million PLN)
SAPARD	2,000
Rural Development Plan for 2004-2006	14,000
SOP "Restructuring and Modernisation of Food Sector and Rural Development 2004-2006"	6,000
Rural Development Programme for 2007-2013	4,000
<b>Total</b>	<b>26,000</b>

Among the programmes referred to in table 2 only SAPARD had a clearly marked character of an investment programme supporting mainly infrastructural investments (roads, waterworks, sewage systems), modernisation of some branches of food industry adapting to the EU standards within the scope of sanitary and veterinary, environmental protection and animal welfare standards, as well as modernisation of agricultural holdings (mostly the purchase of machinery and tractors). The remaining programmes, implemented fully in the period of the membership, had a mixed character. Apart from supporting investment in many branches of agri-food industry and further modernisation of agricultural holdings in 2004 and between 2007-2013, substantial funds were earmarked for programmes supporting incomes (subsidising less favoured areas), social programmes (early retirement) and environmental programmes.

### **Competitiveness of Polish food producers**

The results of foreign trade show high competitiveness of Polish food producers on foreign markets and indicate that Poland's export offer is safe, ensures high quality and good price for foreign consumers.

The relationship of the export value of selected food products to their sale value shows that the following branches of food industry had specifically strong export orientation after the accession to the EU: fish processing, production of starch and potato products, production of juices and fruit and vegetable drinks, the remaining fruit and vegetable processing products, production of pet-food, production of durable pastry products, chocolate and other sweets, processing coffee and tea, as well as production of spices, supplements and dietetic food.

The basic branches of food industry showed in 2004-2008 the competitiveness similar to the average competitiveness in the whole food industry. Poorly competitive group of branches of the food industry which were not export-oriented included: ice cream production, production of cereal products, pasta and fresh bread, wine sector, beer sector, non-alcoholic drink sector and the production of fodder for livestock.

The competitiveness of Polish food producers mostly stems from the fact that they have competitive advantages of cost-price character. Poland has clear



price advantages (lower prices) on many basic agricultural markets. Among many products with a relatively high competitive position on the European Single Market, labour-intensive ones prevail if we consider the price factor. The fundamental determinants of competitiveness of Polish agri-food sector on the European Single Market are still the price and cost advantages which result from lower production and processing costs, including lower labour costs and processing margin. The fact that Polish agriculture is covered by Common Agricultural Policy started the process of approaching of agricultural products prices in Poland to the EU price level. This process was fast only in these sectors in which production quotas are applied in the EU, i.e. dairy sector and sugar sector, and recently also in the cereal sector.

We also have a clear price advantage on the markets of most basic products of food industry. This is visible not only through a long-standing fast increase in the export of these products, but also still slower process (than for agricultural products) of bringing the domestic prices of food processing products closer to the EU price levels. The differentiation of these price levels is, however, a natural consequence of great differences in the level of economic development between more and less developed EU Member States.

Polish entrepreneurs deal well with absorbing EU export subsidies, and the largest beneficiaries among them are producers of sugar and dairy products.

Export subsidies contribute to keeping balance between demand and supply in the market in the period of food overproduction. From the point of view of agricultural holdings and processing plants, this system significantly contributes to the growth of their competitiveness on non-EU markets. They gain profits directly from subsidising export to non-EU countries, since thanks to subsidies the prices on the internal market are above the level which would be obtained as a result of a free game of demand and supply, and thus, export becomes more profitable.

After Poland's accession to the EU, it turned out that the threats were smaller than forecasted, and our food producers took the opportunity of entering a large and lucrative European food market. Polish food enterprises are well-prepared to operate on the European Single Market. Of course, the situation varies in different markets and in subsequent years.

