



**INSTITUTE OF AGRICULTURAL  
AND FOOD ECONOMICS  
NATIONAL RESEARCH INSTITUTE**

**European Union  
Food Sector after  
the last enlargements  
- conclusions for  
the future CAP**

**no 6.1**  
**Warsaw 2011**



**COMPETITIVENESS OF THE POLISH FOOD  
ECONOMY UNDER THE CONDITIONS OF  
GLOBALIZATION AND EUROPEAN INTEGRATION**

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This publication was prepared within the Multi-Annual Programme “Competitiveness of the Polish food economy in the conditions of globalization and European integration”.

The purpose of this study is to evaluate Common Agriculture Policy after two last enlargements. The last EU expansions were accompanied by global economy processes of extraordinary dynamic. These resulted in growing uncertainty related with the new phenomena observed in different social and economic spheres of societies. Conventional solutions validity became questionable.

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ISBN 978-83-7658-134-7

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## **Introduction to the volume**

The publication “European Union Food Sector after the last enlargements – conclusions for the future CAP” was prepared within the Multi-Annual Programme 2011–2014 “Competitiveness of the Polish food economy in the conditions of globalization and European integration”. It contains the articles discussed during the Conference held in Rajgród in Poland, June 2011. During the two days the papers concerned with the economic situation of food sector and major processes in rural areas of different EU and Candidate Countries were presented. They were followed by the examples of problems faced by Countries willing to increase their connections with the EU food market.

Presentations followed by discussions underlined the growing impact of global economic processes on agricultural and rural policy formulation. This is particularly important for the EU countries that they are facing the Common Agricultural Policy’s reform and growing pressure to become competitive on the world market. On the other side the Candidate Countries struggle to prepare their agricultures for accession to the EU and to take advantage of the Common Agricultural Policy measures. Among the strategic policy priorities the food security at national and global level was pointed out.

The results of the Conference directly support debate on the Common Agriculture Policy evaluation after the two last enlargements. It was underlined that the last EU expansions were accompanied by global economic processes of extraordinary dynamic. They resulted in growing uncertainty related with the new phenomena observed in different social and economic spheres of societies. In this light the validity of conventional solutions to overcome current and expected obstacles to agriculture development becomes questionable.

Zbigniew Floriańczyk



## **Conditions of the development and global challenges for the agri-food sector in Poland**

### **Introduction**

The permanently increasing lack of payment balance of international capital and trade turnovers is one of the most important problems of the global economy. It is a source of contradicting projections concerning the development of the economic condition throughout the world, and the main cause of the potentially serious, long-term economic crisis<sup>1</sup>.

The globalisation of financial markets allowed for the liberalisation of capital flows and technological progress. The main result of globalisation was the creation of numerous liquid financial markets, the increasingly diverse mosaic of which composes the global market.

The changes occurring within the modern world are altering the architecture of the global economy, mainly due to the growing capital surplus on a global scale, liberalisation and openness of economies, assurance of relatively stable flow of capital between the global markets and regions, and expansion of the possibility of investing capital on-line 24 hours per day. The activity of the various financial institutions affects the dynamics and results of the financial market globalisation process in various ways.

The activity of institutional investors operating on a global scale is not only a factor increasing the liquidity of local capital markets. The rising activity of commercial banks on financial markets allowed for dynamic development of the derived instrument market. The weight point was significantly transferred from traditional investment forms to securing debt papers and other securities.

The social and economic agricultural functions undergo significant changes in the social and economic development process of societies. They transform from a field deciding on the surviving capabilities of entire societies and creating foundations for economic development, into a field which requires active policies. The thesis that its developmental capabilities are more dependent on the economic

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<sup>1</sup> Some economists believe that the slowdown of the global economy in 2008 associated with the bankruptcy of US and European banks was only the top of the iceberg concerning the issues related to the international payment imbalance. See: The Turner Review: A regulatory response to the global banking crisis, The Financial Services Authority, London, March 2009.

condition in the non-agricultural area than the agrarian policy is already a truism. In the modern world, it is impossible to understand the developmental mechanisms of the food sector without analysing the macroeconomic factors<sup>2</sup>. In Poland, this analysis is more difficult, since during the last century, our economy was subjected to fundamental changes of economic policies at least six times. The most recent ones are associated with Poland becoming a member of the European Union.

### **Globalisation of financial markets and the crisis**

The growth pace of the global financial assets exceeds the growth pace of the global GDP, which proves that financial markets are becoming deeper and more liquid. In 1990, only 33 countries throughout the world had financial assets exceeding their GDP<sup>3</sup>. In recent years, the central banks of surplus countries became the global institutional investors. In surplus countries, the capital markets are usually not developed well enough to effectively pump the surpluses of export income to the markets of deficit countries. This process caused the number of countries with assets exceeding their GDP to grow to 72 in 2006. The deeper financial markets facilitate access to the capital, offer more effective appraisal, and also expand the capabilities of risk diversification, which in turn can promote economic growth through more effective capital allocation<sup>4</sup>.

The globalisation of financial markets caused significant changes in the roles played on the markets by the most important countries and regions. 80% of the global financial reserves are located in four regions: the United States, the Eurozone, Japan, and Great Britain, however the Chinese financial market is among those growing at the fastest pace<sup>5</sup>.

The globalisation of financial markets has its other side as well. The span between the financial and commodity markets keeps growing. The modern global market is similar to an upside-down pyramid. Its narrow base are the finances servicing the real sector or commodity streams, with share of no more than 10-12% of the total global financial resource turnover. All other financial capital has no material substrate. The limited bond between the real and financial areas has

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<sup>2</sup> See: A.Woś, *Rolnictwo polskie wobec procesów globalnych w gospodarce*, „Studia i Monografie”, v. 105, IERiGŻ, Warszawa 2001, pp. 6-10.

<sup>3</sup> D. Farrell, Ch. S. Fölster, S. Lund, *Long-term trends in the global capital markets*, McKinsey Global Institute, February 2008.

<sup>4</sup> Cf. A. Terzi, *International payments imbalances and the prospective role of the euro*, paper for Italian Association for the Study of Comparative Economic Systems, 16th National Scientific Conference, Parma, 21-23 June 2007.

<sup>5</sup> Cf. E. Kahveci, G.Sayılgan, *Globalization of Financial Markets and its Effects on Central Banks and Monetary Policy Strategies: Canada, New Zealand and UK Case with Inflation Targeting*, *International Research Journal of Finance and Economics*, Issue 6 (2006).

been minimised. The separation of financial markets and the real economy keeps growing; the global financial markets are generally independent, separated from the real area, and have become a phenomenon positioned beyond real economy. The currency transactions are more frequently reduced to pure speculation, and currently exceed 2 billion American dollars per day, i.e. over 50 times the daily value of trade exchange. Only 10% of everyday financial transactions throughout the world are aimed to finance investments or other operations intended to develop industries or trade, whereas 90% of such operations are of a purely speculative nature<sup>6</sup>. Thus a paradoxical situation was created, based on the alienation of finances from real economy. The financial capital is becoming more and more separated from investments and production.

The events of the global markets have impact on the domestic markets. The pace of transferring crisis infections is rising, especially in financial markets. By the end of 2007, the global market capitalisation, obligations and bank assets comprised almost 400% of the global GDP. This relation was even higher in Japan (approximately 500%). In the USA it was close to 400%. The global bank assets themselves exceed global GDP by 30%<sup>7</sup>. This disproportion between the dimensions and globalisation level of financial markets and the economy creates tensions, and may be among the most significant sources of the global economy crisis.

The initial worries of the economists concerned the possibility of currency crises related to capital mobility. The liberalisation of short-term capital flows allows for sudden speculative attacks on currencies, since it created easy access to credits in endangered currencies and its immediate resale in order to later repurchase it with profit following a drop of the currency rate. Such practices were common mainly during the nineties of the last century.

The present relatively significant worries are related to operations of thousands of arbitrage funds on the global financial market, which due to their operating nature make risky transactions, and are not yet adequately supervised.

The aforementioned factors undoubtedly benefit the creation of imbalance in international payments. The central element of this imbalance is the unbelievably high deficit of the USA current account balance (CAB), which has been continuously growing for many years. In the years 2006-2007, it surpassed 7% of the American GDP, and continues to present a growing trend. There is no harmony concerning the reasons of this trend. Some experts believe that the reason for the deep imbalance of the American CAB is the exceptionally low savings rate

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<sup>6</sup> Cf. McKinsey Global Institute, Debt and deleveraging: The global credit bubble and its economic consequences-Updated analysis, January 2010 [[www.mckinsey.com](http://www.mckinsey.com)].

<sup>7</sup> See: Global Economic Prospects: Crisis, Finance, and Growth, The International Bank for Reconstruction and Development / The World Bank, Washington 2010.

in the United States. In 2004-2005 it was below 2% GDP, and in 2005, according to some assessments, it was negative<sup>8</sup>. It was composed of both the budget deficit, as well as the high consumption tendency of the household sector, exceeding the size of the aggregated net personal income.

Another hypothesis sees the reasons for the current crisis in the conscious policy of creating high foreign currency reserves implemented by emerging economies, particularly Eastern and South eastern Asian countries, which suffered due to the wave of financial and currency crises during the years 1997-1998. Furthermore, an important factor impacting the preservation of the international dollar value is the specific pro-export growth policy selected by some Eastern Asian countries, mainly China. China currently holds the second largest resource of foreign currency reserves in the world, and it is rapidly growing. Its impact on global supply and demand created strong influence on global prices. It reduced global inflation in scope of industrial commodities, particularly commodities produced with technologies of relatively high labour consumption. On the other hand, by significantly expanding the global demand for raw materials, it provided the exporters of the raw materials (including fuels) with the ability to raise their prices.

A new causative action of the international financial imbalance was recently presented by the high surpluses of petroleum exporters. The petroleum countries still do not and will not have any short-term alternative to the dollar.

A large group of experts sees the causes of the international market imbalance in the area of global independent capital flows, which have recently dominated the field of international economic relations<sup>9</sup>. The effect of the opening and combining of local markets into one integrated local market – thanks to the progress of computer and telecommunication technologies, thus also due to the increasing market transparency – brought the capital market to a state of previously unimaginable capital mobility increase. The total potential of the globalised capital market significantly increased the capital supply, forcing structural and institutional changes. This fact is a key element explaining the mysteriously low long-term percentage rates observed throughout the world despite the recent rises of the official short-term rates. This is a results of the so-called “global excess liquidity”.

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<sup>8</sup>United States GDP Growth Rate, Trading Economics, New York/Lisboa, [www.tradingeconomics.com](http://www.tradingeconomics.com) [11.08.2011].

<sup>9</sup> Cf. S. J. Enlow, A. L. Katchova, Agribusiness Firms' Performance during the Global Economic and Financial Crisis, Paper prepared for presentation at the International Food and Agribusiness Management Association's 2011 Annual World Forum and Symposium, Frankfurt, Germany, June 20-23, 2011.

The current crisis is referred to as the liquidity crisis, because the banks, funds, and other entities operating in the financial markets refused further financing of investments in debt papers secured by assets (mainly in those associated with the American real-estate market, but this reluctance expanded over other segments of the financial market). However, this crisis can also be referred to as the crisis of trust, because the financial institutions are worried that if they should lend funds to another financial institution, and it proceeds to bankrupt, they will lose the said funds. The foundation for the trust loss was the uncertainty if the “pumped up” bank balances do not contain even more toxic assets, entailing further losses, as well as sudden reduction of limits for other banks, and common conviction that it is best to have cash in such times.

A very rough inspection of expert opinions on the reasons of the current global financial crisis situation proves the complexity and ambiguousness of reasons of the current financial crisis. The experts practically agree on one thesis only: that the current financial crisis will have impact on the pace of the global economic growth. This thesis is verified everyday with information of decline of GDP pace of significant economies, and reduction of projection indicators for the next years. No renowned expert centre presented trustworthy evaluations on the scope, depth and duration of the recession.

### **Agribusiness and the economic crises**

The main agricultural functions associated with food production are becoming implemented more not by agriculture itself, as much as by the complex of operations involving various factors and conditions independent of agriculture. The global experiences show that the developmental capabilities of agriculture are becoming less dependent on the endogenic conditions of this sector, and more dependent on sector policy, particularly macroeconomic policy. The development trends of the entire economy have significant meaning to the competitiveness of the food sector. The negative macro-scale results impact agriculture and its surroundings. The GDP drop limits the income of the population, which in turn entails reduced demand for food products. The agricultural economic condition is an integral part of the general economic condition, as well as its derivative.

This way, the social interest area covers not agriculture itself, but rather the entire food economy and its operating conditions, both within the country as well as in a regional or global depiction. This means that the economic development and formation of agribusiness reduces the role and significance of agriculture, and creates pressure on the agricultural and food economy to adapt to the new needs and conditions.

Economic development is beneficial to progress in the fields of genetics and biotechnology, as well as the widely understood technology (mainly IT), and creates a breakthrough in agriculture and the use of its products. Technical progress creates possibilities of not only the automation of agricultural technologies, but also recognition of the environmental conditions and progress of the biological production processes, quality of the agricultural raw material, and the processing and storage conditions of the products.

The combination of the automation of the biological processes of agricultural production and the automation of recognising their progress and capabilities of intentional service provides opportunities of significant, even revolutionary changes to the organisation and economics of agriculture. These changes will certainly be bound with mutual influence with economic events and market operations, but most of all they will create significant structural transformations in the agricultural community, and in effect in the agrarian structure.

The historical experiences indicate that even though agriculture is entering the crisis with a certain delay, it takes longer to escape it, and the economic and social effects can be more severe. Thus, the active modern economic policy is even more important during such periods.

### **Impact of the global economic condition on the economic growth in Poland**

In 2010, the actual GDP of Poland grew by 3.8%, following a growth slowdown by 1.7% in 2009, and was higher by 5.6% than the product created in 2008. The GDP growth was the result of the increased actual domestic demand by 4.3%, including gross accumulation by 8.2% in relation to 2009 (despite the reduction of the level of investment expenditures for fixed assets by 1.2%), due to strong recreation of the reserves. The consumption increase was at 3.4%, including individual of 3.2% and collective of 4.0%<sup>10</sup>. The deep decline of Polish foreign trade in 2009 was followed in 2010 by the recreation of the foreign trade volume to a level similar to that in 2008. The commodities and services export volume, calculated on the basis of national accounts, increased by 10.1% in relation to 2009, and the import volume to 11.5%. The commodities export and import volume grew in a similar manner, by 10.4% and 11.1%. The impact of the foreign exchange balance changes to the GDP change in 2010 was negative (-0.5 pp). The rejuvenation of the domestic export and consumption was related to the strong growth of the industrial gross added production value (9.2%), and a more moderate growth of construction production (3.8%) and market services (1.5%). Following a decline in 2009, the coefficients of export involvement and import

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<sup>10</sup> CSO, Informacja Głównego Urzędu Statystycznego w sprawie zaktualizowanego szacunku PKB za 2010 r., Warszawa 2010 [www.stat.gov.pl].

penetration (relations of the commodity and service export and import values to GDP in current domestic prices) grew in 2010, to adequately 41.5% and 42.5%<sup>11</sup>.

The registered unemployment rate grew from 9.5% at the end of 2008 to 11.9% at the end of 2009. The unemployment rate calculated on the basis of questionnaire surveys of the population's economic activeness was also significantly lower, although also rising.

The years 2008-2010 saw a decline in the annual inflation rate (calculated by the growth of consumption commodities and services) – from 4.2% in 2008 to 3.5% in 2009 and 2.6% in 2010. The harmonised indicator of consumption prices during these years declined from 4.2% to 4.0% and 2.7%. This trend reversed by the end of 2010 and the first quarter of 2011, when the growth dynamics of consumption commodities and services were at their highest level since the fourth quarter of 2008<sup>12</sup>.

The financial deficit of the government and self-government sector was growing at an alarming rate, from 3.7% GDP in 2008 to 7.3% in 2009, and 7.9% in 2010. The debt of this sector grew adequately from 47.1% to 50.9% and 55.0%. According to the GUS customs statistics, the deficit of commodity turnover in 2010 was at 23.9 billion pln (i.e. approximately 6.0 billion euros), and was higher by 10.6 billion pln (2.9 billion Euros) than in 2009. The deficit of commodity turnover in value terms also grew (from 13.4 billion pln w 2009 to 23.9 billion pln in 2010, i.e. approximately 6.0 billion euros). The positive balance of service turnover declined to 10.5 billion pln (2.6 billion euros). The current transfer surplus also dropped, to 18.0 billion pln (4.5 billion euros). On the other hand, the negative revenue balance grew to 52.4 billion pln (13.1 billion euros). Due to these unfavourable changes of the current account, the current turnover deficit in 2010 grew from 2.1% to 3.4% GDP, reaching 47.8 billion pln (approximately 12 billion euros)<sup>13</sup>.

The value of the Polish commodity import and export in 2010 was adequately at approximately 117.5 and 131.0 billion euros. Considering turnover value, Poland was the ninth exporter (after Sweden, but before Austria) and eighth importer (above both Sweden and Austria) of the European Union. 3.0% of the EU export and 3.25% of the EU import fell to Poland, including the intra-European Union trade. For Eurozone states, Poland was the fifth recipient of their exported commodities, following Great Britain, United States, China and Switzer-

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<sup>11</sup> Ministry of Economy, Informacja dzienna dotycząca kształtowania się koniunktury w gospodarce, <http://www.mg.gov.pl/Analizy+i+prognozy/> [21.07.2011].

<sup>12</sup> CSO, Polska - wskaźniki makroekonomiczne (PKD), [www.stat.gov.pl](http://www.stat.gov.pl).

<sup>13</sup> Ministerstwo Finansów, Strategia zarządzania długiem sektora finansów publicznych w latach 2011-14, Warszawa, September 2010.

land, and ahead of Russia. As a supplier of commodities to the Eurozone, Poland was seventh, after China, Great Britain, United States, Russia, Switzerland, and the Czech Republic. The raw material and agricultural and food commodity trade continues to be a very important part of Poland's foreign trade. In 2010, it composed 10.7% of export and 7.1% of import. The turnover in these fields was closed with a positive balance of 12.5 billion pln (approximately 2.6% of overall export). However, the commodity trade is dominated by industrial products. In 2010, 74.4% of export and 62.2% of import fell to such commodities. The overall balance (deficit) of commodity turnover in 2010 was 53.8 billion pln, corresponding to 11.5% of export value<sup>14</sup>.

In Poland, during the crisis period of 2008-2009, the drop of the foreign direct investment inflow was lower by 5.3 pp than the global one, while with inclusion of 2010 (the entire period of 2008-2010), it became higher by 11.3 pp. The rapid, negative reaction of FDI inflow into Poland to the global crisis was associated mainly with the withdrawal of profits by foreign investors.

Facing the growing global economic crisis, the government implemented several fiscal operations increasing the social consumptive demand, thanks to which the stimulated individual demand became the main driving force behind the economic growth during the crisis. Halfway through 2009, in agreement with trade unions and employer organisations, the government additionally implemented several anti-crisis measures. The anti-crisis package included more flexible labour conditions, access to salary subsidies and trainings for employees of companies affected by the economic crisis. The effectiveness of utilising for individual anti-crisis measures was very diverse. The most effective anti-crisis measure was the increase of household income by reducing the social pension contribution and the burden of personal income tax, which preserved the level of individual consumption. Simultaneously, the strong depreciation of the Polish zloty increased the competitiveness of Polish export and costs of import, which was beneficial to improvement of the trade balance situation. Meanwhile, specific solutions directed at employees and companies played a limited role in the battle with the economic crisis. Some instruments turned out to be overregulated and late in relation to the economic situation. The deteriorating condition of public finances forced the government to take actions aimed at regaining of the budget balance understood as the deficit and public debt level within the cautionary thresholds defined by the Polish legal system and required within the EU. The government attempted to define ventures, both increasing budget income and reducing public expenditures, in a manner allowing for the lowest possible dete-

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<sup>14</sup> Ministry of Economy, Poland in the World's and Europe's background in 1995–2010 (in figures), Warsaw, September 2011.

rioration of the conditions of exiting the economic crisis of the years 2008 and 2009. The directions of the consolidative actions and the projection of the basic economic values for the next years were presented in the document entitled "Multi-Year State Financial Plan for the years 2011-2014" of April 2011. In order to increase budget income, the VAT rates were increased on January 1, 2011 – the basic rate from 22 to 23%, and the reduced tax rates from 3 to 5 % and from 7 to 8%<sup>15</sup>.

In order to soften the effect of the VAT rise, the tax rates for certain basic food products were reduced from 8% to 5%. The VAT rates increased by one percentage point will remain in force for the next three years, but if the public debt should exceed the 55% of GDP value threshold despite the assumed consolidative actions, more rises of the basic tax rate will follow starting with the second half of 2012, up to a maximum of 25%. 2011 also saw the increase of the excise tax for tobacco products, and further increases are planned for 2012.

