

## **Competitiveness of Lithuanian farms and their agriculture production from present to medium - term perspectives**

### **Introduction**

Competitiveness of the agricultural production became of special importance for Lithuanian agricultural sector working under global market conditions. Agricultural competitiveness depends on the users' needs and, especially, on the ability to produce cheaper and better quality products than its competitors.

Despite the fact that Lithuanian farmers have improved their situation after the accession to the EU, they still do not use all the opportunities to become competitive in the single market. Therefore for a Lithuanian farmer it is difficult to compete with modern agricultural farms having a large share of the market. Internal and external competitiveness factors are driving new opportunities and constraints for each producer and require coherent analysis including comparison effectiveness of agriculture among EU-27.

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The aim of the research is to assess the competitiveness of Lithuanian agricultural sector in the context of EU-27.

**Research object:** agricultural sector.

**Research subject:** competitiveness of agricultural sector.

**Results:** Economic results of the agricultural activity in EU-27 countries for the period of 2004-2009 were analysed and the factors influencing them were identified; the macroeconomic situation of the EU-27 countries was assessed; the prices of the main agricultural commodities in the EU-27 countries were evaluated, and the reasons for the differences between them were identified; the structure of the agricultural production in the EU-27 countries was estimated; agricultural production efficiency in the EU-27 countries were compared and evaluated; the influence of the direct payments levels to the competitiveness in the EU-27 was explored; Lithuanian agriculture's mid-term perspective was presented.

## **Competitiveness definition in agriculture**

Literature on economics and agricultural economics offers different definitions of the term of competitiveness. The most appropriate definition formulated by David Balassa (1962) is the “ability to sell”. From the perspective of a single farm, competitiveness of an enterprise results from the sum and the effect of the competitive advantages which, ensure from lower costs of production or from qualitatively better performance when compared to competitors (Porter M. E., 1989; Wellert K., 1995).

In the same way as the general definition is missing, none unified indicator to quantify and compare the competitiveness of different products, sectors or countries has been formulated. Nevertheless, as indicators of competitiveness on the farm level “market share” and “profitability” criteria are suited. The market share criteria comprise production and trade shares of single enterprises within a certain region as well as growth rates of production and turnover. Profitability criteria may include profit, added value, equity return and percentage return on sales. Depending on the research question and the level of the analysis, different indicators are suitable (Frohberg K. et. al., 1997).

The farm successfully increases the competitiveness when it precedes qualitative and quantitative changes. Qualitative factor comprises specialised knowledge and skills, meanwhile quantitative changes come when these knowledge and skills are applied in practice to raise the production. These two kinds of factors do not overlap and are essential for creating competitive farm. Other important condition is the growth of farm. If agriculture growth is fuelled by overall market growth, then farms should also increase their production in order to keep their market share and not to bankrupt (Krisciukaitiene I., 2008). Thus in the article indicator for market share has been used. For development of the Lithuanian agriculture this indicator is very valid as the goal to have larger market share or to keep the same one is the base for competitiveness in emerging economy. The same principle can be applied for the farms. The growth of competitive farm should not be less than the growth of agriculture. In the case of stable (i.e. not growing) market, farm should not only keep its main activities, but also should diversify them, target other market segments. However prerequisite for taking such a goal is to have financial potential. Therefore, in order to have an effective farm in the long term the three main farm’s parameters should be met: level of growth, size, and economic or financial potential.

Competition among domestic producers, who benefit from clear legislation and well-known competitors, is one thing. Competing with much stronger

foreign agricultural and processing enterprises according to new “rules of the game” is something completely different and requires much greater dynamism (Epstein D., 2000).

Competitiveness can be defined at the levels of farms, industries and countries. A farm is competitive if:

- in competitive markets and without subsidies can produce and sell homogeneous products cheaper than the others;
- can produce unique products or find exceptional features for existing products (i.e. innovative products, modifications) that cannot be produced by other farms.

For analysis purpose it is proposed to distinguish two concepts of the phenomenon of competitiveness:

- competitiveness;
- competitive advantage.

The term *competitiveness* describes competitiveness of a country, an industry or a farm in general, while the term *competitive advantages* emphasize the factor that gives a farm an advantage over the other farms.

It is worth mentioning that dualism of competitiveness processes in European agriculture was observed (Multifunctional ..., 2003). First, competitive agricultural farms are consolidated, with high productivity, adjusted to new conditions and fully integrated into international markets. On the other hand, there are also non-competitive farms with very low capacity of agricultural productivity and they are adapted only to the local or regional market. Farms from the latter group continue their activities and will have the opportunity to do so in the future, if the government through a series of support measures helps such farms to be viable. The importance of such farms very little depends on their productivity or marketing abilities, but rather on their location in rural areas that try not to disappear and to remain viable. The concept of multifunctional and especially the compensation of extremely unproductive agricultural activities are very important in this context (Treinys M., 2002). Among these farms are the ones that are unable to compensate all costs of production, however depending on their strategic interests they can compensate one of factors, e.g. workforce or capital. Such farms could be determined as a viable, whilst non-competitive.

In recent years three types of farms assessed by their competitiveness dominated in the country: 1) small farms that had a very small and diminishing market share; for such farms two options could be listed either to endure the situation or quit the market, 2) medium farms that had a quite stable market;

though when competition rose these farms should consolidate their efforts (particularly in management) in order to remain competitive, and 3) large farms that extended their market share and were able to conquer new markets.