Before the accession Poland had exported greater amounts of cereals only from time to time, in the years of abundant harvest or in the case of reduction in intervention stocks. Accession to the Community ensured greater export possibilities. Firstly, we obtained a free access to a large market, secondly, Poland could subsidise grain exports, which was previously impossible according to the UR GATT. Since 2004 Poland annually exports from 1.0 to 1.7 million tonnes of cereals regardless of the size of national harvest. The import volume to a great extent resulted from the size of the national harvest and in the years of small harvests it reached the level of 13% of the national supply. Regardless of the market situation, Poland has to import considerable volumes of durum wheat, even as much as 400 thousand tonnes, as it cannot be produced in the country.

Poland is one of the largest rape producers in Europe. It has over 10% share in the rape production among 27 European Union countries and within the last five years (2004-2008) its production of rape amounted to approx. 1.8 million tonnes. As regards the size of harvest and the area of cultivation only Germany and France occupy better positions than Poland, while in respect to the level of rape yields better results are noted also in Great Britain, Denmark and the Czech Republic.

After Poland's accession to the European Union, rape production became the fastest growing sector of plant production. After some years of stagnation in the pre-accession period, within the last five years the harvests increased rapidly. In 2004-2008 they amounted to approx. 1.8 thousand tonnes on average and they were higher than the averages in the previous five-year period by over 80%, and in the last two years the rape harvest exceeded 2.1 million tonnes.

Before the accession the rape production was downward, whereas within the last five years it developed at the pace of almost 28% per annum, which was influenced by the Polish accession to the European Union and the EU policy in the scope of biofuels and renewable energy that strongly stimulated to the development of rape cultivation and processing.

In 2004-2008 the area of rape cultivation increased by almost 50%, and the rape yields amounted to 2.75 dt/ha, which was by almost 30% higher than in the previous five-year period.

Although the self-sufficiency in the sector of oil plants is low, Poland is fully self-sufficient as regards production of rape and its processed products. As a result of a dynamic development of rape production after the Polish accession to the European Union, Poland regained the position of a big net exporter of rape seeds (except for 2008). It also became a significant exporter of rape oil, and the most important export destination is the German market, where it is used for biofuel production.

A reform of the sugar market regulation system includes a reduction in sugar production in the EU by 5-6 million tonnes and an increase in the share of import in market supply. The consequences of implementing the reform are also visible in the Polish sugar sector. The achieved production quota amounted to 1,671.9 thousand tonnes and it was slightly higher than the national demand. As a result of the reform the production quota decreased to 1,405 thousand tonnes, therefore, it is by approx. 225 thousand tonnes lower than the national consumption. The reform also includes a reduction in procurement prices of beet (approx. 40%) and the reference prices of sugar (approx. 36%). In consequence of these changes the profitability of sugar beet cultivation declined and some farmers quit the production. Decrease in the production quotas forced the deep restructuring of the sugar industry. The number of operating sugar refineries decreased to 18. As a result also a part of cultivation area was liquidated.

In the seasons 2006/2007 and 2007/2008, sugar production significantly exceeded the production quota, which was to a great extent caused by advantageous weather conditions during the growing cycle. The true results of the

reform manifested themselves in the season 2008/2009, when because of the low production profitability the farmers contracted a smaller cultivation area and the sugar production was lower than the production quota and domestic consumption. As a consequence Poland has ceased to be self-sufficient in the sugar market. The sugar sector has undergone transformation from a net exporter to a net importer. This situation will continue also in the season 2009/2010, because the area sown to sugar beet will enable sugar production at the level of the production quota. It means that the self-sufficiency indicator in the sector will amount to approx. 85%, just like in the current season.

Poland for many years has recorded a surplus in the production of milk. After the accession the production surplus over the domestic consumption increased from 7-9 to 12-17% as a result of a clear improvement in profitability of milk production and processing. The inclusion of the Polish dairy sector in the European Single Market, where the prices were 30-50% higher and covering it with the CAP mechanisms caused a significant increase in the export of dairy products at much higher prices. It led to price increases at all market levels, which until the end of 2007 preceded the growth in production costs. Until the end of 2007 the profitability of milk production and processing was gradually increasing and the dairy industry was considered to be the major beneficiary of integration with the EU. Its potential for development was limited only by the level of milk quotas.