A significant operation of the side reducing the budget expenses is the 1<sup>st</sup> of May 2011 change of the instalment forwarded by ZUS to the Open Retirement Funds. The amount of the instalment was reduced from 7.3% to 2.3% from May 2011, and from 2017 to 3.5% of the basic retirement instalment. The remaining part of the erstwhile instalment will be recorded in ZUS on special individual subaccounts, and submitted to a separate fund administered by ZUS in order to finance current retirement payments. The instalments registered on the individual ZUS accounts will be annually indexed by a sliding average of a five-year nominal GDP growth indicator<sup>16</sup>.

The most important operations aimed to reduce budget expenses include the following<sup>17</sup>:

- freezing the remuneration fund of the government and self-government sector entities;
- introduction of a regulation limiting the growth pace of discretionary expenses of the public sector to an actual 1% annually in 1 January 2011, and the obligation to locate free financial resources in a special account of the minister of finances for financial sector entities (which will limit the vol-

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<sup>15</sup> Rada Ministrów, Wieloletni Plan Finansowy Państwa 2011-2014, (Załącznik do uchwały nr 36 Rady Ministrów z dnia 5 kwietnia 2011 r.), Warszawa, April 2011.

<sup>16</sup> See: Social insurance in Poland: information, facts, The Social Insurance Institution, Warsaw 2011.

<sup>17</sup> Ministerstwo Finansów, Strategia zarządzania długiem sektora finansów publicznych w latach 2011-14, Warszawa, September 2010. and Rada Ministrów, Wieloletni Plan Finansowy Państwa 2011-2014, (Załącznik do uchwały nr 36 Rady Ministrów z dnia 5 kwietnia 2011 r.), Warszawa, April 2011.

ume of government emissions of securities and reduce the national credit needs);

- reduction of the amount of funeral benefits from twice the average remuneration and indexed in quarterly periods to 4 000 PLN on 1 March 2011;
- limitation of the privileges resulting from the entitlement to early retirement;
- reduction of expenditures for certain labour market programmes with low effectiveness.

The analysis of the financial crisis allows for a uniform statement that it has no direct source in Poland. However, the global crisis significantly affected the situation in Poland, creating a hazard to the development of the entire economy. This influence presents itself by the deterioration of the perspectives of global economic growth, limitation of the credit campaign, limitation of the access to external financing. The symptoms of the crisis occurred in Poland in a different manner than in most countries. It first appeared on the capital market, followed by the banking sector, and ultimately, much like in the case of developed countries, affected the actual area. The evaluation of the perspectives of the Polish economy in the age of an actual crisis should consider the fact that the crises in the real area preceded by a financial crisis last longer than crises unrelated to a financial crisis. The crises are more experienced and longer if the economy enters them with numerous imbalances (e.g. significant deficit of current turnover, budget deficit, lack of household savings).

In Poland, we are dealing with an economic slowdown, not recession. Lower debt level. In Poland, the consumers and companies use credits less than in the case of developed economies. There is a possibility of a larger impact of the Russian crisis. The crisis in the area of real economy will be better dealt with by economies open to trans-border flow of commodities with higher productivity, lower asset substitute flexibility, and lower fixed production costs.

### **The global financial crisis and the EU budget**

The global financial crisis and the Eurozone crisis in the years 2010-2011 have forced unorthodox measures to be taken by the EMU countries and by the EU authorities, including especially the European Central Bank. They have also triggered the IMF involvement, bringing the issue of leadership in the monetary union and in the entire community to light. We have become aware that comprehensive integration mechanism reforms are indispensable, which gives rise to a series of substantial organisational and regulatory changes, aimed at increasing

the EU financial discipline<sup>18</sup>. Their development and implementation is likely to continue for the nearest several years. It is projected not only that the Stability and Growth Pact will be observed more rigorously, but also that new institutions will emerge forming a competitiveness pact, also referred to as the pro-Euro (currency) pact.

Financial fluctuations and the global economic slump have once again brought the questions of competition sources in the European economy and the shape of the current financial perspective. To meet the competition-related challenge in the globalised world, Europe has to support intelligent growth. In consequence, the EU budget must be concentrated on the added value, i.e. it has to specify the areas in which one euro spent at the EU level bears more fruit than at the country level. Costly investments on scientific research and innovation, as well as the most significant international undertakings related to infrastructure, should also be financed at the EU level. Furthermore, the EU budget has to provide finance for the activities aimed at more environmental-friendly technologies and services within the European economy. However, instead of creating a separate programme, such issues should form part of the current EU policies.

The most crucial proposals for amending the EU budget included, without limitation<sup>19</sup>:

- extending the financial perspective period to 10 years (including a review upon the expiry of 5 years, and possible expenditure shifts between individual sections);
- searching for new sources of financing outside the member state budgets (the Council is to choose one out of six “Euro-tax” sources proposed, i.e. tax on the financial sector, receipts from the trade with carbon credits, taking over a part of VAT or CIT, payments on air transport or energy tax); putting an end to the so-called UK rebate;
- introducing a system change to the cohesion policy: it should be open to all countries, rather than limited to the poorest ones; first the financing and then the financing refund to the best projects;
- maintaining the potential of agricultural production in Europe in consideration of the EU food safety and the global demand for food;
- maintaining the uniform market and competition rules within the Community;

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<sup>18</sup> UNCTAD, World Investment Prospects Survey 2008–2010, United Nations, New York-Geneva, 2008.

<sup>19</sup> Cf. European Commission, A Budget for Europe 2020: the current system of funding, the challenges ahead, the results of stakeholders consultation and different options on the main horizontal and sectoral issues, Brussels, 29.6.2011, SEC(2011) 868 final.

- constructing the system for risk management and mitigation of the impact of strong price and income fluctuations on agriculture;
- simplifying the implementation pattern for the Common Agricultural Policy measures and combining them with other Community programmes.

In June 2011 the European Commission presented a proposal for the multi-annual EU budget for 2014-2020. It reflects an attempted compromise between the demands of the European Parliament which is for increasing the budget, due to the growing number of responsibilities to be met by the EU, and the net payer countries which demand that the EU expenditures be frozen. According to Janusz Lewandowski, Commissioner for the EU Budget and Financial Programming, the budget proposal is constructed in such a way that its rejection would be difficult<sup>20</sup>.

### **The new multi-annual budget proposal**

In the budget proposal for 2014-2020 the Commission provided for liabilities in the amount of EUR 1025 billion, i.e. 1.05% of the gross national income (GNI) of all EU-27 member states. It has also proposed that total expenditures (payment resources) amount to EUR 972 billion, accounting for 1% of GNI. Considering the margin (reserve), the payment ceiling would be 1.23% of GNI at a maximum<sup>21</sup>.

The measures fostering intelligent development and social inclusion, as part of the “Europe 2020” strategy, were viewed by the Commission as the priority issue. This was reflected in increasing the share of funds allocated on such activities, as compared to the perspective for 2007-2013. The support for sustainable development, the importance of which had decreased considerably, was classified as the second most significant issue.

In the EC proposal, the structure of liabilities has been once again dominated by the resources allocated to the cohesion policy and to the common agricultural policy. Their value will be, however, maintained at a similar level, which implies a decrease in their share in the multi-annual EU budget (to 35% against 40% in the current financial perspective). As regards the cohesion policy, the Commission has suggested establishing a new category of intermediate regions, which could still benefit from the cohesion funds, despite an improvement in their living standards. In terms of the common agricultural policy, the Commission opts for increasing direct subsidies.

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<sup>20</sup> European Parliament, Debates of the European Parliament, [www.europarl.europa.eu](http://www.europarl.europa.eu) [12.06.2011].

<sup>21</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Budget for Europe 2020, Brussels, 29.6.2011, COM(2011) 500 final.

As compared to the current multi-annual budget, in the financial perspective for 2014-2020, the EC has proposed increasing the funds to support competitiveness, infrastructure development and implementation of measures related to justice and foreign affairs.

The June's EC communication also includes certain proposals for amending the system of EU own resources, which provide for<sup>22</sup>:

- going away (in 2014) from the model of transferring the VAT receipts by member states, in the maximum amount of 1% of the uniform taxation basis established for VAT,
- introducing (since January 2018 at the latest) two new own resources, i.e. 1) tax on financial transactions and 2) receipts from VAT in the amount of 1 percentage point of the principal VAT rate.

### **Reactions to the EC proposal**

The EC proposal has raised strong criticism on the part of the major EU net payers, including especially Great Britain, Germany and France, which expect that the EU budget for 2014-2020 will provide for dramatic budget cuts in member states, as a result of which the budget will on no account exceed the actual 2013 level. These countries have pointed out the necessity to introduce a more efficient expenditure model, instead of a budget increase, declaring their willingness to undertake negotiations on the expenditures structure.

Great Britain has also disapproved of establishing intermediate regions and reforming the so-called British rebate which allows this country to make lower contributions to the EU budget. Sweden, in turn, has expressed its objections to the insufficient consideration of the reforms which are indispensable to foster future competition with India, China and other countries. It also fears that the budget solutions proposed will substantially increase its contribution to the EU budget.

Most countries have assessed the proposal for introducing the tax on financial transactions in a negative way, except for France. However, France does not welcome the idea of increasing the budget through VAT which, in its opinion, may have a negative impact on national budgets and consumption. Most EU-27 countries have viewed the EC proposal as a solid ground for further negotiations. Poland has not commented on this proposal at all.

Jerzy Buzek, President of the European Parliament, has considered the EC document to be a good starting point. He supports the idea of increasing expenditure on research and development, infrastructure, foreign policy and EU extension. He is also in favour of putting an end to the rebates in the EU budget contributions<sup>23</sup>.

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<sup>22</sup> Communication from the Commission... op.cit. pp. 22-26.

<sup>23</sup> European Parliament, Debates of the European Parliament, [www.europarl.europa.eu](http://www.europarl.europa.eu).

## **Negotiations over the new multi-annual budget**

The political debate over the EU financial perspective for 2014-2020 began soon after the EC proposal had been announced. This was right after Poland had taken over the presidency in the EU Council, during an informal meeting of the ministers for European affairs, taking place in Sopot on 28-29 July 2011. This was when the representatives of EU member states presented their standpoints on the EC proposal. Yet another discussion on the new multi-annual EU budget is planned in September. It will be held as part of a formal meeting of the EU Council for General Affairs.

The preparations to the negotiation process, comprising an in-depth analysis of the EC proposal and a definition of the principal issues, will take place during the Polish presidency. At that time, Poland would like to achieve a preliminary understanding as to the EU budget priorities. It is expected that in June 2012, during the Danish presidency, the new multi-annual budget will be adopted by the Council, and in December 2012, upon assuming the presidency by Cyprus, the adoption procedure for the new budget will be completed.

Adopting the new multi-annual budget may be more difficult, compared to the financial perspective for 2007-2013, for two reasons. Firstly, the GNI-related direct subsidies from member states are perceived by some states as a burden which inhibits the implementation of duties arising from the Stability and Growth Pact, in terms of levelling off the national budgets. Secondly, two more countries (Bulgaria and Romania) are now participating in the decision-making process. The discussion over the new multi-annual budget will cover both the most urgent challenges to be faced by the EU (e.g. the necessity to consolidate public finances) and the long-term perspective (the budget as an investment tool).

The talks about the future budget are not limited to finances, but they concern especially the objectives of the EU budget and the principles governing the disbursement of shared funds. These are, in essence, talks about the vision of Europe.

Poland takes an active part in the debate on the future budget. According to the Polish government, the EU should support the cohesion policy, which brings us closer to achieving the socioeconomic cohesion. It will, in turn, allow all member states to realise global priorities, such as combating climate changes, or to implement internal reforms, such as establishing the service market.

From the perspective of the agricultural policy objectives, in the times of globalising economy, more importance will be attached to the following factors<sup>24</sup>:

- the population growth (by 2 billion until 2030),

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<sup>24</sup> Cf. European Commission, Directorate-General for Agriculture and Rural Development, Why do we need a common agricultural policy? Discussion paper by DG Agriculture and rural development, December 2009.

- the low production activity in agriculture in relation to information technology,
- the implementation of new-generation farming and “intelligent” food technologies,
- drastic changes within the agricultural structures and marketing,
- a drop in agricultural production in developed countries,
- Latin America and the Caribbean becoming a new global centre of food production,
- an intensified degradation process of the natural environment,
- an accelerated urbanisation process of rural areas.

### **Megatrends in the global economy in the perspective of the year 2050**

The discussions on limiting the community budget always intensify during the periods of unfavourable economic conditions. These periods host not only GDP decline in individual countries and relative rises of social expenses, but also reduction of income from direct taxes, which is particularly important due to the domestic budgets and EU indirect taxes. Community policies are subject to particular criticism during such periods. There are voices of their ineffectiveness, inability to keep pace with the occurring social and economic changes, which include key challenges set for the European economy by globalisation. Some of the challenges facing the EU include the activation of developing countries in the international labour distribution of not only production but also services, which play a key role in the economy of the 21<sup>st</sup> century, and the differentiation of the global demographic trends to the disadvantage of Europe, which will have significant impact on the redistribution of the sources of growth, income and savings in the coming years. Some experts believe that the cure for the fragmentation of community policies is their renationalisation<sup>25</sup>. This approach creates a reduced demand for horizontal and integrated reasoning. It seems that instead of discussing the need to fundamentally modify EU finances following the year 2013, we should be concerned with another fluent adaptation of it to new challenges.

If Europe is to cope with international competition, the discussions of the shape of the budget and scope of community policies must consider the global development trends. The main significance to the future of the nations is held by the usually underappreciated demographic factor. The human factor and the growth of the labour capacity – based on intellectual capital, newest technologies, inventions and entrepreneurship, as well as labour time – is decisive for the eco-

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<sup>25</sup> Cf. J. Niemi, J. Kola, Gradual renationalisation of the Common Agricultural Policy – a way forward?, Maataloustieteen Päivät 2004.

conomic development pace and the prosperity level of the nations. This occurs despite the theories dominating until recently in, among others, Poland, stating that the demographic development is a barrier and not the creative force behind economic development.

The global population number will rise until the year 2050, however, this growth will be very irregular. The share of the human resources capable of labour drastically declined in Russia, Japan, Germany, China (-143 million people in relation to 2006). It will intensely rise in India (+390 million people in 2050 compared to 2006), Nigeria, Pakistan, and USA<sup>26</sup>.

In Poland, the total population number will drop from 38.1 million in 2008 to 35.99 million in 2035 and approximately 34 million in 2050, i.e. by 11% - during a period of less than two generations<sup>27</sup>.

The slowdown of the economic growth rate of the USA and leading EU states (Great Britain, Germany, France, Spain, Italy) has not affected the decline of the global economy growth pace thus far, but it will. However, the developing economies are developing faster due to commercial trade and capital inflow, and compensate for the lowered growth pace of the most mature economies of the world.

The World Economic Outlook IMF data of April 2008 indicate that the GDP of China – calculated according to the purchasing power parity – moved into second place, trailing the USA GDP; of India into fourth place, of Russia into seventh place, and of Brazil into ninth place. The projected growth dynamics of these countries, even reduced by the slowdown of the global economy, will only accelerate the chase of the best-developed economies.

According to the annually published World Wealth Report of 2007, approximately 9.5 million people throughout the world held financial assets in excess of 1 million USD. The total value of the assets of said people exceeded 37 trillion USD (the highest growth rate of the wealthiest people took place in 2007 in India, Russia, Indonesia, and Singapore). The projections for 2011 see further growth of the financial assets, to almost 52 trillion USD. The number of people with financial property exceeding 1 billion USD was estimated at 946, while their total property at 3.5 trillion USD<sup>28</sup>.

According to the authors of the 2007 World Wealth Report, the main source of the wealthiest people was the possession of capital company shares and

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<sup>26</sup> Cf. S. Poncet, The Long Term Growth Prospects of the World Economy: Horizon 2050, CEPII Working Papers, 2006, <http://www.cepii.fr/anglaisgraph/workpap/summaries/2006/wp06-16.htm>

<sup>27</sup> CSO, Prognoza ludności Polski na lata 2008-2035, Warszawa 2008.

<sup>28</sup> World Wealth Report 2007, Merrill Lynch and Capgemini, 2007, p.11.

the derived income; only less than 20% of the assets were composed of inherited assets and property. The world is facing a new explosion of the middle class.

The projections indicate that it will grow with an annual average (until the year 2030) by approximately 70-90 million people. If this trend were maintained, it would mean the possibility of creating almost 2 billion of additional middle class. For example, in 2000, approximately 56 million people fell to middle class in China; however the indications state that in 2030 this number will rise to 361 million people, i.e. more than the entire USA population<sup>29</sup>. This trend also affects other countries in Asia, Central and Eastern Europe, the Near East, and Latin America. It is very significant to the impact of the growing demand for the enforcement of economic prosperity throughout the world during the next decades.

Additionally, the poverty level significantly declined due to the economic growth, globalisation processes, and development of the market economy. While the number of people with annual income below 1000 USD was at 50% during the seventies of the 20<sup>th</sup> century, it was at only 17% in the year 2000, and is projected to drop to approximately 6% by 2015.

In relation to the expected growth of the instability of international agricultural markets and the opening of the community market to external competition, the ideas of limiting the expenditures for CAP implementation or renationalisation seem unjustified. In order to ensure equal conditions for the competition, it is necessary to ensure equal conditions to the competition of the agricultural sector within a uniform agricultural market, which will only be possible in scope of a community mechanism for financing the EU agricultural policies (financial solidarity), and through the definition of current and future CAP objectives, as well as adequate, new directions of financial support. It will be important to level the direct payment fees on the EU scale, which would be based on real and objective criteria relating to the requirements imposed on agricultural producers.

The Common Agricultural Policy should preserve the current intervention instruments, even more so, because they are not the basic measure of supporting agricultural income, but effectively ensure a “safety net”, which is activated in special cases (high price fluctuation). Further preservation of limited market support capacity would be significant in sensitive sectors and those playing a significant economic role in the development of a region. Effective stabilisation instruments are particularly valuable to most medium and small farms, which have lower financial capabilities to cope with crisis situations. There is also a need to improve the access to modern risk management instruments, especially in the case of large commodity farms.

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<sup>29</sup> World Wealth Report ... op.cit., p. 23.

The direct payments should remain among the main CAP instruments, and concern the following:

- support and stabilisation of agricultural income,
- compensation of costs associated with fulfilment of high Community standards (in relation to the quality and production methods, particularly environmental requirements),
- preservation of agricultural production in regions with the most difficult farming conditions.

With this, the direct payments should serve to ensure the economic stability of agriculture as well as the food and environmental safety.

At the same time, the target direct payment system should provide a compromise for simplicity (limitation of transaction costs), common nature (basic instrument of support) and orientation towards the basic functions of agricultural policies. The payment system should abandon the present solutions, where the payment rates and national envelopes reflect the historical level and intensiveness of production.

The amount of the financial envelope for the direct payments should recognise the current and future challenges undertaken in scope of supporting agricultural production within the EU.

The growing role of the rural development policy should support not only the agricultural structural transformation process, but also the new challenges facing European agriculture associated with climate changes, water economy, or protection of biological diversity. The rural development policy seems to be a good tool to implement new CAP functions, supplementing the area of agricultural markets and agriculture<sup>30</sup>. With this, the amount of the finances assigned to the implementation of the rural development policy should not be lower than that of the current financial perspective, taking into consideration the new functions associated with climate changes or renewable energy, which are addressed to this part of CAP.

The current objectives of the Rural Development Policy related to the elimination of the differences in the development level of rural areas among EU regions should be considered as priorities, as should the reduction of the distance between the rural and urban areas.

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<sup>30</sup> A. Kowalski, M. Wigier, P. Chmieliński, Poland's adjustment to challenges of changing agricultural policy of the European Union, paper for the 113th Seminar of the European Association of Agricultural Economists, December 9-11, 2009, Belgrade, Serbia.

## Conclusions

Much like most global economies, the Polish economy is becoming more and more subordinate to the co-dependencies of the external surroundings. As a result of the ongoing integration and globalisation process, Poland is an integral component of the global economy. The directions and pace of the social and economic development will be decided on a similar scale by the state economy policies implemented in scope defined by member states, with use of state and EU budget funds, as well as independent externalities.

The globalisation process is accompanied by several new challenges, which stand beyond borders and require effective reaction from the European Union. Some of the challenges are related to the degradation of the natural environment, demographic changes, and the new situation in scope of the food and energy safety of the world. Agriculture and rural areas are significant elements of these events. This brings new tasks to the Common Agricultural Policy. In the future, the preservation of the agricultural production resources in good culture will be significant not only to the food safety of the Community, but also the satisfaction of the growing global food demands. As shown above, the demographic trends show that in a long-time perspective, Europe may have a much higher share in the global food production resources than in the number of population. The growing global demands for food mean that the necessary growth of agricultural production in the perspective of the year 2050 will require the agricultural raw materials to be doubled.