### Research methodology

Comparative analysis of macroeconomic indicators was carried out by assessing macroeconomic situation and agriculture sectors in Lithuania and EU-27 countries. In a multi-criteria, complex comparative analysis method (Gudkov, 2008) the following macroeconomic indicators were evaluated: gross domestic product (GDP) per capita in purchasing power standards (PPS); the general price level (inflation CPI); unemployment; social protection expenditure per capita; share of government revenues from taxes in total GDP. According this methodology, each country is ranked based on the used statistical data and economic indicators receive assigned significance level.

Average growth rate used in research was calculated as follow:

$$\overline{T}_x = \sqrt[n-1]{\prod_{i=2}^n K_{i/i-1}},$$

where:

$\overline{T}_x$  – average growth rate,

$K_{i/i-1} = \frac{x_i}{x_{i-1}}$  – growth coefficients.

These key competitiveness indicators were used:

- changes of gross agricultural production value and gross value added in percentage and absolute terms;
- net value added per AWU in PPS;
- producer prices (wheat, barley, beef and veal and pork);
- production costs;
- productivity indicators (grain yield, milk yield per cow);
- support (direct and compensatory payments);
- net profit with and without subsidies;
- gross profit with subsidies per AWU comparison among different types of farming and farm size.

Delphi and heuristic methods were used for preparing mid-term perspectives of Lithuanian agriculture.

Research period covers 2000-2009. The data sources: the Statistical Department and EU data bases, data from the Ministries of Agriculture and Finance, research studies from Lithuanian Institute of Agrarian Institute and others.

### **Comparative analysis of the Lithuanian and the EU countries agricultural sector**

Contribution of Lithuanian agriculture to the national economy is significant, because of the generated gross value added (GVA) and employment. After Lithuania's accession to EU, the agricultural activity was subsidized by structural and income support measures aimed to modernize production, increase productivity and business income. However, during five years of Lithuanian membership in EU (2005-2009), the average annual agricultural production growth was comparatively low – 3 percent. Agricultural production, 2009 compared to 2008, has decreased by 20 percent. The net income per employee has decreased by even one third in 2009 compared to 2008. The negative impact to the economy of the agricultural sector has had meteorologically unfavourable year (2006) and decreasing macroeconomic situation since the second part of the year 2008. So, during the analysed period, farmers' income was instable.

Despite increasing production prices in recent years, the agricultural support, according to the opinion of Lithuanian agrarian economists, is necessary, because of lack of modernization, low labour productivity, low yields in comparison with other EU countries.

**The comparison of Lithuania and EU-27 macroeconomic situation.** For the complex macroeconomic situation evaluation of EU-27 these indicators have been chosen:

- gross domestic product (GDP) per capita in Purchasing Power Standards (PPS),
- inflation (Consumer Price Index (CPI),
- unemployment rate,
- expenditure on social protection per capita,
- ratio of Government revenue from the taxes and total GDP.

The standard of living in the country has been assessed by the indicators of GDP per capita measured in PPS. The highest GDP per capita in PPS was in Luxembourg, Sweden, Belgium, Austria and Denmark; the lowest was in Romania, Bulgaria, Latvia, Lithuania and Estonia in 2009. During the period of 2004-2009 this indicator faced noticeable growth in all countries except Ireland. The largest growth was observed in Romania: GDP per capita grew by 45 per-

cent with 8 percent average annual growth rate. GDP per capita has decreased in Ireland: it has dropped by 2,5 percent, and the average annual fall in the rate was 0,5 percent. In Lithuania this indicator has increased by 14 percent and in 2009 year it represented 54 percent of EU-27 average level.

As prices kept increasing, inflation rate indicated falling of living standards. EU prices were considered as stable if CPI was slightly lower but close to 2 percent. In 2004-2008 period high inflation rates were registered in Latvia, Bulgaria, Hungary and Romania. It should be noted that in Lithuania inflation had also overstepped 2 percent line. In 2009 inflation had started to increase almost in all countries of EU, the noticeable highest level was in Romania (5,6 percent), and the lowest one (deflation) was registered in Ireland (-1,7 percent). Inflation in Lithuania was 3 times higher than EU-27 average in 2009.

Dynamics of population partly reflects the country's development level and ability to implement balanced economic and social policies. Lithuania's population was decreasing; Lithuania could be attributed to countries such as Romania, Hungary, Latvia, Estonia, and Bulgaria, where population was also decreasing because of emigration. Despite the tendency of increasing unemployment rate in Ireland and Spain, immigration to these countries was observed. Such a situation could be explained by a relatively good social security system. The highest expenditure on social protection was in Luxembourg, Sweden, and Denmark and the lowest in Romania, Bulgaria, Latvia, and Lithuania. The extreme values of the indicator varied up to 10 times.

Government tax revenue as percentage of total GDP in each country ranged from 29 percent in Romania to 47 percent in Sweden. In Lithuania this indicator was one of the lowest in EU-27 (31 percent).

Complex comparative analysis showed that the best macroeconomic situation within identified macroeconomic indicators was in the Netherlands, Denmark, Austria, Ireland, Sweden, Finland, Belgium, United Kingdom, Germany, and France. The average group included Italy, Cyprus, Slovenia, Spain, Portugal, Spain, Greece, and Czech Republic. The relatively worse macroeconomic situation was in Poland, Hungary, Malta, Estonia, Lithuania, Slovakia, Latvia, and Bulgaria. It was noticed that Lithuania's position among member states has been relatively stable and only in 2009, when global economic crisis has begun, Lithuania's position on the specified macroeconomic indicators has weakened. Complex comparative analysis of estimation showed that the most significant indicators for the macroeconomic situation of countries were a country's expenditure on social security and inflation.

Complex comparative analysis showed that Lithuania was classed together with countries' group with weak macroeconomic situation during the period of 2004-2009. Moreover, the global crisis in 2009, made Lithuania's macroeconomic situation even worse and it took penultimate the 26<sup>th</sup> place among the EU-27.