After the accession the milk production increased by approx. 4%, to 12.4 million tonnes, despite milk quotas, which reduce the selling possibilities. Milk and dairy products consumption at the constant level, which in 2004-2008 ranged within the limits of 251-266 kg per head, and in the total amount of 9.7-10.2 million tonnes, enabled a 50% increase in the volume of export and a significant improvement in the balance of foreign trade in milk products. The balance of foreign trade in the dairy sector tripled in 2004-2008 – to the value of EUR 923 million.

The situation changed in 2008 as a result of very low activity in the global business cycle, which in 2007 had its trough at a level never noted before. It was then that the effects of a major CAP reform on the milk market could be observed. Since 2004 the reform consequently has aimed at reducing the market support in favour of direct payments, as well as abolishing milk quotas and liberalisation of the milk market in 2015. In Poland the expenditures of the Agricultural Market Agency for market support to milk sector decreased from PLN 156 million in 2005 to only PLN 40 million in 2008, of which PLN 38 million for a initiative “a glass of milk in a school”. The total support for the dairy sector in 2008 together with direct payments for the forage area necessary to feed the country’s cow stocks amounted to over PLN 1.23 billion, of which 97.5% were the direct payments paid to farmers.

After the accession the trade in meat and meat products clearly increased, especially on the export side. In 2004-2008 the poultry export tripled, beef export doubled and pork export fluctuated from 213 to 413 thousand tonnes in meat equivalent, depending on the stage of the hog cycle. The poultry and cat-

tle imports in the same period remained almost unchanged, and pork import increased from approx. 140 thousand tonnes to over 500 thousand tonnes. As a result, the value of export of meat and its products exceeded EUR 2 billion in 2008. When the value of import increased to nearly EUR 700 million in 2007, the balance of foreign trade in meat and its products reached the highest level of EUR 1.3 billion in 2006-2007.

In 2008 as a result of a leap in pork imports the balance of foreign trade in the meat sector decreased to less than EUR 900 million. In 2008, for the first time in history, the negative balance in foreign trade in pork was more than EUR 300 million, whereas the surplus in imports over exports amounted to approx. 90 thousand tonnes. This was influenced primarily by the high value of the Polish zloty during the greater part of the year, which coincided with a low stage of the hog cycle and a leap in the prices of live pigs. It has weakened the competitiveness of Polish pork, which was not high even before. The similar situation is going to take place also in 2009, though an increase in the value of euro from PLN 4.2 to 4.6 has significantly improved the competitiveness of Polish exports. As a result, although the import of pork is higher than in the previous year, the balance of foreign trade in meat and its products may increase to over EUR 1.1 billion.

The competitiveness in both the EU and world market does not consist merely in price differences. The factors influencing it include: development of entrepreneurship, improvement in the quality of local environment, rationalisation of organisational and ownership structures and the government policy concerning growth of competitiveness.

Consumers from other EU Member States now appreciate Polish food and its quality, which is reflected in the increase of the export orientation indicator of specific sectors of food economy. The growing sale on the competitive foreign markets being subject to strict rules of quality control indicates high quality of our food.

Despite the observed positive transformations, effective competition with other EU member states is hampered by a relatively low level of concentration of agricultural production and food processing, low labour efficiency in food industry and insufficient marketing and promotion of Polish agri-food products. Taking into account the available resources (especially labour and land), the potential of food industry, food safety of the country and the expected growth of export, agriculture in Poland should undergo the processes of concentration, intensification of production meeting the requirements of the natural environment and animal welfare which in turn would lead to changes in production techniques and the growth of competitiveness of Polish food sector. These processes may guarantee firm foundation of the competitiveness of Polish agriculture. It is also vital to develop a highly productive, market-oriented segment of agricultural holdings in Poland.

It needs to be stressed that the production and export potential as well as the competitive ability of Polish agri-food sector after the accession to the EU have been determined to a great extent by lower level of direct payments.