The completed CAP review is an important stage in the evolution of the Common Agricultural Policy, since it confirms that it is capable of adapting to the changing demands and conditions. In scope of the review, the CAP objectives were expanded by new challenges. They are important not only from the viewpoint of agriculture and rural development, but also in the context of the expectations and requirements of the entire EU society. This emphasises the community, and not just the sector, dimension of the Common Agricultural Policy. CAP falls under other horizontal community strategies, particularly under the implementation of the Lisbon Strategy.

The evaluation of CAP operations emphasised that its expended resources impact the creation of the European added value, which will facilitate the process of reviewing the community budget, which contains an important element in form of the budget assigned to the development of agriculture and rural areas.

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## **The main direction of the Romanian agricultural sector evolution following the EU integration**

### **Introduction**

The paper presents the main characteristics of the dairy, poultry, vegetable and oilseeds sectors following the EU integration including an analysis of price volatility along the agri-food chains, using the monthly series of agricultural, processor and consumer price indices, in the period January 2006–December 2010. The price analysis is made at sectoral level. The main characteristic of price volatility from the different levels of the food chains is the apparent stability of consumer and processor prices and the strong volatility of agricultural prices. Also, the paper presents an analysis of the intensity of economic flows between the general aggregate “agriculture” and the “food industry” aggregate, both from the perspective of intermediary deliveries (destinations) and from the perspective of intermediary acquisitions (origins).

### **Dairy sector**

At the moment of Romania’s accession to the European Union (EU), the dairy farm sub-sector was dominated by about 1 million extremely small-sized farms, on which a large part of milk production was used under the form of self-consumption. This situation resulted in an average size of the holding with dairy cows smaller than 2 heads (Table 1).

Table 1. Evolution of the number of dairy farms and of the dairy cow and buffalo cow herds

Specification	2007	2008	2009
Total farms (number)	1052028	945860	849851
Livestock herds (heads)	1710432	1593535	1499434
Average farm size (heads/farm)	1.63	1.68	1.76

Source: *MARD*.

Three years after the accession, this size was maintained, while the number of holdings decreased, mainly those with less than two cows (Table 2). As a positive fact, the number of holdings with more than 3 cow heads increased, for each size class.

However, the situation of milk production use per total country remained almost unchanged in the last three years: out of about 5 million tons of milk produced in Romania, about a half went to self-consumption, one quarter to direct sales and only one quarter to deliveries for processing. The question to which we are trying to answer in this by the present paper is whether the current problems with the milk chain in Romania, mainly the non-fulfillment of the allocated quota under the European Single Market, result from the deficient milk collection system, or maybe from the diminution of the support provided by the state, both from European or national funds, or from other conjunctural or structural causes.

Table 2. Structure of dairy cow and buffalo cow farms, by size classes

Size class	2007	2008	2009
1 - 2	969896	863830	757799
3 - 5	66653	65817	73436
6 - 10	9614	9852	11227
11 - 15	2433	2468	3105
16 - 20	1391	1586	1620
21 - 30	942	1028	1202
31 - 50	587	634	795
51 - 100	321	409	432
over 100	191	236	235

Source: *MARD*.

The milk collection peculiarity in Romania derives from the command economy experience, when the integrating role of the milk chain was played by the large state companies (in general, a large processing company in each county). The different evolution of these units in the transition period resulted in milk not being collected by any processor in certain areas, while in other areas, several processors, both small and large-sized, with a long existence on the

market or newly established, competed for raw milk. After the accession to the EU, with the strict milk hygiene requirements, the large processors came to prefer the collaboration with the large producers of raw milk, while the medium and small-sized processors collected the raw milk from the small farmers.

This division into two categories of players on the milk market was the result of the support provided in the pre-accession period, when Romania's agriculture benefited from the SAPARD financial support, which funded the investments on dairy farms through Measure 3.1 (Sub-measure Dairy cow farms), while the investments for processing through Measure 1.1 (Sub-measure Milk and dairy products). As a first estimation of the effects, it can be mentioned that almost all the large processors that are active at present in Romania benefited from SAPARD funds. At the same time, most farmers who produce conform milk on specialized farms were beneficiaries of the SAPARD funds. Under the Sub-measure Milk and dairy products, 89 milk processing projects were funded totaling about 50 mil. euro, which means only 57% of initial allocation consumption. Under the Sub-measure Dairy cow farms, a total amount of 31 million euro were provided for 221 farms, which means 87% allocation consumption. This adds to other 21 milk processing projects funded under the Romanian SAPARD and 78 dairy farm projects funded under the same program.

As a result of the difficult situation of the dairy market in 2009, the Commissioner Fischer Boel created, in October last year, a high-level group of experts, with the purpose to discuss the medium and long-term measures that have to be taken in this sector, taking into consideration that the milk quotas will be removed on April 1, 2015. Among the 7 recommendations that the high level group presented to the European Commission (EC) in June 2010, a special focus was laid on the contractual relations between the milk producers and processors, in the sense of encouraging the use of formal written contracts, concluded in advance, for the raw milk deliveries, as well as the increase of the producers' collective negotiation power by permitting the producers' organizations, consisting of dairy farmers, to negotiate on collective basis the clauses of contracts concluded with the dairy factories.

A still non-definitive report of the Competition Council reached the conclusion, published in press, that the Romanian milk producers are found in an unfavourable position from the negotiation power point of view, as they conclude delivery contracts on individual basis and do not hold shares in the processing companies. According to the document, the segment of processors is quite concentrated, so that in the year 2008, the first ten economic operators, out of 481 in total, cumulated 56% of the sector turnover. It is true that Romania's situation does not favour the farmers, but it is not the processors that are to

blame for the lack of producers' organization. On the other hand, the integration on the product chain starting from the raw milk producer is much more difficult than that in the case of processor and, which is more important, it takes a longer time and a mobilization of financial resources that are not available for the Romanian farmers. A brief analysis of the sector is giving based on FADN data, Milk Quota Administration Department under the Agency of Payments and Intervention in Agriculture (APIA) and the information referring to the support policy implementation for the milk sector from the Ministry of Agriculture and Rural Development (MARD).

The FADN sample from Romania contains both farms specialized in milk production and non-specialized farms, which produce milk. According to the FADN methodology, the specialized farms are those on which the share of milk value in the farm output exceeds 50%. The non-specialized farms produce, in general, less milk than those specialized, but on a systematic basis. In Romania, the non-specialized farms produce 28% of the milk production, while the specialized farms the remaining 72%. The number of farms that are considered non-specialized farms totals about 313 thousand, while the specialized farms total 687 thousand, according to the Farm Structure Survey from 2007.

When the milk quota was introduced in Romania, the quota holders totaled about 1.6 million farmers, out of which only about 228 thousand with deliveries quota for processing. Both figures were down in the post-accession period (Table 3).

Table 3. Number of milk quota beneficiaries

Quota years	2007-2008	2008-2009	2009-2010
Producers with delivery quota	228257	179079	136735
Producers with direct sales quota	1425284	1273518	991210
Buyers for processing	429	478	477

Source: Milk quota administration department – APIA.

As regards the agricultural policies, they use both European and national funds. The support for the milk sector under the European Agricultural Guarantee Fund (EAGF) is mainly under the form of direct payments to farms, in the context of the milk Common Market Organization, which also provides the possibility of certain interventions at processor level through the acquisitions of butter and milk powder, as well as through certain storage subsidy measures.

However, the main instrument regulating the milk market remained the milk quota system. Complementary to the support to production, by the European Agricultural Fund for Rural Development (EAFRD), the investments of the private beneficiaries on dairy farms are also funded under the NRDP, through Measure 121 – Modernization of agricultural holdings. The support from the state budget was available under the form of state aid in agriculture.

### Some discussions concerning the sector

*Cow milk production on specialized and non-specialized farms.* According to the FADN data from 2007, centralized at EU level, the farms specialized in milk production from Romania (Table 4) have the lowest forage area, as well as the lowest number of animals per farm among all the EU-27 Member States. At the same time, the average milk yield per cow head (Table 5) is the lowest in Romania among the European states (3883 kg/cow).

Table 4. Structural characteristics of the inputs on the specialized dairy farms (FADN, 2007)

Countries	Average forage area (ha)	Average number of dairy cows (LU)	Average labour force (AWU)
EU-15	46	51	1.9
EU-10	22	18	2.1
Romania	3	4	1.9

*Source: EU dairy farms report 2010 based on FADN data, EU FADN – DG AGRI.*

The average price per ton of milk (330 euro/t) is below the EU-15 average (Old Member States), yet above the average of the New Member States (EU-10).

Another important aspect is that a labour surplus on dairy farms exists in Romania. In Table 4 we can notice that 1.9 AWU (annual work units) are used on the average on a specialized dairy farm, which take care of 4 LU (livestock units, adult dairy cow equivalent). The average in EU-15 is also 1.9 AWU per farm, for the labour force, yet the livestock herds total 51 LU on the average.

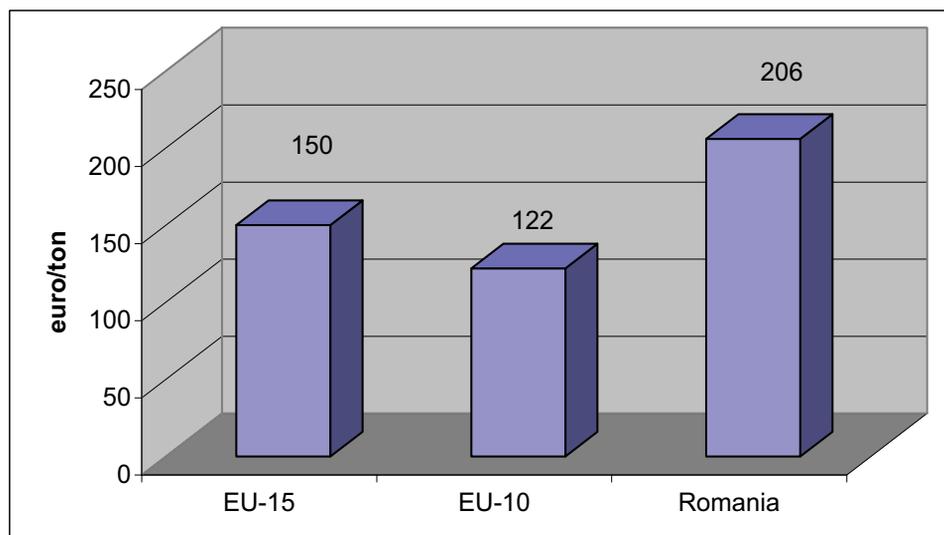
Table 5. Structural characteristics of the outputs on the specialized dairy farms (FADN, 2007)

Countries	Average milk yield (kg/cow)	Milk production on a farm (tons)	Milk price (euro/ton)
EU-15	7019	355	349
EU-10	5567	102	283
Romania	3883	17	330

Source: EU dairy farms report 2010 based on FADN data, EU FADN – DG AGRI.

The situation is quite similar on the non-specialized farms. In Romania, the non-specialized farms have an average milk yield per cow lower than on the specialized farms (which is according to expectations), and receive a lower price for milk than the specialized farms, due to the lower milk quality and in general to the lack of experience in milk production. At EU-27 level, the largest differences between the price received by the specialized farms and the price received by the non-specialized farms are found in Portugal (220 euro/t on non-specialized farms, versus 306 euro/t on specialized farms) and in Romania (258 euro/t on non-specialized farms versus 330 euro/t on specialized farms).

Figure 1. Gross margin per ton of milk, specialized dairy farms, 2007



Source: <http://ec.europa.eu/agriculture/rica/>

*The analysis of the Standard Gross Margin.* The farms specialized in milk production in Romania had the highest standard gross margin in EU-27. The price received by the specialized farms for the milk delivered to processing was quite good (330 euro/ton), which added to the 15 euro/ton subsidy from national funds received for conform milk. At the same time, the operation costs in Romania are by 29% lower compared to the EU average, as certain inputs are cheaper in Romania (e.g. feed). Thus, the gross margin of specialized farms reached a maximum level in Romania in 2007 (Figure 1).

However, the incomes of farms specialized in milk production are low in Romania, due to the very low size of farms. After Romania, the next gross margin in size was that of Italy (199 euro/ton); this was due to the very high price of milk in this country (385 Euro/ton – the highest value in EU-27 in the year 2007).

*Milk quota fulfillment by Romania.* Although at the moment when the negotiations were completed the milk quota available for Romania (2.1% of total quota at EU level) was considered under the country potential, the evolution of its fulfillment in the first three quota years reveals that the sector is still under restructuring, and the milk deliveries to processing are under the expected level. At the same time, the number of quota holders dramatically decreased in the last years, both in the case of delivery quota and in the case of direct sales quota. The ratio of the two quota components, i.e. deliveries and direct sales, was almost unchanged (Table 6), the two outlets having quite similar shares, with the share of direct sales still higher than that of deliveries.

Table 6. Evolution of the milk deliveries – direct sales ratio in Romania

Quota years	2007-2008	2008-2009	2009-2010
Total national quota (thou. t)	3057	3118	3149
Milk deliveries share (%)	43.2	45.8	46.8
Direct sales share (%)	56.8	54.2	53.2

Source: Milk quota administration department – APIA.

The detailed data by counties in the quota year 2008-2009 reveal certain differences in quota fulfillment; in the case of delivery quota, there are three counties that exceeded the quota (Prahova with a 152% quota fulfillment, Dolj with 133% and Mehedinți with 105%). In the case of direct sales quota, two counties exceeded the quota (Bistrița-Năsăud with 112% quota fulfillment and

Maramureş with 108%). Thus, at national level, the direct sales quota fulfillment is under stronger decline in the case of delivery quota (Table 7). These evolutions suggest that in the next years a large national reserve might be available as regards the milk quota, which could facilitate the emergence of new efficient dairy farms.

Table 7. Milk quota fulfillment per total and by components

Quota years	2007-2008	2008-2009	2009-2010
Total quota fulfillment (%)	77.5	74.9	60.9
Delivery quota fulfillment (%)	71.5	74.4	62.9
Direct sales fulfillment (%)	82.1	75.4	59.2

Source: Milk quota administration department – APIA.

### **The support policies for the dairy farms**

At the moment of accession to the EU, Romania opted for the simplified variant of the direct payments, i.e. SAPS, which somehow disadvantaged the dairy farms, as well as the whole livestock sector, as the EU subsidies under the form of direct payments were received according to the utilized agricultural area by each farmer. In the case of the dairy cow farmers, the support was received only on an indirect basis, through the direct payments for the farmers' land areas, which provided them with the necessary fodder, pastures included. The subsidies under the simplified variant will continue until late 2013, according to the possibility for the New Member States to prolong SAPS application, following the negotiations under CAP Health-Check. The level of direct payments per area paid from EAGF gradually increased each year after the accession and it is scheduled to gradually increase until 2015. The flat rate payment according to SAPS for the year 2009 (paid in 2010 in most cases) amounted to 71 euro/ha, to reach 81 euro/ha in 2010. In both years, part of the amounts available to farmers could be paid in advance, starting with October 15 of the year for which the subsidy is received.

*The end of the transitory period and the new state aids.* The late 2009 meant the end of the three-year period when Romania could provide state aids to farmers without the European Commission (EC) notification, as those aids existed at the moment of accession. As regards the milk producers, the main state aid was the financial support worth 0.3 RON/liter, received for the conform quality milk delivered to the collection centers. Starting with 2010, this support

is no longer received, and no other aids specific to other sectors are received either. Part of those aids could be replaced by other forms of state aids, approved by EC. Among those aids benefiting the dairy cow farmers is the diminution of the excise tax for the Diesel oil used in agriculture (by 1.16 RON/liter), under the measure run through APIA. Other state aids are related to the possibility of having access to production credits with subsidized interest. However, the year 2010 is under tough budget constraints, which results in a lower level and number of state aids; we also have to take into consideration here the fact that the complementary national direct payments (CNDP) must be also paid from the same low MARD resources.

*CNDP payments.* As a result of the accession negotiations, Romania is allowed to top up the direct payments to farmers provided from EAFG funds, by a component funded from the state budget (named CNDP) in the period when the payments from EU funds are under the level of a 100% allocation. The complementary payments received by the dairy farms in the year 2009 amounted to 140 euro/bovine head. For the year 2010, the envisaged level is the same, but it is very likely that the limited budget resources will result in the diminution of this amount. The calculation of these payments, approved by EC, had in view per total country both the milk and the meat production, but it does not make any difference between the bovines for meat and the bovines for milk. These funds are run through APIA, as a payment set at farm level (according to the livestock herds on January 31, 2008) and which is no longer modified each year (being a fully decoupled payment); one of the conditions for receiving this payment is a minimum number of 3 bovine heads per holding.

*Specific payment according to Art. 68.* Following the Health-Check negotiations in late 2008, Romania opted for a subsidy for the cow milk producers from the less-favoured areas (mountain areas), in conformity with the provisions of Article 68 from (EC) Regulation no. 73/2009. The idea of this aid, funded from EAGF and run through APIA, was to compensate the specific disadvantages of the area (defined in Annex 4A a of the NRDP), by providing a specific aid per holding, under the form of an additional payment, calculated and provided each year, according to the number of dairy cows on the holding, ranging from 2 to 15 cows (for those with more than 15 cows, the payment ceiling is set at 15 cows). The value of the aid is derived from relating the maximum ceiling approved for the entire country to the number of eligible dairy cows, without exceeding 100 euro/cow head. These payments are made starting with December 1, each year, the first year being 2010. The beneficiaries of this type of support must be registered in the milk quota administration system and to have a milk quota allocated (be it delivery or direct sales quota). One of the condi-

tions, rather constraining, demanded from this support beneficiaries, was to register as authorized natural person until September 30, 2010 at latest, in case they are physical entities.

*The crisis support.* In the year 2010, at EU level an additional aid was provided to the milk producers, considered as seriously affected by the crisis in the dairy sector. As approved in late 2009, this support provided for Romania the distribution of an amount of 5.01 million euro to the milk producers registered in the quota system, who were in operation on the date of March 31, 2010 and who had delivered more than 10 thousand kg of milk in the quota year 2008-2009. The amount calculated per holding was allocated according to a grid, depending on the delivered milk quantity (not sold directly) starting from 200 euro for the holdings with milk deliveries ranging from 10 thousand to 20 thousand kg, and reaching 2000 euro for the holdings with milk deliveries from 200 thousand to 500 thousand kg. For the delivered quantities ranging from 20 thousand to 200 thousand kg, the amount to be received was calculated on a proportional basis. For the farms with over 500 thousand kg, the amount to be received was limited at 1200 euro. In the case of this subsidy as well, the natural person beneficiary had to be registered as an authorized natural person, however the short term (the payments had to be made until June 30, 2010) resulted in giving up this condition.

### **Some conclusions**

The transformation of the dairy cow farms sub-sector in Romania, in the first three years after the accession to the EU, was produced under the milk quota system constraints, with the differentiated contribution of certain factors of both structural and conjunctural nature.

The result of the interaction between these factors is reflected in the poor economic performance of the dairy farms from Romania: these obtain the lowest net value added per annual work unit among all the EU Member States (2441 euro/AWU); this situation is the result of the small farm size, in combination with the labour surplus on these farms.

The review of the main factors that influenced the sub-sector adjustment reveals that the evolution of dairy farms after the accession was determined by the inadequacy between the sophisticated management tools of the supply specific to the European Single Market and the partial integration on the markets of the holdings with surplus labour.

However, the structural changes that took place in the dairy farm sub-sector in this period could determine a re-launching of the milk production in Romania.

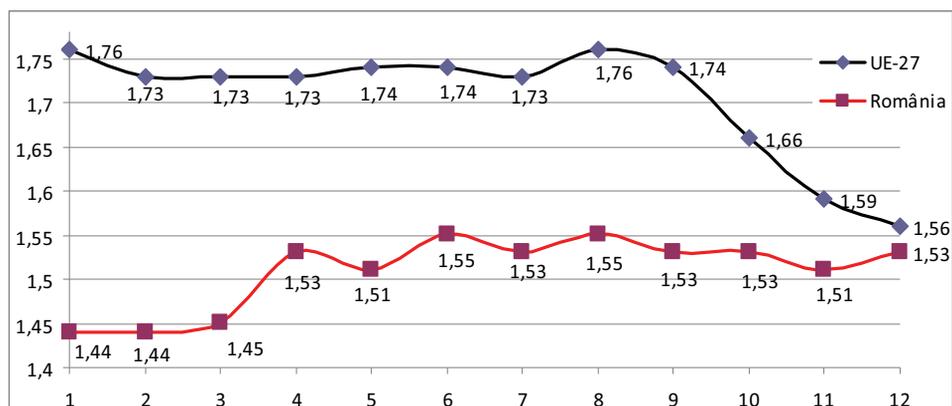
## 1. Poultry meat market in Romania after the accession to the European Union

The poultry meat market in the European Union is a stable market, with a total production on the rise, which reached 11.3 million tons in 2008, and 11.5 million tons in 2009.