**The comparison of Lithuania and EU-27 competitiveness indicators.**

For the evaluation of the ability to compete, the following main aggregated agricultural indicators were chosen: gross value added in agriculture per one hectare of utilized agricultural area (UAA) and annual work unit (AWU), net value added in agriculture per one hectare of UAA and AWU.

The analysis revealed that the share of value added in agriculture was decreasing in the structure of Lithuanian gross value added during the period 2000-2009. In 2009 compared to 2000 this indicator decreased by 2,8 percentage points from 5,7 percent in 2000 up to 2,9 percent in 2009. However, value added in agriculture in absolute terms increased 46 percent during the same period.

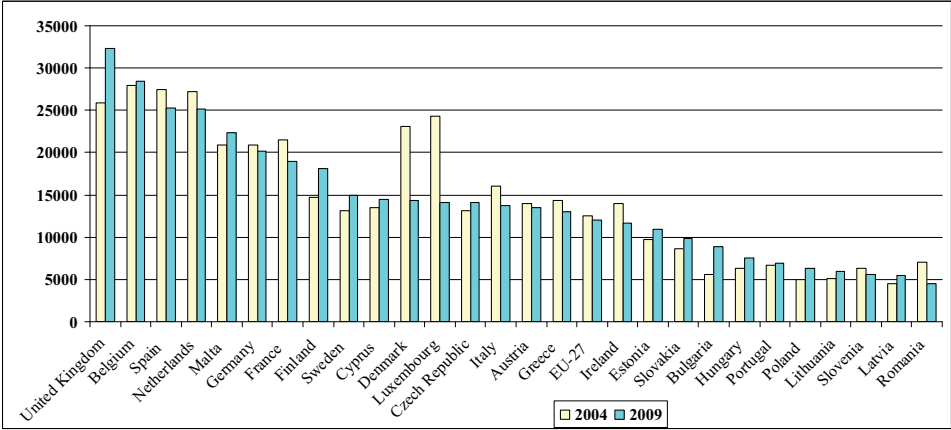
The indicator of net value added per one hectare of UAA in different countries compared to EU-27 average showed that the most effective agriculture was in Malta, Cyprus, Netherlands, Greece, Belgium, Italia, Bulgaria, Slovenia, Spain, and Poland. Especially Poland is worth mentioning, because this country rationally exploited labour and material resources and increased above mentioned indicator by one third from the year of accessing EU. The same indicator in Lithuania did not reach a half of EU-27 average and was 43 percent. The reasons are as follows: lack of qualification in management, technology and unfinished farm restructuring programme, financial problems (Kriščiukaitienė I. et al., 2010). It is necessary to distinguish EU Common Agricultural Policy (CAP) unequal possibilities for EU new member states because of lesser direct payments.

Net value added indicator per annual work unit (AWU) in Romania, Latvia, Slovenia, Lithuania, Poland was lower than EU-27 average value. The main reason is comparatively high labour input in above mentioned countries. In Lithuania net value added per AWU has increased due to EU support and decreasing agricultural labour input. However, the gap among Lithuania and the leading countries was noticeable, e.g., net value added per AWU was about 5 times higher in the United Kingdom compared to Lithuania.

Net values added per AWU tendencies were different in EU-27 during 2004-2009. Because of the world financial crisis in 2009 this indicator decreased by 42 percent in Luxembourg, 38 percent in Denmark, 36 percent in Romania. Other countries in 2009 had a tendency to increase the net value added per

AWU in PPS: Bulgaria by 60 percent, the United Kingdom and Poland by 25 percent, Lithuania by 17 percent. It showed that by appropriate governance even under global economic recession conditions there were possibilities to achieve good economic results.

Figure 1. Net value added per AWU in thousand PPS, in EU-27 for the years 2004 and 2009



Source: EUROSTAT, 2010.

After the investigation of gross agricultural production value (GAPV) per one hectare of UAA (production intensity), GAPV structure and its comparison to other EU-27, we have concluded that both sectors (crop and animal) were able to create value added. Because of decline in population purchasing power during the crisis period crop production remained dominant in value of agricultural production (table 1).

EU-27 countries were grouped according to the share of animal production in 2009 into three groups: **group 1** - countries in which animal production dominated, **group 2** - countries where crop and animal production ratio were almost the same (+/- 5 percent), and **group 3** – countries where crop production dominated. After the assessment of the influence on production structures GAPV intensity revealed that both sectors (crop or animal) were able to create considerable GAPV, thus production intensity did not depend on the chosen sector. Deeper analysis showed that the biggest GAPV per one hectare of UAA was in Malta, Netherlands, Belgium, Cyprus, Italy and Denmark. These countries chose the most rational ways of the consumption of their natural and material resources and stated priorities in accordance to the country's competitive advantages and market conditions. It is worth underlining that Lithuania in its rural strategy gave



the priority to the animal sector (Žemės..., 2000; Lietuvos..., 2007), actually Lithuania occupied the 25<sup>th</sup> place among EU-27 by GAPV indicator per one hectare of UAA (just ahead of Estonia and Latvia).