The main producers have the following shares: 15.8% France, 12.4% United Kingdom, 11.7% Spain, 11.0% Germany, 10.2% Italy. With a production of 371 thousand tons in 2009, Romania's share was 3.2%. The poultry meat export in EU-27 reached 920 thousand tons in 2008, while in 2009 it was up to 1013 thousand tons, while imports reached 792 thousand tons. The main exporters were Netherlands, France, Italy and Germany.

The EU-27 monthly average prices for broilers without VAT had a variability of 1.76 euro/kg in January and August, to reach 1.56 euro/kg in December.

Figure 2. Evolution of monthly average broiler prices in 2009



Source: European Commission – Agriculture and Rural Development.

In Romania prices were under the EU average and oscillated from 1.44 euro/kg in January-February to 1.55 euro/kg in June and August, with an annual average of 1.50 euro/kg. Prices were higher than the annual average in the following countries: United Kingdom 1.23 euro/kg, Poland 1.24 euro/kg,

Bulgaria 1.43 euro/kg and lower than in Germany 2.53 euro/kg, Italy 1.79 euro/kg, Denmark 1.85 euro/kg. This situation of broiler prices in EU could lead to certain options for Romania, i.e. exports should be oriented to countries that have higher prices compared to us and imports from countries with lower prices. At EU level, prices are different by countries, while in the period January–June 2009 the monthly average broiler prices without VAT had a variability ranging from 1.76 euro/kg in January to 1.74 euro/kg in June. In the same period, in the year 2010, prices oscillated from 1.58 euro/kg in January to 1.65 euro/kg in June.

In Romania, in the first half of the year 2009, prices were under the EU average, oscillating from 1.44 euro/kg in January to 1.55 euro/kg in June. Compared to 2010, the prices had a decreasing trend, from 1.53 euro/kg in January to 1.43 euro/kg in June, the prices being lower than those from the EU average.

### **The market in Romania – general considerations**

The poultry raising sector is characterized by the existence of two systems: an extensive raising system on the individual holdings and an intensive or industrial system. The large units for raising chickens for meat are integrated units, with combined feed mills, reproduction units, chicken raising units, slaughtering and processing units, distribution units and own shops.

There are 273 thousand individual holdings, summing up 24% of the number of poultry, and 185 legal entity units, which account for 76% of poultry number. The total number of slaughtered poultry in 2009 was 241128 thousand heads, out of which 74.6% were slaughtered in specialized industrial units.

Table 8. Poultry meat production

Specification	2005	2006	2007	2008	2009
Poultry carcass total (thou. tons), out of which:	308.6	273.3	304.9	343.0	371.3
- in specialized industrial units (thou. tons)	155.1	184.4	210.3	255.7	289.8
Average chicken carcass weight (kg/piece)	1.5	1.5	1.6	1.6	1.5
- in specialized industrial units (kg/piece)	1.6	1.6	1.6	1.7	1.6

Source: National Institute of Statistics.

The integrated producers have their own slaughterhouses and have made great investments for getting in line with the EU standards in recent years. The slaughtered poultry meat production totaled 304.9 thousand tons carcass weight

in 2007, out of which 68.8% was obtained in great complexes, up by 25.9 thousand tons compared to 2006; in 2009, carcass meat production was 371.3 thousand tons, up by 8.2% compared to 2008 (Table 8).

In the first six months of the year 2010, production reached 188.2 thousand tons, up by 8% compared to the same period of previous year.

The organized poultry meat market is almost entirely supplied by the integrated industrial producers and by imports.

Since 2007, imports have decreased compared to previous years, mainly those from third countries such as USA, Canada, and Brazil (Table 9).

After accession, the chicken meat imports have decreased by about one third compared to previous years, due to domestic production increase.

Table 9. Foreign trade in chicken meat (thousand tons)

Specification	2004	2005	2006	2007	2008	2009
Imports	129.1	160.8	155.4	138.3	118.3	112
Exports	3.8	6.2	3.1	1.7	8.0	30.2

Source: National Institute of Statistics.

Exports are modest and decreased in volume after 2005 due to avian influenza, and the large producers are satisfied to supply the domestic market, where demand exists.

Table 10. Self-sufficiency in meeting poultry meat consumption needs from domestic production

Specification	2006	2007	2008	2009
Domestic production – thousand tons carcass	273.3	304.9	343.0	371.3
Consumption – thousand tons	460.8	433.8	453.8	462.2
Total production per total consumption - %	59.3	70.2	75.5	75.6

Source: National Institute of Statistics, own calculations.

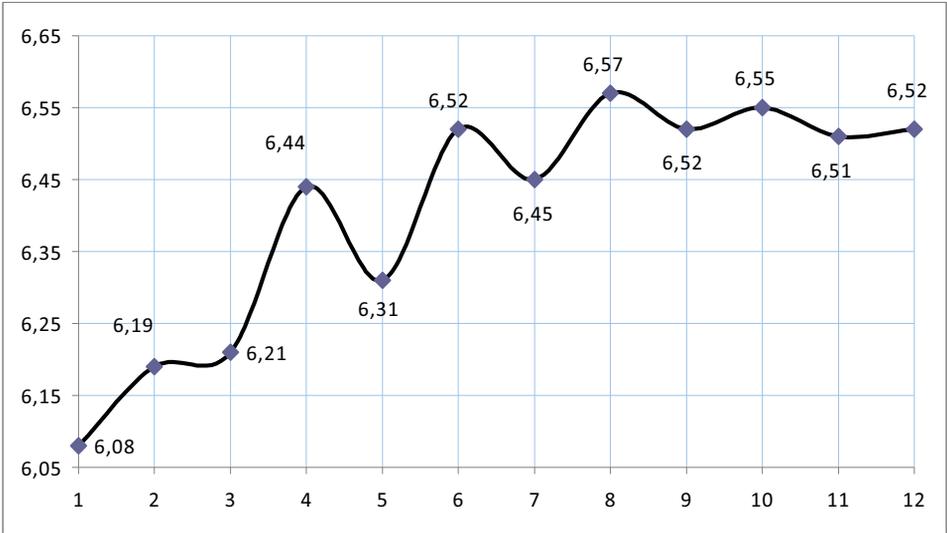
Poultry meat consumption in Romania had an increasing trend after the year 2000, from 12.1 kg/capita to 21.4 kg/capita in 2007 and 21.6 kg/capita in 2009, which is a level comparable to the EU average of 22.0 kg/capita. Con-

sumption increased due to imports, which accounted for 31% in 2007 and 26.1% in 2008, self-sufficiency reaching 59.3% in 2006 and 75.6% in 2009 (Table 10).

**Prices, volatility**

The broiler prices are reported to Brussels, as expressed in both national currency and in euro, as in the other EU Member States and represent average weighted prices at country level. The average monthly prices for broilers in 2009 ranged from 6.08 RON/kg in January to 6.55 RON/kg in October (Figure 3).

Figure 3. Evolution of monthly average broiler prices in 2009



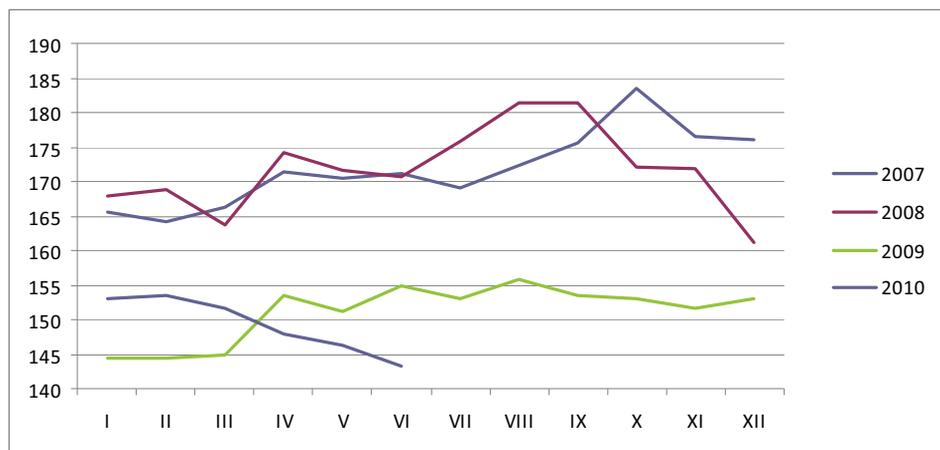
Source: MARD.

In 2010, the monthly average prices followed a decreasing trend, from 6.38 RON/kg in January to 6.08 RON/kg in June. In order to determine price volatility, we used monthly average price series for the chicken carcass in the period January 2007 – June 2010. Volatility measures the amplitude of price variation and the standard deviation and the variation coefficient are calculated, meaning the percentage ratio of standard deviation to the average of the period; this indicator reveals the volatility level of this product market.

In the year 2007, prices began to increase since March and reached a maximum level in October, i.e. 183.5 euro/100 kg carcass, while in 2009 prices began to decrease since October. The evolution of prices in 2010 also followed a decreasing tend, from 153.1 euro/100 kg carcass in January to 143.3

euro/100 kg carcass in June. When the price almost does not change, volatility is low. We calculated the standard deviation and the variation coefficient for the period January 2007–June 2010 (Table 11). The result of the price increase in 2008 was a standard deviation of 6.06 and a variation coefficient of 3.53%.

Figure 4. Evolution of broiler carcass prices, January 2007–September 2010



Source: MARD.

Comparing the variation coefficients in the period January 2007–June 2010, we can notice that price dispersion was higher in 2007 and 2008. The low level of the variation coefficients reveals a certain stability of the poultry meat market in the investigated period. The price fluctuations above the trend line are considered peaks, with a higher dispersion in the years 2007 and 2008.

Table 11. Variation coefficients for broiler carcass

Years	Average – euro/100 kg carcass	Standard deviation	Variation coefficient %
2007	171.82	5.25	3.06
2008	171.72	6.06	3.53
2009	151.14	4.11	2.72
2010	149.23	4.11	2.75

Source: own calculations on the basis of prices provided by MARD.

At EU level, in the period January 2004–May 2010, the variation coefficient for the broiler carcass was 9.23%, indicating low price volatility, according to a study from June 24, 2010 of the Economic Analysis, Perspectives and Evaluations Directorate of the European Commission.

The analysis of poultry meat prices in the first half of the year 2010 paradoxically reveals a price decrease tendency compared to the same period of the year 2009. This situation is most likely generated by a production surplus following the depopulation practiced by some producers who limit their activity in the conditions created by the absence of state aids and decrease of sales as a result of the population's purchasing power diminution.

According to the information provided by the Union of Poultry Farmers from Romania and by certain producers from the sector, the subsidies granted in the year 2009 covered about 15% of the production cost. In order to stay on the market, producers needed to lower prices, often under the production cost, or to get a minimum profit.

### **Some conclusions**

The national poultry meat production increased after Romania joined EU, while self-sufficiency in poultry meat also increased from 59.3% in 2006 to 75.6% in 2009. In 2010, producers were confronted with pressures related to the low prices compared to the 2009 prices, due to the diminution of sales, as well as the absence of subsidies and increase in feed prices.

The broiler carcass prices were below the EU-27 average, i.e. 1.61 euro/kg, compared to 1.75 euro/kg in 2008 and 1.50 euro/kg compared to 1.71 euro/kg in 2009.

The variation coefficients calculated in the investigated period were low, indicating a stability of the poultry meat market in Romania.

## **2. Vegetable market and price variation**

The vegetable sector in Romania is characterized by high risk and uncertainty. Owing to the great climate variations from one year to another, the total productions and the average yields have great variations. As a result, price volatility is extremely high. As a rule, prices decrease in the years with good yields and total productions, and they increase in the years with low productions. It seems that Romania's integration into the European Union did not contribute either to the diminution of vegetables price volatility.

Table 12. Variation coefficient of procurement prices by regions (%)

Macroregions and development regions	Variation coefficient of procurement prices 2004-2010 (%)				
	Tomatoes	Cucumbers	Pimiento peppers	Green peppers	Red peppers
TOTAL	89	75	22	40	24
Region NORTH-EAST	65	45	31	36	30
Region SOUTH-WEST OLTENIA	69	35	30	38	18
Region NORTH-WEST	n/a	31	23	23	n/a
Region BUCHAREST- -ILFOV	28	28	n/a	18	18
Region SOUTH- -MUNTENIA	30	42	n/a	19	14
Region WEST	n/a	23	n/a	26	44
Region SOUTH-EAST	n/a	n/a	n/a	n/a	22

\*n/a: not available

Source: own calculations on the basis of data from Tempo on line data base 2004-2008, NIS.

The vegetable market in Romania has certain peculiarities that differentiates it from the markets of the other agricultural products, among which the most important are the following: atomization of supply and demand, seasonality of vegetable products, zonality of vegetables and existence of a weakly developed marketing system; at the same time, the demand for vegetable products has a continuous character, while the supply is seasonal. This leads to an increased variability of prices. As long as the area under hothouses is small, the producers cannot benefit from the high prices over winter; in this period of the year, most vegetables come from imports, mainly from Greece, Netherlands and Turkey. In the vegetable farming sector, the individual holdings have the largest share of cultivated areas (over 95%), which practically leads to an excessive fragmentation of supply also with implications upon the prices of vegetables. The quality of vegetables also influences the vegetable prices. Among the factors that influence production quality, the following should be mentioned: seed quality, plant density, optimum water supply. Certain farmers do not respect plant density, and this influences production quantity and quality. The specific water consumption must be also respected, and the inefficiency of the irrigation system (irrigation water is not received at the right moment) adversely impact production quality. At the same time, farmers do not have sorting and packaging

equipment, which constrains their access to the large store chains and prevent them from obtaining stable and constant prices throughout the year.

Price variation is very important in the production decision as well as in the calculation of vegetable farmers’ incomes. Table 12 presents the values of variation coefficients of the monthly procurement prices by development regions and by types of vegetables.

Owing to the high variability of total productions and average yields, the variability of procurement prices is even higher. The tomatoes have the highest price volatility in all the 6 investigated regions (Table 12).

At the same time, owing to the pests and diseases and the extreme weather conditions, the supply is very variable and as a result prices have a high volatility. Farmers should improve the production decision and extend the production season on a correlated basis so as to be less confronted with price variation.

Table 13. Annual variation coefficient of average prices

Years	Variation coefficient of annual average prices (%)			
	Field tomatoes	Winter white cabbages	Onions	Green peppers
2004	21	42	21	27
2005	19	27	7	19
2006	42	56	11	36
2007	19	24	7	19
2008	19	39	5	13
2009	28	27	4	27
2010	9	6	11	11

Source: own calculations on the basis of data from Tempo on line database 2004-2010, NIS.

Table 13 presents the evolution of variation coefficients of average prices for field tomatoes, white cabbages and green peppers. It can be noticed that the tomatoes and winter cabbage had the highest price volatility in the year 2006, i.e. 42% and 56% respectively. Throughout the investigated period, onions had the lowest price volatility. The green pepper prices were also less volatile compared to the tomato and cabbage prices.

Table 14. Variation Coefficient for F&V in relative prices in few EU Countries

Country	CV 1999/2002	CV 2003/2006	CV 2007/2009
Austria	2.6	3.0	6.8
Bulgaria	6.9	2.8	12.9
Greece	7.7	3.7	3.9
Spain	2.2	3.3	2.4
Hungary	8.1	5.0	6.8
Poland	4.9	7.9	6.9
<b>Romania</b>	<b>9.7</b>	<b>12.3</b>	<b>12.6</b>
Slovak Republik	1.7	2.7	3.3

Source: based on Eurostat, <http://appsso.eurostat.ec.europa.eu>.

Regarding the evolution of variation coefficient at the EU level, one may notice that Romania records the highest variation coefficients.

### Some conclusions

The vegetable production and yields fluctuate a lot and this is reflected in the price variation. The coefficient of variation for vegetable is highest among the other Romanian agricultural products and among the EU countries. Although some support was provided to this sector within CAP and national policy, it is still confronted with large fragmentation among farmers and wholesalers. The organization of the F&V market is feeble in terms of infrastructure and institutions and this leads to difficult production decision among farmers and problems in selling the production. Weather conditions contribute also to a high variability of the production which makes it even more difficult to balance the demand and supply. A better allocation within RDP might contribute to new investments in the sector in order to diminish the high volatility and production.

### 3. The oilseeds sector

#### Analysis of the primary production sector

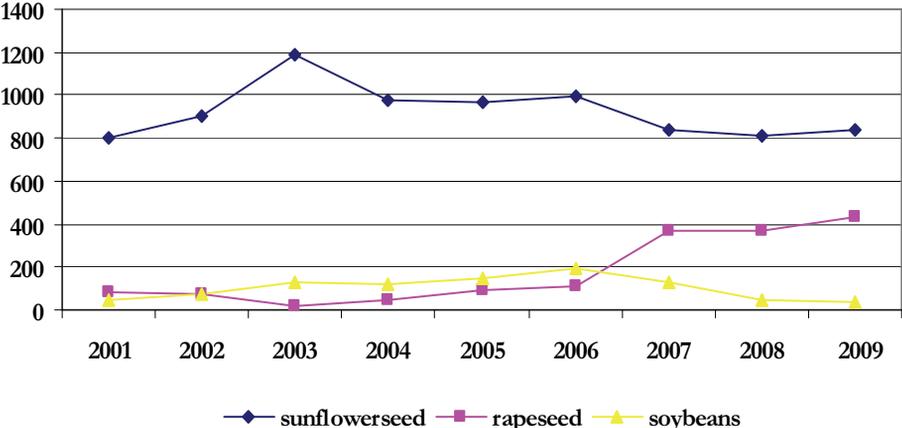
Romania has over 150-year tradition in vegetable oils production. It is one of the most important producers of oil crops in Europe. The main oil crops that

are cultivated are the following: sunflower (66%), rapeseed (30%), soybean (3%) and others (1%).

The vegetable oil industry had an increasing trend, mainly due to a steady increase of sunflower production and to a constant demand of raw (brut) oil and oilcakes on the foreign markets.

The area under oilseeds experienced a general increasing trend in the period 2000-2009 (Figure 5). One of the main causes was the faster increase of areas cultivated with rapeseed compared to the diminution of areas cultivated with sunflower and soybean (as a result of banning the cultivation of genetically modified soybean).

Figure 5. Total area under oil crops in the period 2000-2009 (thousand ha)



Source: NIS, Romania’s Statistical Yearbook, \*provisional data of the Ministry of Agriculture and Rural Development.

If we investigate the areas cultivated with oil crops by types of holdings, we can notice that there is a relatively balanced situation between the individual holdings and the agricultural companies. On the individual holdings, sunflower is cultivated on the largest areas (55-61%), in the conditions where manual weeding is applied for weed control.

In the case of soybean, this crop is mainly cultivated on the agricultural companies, which have the necessary machinery fleet and experience in cultivating this crop. The area cultivated with sunflower seeds has experienced a steady increase in Romania since 1989. Crop rotation limited the increase of areas under sunflower to 1 million hectares. Sunflower is the only crop in

which self-consumption is under 3%, and in this case the seeds are mainly used for producing cold pressed oil.

Sunflower remains a top product in the Romanian exports, while the exported surplus continues to decrease as the needs for raw materials for processing on the domestic market increase. Farmers consider that the sunflower is the crop with the simpler cultivation technology, as it does not imply high input costs (small seed quantities for sowing, use only of herbicides); after the plant reached the five-leaves stage, the next work performed by farmers is harvesting. Soybean continues to be a crop that is mostly sold on the market. The agricultural companies that had access to irrigations and modern technology began to increase the areas under this crop.

Although the soybean yields, under non-irrigated system, in the last three years, averaged 2 tons per hectare (in the case when the crop is established on the chernozems with surface water), in the past average yields of even 0.6 tons per hectare were obtained under drought conditions (before 1989, when the cultivated area was extended outside the zone suitable for this crop). Thus, in the years with drought, the soybean crop can be compromised in the absence of irrigation. Stimulated by the increased demand for biofuel, farmers began to cultivate larger areas with rapeseed, since the autumn of 2006.

In general, rapeseed is considered by farmers a crop that does not need irrigations. Yet, in the autumns with drought, the crop may be compromised if no irrigations are applied. However, this rarely happens, as generally when water is no longer available in the irrigation canals, the farmers give up establishing this crop.

In the future, as there is an increased demand for the rapeseed seeds, we expect that the rapeseed will become an irrigated crop, and the production gains and incomes will be significant.

Another risk factor in rapeseed cultivation is represented by the excessive frost in winter, which can partially or totally compromise the harvest, as well as by the extremely mild winters, which make it possible for the flower buds to appear even in the month of December; in both cases, the yields are negatively affected.