Table 1. Structure of the gross agricultural production value (GAPV) and production intensity in the EU-27, in 2005 and 2009

Country	2005			2009			Change in GAPV, 2009 compared to 2005, percent
	GAPV, Euro/ha	production, percent	production, percent	GAPV, Euro/ha	production, percent	production, percent	
<b>1 group</b>							
Ireland	1424	23	77	1158	29	71	81
Finland	1937	41	59	1565	35	65	81
Denmark	2784	33	67	2991	36	64	107
Luxembourg	1932	40	60	1883	38	62	98
United Kingdom	1204	39	61	1225	40	60	102
Malta	12424	37	63	12607	43	57	101
Belgium	4855	44	56	5061	44	56	104
<b>2 group</b>							
Estonia	556	43	57	571	45	55	103
Sweden	1258	41	59	1209	46	54	96
Austria	1597	45	55	1772	48	52	111
Cyprus	4296	52	48	4339	49	51	101
Slovakia	819	51	49	891	49	51	109
Germany	2192	49	51	2392	52	48	109
Slovenia	2310	50	50	2132	53	47	92
Poland	1001	51	49	1144	53	47	114
Czech Republic	941	51	49	1026	54	46	109
<b>3 group</b>							
Latvia	398	54	46	468	55	45	118
Netherlands	9916	54	46	10258	55	45	103
Portugal	1948	58	42	1913	58	42	98
Hungary	1409	61	39	1284	60	40	91
France	2420	60	40	2180	61	39	90
Lithuania	655	53	47	699	62	38	107
Italy	3278	66	34	3129	64	36	95
Spain	1698	64	36	1513	64	36	89
Bulgaria	904	59	41	1051	65	35	116
Romania	880	64	36	950	65	35	108
Greece	3091	74	26	2345	72	28	76

Source: EUROSTAT, 2010, Rodikliu, 2010.

The analysis of the above mentioned indicators showed that for reaching sustainable sectors development, Lithuania should implement additional measures for animal sector strengthening, because this sector had competitive advantages. They were natural fodders, low level of animal density (0,5 LSU), good animal health indicators, and others. The animal production export had major share of total agricultural and food export and it showed Lithuanian animal sector's competitiveness in the global market.

**Producer price** was one of the main economic factors that directly influence above mentioned indicators of agricultural competitiveness. Prices were one of the main indicators that allowed a proper evaluation of agricultural products competitive ability. After agricultural products prices comparison it was concluded that the process of prices convergence is protracted (Kriščiukaitienė I. et. al., 2010). EU CAP price indirect regulation by the government intervention purchases was not appropriate tool for effective price control.

Prices of the main agricultural products in Lithuania, as well as in EU-27, were unstable during the period of 2004-2009. All agricultural products' prices had had a tendency to increase from 2004 up to 2008 when top level was reached, after 2008 prices started to decrease due to fluctuations in world prices, changes of purchasing power, meteorological and other factors. It should be noted that EU old member states with strong economies and more experience in acting in free market only partially managed to keep stable prices.

The analysis showed that in 2009 the highest wheat price was in Italy (170 Euro/t) and the lowest wheat price was in France (103 Euro/t). In Lithuania wheat price was very similar to the world price and has reached 115 Euro/t. The same situation was with barley: 162 Euro/t in Italy and 86 Euro/t in Sweden. In Lithuania barley price was below the world price – 92 Euro/t. The reason for such differences was inequality in quality and demand-supply proportion.

The prognoses of Lithuanian and EU-27 average prices convergence of agricultural products were not confirmed (Meyers W. H. et. al., 2007; Kriščiukaitienė I. et. al., 2009). There was still a big difference in price level of main agricultural products among Lithuania and EU-27 in 2009 because of market globalization and surplus supply.

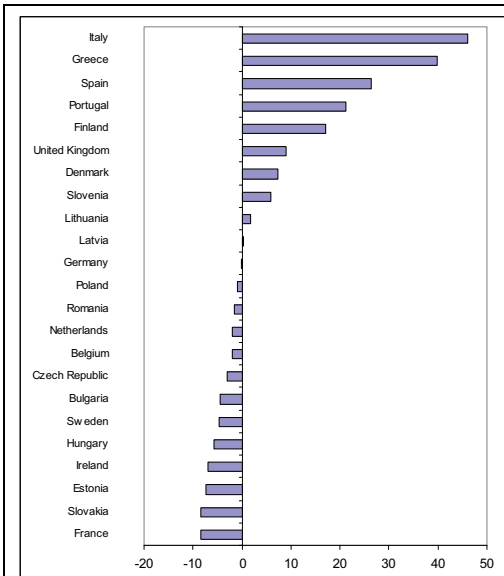


Figure 2. Differences of the wheat price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

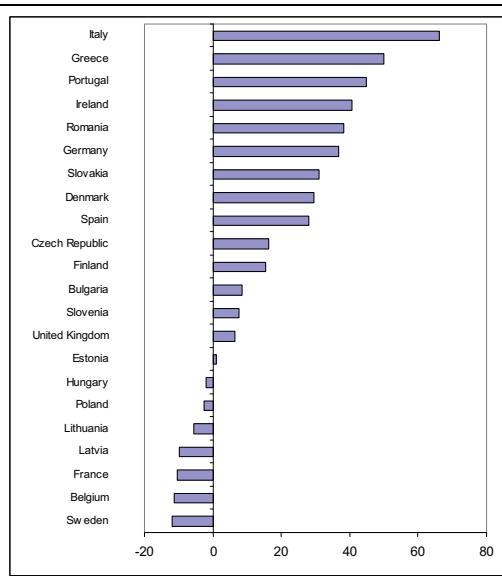


Figure 3. Differences of barley price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

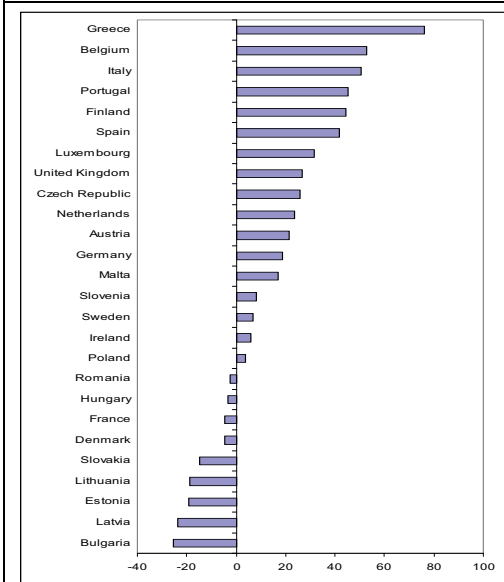


Figure 4. Differences of the beef and veal price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

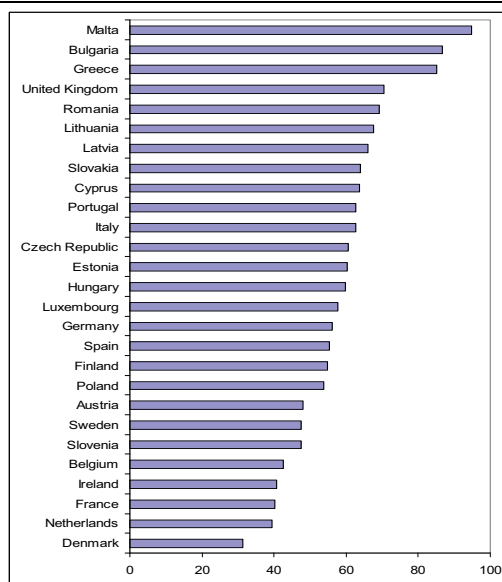


Figure 5. Differences of the pork price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

Source: EUROSTAT, 2010; Bord Bia, 2010; DairyCo, 2010; European Commission, 2010; AGMEMOD, 2010; FAPRI, 2010; USDA, 2010; OECD-FAO, 2010; Rodikliu, 2010.

Average beef and veal price in Lithuania was 30 percent lower, pork and poultry prices were 7 and 3 percent higher respectively comparing to the prices of the same products in Germany. The gap of prices in crop sector was much lower.

The differences in price level of Lithuanian and world agricultural products are presented below (2-5 figures). In figures 2-5 the world agricultural prices are equated to 100 percent and the differences between prices in the country and the world ones are presented. Lithuania according to the price factor has comparative advantages in selling wheat, barley, beef and veal. It should be noted that the price of pork was by 68 percentage points higher than the world price. As shown in Figure 5, pork producers faced the problems regarding the competitiveness in all EU countries. Such a problematic situation had several reasons and the most important of them was the absence of direct payments for pig breeding.

**Agricultural production costs** are another important indicator of the competitiveness. In order to evaluate the competitiveness of agricultural production, the analysis of production costs was made in selected EU countries that had similar economic conditions for the agricultural production to Lithuania. The results showed that the difference between the highest (in Belgium) and the lowest (in Latvia) costs per one hectare of UAA was almost 10 times (2009). Such differences were because of the various intensities of production and labour productivities. Moreover, deeper studies revealed that in the countries with higher costs, the crop yields and animal productivity were also higher. Thus, Lithuania, Estonia, Romania, Spain, Poland and other countries with the scarce costs per hectare should increase them in order to achieve more effective results (figure 6).

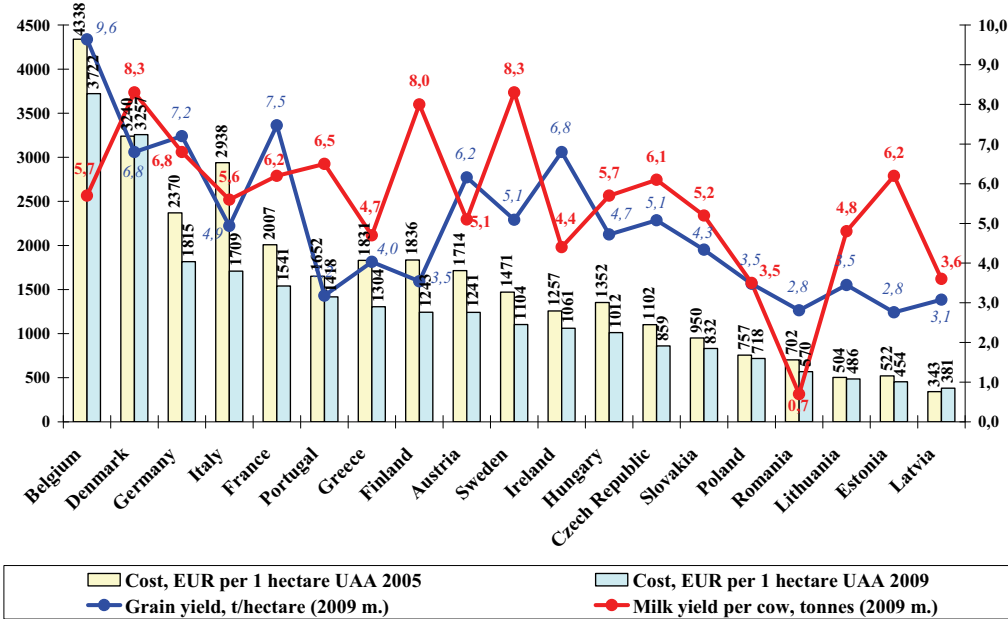
**The support** is other factor influencing agricultural competitiveness. Comparative analysis of EU-27 countries showed that the support in Lithuania was the lowest (after Romania) and, if compared with countries that had got the largest support such as Malta, Finland and Greece, the differences were 16, 8 and 6 times respectively (Kriščiukaitienė I. et. al., 2010).