Another significant impediment is represented by the losses due to pod shattering at harvesting. In general, farmers cultivate rapeseed only if they have efficient combine harvesters and well-designed plans for cultivating their areas with winter crops so as to perform the harvesting of rapeseed and small grains in due time. The farmers who do not know how to plan the structure of crops on the basis of their own harvesting capacity can have serious losses due to rapeseed pod shattering. The National Agency for Agricultural Consultancy (ANCA) should provide advice to farmers in planning their crops for the following market year.

## **Analysis of the processing sector**

The Romanian oil industry is booming, being very competitive, with great investments from the large foreign companies in this field (Cargill, Bunge) absorbing almost 950 thousand tons of sunflower seeds and about 235 thousand tons soybeans. The peasant oil presses are processing about 70 thousand tons/year, with an extraction rate of 25% for sunflower, while the extraction rate under industrial system is 42% on the average.

Romania is on the third position in Europe with regard to the refined oil production. The market has developed very fast in recent years, the concentration level increased very much, so that the international processors (mainly from the United States) produce two-thirds of the domestic oil production. The Romanian oil production value is estimated at over 300 million USD (this value does not include the 20 thousand tons of oil obtained in the peasant oil presses that go to self-consumption).

The domestic demand, which remained constant, is largely satisfied from the domestic production. A recent trend, which is quite interesting, is represented by the acceptance of soybean oil in the human consumption, obviously in the poorer regions, sensitive to price variations. For the 2007/2008 season, vegetable oil imports were expected, at attractive prices for the Romanian consumers, such as the palm oil.

The industry continues to get consolidated by significant investments in replacing the equipment, mainly the bottling and labeling equipment, and quality control for getting in line with the EU standards. Two companies from the United States (Bunge and Cargill), with 50% market share on the Romanian market, are in full expansion, Romania being the center of raw materials (together with Ukraine and Russia) and it will be soon the greater refined oil supplier from Europe. There are also local investors with significant market shares (Argus Constanța 20%, Agricover Buzău 9.5%) and other 10 similar companies, which are struggling to survive in an increasingly competitive environment.

Soybean processing industry is dominated by a Swiss investor. The oil production capacity is 400 thousand tons, still not fully used due to the low consumption per capita of only 10-11 kg/year (representing only a half of the consumption average of the European Union), which is a limiting factor for production.

Owing to the very little diversified preferences, the Romanian consumers mainly prefer the sunflower oil. There are several Romanian brands that are recognized at national level and they are preferred depending on the

consumers' incomes. Both the local producers and the importers are trying to diversify their supply and to strengthen their role on the market.

The soybean oil is mainly used in margarine production. The margarine market slightly decreased, as the trend of consumption expenses increased. The first three producers (Unilever, Orkla and Rozal Brinkers) have 90% of sales. The margarine market is estimated at 60 million USD, almost fully covered by the Romanian production. The competition is very high in obtaining best prices possible for raw oil for margarine production. By its position on the oilseed market, Romania is to be considered an important source of raw materials for the factories from Western Europe, mainly in the case of rapeseed.

Although Romania has a total processing capacity for biofuels of 280 thousand tons/year, in the year 2007 only 30,000 tons of biodiesel were produced, and 20,000 tons of biodiesel were imported.

### **Storage sector analysis**

At present, the main player on the oilseeds storage market is the company Cargill, which has about 10% of total storage capacity and about 50% of the effectively used storage capacity. Here the best storage conditions are provided, yet the storage prices are quite high; these prices are not only the result of the good services provided, but rather of the regional monopoly the company has. Thus, only the loading/unloading from silo costs 10 euro/ton of product. Cargill is a company that can pay the stored product the next day after its reception, but the prices are slightly higher than the average prices practiced in the zone.

Almost all farmers sell their oilseeds production at the harvest time, as they do not have adequate storage facilities; even when they have storage premises, they cannot control very well the self-heating phenomenon that is very common in the case of oilseeds.

### **Marketing sector analysis**

The oilseeds are among the few vegetable products for which the payment is made on the spot (immediately), as they are sold at the very moment of harvesting.

In sunflower production, only 70 thousand tons of seeds do not enter the producer, depositor, and processor or trader system. This quantity of seeds is used by farmers for obtaining oil in small processing units. The oil obtained in this way is used in the very next period, being prone to oxidation.

Soybean is mainly cultivated by the units with integrated production that have also livestock herds. The beans are processed in specialized units and the processing value is paid. The soybean oil is used in margarine production or it is exported through the intermediary of specialized traders. The soybean oilcake imports are made through the specialized trade companies on order basis. The trader imports the oilcakes at the moment when all the oilcake quantity that it imports is covered by contracts.

In the recent period, due to the increasing demand for soybean oilcakes on the domestic market, the oil factory from Urziceni used direct imports of soybeans that were subsequently processed depending on the demand on the domestic market. There are also situations when the large consumers of soybean oilcakes use direct imports of soy beans that they process in specialized units depending on the feed needs.

As a result of the drastic diminution of the domestic soybean production, the milled quantity correspondingly decreased. As the soybean oil demand is very low, the direct oilcake imports are preferred, which account for 65% of the yearly consumption.

The rapeseed production goes mainly to export and it is obtained on the farms with their own combine harvesters. The rape seeds are sold to an exporter at the harvest time.

By tradition, Romania is a net sunflower oil exporter. The main destinations of sunflower brut oil exports were the European Union, 56% (Spain, Hungary and Poland) and Turkey 29%. On the other hand, many firms experienced difficulties, their exports being penalized due to national currency depreciation versus EUR and USD. Further problems appeared, due to very high prices for the raw material.

The incomes from oilseeds exports are quite stable due to previous contracting. This happens not only with the sunflower oil but also with the sunflower oil cakes, where most contracts were previously signed and the exports were covered with merchandise.

The main export destinations of sunflower meal are the traditional partners: Turkey 55%, Hungary 20%. The main suppliers of soybean meal were Brazil (69% of imports) and Argentina (17%). The oil factories have low storage facilities, which ensure their operation for one month. That is why they mandate the silos or send representatives to silos to buy sunflower seeds from farmers, at harvest time, and the factory is to pay for the seeds in the shortest time possible.

The oil factories have long-term contractual relations with the silos and it seems that both parts are satisfied with this partnership; the factories can choose between several variants of sunflower oil distribution. They export brut oil and oil cakes via specialized trade companies; the refined oil is sold directly from the factory gate to wholesalers or supermarkets; the sunflower oil cake is sold on the domestic market on the basis of a schedule and with the payment at the moment of delivery.

Romania has a positive trade balance from the trade in oil seeds, oils and oil cakes. If we investigate the oil seeds trade in the year 2010, we find out that the trade balance was deficient only in soybeans; for the rapeseeds and sunflower seeds the balance was positive. The import prices for the oilseeds are higher because the imported quantity is to a large extent the result of imports of seeds for sowing, with a unit value much higher compared to that of the commercial seeds.

#### **4. Analysis of price transmission along the agri-food chains**

The transmission of agricultural price variation caused by the agricultural price crisis, which in Romania was manifested in the period March 2007–May 2008, had an asymmetric character, in the sense that the process of agricultural price increase was almost simultaneously accompanied by the increase of processor and consumer prices (transmission with attenuated amplitude). In the period when agricultural prices decreased, which followed after May 2008, the processor and consumer prices continued to slowly increase or stagnated in the best case.

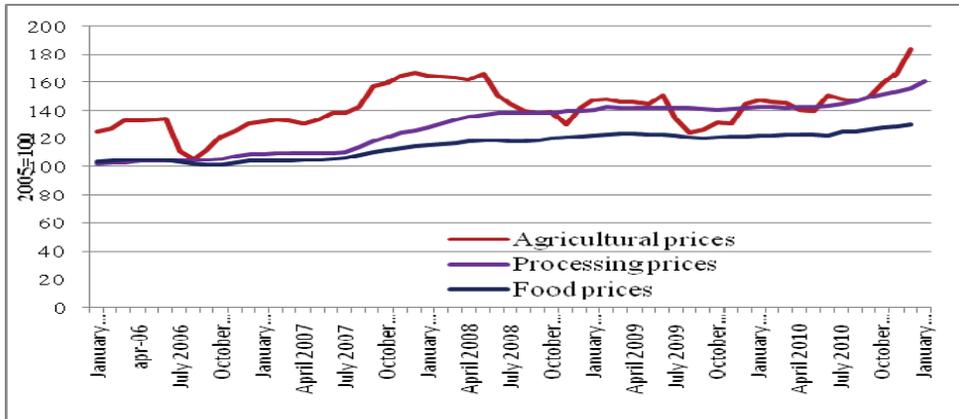
In the period of the 2007/2008 crisis, agricultural prices increased by 25.1% on the average, and this increase was relatively fast transmitted to the processing sector, where the output prices increased by 24.6% on the average, i.e. by a percentage quite close to that of agricultural price increase.

We mention that the European average of processing price growth in the period of the 2007/2008 crisis was only 9%. Logically, the processing price growth should be lower than the agricultural price growth as the agricultural product represents only one of the cost items in a processed food product. In EU-27, the agricultural raw material averagely accounts for 20% of the processed product cost. In Romania, the cost structure of processed food products is not transparent. Some disparate information would indicate very high shares of agricultural raw material (e.g. 65-70% in the case of bread), but we do not know how much of this information is true or whether it is disseminated in order to

justify the excessive increase of prices following processing. But in any case, the increase in transparency with regard to value added creation along certain chains would indicate whether these problems originate in the imperfect operation of markets along the chains (eventually concentrations in the processing sector for certain products), of the general economic background, of other input prices (energy, labour) etc. Anyhow, as we can see in Figure 6, price growth transmission to final consumers is much attenuated (13.6% in the period of the 2007-2008 crisis), as in the end, the final consumer's purchasing power constrains the continuous intention to increase prices from the part of operators in the agro-processing and primary sectors. Although foodstuffs are basic products, and the food demand is relatively inelastic, the consumer, in the situation of income diminution, looks for cheaper products or increase self-consumption (mainly in rural areas). In this way, food demand of more expensive products decreases, mainly in the case of products that are a source of animal protein (milk and dairy products, meat and meat products), and also in the case of fruit. In the period following the crisis (May 2008–October 2008), although agricultural prices were down by 16% on the average, processing prices stagnated, which reveals the asymmetric transmission phenomenon, i.e. in Romania the variations of prices at the higher levels in the chains of many products have only one direction: they grow. At EU-27 level, agricultural price depression was also followed by a modest decrease of processing prices. The same stability can be also noticed with regard to consumer prices (Figure 6).

Another price growth cycle along the agri-food chains was produced in the year 2010, under the background of natural disasters that affected the agricultural production in countries such as Russia and Ukraine, as well as of the economic crisis that led to great speculations on the markets of agricultural raw materials. This agricultural price escalation was felt in Romania as well, where in the period September 2009–December 2010, the agricultural prices increased by 45.2%, while the final consumer prices by 8% (Figure 6). We can notice that in this second price growth cycle, the transmission of price variations along the chains to final consumer was much attenuated compared to the first cycle, under the background of ongoing economic crisis, which significantly affected most population's income forms.

Figure 6. Evolution of agricultural products prices, of the processor products prices and of consumer food prices in Romania



Source: National Institute for Statistics, price bulletin, 2006-2010.

### Price volatility in the different stages of the agri-food chains

Price volatility analysis was based on the calculation of variation coefficients of the monthly series of fixed base price indices, namely agricultural prices, processor prices and consumer prices. The obtained results reveal that prices on the agri-food chains in Romania feature a higher volatility in the primary stage of chains (agriculture), while on the processing and consumer stage this volatility is lower. We can notice from the table below that the variation coefficient for the prices of crop products is 16.5% and for the prices of animal products 14.3%, in the period January 2006–December 2010. In the same period, price volatility in the case of processed foodstuffs was 13.1%, while in the case of the consumer prices of foodstuffs it was only 7.5%. The main characteristic of price transmission along the chains is the apparent stability of consumer and processor prices and the strong volatility of agricultural prices. As such, the agricultural prices and the consumer prices have different evolutions: the consumer prices have a much lower volatility and generally a constant growth trend, while the agricultural prices feature great fluctuations, both on the medium and seasonal term.

An explanation for this situation is that the food demand is conditional to the prices of products as well as to the consumers' incomes. Although foodstuffs are basic commodities and have a relatively inelastic demand, the budgetary restriction applies mainly to the more expensive products, i.e. consumers can opt for cheaper products in the case of the excessive price increase of these products. Most foodstuffs are perishable products, so that the operators in the retail

sector have special strategies: they do not increase selling prices very much when the agricultural prices explode, and they do not decrease them either when the agricultural prices significantly decline.

Table 15. Price variability in the main stages of agri-food chains \*

Name of product	Variation coefficient Jan.2006- Dec.2010	Variation coefficients					
		Jan.2006- Mar.2007	Apr.2007- May 2008	Jun. 2008- Oct.2008	Nov. 2008- Sep.2009	Oct.2009- Jul.2010	Aug.2010- Dec.2010
Crop products	16.5%	11.2%	10.8%	16.2%	9.4%	8.9%	13.1%
Animal products	14.3%	5.8%	8.4%	5.1%	3.4%	4.5%	4.6%
Total processing	13.1%	2.4%	8.8%	0.5%	0.7%	0.7%	2.3%
Total foodstuffs	7.5%	1.2%	4.6%	0.6%	1.0%	1.0%	1.4%

\* The price indices used are fixed base indices, 2005=100.

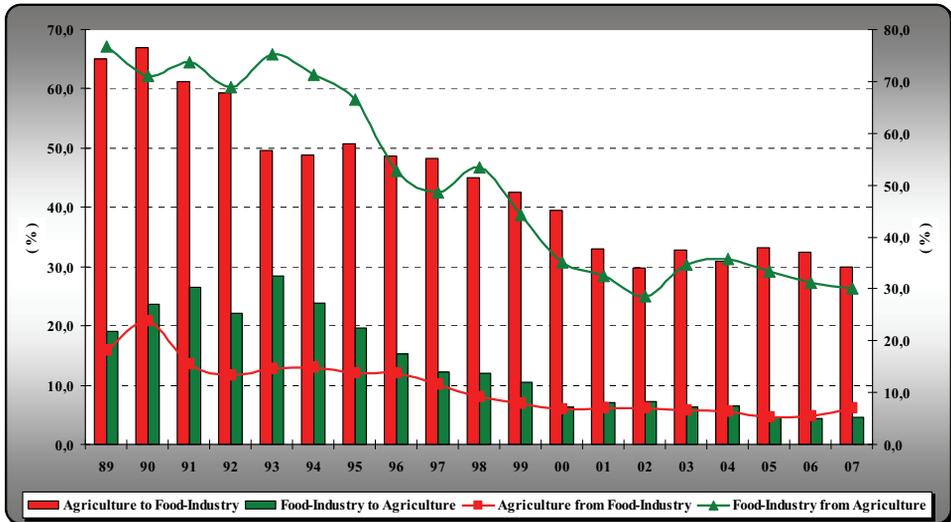
Source: Own calculations on the basis of data from the Price Bulletins 2006-2010, NIS.

### Internal convergence through agri-food integration

The synthetic expression of the presence of an agri-food disintegration process in Romania's economy, throughout 1989–2007 results from the analysis of the intensity of economic flows between the general aggregate “agriculture” and the “food industry” aggregate, both from the perspective of intermediary deliveries (destinations) and from the perspective of intermediary acquisitions (origins).

Thus, from the perspective of intermediary deliveries a decrease by over 35% of the intensity of intermediary deliveries of agriculture to the food industry can be noticed (from 65.1% in 1989 to only 29.9% in 2007, with maximum 67.0% in 1990 and a variation coefficient of 27.6%) (Figure 7). At the same time, the intensity of intermediary deliveries flows from the food industry to agriculture was down by over 14.5 percent (from 19.1% in 1989 to 4.6% in 2007, with maximum 28.4% in 1993 and a variation coefficient of 60.7%).

Figure 7. Evolution of inter-relations between agriculture and food industry, as intermediary deliveries and intermediary acquisitions, in Romania's economy, 1989-2007



Source: own calculations, on the data from Nat. Accounts, 1990-2007, National Institute of Statistics, Bucharest.

The manifested regressions have multiple causes, which can be found both in the development pattern of the agri-food sector in the command economy period and in the failures during the transition period, among which the following stand out:

Asymmetry in the destructuring process from agriculture (much faster and more radical) compared to that in food industry (slower and more superficial);

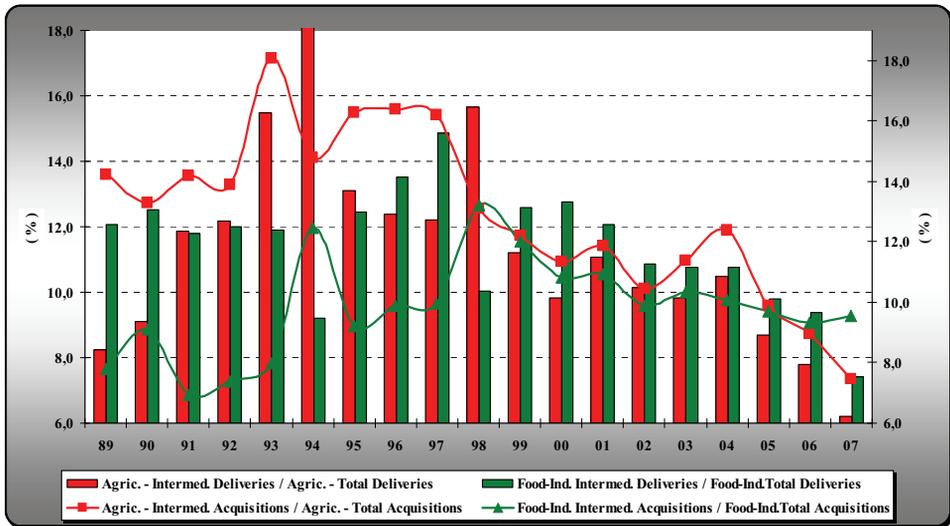
Narrowing the population's final agri-food consumption demand, following the general economic decline action, under the background of persistent hyperinflation. On the other hand, from the perspective of intermediary acquisitions, it is worth mentioning a stronger diminution (by 46.7%) of the intensity of the intermediary purchases flows of the food industry from agriculture (from 76.7% in 1989, to 30.0% in 2007, with a variation coefficient of 35.8%).

At the same time, the intermediary acquisitions of agriculture from the food industry diminished their intensity by 11% (from 18.0% in 1989 to 7.0% in 2007, with a maximum of 23.7% in 1990, with a variation coefficient of 46.7%). One of the explanations for the emergence and persistence of the agri-food disintegration phenomenon in the Romanian economy resides in the situation created by the excessive increase of the number of suppliers of agricultural raw

materials, compared to the relatively low number of agri-food processors, an asymmetric “atomization” generating very high variation coefficients.

The other modality to reflect the internal agri-food economy convergence consists in measuring the intensity of intermediary deliveries (LI) and of intermediary acquisitions (AI) respectively, of each of the two component aggregates (agriculture – a and food industry – ia) in the corresponding total (Figure 8).

Figure 8. Evolution of the share of agriculture and food industry in total intermediary deliveries (LI) and total intermediary acquisitions (AI) related to the respective activities from the Romanian agri-food economy, 1989-2007



Source: own calculations, on the data from Nat. Accounts, 1990-2007, National Institute of Statistics, Bucharest.

A few remarks can be formulated with regard to the persistence of the agri-food disintegration phenomenon in the Romanian economy:

The highest relative instability (measured by the variation coefficient) is found in the aggregate “agriculture”, its shares ranging from 18.2% (1994) to 6.2% (2007), with a variation coefficient of 26.2%, in the intermediary deliveries and from 18.1% (1993) to 7.5% (2007) respectively, with the variation coefficient 21.2%, in intermediary acquisitions;

The aggregate “food industry” presents lower decreasing shares, from 14.9% (1997) to 7.4% (2007), with an average variation of 15.2%, in the intermediary deliveries and from 13.2% (1998) to 7.0% (1991) respectively, with a variation coefficient of 16.8%, in the intermediary acquisitions. Reaching

economic convergence through agri-food integration is endangered by the relatively high instability of the intermediary deliveries of agriculture, as a cumulative reflex of the meteo-dependence influences and economic-organizational risks in this field.

## Conclusions

From the analysis of the sector presented above, one can notice that although there were steps made in improving competitiveness following the EU accession, the main structural problems are still an issue. Fragmentation still remains a problem, the negotiation power is still low, there is an oligopoly situation regarding the agricultural inputs, there is also an oligopoly situation in the distribution and marketing channels especially in the vegetable sector. Price volatility is extremely high, which is a consequence of a very high production variability and lack of balanced situation between demand and supply of agricultural products. This may suggest that the adoption of Common Agricultural Policy has not yet solved the main sectoral problems and the future CAP may further be reformulated in such a way that problems at stake could be better tackled.