After the estimation of **net profit without subsidies** in the EU-27, it was observed that in the majority of countries agricultural activity would not be profitable and it is believable that agricultural producers would not be interested in agricultural activities. Agricultural production was profitable in 11 countries out of EU-27 in 2009 (respectively – 22 countries in 2005). Net profit without subsidies had the tendency to increase only in Malta, Poland and the United Kingdom, 2009 compared to 2005.

After the estimation of **net profit with subsidies** it was observed that Lithuania appeared among the countries which were below EU-27 average and its indicator reached only 27 percent of EU-27 average.

**Competitiveness of Lithuanian farms by type of farming.** The above mentioned economic factors determined that Lithuanian farms have been working under unequal competitive conditions, therefore the different competitiveness of agricultural products was observed. Competitiveness indicators have shown that during the recent decade the crop farming development in Lithuania was more successful compared to animal production. The animal production still remained problematic. Farm Accountancy Data Network (FAD) data has shown that total income (without subsidies) per AWU of a mixed specialization farm mainly with grazing livestock was 40 percent lower compared to an average Lithuanian rate. Moreover, as compared with the most profitable specialization (i.e. cereal and oilseed rape type of farms), the indicator was three times lower. Gross profit with subsidies per AWU of the mixed specialization farm mainly with grazing livestock was lower by a third compared to an average Lithuanian rate and was almost three times lower compared to the cereal and oilseed rape type of a farm (table 2).

Figure 6. Agricultural production costs in the chosen EU-27 in 2005 and 2009



Source: EUROSTAT, 2010.

Total support (direct, compensatory payments and investment support) per AWU of the mixed specialization farm mainly with grazing livestock was below 30 percent compared to an average Lithuanian rate, and more than three times

lower compared with the cereal and oilseed rape type farm. Moreover, even greater differences can be observed in the mixed crop-pig breeding farms where total support per AWU was accordingly 48 percent and almost five times lower.

Animal production was labour-intensive and thus less attractive. Farms involved in animal production had to meet animal welfare, veterinary and other EU standards which were more complex and more expensive to be implemented comparing to crop farming. In addition, the animal products were more sensitive to health status, animal production was perishable and required greater investment in storage and / or further processing compared to crop production or any other business.

Table 2. Gross profit with subsidies per AWU, the comparison among different types of farming and the country's average in Lithuania, during the period 2004-2009, percent

Types of farming	2004	2005	2006	2007	2008	2009
Specialist cereals, oilseeds and protein crops	169	172	167	205	200	170
General field cropping	173	130	107	115	143	135
Horticulture and permanent crops	100	72	77	94	82	82
Specialist dairying	103	126	121	86	79	90
Mixed cropping	57	49	68	67	52	61
Mixed livestock, mainly grazing livestock	73	57	85	60	48	75
Field crops – grazing livestock, combined	85	116	101	80	99	87
Field crops and granivores, combined	102	68	34	69	67	70
Republic average	100	100	100	100	100	100

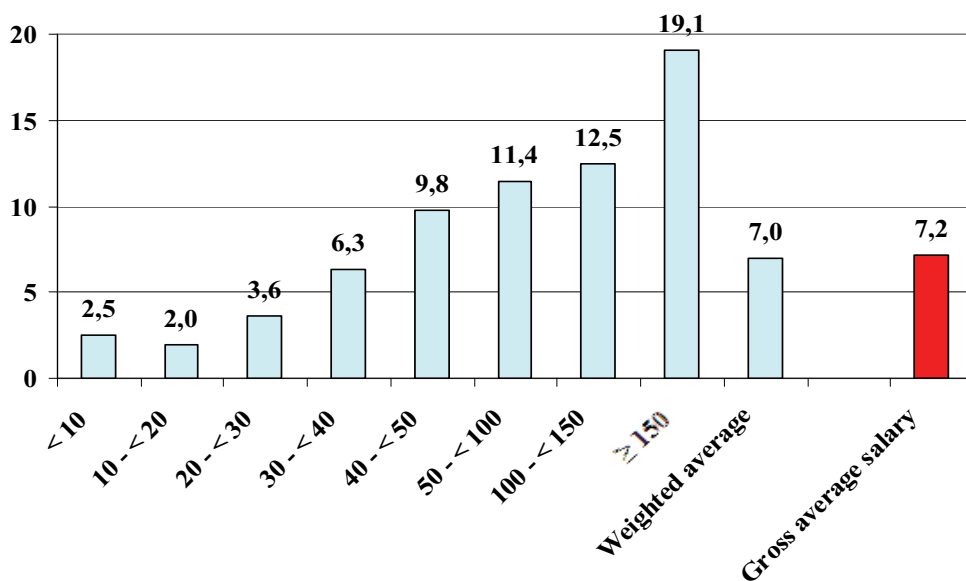
Source: *Ūkių veiklos rezultatai, 2010.*

The problem of farm size was still relevant in Lithuanian agriculture. During the period of 2003-2010 the average farm size in Lithuania has increased 1,5 times: from 9,3 hectares in 2003 to 13,8 hectares in 2010. However, there were 80 percent of farms, which size were up to 10 hectares. FADN statistics showed that gross profit with subsidies per AWU in the case of these farms was three times lower comparing to the average country's indicator and 7,7 times lower compared to the maximum indicator (figure 7).

This situation shows that government assistance has to be revised essentially, in consideration that in previous programming period government aid came mainly to large scale farms. Assuming that the subsidies comprised half of

the amount of gross profit with subsidies, it is evident that only large farms (more than 150 hectares) could receive relatively less support compared to smaller farms. This statement is approved by the fact that the average salary per AWU in Lithuanian economy in average was 2,7 times lower than the income per AWU in the largest farms' group (more than 150 hectares).

Figure 7. Gross profit with subsidies per AWU in 2009 and gross average salary in Lithuania in 2009, thousand Euro



Source: Ūkių veiklos rezultatai, 2010; Rodiklių, 2010.

### Lithuanian agriculture's mid-term perspective

In the mid-term perspective, agricultural production will continue to be oriented to help Lithuanian farmers to create profitable and the long-term oriented business. The business that will ensure environmental requirements and will meet local markets and exports demands for high quality agricultural products and foodstuffs.

The key challenges to achieve the competitiveness are as follows:

- to increase productivity on small and medium-size farms;
- to ensure more sustainable use of natural and human resources in the agriculture of the country;

- to promote the technologies that can reduce pollution in the agricultural sector;
- to promote methods of direct sales of agricultural and food products.

Increasing productivity on small and medium-size farms should be based on the support of medium and small family farms. An increase in the number of such farms will make Lithuanian agricultural sector more stable in the mid- and long-term, because they are less dependent on hired workers supply and skills than large farms are. Farms, that have lower labour input, keep the traditions, their business is planned for long-term perspective, and therefore, they help to protect natural resources. Additionally, the recent growth of the demand of fresh meat production in small and medium-size farms has opened the new perspectives for revenue-raising options. The implementation of this task will be also important for rural social environment. Local farmers' community helps to reduce the differentiation of economical and social disjuncture among rural inhabitants and also an emigration threat.

In order to increase productivity on small and medium-size farms, it will be appropriate to support projects that are designed to modernize farms and to increase productivity by reducing the need for agricultural labour and allowing farmers to receive income from other activities. Additionally, the production chain should be extended on the farm, thus processing of agricultural production and other activities should be continued after the primary production.

In the future regarding the support we propose to implement the measures that will promote regional specialization, keep sustainable agriculture in the countryside that preserves the landscape. For the less favoured areas we suggest to differentiate compensatory payments according to farm type and to give priority for the development of animal farms. In order to encourage the growth of animal farms, these farms should be a prioritized not only in support measures, but also the state aid measure concerning the acquisition of land has to be introduced. So, we expect the natural, human, and financial resources in agriculture will be used more efficiently.

Undoubtedly, technologies that could reduce pollution in the agriculture sector should be promoted on the large-sized animal producers. The main problem for the large-sized cattle, pig and poultry farms is to fulfil environmental requirements. Although by 2008 these farms had to implement the Nitrates Directive, but environmental requirements will remain important in the future. For this direction, the key tool will be construction of bio-power plants that uses slurry, manure and other organic waste. These innovative projects will be important not only for the minimization of pollution but also for providing the energy supply.



It is important to promote direct sales for the farmers who sell their production. For them it is necessary to introduce new support measures for marketing. Such support will be especially important for small and medium-sized farms. It is evident that consumers prefer qualitative food and want to consume organic, fresh and original food. So, the above mentioned support measures should be based on the idea that farmers should be encouraged to increase the share of their production sold not to processors, but to final users.

Results of analyses showed that for small farmers it was difficult to sell the production directly to the final consumers and, moreover, to keep them loyal. Thus the forms of marketing when farmers are engaged in direct contact with consumers require coordinated efforts and public support. It is worth mentioning that the emergence of farmers' markets in Lithuanian cities was possible only through a dedicated project and support of the Ministry of Agriculture. The Lithuanian consumers very appreciated the mentioned project and are looking forward to similar initiatives and introduction of other forms of direct sales when the consumers could buy cheaper, high-quality, short shelf life agricultural and food products.

Also, the support should be dedicated to modern systems for distribution network. Promotion of the electronic trading enables to reduce the cost of marketing. The support measures should promote cooperation among farmers themselves or with other organizations to reduce agricultural and food products marketing cost.

Believable that implementation of the above mentioned measures will influence redistribution of marketing margin and the farmer will receive larger share. Besides, the implementation of this objective will fulfil the public interest, as consumers will have more fresh and healthy food from reliable supplier.

## **Conclusions**

During the five years of Lithuanian membership in the EU (2005-2009), the average annual agricultural production growth was comparatively low – 3 percent.

The complex comparative analysis showed that Lithuania was classed together with countries' group with weak macroeconomic situation during the period of 2004-2009. During the same period GDP per capita in Lithuania has increased by 14 percent and in 2009 year and was 54 percent of the EU-27 average level. Inflation in Lithuania was 3 times higher than the EU-27 average in 2009.

In 2009 compared to 2000 the share of value added in agriculture decreased by 2,8 percentage points from 5,7 percent in 2000 up to 2,9 percent in 2009. Net value added per one hectare of UAA in Lithuania did not reach a half of EU-27 average and was 43 percent.

In Lithuania net value added per AWU increased due to EU support and decreasing agricultural labour input. However, the gap among Lithuania and leading countries was noticeable, e.g., net value added per AWU was about 5 times higher in United Kingdom compared to Lithuania.

There was still a big difference in price level of main agricultural products among Lithuania and EU-27 in 2009 because of market globalization and surplus supply. Average beef and veal price in Lithuania was 30 percent lower, pork and poultry prices were 7 and 3 percent higher respectively comparing to the prices of the same products in Germany. The gap of prices in crop sector was much lower.

Lithuania according to the price factor has comparative advantages by selling wheat, barley, beef and veal. It should be noted that the price of pork was 68 percentage points higher than the world price. Pork producers faced the problems regarding the competitiveness in all EU countries.

Lithuania, Estonia, Romania, Spain, Poland and other countries with the scarce costs per hectare should increase them in order to achieve more effective results.

After the estimation of net profit with subsidies it was observed that Lithuania appeared among the countries which were below EU-27 average and reached only 27 percent of it.