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## **The Common Agricultural Policy in the function of organic production development in EU**<sup>32</sup>

### **Introduction**

Under contemporary conditions the development of agricultural production has been achieved mainly at the expense of the environment. Traditional agriculture (natural farms and farmer's way of using plants and animals) already left a legacy of polluted nature and thus the environment (erosion, barren land etc.). Modern agriculture which would use technical-technological achievements could cause even more serious damages. We could not let that development and prosperity of agricultural production threaten the environment and lead to ecological problems, with unforeseeable consequences. Under present conditions, agricultural policy should take into account the agro-ecological issues in agribusiness. The main task of modern agricultural production and food industry is not only to produce more food at lower prices, but also to contribute to their work on protecting and improving the environment. Thus the production of the so-called healthy food includes using environmentally friendly technologies. But in the first place it implies that the profile of managers in agribusiness will also change. They should be modern eco managers. The basic task of these eco managers would be to manage the control of application of ecological principles in agricultural production. In contemporary business conditions of agricultural enterprises it is important not only the business effect that is realized on the market, but also the level of acceptance of ecological principles. Application of these principles could be one of preventive measures in environmental protec-

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<sup>32</sup> The paper is a part of the research on the projects: 1) III – 46006 “Sustainable agriculture and rural development in terms of realizing the strategic goals of the Republic of Serbia within the Danube region“, financed by the Ministry of Science and Technological Development of RS; 2) TECH FOOD: “Solutions and interventions for the technological transfer and innovation of the agrofood sector in South East regions”, Programme co-funded by the European Union, South East Europe, Transnational Cooperation Programme, Institute of agricultural economics, Belgrade.

tion. Actually it is more expensive to eliminate adverse consequences caused by failure to observe the ecological principles in business, than stick to ecologically correct principles. When seeing the competition and strategic possibilities for agricultural development of the EU countries that would be harmonized with expansion of agricultural market, it should start from some important points: first, under the influence of the EU enlargement the structure of its internal market is changed; second, the requirements for state regulations in terms of encouraging the growth of agricultural production as an important branch in agro industry structure are changed; third, by increasing the number of the EU Member States, the position of agriculture and agro industry is changed depending on their level of development in the countries that are integrated in EU.

## **1. Nature and characteristics of common agricultural policy**

In the period 1967-1991 the European Union Member States significantly improved cooperation in the function of common economic policy development, by which an important place in agricultural development has been given. First the common market of agricultural products was established, and then the common market policy in EC. In other words, in that period the EC members had the aim to protect themselves from competition of the countries beyond this community especially in the field of agro industry sector. In that period our country carried out exchange with the EC members in accordance with changes of conditions on their market. Agriculture and its agricultural policy had important role in the period of transformation of EC into the EU, by signing the Maastricht Treaty between members in 1992. This had given a new role to agriculture on the EU market, which required the “Common Agricultural Policy“ (CAP) to be established. That represented significant reform in the EU agricultural policy, which defined the objectives of encouraging the growth of production volume of the basic agricultural products (cereals, oilseeds, sugar beet and sugar, beef, especially baby-beef, milk and their products). Common Agricultural Policy had endured fundamental reform in June 2003, which created long-term perspectives for sustainable agriculture and rural development.<sup>33</sup>

For the time being EU has over 640 geographical indication and indication of origin (beside these there are over 4.000 registered indications for wines and alcoholic beverages). Member States can offer assistance for food

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<sup>33</sup> Jovanović-Gavrilović, B. (2004): “Concept of sustainable rural development and its importance for EU countries and Serbia”, Institutional reforms and transition of agriculture in Republic of Serbia, Faculty of Economics, Belgrade, page 64.

quality programmes of some other country if those countries respect numerous EU criteria. CAP has clearly defined policy which is focused on organic food and agricultural production<sup>34</sup>. The organic agricultural production refers to farmers who return nutrients which are contained in waste products to the soil, and who at the same time take care of the animal welfare, avoid to use synthetic pesticides, herbicides, chemical fertilizers, growth hormone, antibiotics and genetic modifiers.

Agricultural producers who deal with organic agriculture use the set of techniques that help to maintain ecosystem and to reduce pollution. EU has introduced rules for organic agricultural production in 1991. They have the aim to secure the authenticity of organic agriculture methods, in order to provide framework for organic production of plants and animals and to introduce rules for labeling, processing and placement of organic products. The aim is to give guarantees to consumers about the quality and safety of the organic products which they buy, and to secure limitations and guidelines for farmers and other participants in the production chain within they must work. Incentives for organic agricultural production are approved in EU Agro-ecological scheme.

The EU Common Agricultural Policy must be directed as an integrated policy which contributes to other elements of the state policy, above all in the direction of rural area development. The policy which is advocated in such way requires systematization of the following four elements<sup>35</sup>:

- Market stabilisation – MS;
- Environmental and cultural landscape payments – ECLP;
- Rural development incentives – RDI;
- Transitional adjustment assistance – TAA.

Today CAP reflects almost a half of the century of long change of priorities. The initial objective to increase food production, regardless of costs, is replaced with controlling the production surpluses and excessive costs. Redirection towards fulfillment of various social and ecological goals is also carried out through mechanisms which are in great deal separated from the production. None of the proclaimed objectives entirely satisfies the current objective of Serbia, and that is ending the process of transition into market economy and creating the effective and competitive agricultural sector, and at the same time taking into account current social and ecological problems.

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<sup>34</sup> <http://ec.europa.eu/agriculture/capreform>

<sup>35</sup> Njegovan, M.Z. (2003): “Framework for European integration of Serbian agriculture“, *Agriculture and rural development in European integrations*, Faculty of Agriculture, Belgrade, page 93.

CAP carries the main heritage from the past which was oriented to the production. As far as the new one-time payments to agricultural farms are not connected with the current production, the amount that every agricultural producer receives reflects his previous direct benefits related to foodstuffs, which in most cases arise as compensation for price support reduction. For that reason direct payments in 15 “old” Member States are still firmly linked with the production of agricultural food from the past then with the current production of ecological or social goods.

## **2. The Common Agricultural Policy Development**

Common Agricultural Policy began to form in 1960s as we already pointed out by forming the “common market mechanisms” for practically every agricultural product. Emphasis was put on the joint formation of the community pricing policy, and from that (Article 40 of the Treaty of Rome) came the European Agricultural Fund which represented the source of funding of the Common Agricultural Policy (of prices).<sup>36</sup>

EU with its common policy contributed to higher communication of Member States in all segments of agricultural production. EU creation is thus connected with establishing of developed agricultural policy concept. Note that EU started with Mansholt plan (Le plan Mansholt) which was mostly implemented to 1980. The complexity of issues of such EU agricultural programme appear in many segments of agricultural policy in every country. Some of these issues are the following: the issue of general position of agriculture in a given country, the issue of farmer income improvement, the issue of overcoming unfavourable agricultural structures, the issue of labour surplus in agriculture, the issue of low work productivity, the issue of precise social policy measures for agricultural producers and many others.

Any of these issues if placed would automatically require long discussions in creation of shared vision. For that reason it is necessary to start with studying these issues and seeing all the aspects of their possible solution. Generally speaking CAP can be evaluated as successful on the basis of the objectives mentioned above, however, in reality it caused serious economic, ecological and political problems.

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<sup>36</sup> Lovre, K., Trkulja, Đ. (2003): “Integrated policy of agrarian and rural development of the European Union and the implications on agricultural policy for transition countries”, *Annals of Faculty of Economics in Subotici*, number 9, Subotica, 2003, page 6.

Enlargement from 1973 even more complicated the already complicated relations. The two small countries (Denmark and Ireland) with their big agricultural sectors and one big country (Great Britain) with its small agricultural sector, but with great number of big agricultural producers, joined the European Union. The accession of Great Britain to the EU was the one that caused new political shift because for the reason that Great Britain followed agricultural policy which was confronted to CAP. In the last two centuries Britain was not able to produce enough food for all its population, because there was little arable land on the island. During the time as the Empire grew smaller the British switched to supplying of agricultural products from Commonwealth and from cheap suppliers. The countries of Commonwealth started to worry about the accession of Great Britain to the EC. From that reason come roots of British aversion and criticism which is directed towards CAP.

Excessive production of agricultural products caused new discussions about CAP reform. The Council has imposed small change in guaranteed price system and specific form of payment which should establish „co-responsibility“ of producers of milk products, so that they could recharge the costs of intervention storage and subsidy of product surplus selling. Since this payment for „co-responsibility“ did not get the results the Commission proposed imposing of quotas<sup>37</sup> in production. After intensive and long negotiations at the highest level in March 1984 European Community leaders agreed about the system of quotas for milk production.<sup>38</sup>

Nevertheless, imposing of quota for milk as well as quotas for tobacco and sugar did not contribute much to reduce the consumption related to CAP. There was a possibility to come to bankruptcy. Forthcoming Mediterranean enlargement was also a problem, as well as constantly present insisting of Margaret Thatcher on budget reform which additionally strenghtened the pressure to come to radical measures. At the summit at Fontainebleau in June 1984 the European Council decided to reduce consumption growth for CAP, but at the same time the Council made a decision to increase own incomes of the European Union thus eliminating the reason for long-term reforms of CAP, that is threat of money lacking.

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<sup>37</sup> Quotas are imposed in order to destimulate production above limit. For this purpose taxes are imposed from 75% to 100% for exceeding permitted quotas. Just to emphasize that quotas were confronted to the idea about common market of free movement of production factors.

<sup>38</sup> Petit, M. (1989): *Pressures on Europe's common agricultural policy*, International food policy research Institute, Washington i Ecole Nationale superieure des scienses agronomiques appliquees, Dijon, p.10.

The question of CAP reform again became current in 1987 and 1988 because of budget pressure. The Commission proposed the mixture of measures for excessive production prevention, consumption limitation, diversification of support for agricultural producers and rural area promoting. Direct payments to farmers are imposed in 1988 by the so-called MacSharry reform which would become more and more significant way of agricultural subsidy.

This attempt of reform was also just partly successful. The pressure to carry out effective reform was still growing not only because of CAP overtime costs, but also because CAP encouraged unfavourable international comments on recently launched programme of the unique market. All of this was additionally influenced by weak improvement in the Uruguay Round of negotiations about The General Agreement on Tariffs and Trade (GATT). Misunderstanding was caused as a consequence of disagreements about export subsidies, and at the same time it contributed to increase the international pressure on the European Community to reform CAP. Involving agriculture into the Uruguay Round brought the Commission into a position to defend itself even before the negotiations started in September 1986. The Council insisted that basic objectives and mechanisms of CAP, internal as well as external, could not be questioned.

The incentive for enlargement together with even more expressed care for environment and consumer concerns formed the basis of proposal for reform of CAP in Agenda 2000, strategy of the Commission for "a stronger and wider Union at the beginning of the 21th century."<sup>39</sup> Published in June 1997 Agenda 2000 included modified objectives of the Common Agricultural Policy which revealed the impact of new social movements and economic trends on agricultural policy. Agenda 2000 was issued in 1999 with the aim of further long-term development and continuing of trade negotiation with WTO. The EU heads of state and government agreed that the new agricultural strategy was made of coherent policy which would represent framework for agriculture and regional development in EU. Agenda includes period 2000–2006 and represents strategy based on the principles of MacSharry reform, but also includes the strategy for comprehensive development towards extended needs of the rural communities in Europe. The basic guidelines for this reform were:

- Improvement of global competition of the European Union by lower prices,
- Guarantees for food safety and quality to the consumers,

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<sup>39</sup> Agenda 2000 for a stronger and wider Union, COM(97) 2000 final VOL. I. Brussels: Commission of the European Communities, 15.07.1997, p. 98.

- Ensure permanent incomes and fair life standard to agricultural community,
- Agricultural production methods should be favorable for environment and they should respect protection of the animals,
- Integrate objectives related to environment into its instruments,
- Search for and create adequate earnings and employment for farmers and their families.
- New division of functions between the Commission and Member States which refers to compensation in the form of direct payments or rural development measures.

Basically Agenda 2000 proposed EU to continue with MacSharry reforms by transforming agricultural subsidies from price support into direct payments. The Commission suggested great reductions of guaranteed prices for certain number of agricultural products. Agricultural producers would receive compensation by some form of direct payments.

Besides all the above mentioned Agenda 2000 also gave special attention to rural development by stressing the obligations and possibilities for agriculture with the aim to increase ecological awareness. According to this Agenda 2000 proposed environmental protection within agriculture while organic agricultural production should receive even more significant role. Agenda led to simplifying of rules which refer to new rural development and market regulation and managing regulations in accordance with ecological standards, especially in relation to Agricultural crop. Rural development has become the second pillar of CAP. The reform stressed the intention to review rural development in wider context, that is including agriculture and forestry as well as other professional interests in rural areas.

We can conclude that reform of CAP from Agenda 2000 was very modest, because it did not include elimination of price support system nor great reduction of agricultural incomes. Cuts in prices about which the agreement had been reached were not sufficiently deep to ensure the possibility to manage agricultural policy in the period after the EU enlargement. These measures also could not satisfy critics of the EU agricultural protectionism in the World trade organization. The most important was that food prices in EU despite basic market conditions remained high even though supply still exceeded demand.

### 3. EU environmental legislation and policy

The European Union has prepared *White book* which contains way of preparation of Eastern European countries for integration into unique market. This book regulates instructions from the legislation field which Member States must adjust. White book besides civil-law and criminal-law regulation also contains fields in regard to environmental protection<sup>40</sup>. EU environmental policy has above all the function to:

- 1) achieve long-term stable economic development and fair division of natural resources by developing new technologies which contribute to increased use of resources, on the one hand and
- 2) reduce destructive effects of industrial and human waste by lowering and stopping the production of leading polluters on the other.

In other words, the objective of environmental policy as a component of economic policy is to define negative and positive external effects, to emphasize precisely the most significant types from both kinds of effects and to propose the way by which it is possible to reduce the negative, and increase the positive external effects<sup>41</sup>. Cognition that agricultural production beside its primary function also has the potential to contribute to environmental protection, restoring of natural resources and biodiversity protection, has led towards shaping the basic version of European multifunctional agricultural model. The EU common agricultural and rural policy (CARPE) include four important elements:

1. assistance in transition adjustment,
2. market stability,
3. subsidy linked with ecological component, as well as with landscape preservation,
4. stimulative factors of rural development<sup>42</sup>.

Environmental protection system is very complex (and certainly very expensive) and it consists of measures, conditions and instruments by which the protection is ensured. At the same time, subjects of protection are starting from the state level, that is, the Republic, autonomous provinces, units of local self-

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<sup>40</sup> Jovanović – Kolomjeceva, L. (1998): *Ecological management*, University Braća Karić, Belgrade, page 189.

<sup>41</sup> Cvetanović, S., Jovović, D. (2006): *The European Union Economic Policy – new European economy*, Faculty of Economics in Nišu, Niš, page 190-191.

<sup>42</sup> Trkulja, Đ., Lovre, K., Gajić, M. (2005): “Agricultural multifunction of the European Union – essential reform and real possibilities of new Member States”, *Multifunctional agriculture and rural development*, Thematic collection of works, Institute of agricultural economics Belgrade, Belgrade, 2005, page 109.

government, legal entities, entrepreneurs, public services, citizen associations, as well as physical entities. Their obligation is to preserve and improve the environment, to cooperate mutually with each other, to make decisions in necessary coordination and of course to fulfill them.<sup>43</sup> European Union has prepared White book which contains the way of preparation Eastern European countries for integration into the common market. This book regulates instructions from the legislation field to which Member States must adjust<sup>44</sup>.

#### **4. Objectives and standards for organic food production**

Organic food is produced, processed and/or brought into the market in accordance with international standards and the Organic Foods Production Act in Serbia. According to Codex Alimentarius the organic agriculture includes holistic production-managing system for plant and livestock production. For organic agriculture exist strict rules, whose objective is to ensure guaranteed quality of picked forest fruits, agricultural plant and animal products. Organic agriculture is based on essential bond between agriculture and nature with stress on respect of natural balance.<sup>45</sup>

Numerous objectives of organic production are: production of sufficient quantities of high quality food; maintaining and increasing long-term fertility and biological activity of the soil by using biological, mechanical and methods of adjusting to local conditions; protection and conservation of biodiversity in nature and agriculture, on farm and in its surroundings, by using sustainable production systems; sustaining and conservation of genetic diversity by paying attention to managing of genetic resources on the farm, recognizing the importance of domestic knowledge and traditional production systems, their protection and application in education. In addition to them, the numerous objectives stated in Codex Alimentarius can be added such as: promotion of restorable resources in locally organized agricultural systems, handling with agricultural products in the way by which the organic integrity and vital quality of the products would be sustained in every sequence of processing, etc. In order to measure these objectives easily, the best way would be to ensure their implementation in practice

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<sup>43</sup> Katić, B., Cvijanović, D. i Nikolić, M. (2006): "Environment and quality of healthy food in Serbia", *Economics* 3-4, 2006, page 47-48.

<sup>44</sup> Jovanović – Kolomjeceva, L. (1998): *Ecological management*, University Braća Karić, Belgrade 1998, page 189.

<sup>45</sup> Mihailović, B., Savić, M., Katić, B. (2007): "Consulting, sustainable development and organic production: perspective of Serbia", *Industry*, number 4/2007, page 81-94.

and to make a difference between organic and conventional production and to impose procedures, official rules, both at national and international level.

Organic production must be managed according to the rules, given in IFAOM standards in which minimum of requirements for organic production is proposed and defined. The standards include the following indicators:

#### 1. Production:

- Organic ecosystems must be of such quality so that by farm maintenance it is possible to sustain biodiversity and conserve nature. This, among other things, means soil conservation, quality sustaining and effective use of water, protection of endangered wild species, careful selection of plants for growing. Genetic engineering is excluded, and products must not include ingredients, additives or supplements made by genetic engineering;
- Soil and soil managing, fertility, sustainability based on using these measures and substances that are compatible with basic soil;
- Plant production based on the selection of plants and varieties in accordance with their adjustment to the existing soil, climate and tolerance on diseases and pests (organic seeds and plants). Special attention is paid to the selection of ways of plant protection.
- Organic livestock production based on harmonic relationship between soil, plants and animals, organic food nutrition, life without stress and exertion for animals, good selection. The farm must be in private ownership. Animal breeding is carried out by natural techniques of reproduction and veterinarian insemination. Food for the animals must be from the same farm – at least 50%. Sick animals are adequately treated with possible isolation, and the organic production controller must be informed about used chemical medications and antibiotics. During the transport and slaughter, the animals must be exposed only to minimal stress.

#### 2. Processing and manipulation

- processing must be carried out in separate premises for conventional (functional) food;
- processing is carried out by biological, mechanical and physical methods so that the sustainable vital quality in the final product is ensured;
- only organic ingredients are used for production;
- storage is carried out in controlled conditions;

- packing should be with least unfavorable effects on the product and it should be either returnable package or the one which can be recycled or biologically dissolved;

### 3. Labeling

- it must be clear and correct label that it is organic product as for example «product from organic agriculture», etc;
- label should contain the name of the person / company responsible for the production;
- label of a person/ certification body informing who certified the product.

Standards give the production common language. Thus the communication is more simplified, and the marketing more successful. Standardization helps the producers to secure the product which is wanted and which they can sell, and the buyers to receive the quality of product which they want. Big associations of supermarkets impose quality standards which the production must fulfill. These standards refer to biochemical characteristics, external outlook (weight, color, diameter of fruit) and the presence of harmful materials (nitrates and heavy metals, residual pesticides, phytohormones).

The most important standards are EUREGAP 13 for agricultural production and HACCP in processing industry.<sup>46</sup> These standards were formed as a reaction of consumers to unsafe food during epidemic of livestock diseases (mad cow disease, foot and mouth disease), as well as from fear of imposing genetically modified food.

**EUREGAP** is the standard which covers all the main aspects of production, such as soil managing, crop growing and harvesting. It also deals with issues of pollution, labour treatment and environmental protection. The standard follows the production from sowing (seed origin and soil quality are analysed), through growing (using of herbicides, pesticides and fertilizers-quantity, type, quality, place and way of applying is tracked), irrigation and harvesting (level of hygiene and manner of storage) to packaging, transport and placing the product on shelf in a shop.