Competitiveness indicators have shown that during the recent decade crop farming development in Lithuania was more successful compared to animal production. The animal production still remained problematic. Farm Accountancy Data Network (FADN) data has shown that total income (without subsidies) per AWU of mixed specialization farm mainly with grazing livestock was 40 percent lower compared to an average Lithuanian rate. Moreover, as compared with the most profitable specialization (i.e. cereal and oilseed rape type farm), the indicator was three times lower.

The problem of farm size was still relevant in Lithuanian agriculture. During the period of 2003-2010 the average farm size in Lithuania increased 1,5 times: from 9,3 hectares in 2003 to 13,8 hectares in 2010. However, there were 80 percent of farms, which size was up to 10 hectares.

The key challenges to achieve the competitiveness will be: to increase productivity in small and medium-size farms; to ensure more sustainable use of natural and human resources in agriculture of the country; to promote the tech-

nologies that can reduce pollution in the agricultural sector; to promote methods of direct sales of agricultural and food products.

## Literature

1. AGMEMOD baseline. (2010). AGMEMOD 2020 internal website. Restricted to a group specified by the consortium (including the Commission Services).
2. Balasa B. (1962). Recent Developments in Competitiveness of American Industry and prospects for the future. Factors Affecting the United States Balance Payments, Joint Economic Committee, 87th Congress, 2nd session, Washington, D.C.
3. Bord Bia, the Irish Food Board. (2010). <http://www.bordbia.ie/Pages/Default.aspx> [2010 11 09].
4. DairyCo, A Division of the Agriculture and Horticulture Development Board (AHDB). (2010) <http://www.ahdb.org.uk/> [2010 11 09].
5. Epstein D. (2000). Evaluating the Competitiveness of Agricultural Enterprises. Studies on the Agricultural and Food Sector in Central and Eastern Europe. Wissenschaftsverlag Vauk Kiel KG, IAMO.
6. European Commission, DirectorateGeneral for Agriculture and Rural Development. (2010). [http://ec.europa.eu/dgs/agriculture/index\\_en.htm](http://ec.europa.eu/dgs/agriculture/index_en.htm) [2010 11 09].
7. EUROSTAT. (2010). – <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/> [2010 12 17].
8. FAPRI 2010 U.S. and World Agricultural Outlook. (2010). FAPRI. – <http://www.fapri.iastate.edu/outlook/2010/> [2010 11 15].
9. Frohberg K., Hartmann M. (1997). Comparing measures of Competitiveness. IAMO Discussion paper No 2.
10. Kriščiukaitienė I., Galnaitytė A., Jedik A. (2010). ES-27 šalių žemės ūkio ekonominių rodiklių vertinimas // Vadybos mokslas ir studijos – kaimo verslų ir jų infrastruktūros plėtrai: mokslo darbai Nr. 24 (5). – Akademija: LŽŪU Leidybos centras.
11. Krisciukaitiene I., Galnaityte A., Jedik A., Meyers W. H. (2009). Analysis of agricultural policy scenario impacts on Lithuanian agriculture // Žemės ūkio mokslai T. 16. Nr. 3–4. – Vilnius: Lietuvos mokslų akademijos leidykla.

12. Kriščiukaitienė, I. (2008). Lietuvos ūkių konkurencingumas ir ES paramos įtaka. Vadybos mokslas ir studijos – kaimo verslų ir jų infrastruktūros plėtrai. Nr. 13. LŽŪU.
13. Lietuvos kaimo plėtros 2007-2013 m. programa. (2007). [http://www.zum.lt/min/failai/Oficialus\\_KPP\\_2007-2013\\_bendroji\\_dalis\\_final1vert\\_LT.pdf](http://www.zum.lt/min/failai/Oficialus_KPP_2007-2013_bendroji_dalis_final1vert_LT.pdf) [2010 04 22].
14. Meyers W. H., Krisciukaitiene I., Galnaityte A., Jedik A. (2007). Impacts of CAP Reform and Exchange Rate Scenarios on Lithuanian Markets // Žemės ūkio mokslai T. 14. Priedas. – Vilnius: Lietuvos mokslų akademijos leidykla.
15. OECD–FAO Agricultural Outlook 2010–2019. (2010). – <http://www.oecd.org/dataoecd/13/13/45438527.pdf> [2010 11 08].
16. Porter M. E. (1989). Wettbewerbsvorteile: Spitzenleistungen erreichen und behaupten, Frankfurt, M.; New York, NY.
17. Rodiklių duomenų bazė. (2010). Statistikos departamentas prie Lietuvos Respublikos Vyriausybės. – <http://db1.stat.gov.lt/statbank/default.asp?w=1280> [2010 11 24].
18. Ūkių veiklos rezultatai (ŪADT tyrimo duomenys) (2009). Vilnius: Lietuvos agrarinės ekonomikos institutas.
19. USDA Long-term Projections to 2019. (2010). – [http://www.usda.gov/oce/commodity/archive\\_projections/USDAAGriculturalProjections2019.pdf](http://www.usda.gov/oce/commodity/archive_projections/USDAAGriculturalProjections2019.pdf) [2010 11 10].
20. Wellert K. (1995). Zur Wettbewerbsfähigkeit von Molkerei- und Schlachtunternehmen im vereinten Deutschland, Göttingen.
21. Žemės ūkio ir kaimo plėtros strategija. (2000). – [http://www3.lrs.lt/pls/inter3/dokpaieska; showdoc\\_bin?p\\_id=103083](http://www3.lrs.lt/pls/inter3/dokpaieska; showdoc_bin?p_id=103083) [2010 04 19].
22. Gudkov, P., (2008). Methods of the Comparative Analysis. – Penza: National University of Penza.