**HACCP Standard** represents the system that identifies, analyses and controls the risks, that are significant for food safety. The risk includes biological, chemical or physical agents in food, with a potential to cause unfavorable effect on human health. The needs for HACCP are influenced by the following factors: growing number of pollutioners, increasing concern for health because of food

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<sup>46</sup> Presna, M. B., Branković, A., Savčić, R. (2006): *Fresh fruit and vegetable 2006: Competition of Serbian agriculture*, Jefferson Institute, Belgrade, page 27.

hygiene cross contamination, higher risk from diseases caused by chemical problems in food production, new technologies and life conditions and even less resistance of people to diseases, also the world market which demands international harmonization. HACCP provides numerous advantages. The most important are the following: provides preventive system for food production, effective and efficient surveillance from the government with less inspections, responsibility for food safety is transferred to industry, helps food producers be more competitive in the world market.

## **5. European regulation for organic food production and turnover**

In the last decade of the 20<sup>th</sup> century the organic food production rate rapidly increased. Organic food turnover had growth rate high above than the one in conventional agriculture. Consumption of organic food was on the increase in Europe and beyond (the USA, Japan etc.). Higher demand of organic products was obvious.

Having in mind the significance of organic food the European Union Commission has formed the strategy of its production and turnover within the Common Agricultural Policy. Legal framework for production development and turnover of organic food is regulated by Regulation no. 2092/91 and Regulation no. 1804/1999 and European action plan for organic food and farming.

In European action plan legal basis for comprehensive analysis of organic food production development in Europe has been given. The action plan contains five chapters which are:

- Introduction;
- Organic food production development;
- Organic product market;
- Organic food policy and production;
- Standards and inspection.

Within the Programme annexes and 21 actions are also contained. The actions are the following:

- Organizing the campaign for organic production promoting and informing;
- Creation and maintaining internet data base about national standards in relation to standards in EU;
- Maintaining and improving of statistic data base about organic production and market;

- Assistance for Member states as organic food producers;
- Development of EU measures data base for the organic food field (information, production, marketing);
- Recommendation to Member States to include in their rural development programmes instruments for support of the organic food production;
- Researches in organic food production and ways of modification;
- Transparency of standards and inspection monitoring ;
- Demands to complete, establish and improve the standards for organic food;
- Forming the independent group of experts for technical advices;
- Explaining Decree no. 2092/91 by regulations related to GM;
- Improving the work of inspection services by imposing special measures and cross control according to Decree no. 2092/91;
- Developing of analytical methods in Common researching centre, which can be applied in organic food production;
- Studying the possibilities to use identified zemljišnjih parcela defined for CAP management needs;
- Providing adequate mutual cooperation of inspection bodies and authorized inspection bodies according 2092/91;
- Developing appropriate system of inspection body accreditation;
- Publishing annual reports of Member States about inspection service monitoring;
- Strengthening the effort to include third countries into common list;
- Contrasting standards about EU organic food production, Codex Alimentarius and IFOAM standard;
- Informing about the organic food production standard in EU and inspection systems in third countries.

Since the organic food market depends on the consumer trust that is built and permanently taken care of, it is very important to establish defined system of control and certification. It is also important that the consumers are well informed about the principles and benefits of organic food production and consumption.

It must be emphasized that the significant element of strategy for environment protection and sustainable development is organic food production.

Organic food production is entirely incorporated in rural development policy. Important positive effects of the organic food production are:

- Reduced and controlled use of pesticides and artificial fertilizers;
- Soil protection;
- Biodiversity conservation and environment protection;
- Animal welfare.

The EU Commission estimates rural development programmes especially from the point of organic food production. Cognition and experience based on these programmes represent building material of a new legal document for rural development from 2006. EU Member States should incorporate in their rural development programmes support to organic food production, which includes, among other things, education as well as training of all participants in organic food production and turnover. Adequate labeling of organic food is also important as extremely recommendable in areas, which are proclaimed as ecological oases.

It should be noted that organic products are traditionally placed on the market as unprocessed or minimally processed. Recently the consumers show more interest for supply and consumption of processed organic food, which causes problems for processors because of drastic limitations in number of additives that can be used.

Organic food import on EU market constantly grows. Significant participation in this have developing countries. Export rules protect the concept of organic food production, interest of producers and consumers in EU. Regime is unique for organic products imported from third countries (article 11. Regulation no. 2092/91). EU regulation foresees:

- Organic product import is allowed from the country, which has agreed to and accepted all requirements from the Commission delivered to exporter according to valid procedure;
- Authorized service/body of the third country can issue a certificate on organic production if it is entirely in accordance with EU requirements and if the inspection system is identical as control in EU;
- Organic products must have the origin from registered regions or processing organizations, which are constantly under the regime of inspection control.

EU Commission before organic food import estimates guarantees of third countries about fulfilling the export procedures. Besides, the inspection results from the point of sameness with inspection measures in EU are separately esti-

mated. It is important that the Commission has the right and obligation, if necessary, to request from the third country more detailed information about all aspects of production, processing and inspection. In order to estimate correctness of inspection body results the Commission can hire *ad hoc* experts.

Within the Union organic food movement is free. It should be emphasized, that none of the Member States has the right to forbid the placement of organic products, that legally, in accordance with EU requirements, have entered the Union market. Third countries, which are on the list of organic food exporters, must inform the Commission about any correction in measures and their application.

## **6. Ecological management consulting**

Consulting services in the field of environmental protection and ecological management provide certain scientific research organisations (institutes), advisory bodies of some Ministries, as well as private consulting organizations which within their business have ecological management services. In the field of ecological management there are at least three forms of consulting projects: 1) diagnosis of status of ecological conditions, socially responsible business and sustainable development; 2) education and implementation of ecological production standards; 3) intervention in production and technology.

The offer of consulting organisations depends on the needs, that is, demand for consulting services on the market. At the same time, the offer is influenced by potential of the employees who work in consulting organisations. The most important are experience and expertise of the consultants which enable them to meet the requirements of clients about ecological management. Ecological factors gain the importance, which creates demand for specific consulting services linked with designing and installing of the equipment for reduction/prevention of pollution. The value of investments on the world ecological market exceeded from 379 billion dollars in 1995 to 518 billion dollars in 2000.<sup>47</sup> In agribusiness sector consulting represents one of significant factors for business modernization. In support to this statement is the confirmed fact that investment in consulting (and agricultural researches)

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<sup>47</sup> Strategies and Policies for the Development of Consulting Engineering Services in Developing Countries, UNDO, 1995., p. 4.

brings around 40% of average salary rate, which is „much more than other investments in agricultural development“.<sup>48</sup>

Improvement of manager capabilities and skills can be achieved with high-quality training and education. Steeve Goss, the consultant of European Agency for Reconstruction and the Ministry of Agriculture, Forestry and Water Management of RS, points out that good training and advices to agricultural producers are the most significant and useful way of state support. Development of consulting services in the field of environmental protection is influenced by accession of some countries to European Union. Analyses of economic parameters of countries during the phase of accession to European Union indicate that the three prevailing trends are going on simultaneously: (1) approximation of the economic and social system to EU standards, (2) economic development and (3) development of consulting market. European Union requirements have to be „translated“ into the language which is understandable for companies that actually need some advice about accepting new rules of behaviour. Demand for consulting from the field of human resources also grows, along with linking with confidential local partners, caused by the need to overcome language barriers, introducing with local business culture and improvement of relationships with local clients.

EU market consists of 500 million customers. Accessing this market imposes more strict business conditions which are reflected in keen competition and numerous regulations from the field of environmental protection, protection of producers and consumers etc. Experiences so far indicate that certain sectors represent potential winners after accession to the EU. Potential winners are: tourism, transport, construction, financial services and consulting services in the field of environmental protection. Modernization and introducing with logic marketing are necessary for tradicional processing industry. Consulting services linked with ecology and requirements from environment are relatively new, but it is considered that in the future this segment of consulting service market would have greater importance. With this ascertainment comes the fact that this segment becomes stronger in many countries that have joined EU.<sup>49</sup> Consulting organisations whose basic activity is accounting, managing and engineering consulting are present even in this market segment.

The task of a manager is to change production, marketing, as well as to use the products or services, that is, to carry out the activities, in accordance

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<sup>48</sup> Van den Ban, A.W., Hawkins, H.S. (1996): *Agricultural Extension*, Blackwell Science, UK., p. 13.

<sup>49</sup> Blečić, S. (2005): *International trade in consulting services*, Master's thesis, Faculty of Economics, Belgrade.

with scientific and technical knowledge, in order to prevent serious or irreversible degradation of the environment. At the same time, it is necessary to measure the performance on environmental protection, to regularly check environmental protection and to evaluate compliance with internal requirements of the company, legal requirements and other regulations.

## **Conclusion**

The values which created modern ecological economy clearly reflect the relations between nature and human. Ecological economy suggests domination of nature and specific capability of control of ecological consequences of human behavior. Increased scientific understanding of interactions between human and nature as key basis of knowledge, together with human behavior within the institutions as well as social engagement lead to acceptance of technical and technological solutions for ecological problems caused by humans. Thus, the solutions for environmental problems should not seek outside human society which created them. Today the ecological problem of rural development is very much present. With further technical-technological progress it will be even more present. This problem should be considered in all segments of human life and work. Because the human is not only adjusting to environment, but, unlike other living beings, he actively and intensively changes it.

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## **An assessment of EU Fruit and Vegetable Common Market Organisation<sup>50</sup>**

### **Introduction**

The fruit and vegetable (F&V) sector shows peculiar features on the agro-food scene, connected with the perishable nature of its products and their great vulnerability to weather changes. As a result of “normal” crop fluctuations there is also a tendency to volatility of the market, with relevant effects on producers’ prices and income.

Until the last F&V CMO reform, specific market measures (withdrawals, entry price schemes and export subsidies) guaranteed a certain stabilization of prices and income in the F&V market. Also the role played by producer organizations (POs) since the 1996 CMO reform, through the use of operational programs, contributed to improve adaptation of supply to demand and improve producers’ margins. Nevertheless, the sector has been suffering frequently recurring market crises, mirrored by the wider range of tools for crisis management provided to POs through the 2007 CMO reform. This last reform also set out the integration of the F&V into the single payment scheme. In line with the Fischler CAP Reform, the sector has moved to further market orientation, with increased exposure to market fluctuations.

The current crisis, however, when compared with normal market fluctuations, suggests different causal factors. In the recent years, emerging causes of instability (overproduction of some products, increasing costs of production, stagnating consumption, growing F&V imports as effect of bilateral/multilateral accords) add to structural and established weaknesses (market price volatility and producers fragmentation, with weak bargaining power versus retail concentration and agro-food industry competition), further exacerbating the tense relationships in the F&V supply chain.

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<sup>50</sup> This paper draws upon a recent study prepared by INEA for the EU Parliament and is a joint effort of C. dell’Aquila (INEA) and G. Petriccione (INEA). Wherever necessary, sections 1 and 3 were drafted by C. dell’Aquila, section 2 was drafted by G. Petriccione, Introduction and Conclusions are shared. The authors wish to thank Prof. A. Cioffi (Univ. of Naples), Prof. J.M. Garcia Alvarez-Coque (Univ. of Valencia), Dr. M.A. Perito (INEA) and Dr. R. Solazzo (INEA) for contributing to the original study.

Taking into consideration the very differentiated development of POs from one Member State (MS) to another and among products, and also considering the prevailing opinion among the F&V operators, claiming that “the objectives of the aid scheme for the fruit and vegetable sector will remain valid in the post-2013 CAP” (Copa-Cogeca, 2010), the paper investigates current feature and plausible improvements of the support system to F&V producer and POs in the post-2013 CAP. More precisely, in the context of EU budgetary constraints and WTO requirements, the set of emerging issues is twofold: on the domestic policy side, challenges are how to encourage supply concentration, rebalance bargaining power in the supply chain, improve efficiency and transparency of the supply chain, reduce fluctuations in the producers’ income, improve instruments stimulating F&V consumption; while on the trade policy side challenges are how to strengthen EU trade performance and improve stabilization effects of trade protection.

The paper is articulated in four sections concerning: i) a brief overview of EU F&V market and supply chain dynamics; ii) the current profiles of POs and domestic support schemes, with proposals for plausible changes of the CMO for F&V; iii) the current profile of EU trade policy for the F&V sector, with a discussion of possible outcomes of the ongoing WTO negotiations and preferential trade agreements; iv) a summary of conclusions and policy recommendations.

## **1. Overview of F&V market and supply chain dynamics<sup>51</sup>**

### **1.1. Market dynamics**

F&V is a key sector in EU agriculture, with a weight of about 18% of EU agricultural production, almost equally shared between vegetables and fruit (tab. 1-2). F&V production is highly geographically concentrated, as the two main producing countries, Italy and Spain, gather 40% of vegetable production and more than 50% of fruit. Citrus fruits count for 9% of F&V production and basically come from Italy, Spain and Greece, together originating more than 95% of EU production. Main EU producing countries show some differences in the long term dynamics: Italy remains the largest European F&V producing country with a greater variability of output, while Spain and Greece are characterized by greater price volatility. Among the new Members from Eastern Europe, Poland has shown the most relevant growth in F&V production over the last decade (+16,5%).

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<sup>51</sup> Figures discussed in this Section are derived from European Parliament (2011).

Table 1. EU-27 fresh F&V production (,000 tons) and shares on world production and EU total agricultural output, 2000-2009

	2000	2003	2006	2009	% var. 2000-2009
Vegetables&Melons	64.007	63.816	60.981	60.266	-5.8
Fruit (excl. citrus)	58.562	52.132	53.499	50.001	-14.6
Citrus Fruit	10.127	10.778	12.082	10.845	7.1
<i>F&amp;V</i>	132.697	126.726	126.561	121.112	-8.7
<i>F&amp;V/Tot. Agr. Output (%)</i> <sup>1</sup>	17.2	19.4	19.7	18.2	
<i>EU27/World (%)</i>	11.3	9.9	9.1	8.3	

<sup>1</sup> values of F&V and total agricultural output (producer prices).

Source: Faostat and Eurostat.

The EU's role in the world F&V sector remains significant, although slowly declining in the last decade to a share of 8.3% in world production in 2009. Fruit (excl. citrus) have declined the most, losing 5.1 percentage points, followed by vegetables (-2.3) and citrus fruit (-0.9). The reduction of weight in world production is partly due to the growth of many other areas and mirrors the dynamic of EU production, that in 2009 is by 8.7% lower than the volume produced in 2000, with fruits (excl. citrus) most affected (-14.6%), followed by vegetables (-5.8%), while citrus fruits has increased of 7%.

Still in terms of trends, F&V producer prices show a general pattern not too different from production in the last decade. The trend for prices is stable or slightly declining, with a stronger tendency to decline for fruit (excl. citrus), at least until 2007. In the short run the picture is different, as producers prices have usually been rather volatile for fresh F&V, with sharp declines in prices that usually follow phases of growth in production and anticipate downward turns of it. In the last years, the short run patterns of producer prices suggest slight reductions of volatility (fig. 1-2).

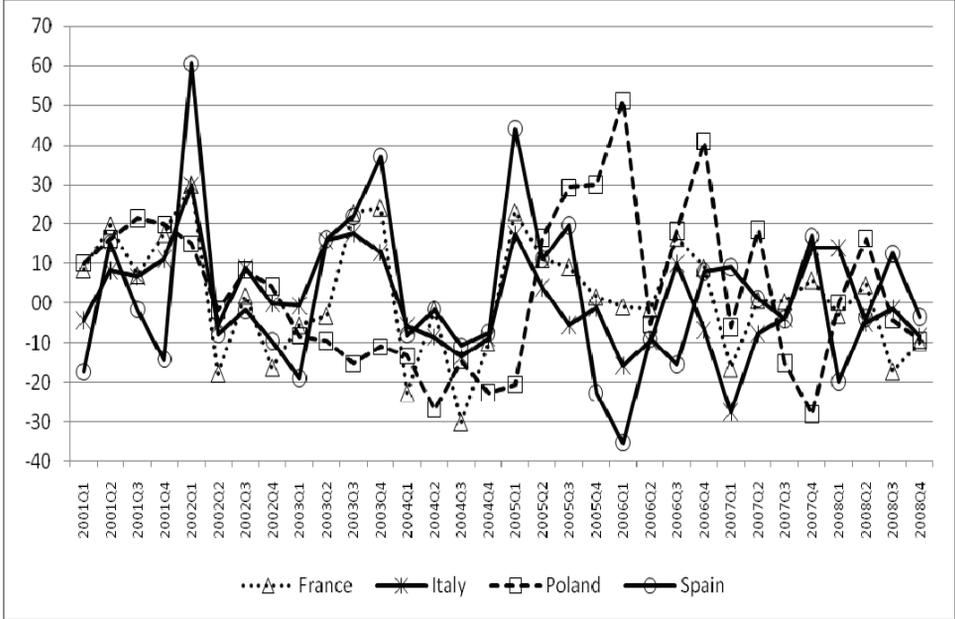
Table 2. EU-27 production of fresh F&amp;V (,000 tons), 2000-2009

Countries	2000	2003	2006	2009	% var. 2000-2009
<i>Vegetables</i>					
Italy	15.949	14.781	14.335	11.951	-25.1
Spain	11.229	11.865	11.776	11.550	2.9
France	5.973	5.838	4.990	4.735	-20.7
Greece	4.098	3.902	3.542	3.287	-19.8
Rest of EU-15	14.115	13.669	14.004	16.905	19.8
EU-15	51.365	50.055	48.647	48.428	-5.7
Poland	5.269	4.533	4.807	5.078	-3.6
Romania	3.099	4.334	3.753	3.524	13.7
Rest of EU-12	4.275	4.894	3.774	3.237	-24.3
EU-12	12.642	13.761	12.334	11.838	-6.4
<i>EU-27</i>	<i>64.007</i>	<i>63.816</i>	<i>60.981</i>	<i>60.266</i>	<i>-5.8</i>
<i>EU27/World (%)</i>	<i>9.2</i>	<i>8.1</i>	<i>7.3</i>	<i>6.9</i>	
<i>Fruit and citrus</i>					
Italy	17.989	15.262	18.015	18.041	0.3
Spain	16.114	17.939	17.428	13.990	-13.2
France	11.265	9.584	10.143	8.984	-20.2
Greece	4.142	3.169	3.680	3.208	-22.6
Rest of EU-15	10.280	7.242	7.698	8.102	-21.2
EU-15	59.790	53.197	56.963	52.325	-12.5
Poland	2.247	3.291	3.251	3.677	63.7
Romania	2.596	3.166	2.399	2.247	-13.5
Rest of EU-12	4.057	3.255	2.967	2.597	-36.0
EU-12	8.899	9.713	8.617	8.521	-4.3
<i>EU-27</i>	<i>68.689</i>	<i>62.910</i>	<i>65.581</i>	<i>60.846</i>	<i>-11.4</i>
<i>EU27/World (%)</i>	<i>14.5</i>	<i>12.7</i>	<i>11.9</i>	<i>10.4</i>	

Source: Faostat.

Production variability and price fluctuations, therefore, have to be understood in two different dimensions: in the short run, they are typical features of the functioning of the F&V sector, mostly due to weather variability and some structural characteristics of sector, such as products perishability, fragmentation of production decisions, or the high concentration of production in few regions influencing the whole European market. Perishability is capable to make market unbalances potentially very onerous to producers because it fuels an high responsiveness of producer prices to the quantity being sold (CFEPSR, 2009). In a longer run, a declining trend in production and prices depends on several structural determinants of change in the functioning of F&V world markets and supply chains (European Parliament, 2011).

Figure 1. Fresh Vegetables. Yearly percentage change of quarterly price indices (2000=100). 2000-2008

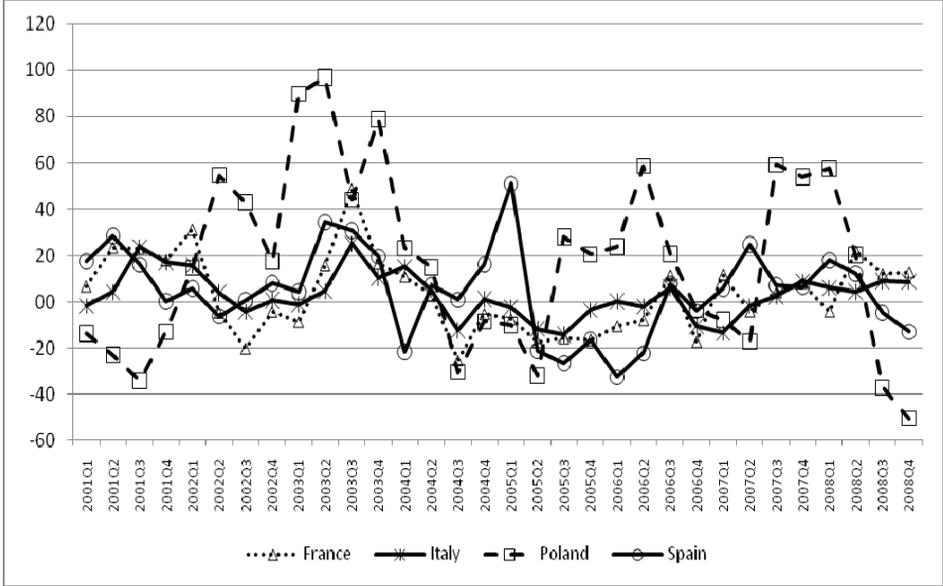


Source: Eurostat.

Effects of structural changes can be detected also when observing changes in the trade pattern of the EU F&V sector (tab. 3). A growing share of Extra-EU imports (from 29.7% to 31.8% of total imports in the last decade) and an increase of 43% of the structural unbalance between Extra-EU import and export (-7.3 billion euro for EU27 in 2009) signal the growing room for external providers on the EU market. Moreover, the improvement of the EU normalized

balance of trade (from -62.4% to -54.7%) suggest that growing imports go hand in hand with the growth of market and trade and that increased openness to external trade is a gradual process of inclusion of further supplies from non-EU operators, capable of meeting demand and retail requirements stemming from globalized supply chains.

Figure 2. Fresh Fruits (excl. citrus and grapes). Yearly percentage change of quarterly price indices (2000=100). 2000-2008



Source: Eurostat.

Non-EU suppliers of vegetables on the EU market are mainly from the Mediterranean area, but also from Central-South America and some African countries, while Central and South America prevails for fruit (also because of the role played by tropical and off-seasons F&V products), although with a significant role of Mediterranean countries for some products, such as citrus. Survival of traditional marketing channels in the EU market, structural backwardness of non-EU suppliers, and EU trade policy devices, converge in determining a relatively slow pace of inclusion of external F&V suppliers in the EU-based supply chains for F&V (European Parliament, 2011).

Table 3. EU-27 import, export and trade balance of F&V.  
(2000-09, million € ,000 ton)

	2000		2003		2006		2009	
	Val	Qt	Val	Qt	Val	Qt	Val	Qt
<b>Import</b>								
EU27 Intra	15.726	21.329	18.782	22.924	21.291	25.182	22.247	26.183
EU27 Extra	6.656	9.144	8.244	10.672	9.687	12.099	10.377	12.671
Total EU	22.382	30.473	27.026	33.597	30.978	37.280	32.625	38.853
<b>Export</b>								
EU27 Intra	15.525	21.558	18.905	23.014	21.011	24.919	22.652	26.313
EU27 Extra	1.542	2.475	1.978	2.798	2.578	3.585	3.035	4.329
Total EU	17.067	24.033	20.882	25.812	23.589	28.504	25.687	30.643
<b>Trade balance</b>								
EU27 Intra	-201	229	122	90	-280	-262	405	131
EU27 Extra	-5.113	-6.668	-6.266	-7.875	-7.109	-8.514	-7.343	-8.341
Total EU	-5.315	-6.439	-6.144	-7.785	-7.389	-8.776	-6.938	-8.211
<b>Normalized balance</b>								
EU27 Extra	-62.4		-61.3		-58.0		-54.7	

Source: Eurostat.

Final demand for F&V is generally more stable than supply and relatively inelastic in price, with changes occurring over longer periods of time. Available data on apparent consumption suggest a trend of slow increase in consumption of F&V in the EU, particularly for those countries starting from lower levels of per capita consumption. However, consumer behaviour is still not homogenous in the European market, not only in terms of amount of fresh F&V consumption in Member States, but also in terms of marketing channels. Within a heterogeneous framework of cultures and lifestyles, the trend to development of fast food, supermarkets and high concentration and vertical co-ordination in supply chains is stronger in northern regions of the EU; while in the South F&V markets show a still relevant presence of street markets and a higher level of dispersion of specialized grocery stores. Moreover, differences in consumption patterns exist even at regional and local levels (Kalaitzis et al., 2007).

## **1.2. Supply chain dynamics and producers' income**

The current difficult situation of the European F&V producers arises mainly from long-term changes in the structure of the global F&V supply chain: consumers increasingly demand services, including convenience in food purchasing and preparation, taste, and variety, and are increasingly concerned for food safety and quality; sales are increasingly being controlled by fewer and fewer retailers, with a growing bargaining power; the role of the WTO and bilateral negotiations is becoming more important in widening competition; multinational agribusiness is now more important due to upgrading of logistics, communication and information technology, transport enabling fresh products to be transported from many origins.

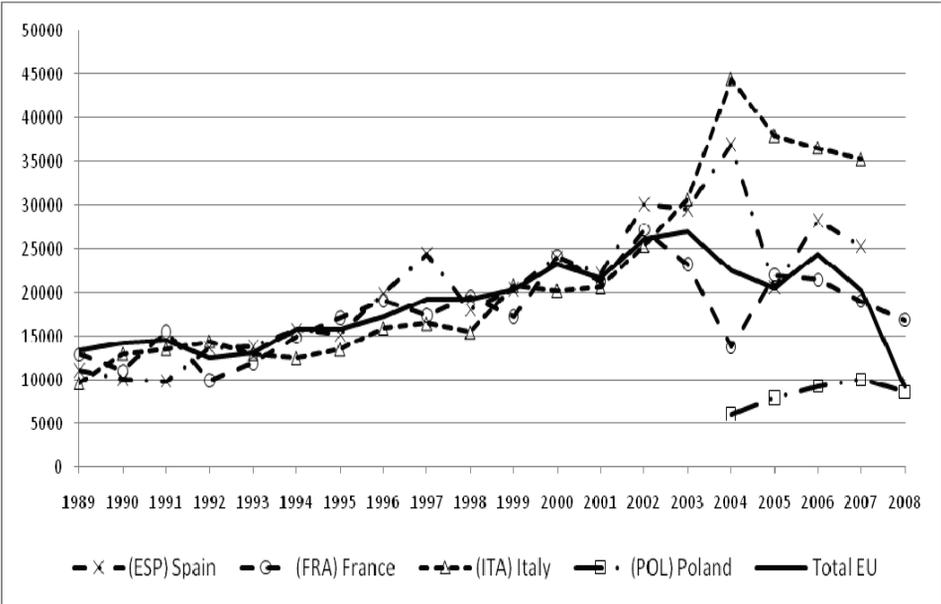
Particularly, changes in food retailing materialize a tendency to exclusion of small independent shops, small enterprises, and small farmers from these new developments. In order to function effectively these dominant retail players have to organize production, processing, logistics, trade, and distribution of numerous other players. The major effects of the emergence of food retailers in the global food supply chains are through the procurement system of large volumes of products from suppliers. Competition from both small retail shops and other forms of retail (i.e. food-away from home, farmers' markets, street sellers, etc.) drives cutting costs and raising quality and diversity. Cutting costs in turn requires the improvement of all aspects of procurement, including product and transaction costs. This is done by improving coordination and logistic systems such as distribution centers, logistics platforms, cold chain development, contracts with wholesalers and producers, and private standards specifying quality, safety, volume, and packaging of products (Bazoche et al., 2005; Green, Schaller, 1996; Sans, Coquart, 1998). Distribution centers imply an increase in the scale and volume of procurement, which tends to lead to procure products from large areas, in higher volumes, and to serve a number of stores, and work with suppliers whose scale, capital, and managerial capacity are sufficient to meet the requirements of the new procurement system. The scale of larger supermarket chains gives them the capacity to pursue the above objectives, since they have the bargaining power, the finance to make investments in logistics, and the geographical presence required.

Processes of concentration and consolidation underway in the F&V supply chains are affecting also upstream stages of supply chains. Large retailers drive the process and build up long term relationships with key suppliers – either producers or wholesalers - capable to meet the requirements necessary to respond to the increased consumer interest for purchasing fresh F&V products from supermarkets. Suppliers are in turn required to make larger investments

deemed to be worthwhile if they can get on a retail chain procurement list. This restructuring process took place in the last decades in the wholesale sector with a concentration and internationalization of wholesale and logistics platforms (e.g. Mercabarna in Spain, Rungis and Perpignan in France, etc.).

F&V in the EU is grown mainly by small farmers, with a great number of suppliers, mainly in Southern EU regions. Eurostat data show that, in 2007, the small size of EU F&V farms was such that over 70% of them did not reach an area of 5 ha. This causes higher costs for many farmers, not allowing reaching an efficient production scale, and poses limits on competitiveness on an open market. A number of suppliers call for a number of intermediaries that intervene at various stages. The complexity of this type of chain implies a number of structural inefficiencies often coupled with low productivity of different actors of the chain.

Figure 3. Farm Net Income/FWU - Specialist horticulture farms (EUR)



Source: FADN.

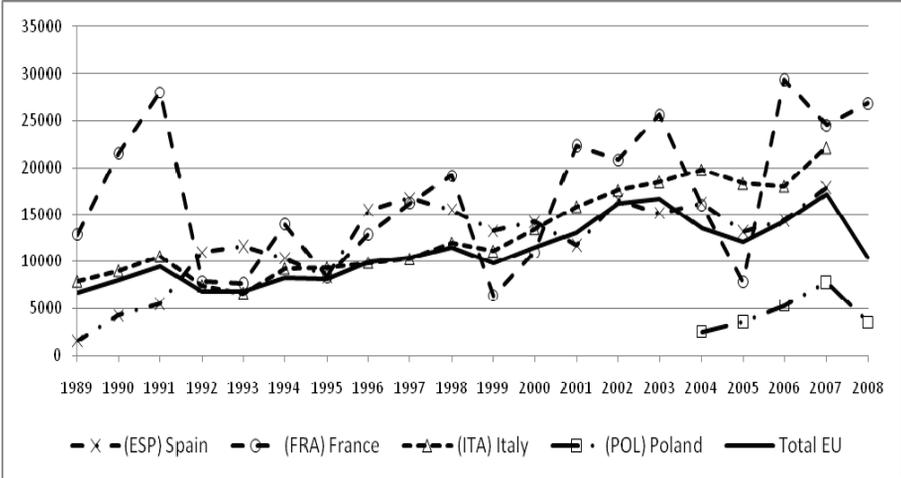
The main challenge for small farmers – pretty much like for traditional wholesalers – is how to be part of retail-led chains. But supermarkets decide the products that farmer have to grow, according to standards that are often too high for small farmers to comply with. Meeting the demand of procurement officers requires technical and management skills that small farmers often do not have. In fact, they are often unable to build a critical mass in terms of volumes and lack an efficient and

speedy delivery infrastructure that would allow them to supply ranges of products within a given category.

Moreover, it also true, that the asymmetry in bargaining power puts upstream actors under unfair trading practices, with larger and more powerful actors who require contractual arrangements to their advantage, either through better prices, late payments or through improved terms and conditions (European Commission, 2009b).

Based on FADN data, the dynamics of income of horticulture and fruit specialist farms in the last two decades shows a long time span of steady growth until 2004, when it became apparent a negative impact of over-production and weak producer prices on farm incomes (fig. 3-4). More than producer price volatility, however, is the dynamic of production costs and marketing margins that should be investigated in order to gain a better understanding of negative income dynamics. While producer prices have usually been volatile for fresh F&V, and are relatively weak in trend in the last few years, retail prices are either constant or increasing, indicating either increasing rents being captured by downstream actors or increasing levels of value added generated at downstream stages of the supply chains (European Parliament, 2011).

Figure 4. Farm Net Income/FWU - Specialist orchards/fruits farms (EUR)



Source: FADN.

Concentration and consolidation in the F&V supply chains, along with changes in consumer choices, will continue to shape the future of the F&V economy in the EU and will deepen as the sector becomes more globalized and interconnected. Collective action at producer level and effective coordination within the chain appear to be pre-conditions for any successful strategy in coping with declining relative producer prices and the gap between farm and retail

prices. Moreover, forms of producer organization should keep being encouraged as an effective way to increase collaboration between growers and other members of the supply chain and develop partnerships around shared interests in cost reduction, quality upgrading and risk management.

## **2. Producer Organisations and domestic support schemes: current profiles and plausible changes**

### **2.1. Development and role of producer organizations**

EU experience in F&V sector has shown the key role played by Producer Organizations (POs) in rebalancing bargaining power and stabilising prices and income through concentration and planning of F&V supply. Thanks to the two last reforms of the CMO<sup>52</sup>, the European F&V sector underwent an extended process of growth and reorganization of the production system. Nonetheless, empirical evidence shows uneven dynamics and characteristics of the strengthening of F&V POs between different Member States. POs' development dynamics differ not only among Member States (MS), but also among products.

Several factors, both internal to the CMO scheme (unlike MS implementation decisions) and external ones (structural factors, historical and cultural factors) can explain the strong heterogeneity of organization rates among MS, especially between Northern and Southern countries in the EU, as well as between new and old MS. At the EU level the average rate of organization in F&V is about 34% (EU-25), very far from the objective of 60% established by the CMO, but with wide differences between MS and between productive areas within single MS. POs that have managed to take on the role required by the

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<sup>52</sup> In response to the stronger position of the food retail sector in the market, the EU already with the 1996 CMO reform for F&V, introduced by Regulation (EC) No. 2200, entrusted a key role to POs in rebalancing bargaining power and stabilising prices and income, through the F&V supply concentration and planning. POs may set up operational programmes, joint financed by Community (50%) and their members with a cap of 4.1% of the PO's value of marketed production (VMP).

The 2007 reform of CMO for F&V (Regulation (EC) No. 1182) strengthened POs' role by introducing some elements with the purpose of favouring a major competitiveness and market orientation of the sector, as well as its better sustainability. In order to further improve the attractiveness of POs, the 2007 CMO reform introduced some new elements (product range of a producer organization; the extent of direct sales permitted and the extension of rules to non-members; permitting associations of POs to carry out any of the activities of their members and permitting the outsourcing of activities) meant to make POs more flexible in their operation. At the same time it provided for a wide range of tools for crisis prevention and management to be carried out through POs, as well as more incentives to mergers of POs and associations of them, and to those regions with a particularly low level of organization rate, etc.

market, albeit with difficulties, tend to locate in those areas with a strong cooperation ground and characterized by the spreading of more competitive and more export-oriented undertakes than other areas (Agrosynergie, 2008a; Bertazzoli and Petriccione, 2006).

The current situation features the presence of a more advanced, organised component which, in response to a "market mission", is more suitably fulfilling the functions of product enhancement and over the last few years has been able to exploit the possibilities for growth and renewal offered by the F&V CMO. Aside from this, however, there is a significant number of POs especially located in certain areas of Southern EU, which, mainly in response to the idea of aggregation, perform functions that are very strictly limited to service function, that is merely placing members' products on the market (*ibidem*, 2008a; 2006). These are bodies which are generally of a minor economic dimension in character and pay less attention to market development; to date they have demonstrated difficulty in the aggregation process, which has been unable to transform itself into an adequate concentration and programming of supply.

Notwithstanding several difficulties in the POs' development path, the EU experience confirms the validity of the association model, as maintained by COPA-COGECA (2010), in which opinion "the intervention of F&V POs on the market does not only benefit their associated producers, but all producers in the sector". Evidences from a recent survey<sup>53</sup> suggest that the strategic role of POs has been particularly effective in coordinating, within the operational program, the actions aimed at planning production, improving product quality and marketing, and environmental actions. Product quality, private standards and other certifications, as well as other component of the marketing-mix are sources of differentiation strategies aiming at increasing the economic value of products and may lead to gain a competitive advantage on the market, provided that POs have taken buyers' needs and behaviour in due account.

As a matter of fact, as clarified in the previous section, the organizational model coming out from the current setup of agro-food markets, as well as the required competitive strategies, imply more stringent forms of chain integration where the retail stage coordinate the other actors. This makes the high contractual strength of large-scale retail an issue because of the persistent fragmentation of agricultural production and imposes forms of producer associations as tools for rebalancing shares of value added distributed along the F&V chains.

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<sup>53</sup> The suggestions quoted in this paper about the F&V CMO implementation come from a survey on POs carried out in Italy, Spain and France. Its results have been reported in a recent study of European Parliament (2011).

Producer Organizations can therefore constitute a fundamental counterweight, restoring balance to market relationships, acting as a contractual tool for redistributing added value and contributing to reshape forms of economic dominion into models of cooperative behaviour.

For this reason the European Commission has always recognized the strategic role played by POs, focusing on the organization and concentration of agricultural supply. This is particularly true for the CMO for F&V, where the concentration of production is defined as an "economic necessity" to consolidate the farmers' position on the market and help them face future challenges which the CAP itself has bet on. On the other hand, the last CMO reform for fruit and vegetables has, compared to previous legislation, provided essential elements to reinforce regulation of supply by an organized component, effectively giving strategic functions to the POs to improve competitive capacity in the sector. If this is a necessary condition for raising both the quantitative and qualitative level of the path of development undertaken by the POs towards greater concentration of production, it may prove to be insufficient, as far as certain situation of F&V production are concerned.

In consideration of the post 2013 CAP scenario, the policy framework based upon POs should be maintained and their relevant tool, as operational programs, however introducing adjustments in functioning rules that both logic and implementation experience would suggest, for example a significant simplification of operational programs, or forms of premium for commercialization of quality products.

## **2.2. The issue of market risk and crisis management**

In principle, the joining of a PO may be deemed itself as an effective tool of crisis prevention that F&V producers may adopt. Effectiveness, however, requires the fulfillment of preliminary conditions on the organization of the PO, in which both market sales and the planning of production activities at the farm level should be centrally managed. Therefore larger POs, with a better structured internal organization and a stronger orientation of their sales toward large retailing are potentially more successful in preventing market risks and crisis. As a consequence, easing conditions for the recognition of POs by requiring lower values of marketable production – a change introduced in the 2007 CMO – does not match the need to improve risk management capability in the EU F&V industry. Although the effort to increase the share of organized production, particularly in areas where it is not adequate, is of paramount importance to the

development of the F&V sector, it is also necessary to shape incentives to POs in such a way to make them effective.

Beside the existing risk and crisis management tools, a possible further instrument for their prevention is the implementation of market intelligence activities. The monitoring of F&V markets through the collection, elaboration and analysis of relevant data on prices, consumer preferences and behaviours, product supply and meteorological trends and their spreading among POs may help in anticipating possible temporary or structural crisis that could be better managed and prevented with timely intervention.

The implementation of this activity is not easy and would require a certain degree of centralization in agencies capable to serve associations of POs or the totality of POs in a country. Moreover, this could be a very difficult exercise because of the complex process of price formation along the F&V chain, which depends on several factors embodied in the relational frameworks and structural inefficiencies existing inside the chain.

Among the single tools currently available in the 2007 CMO for risk and crisis management (market withdrawals; green harvesting or non-harvesting of fruit and vegetables; promotion and communication; training measures; harvest insurance; support for the administrative costs of setting up mutual funds) only some of them have been implemented by National Strategies and subsequently used by POs<sup>54</sup>. Green harvesting or non-harvesting, training measures and support to mutual funds have not been implemented, apparently because of uncertainties about their contents and accessibility, but also because they are deemed to be ineffective<sup>55</sup>.

Market withdrawals and harvest insurance have been used only to a very limited extent (Spain didn't even introduce harvest insurance in its National Strategy). The little interest for market withdrawals seems related to their low indemnities, while support to insurance looks not suitable within the CMO because of the limited availability of resources within the operational funds of

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<sup>54</sup> These measures were integrated in the operational programs of POs, also with the objective to increase attractiveness of POs to producers. In the case POs decide to implement these measures, Community aid may rise to 4.6 percent provided that the excess (0.5 percent) is used only for crisis prevention and management.

In order to improve the effectiveness of the operational programs' action, each Member State shall establish a National Strategy for sustainable operational programs in the F&V market, integrating a national framework drawing up the general conditions for environmental measures. The National Strategy shall define priorities, objectives and instruments of operational programs, as well as introduce indicators regarding an assessment of the operational programs themselves.

<sup>55</sup> See previous footnote 4.

POs as well as the possibility to finance it with other CAP measures. In line with these preliminary evidences of the implementation of the 2007 CMO reform it could be appropriate narrowing the support to insurance only to the covering of POs risks related to the reduction of product marketed by their members.

Promotion and communication are the most widely adopted measures of risk and crisis management. However, it is necessary a clearer definition of its contents as well as of its implementation modalities within the contest of market crisis, and the relationship of this instrument with other similar measures that can be implemented within the operational program in a standard way.

The financial rigidity of the endowment for market crisis measures in the operational fund is a critical issue. The endowment being constant overtime (as for the other measures) doesn't fit well the nature its target: market crises and related income effects on producers are obviously uneven overtime. Introducing arrangements allowing a wider intertemporal flexibility of the financial limits to the implementation of such measures, according the real needs of intervention, and providing additional constraints aimed at avoiding a recurrent use of this type of measures, could be beneficial.

Moreover, although measures for the implementation of mutual funds didn't get very much attention, the role of saving/credit in transferring risk overtime should be enhanced. At this aim it would be useful to analyze the conditions for the introduction of security funds within POs, working with an approach similar to the Agristability program implemented in Canada (Cafiero et al., 2007). This could be obtained defining ranges of farmers revenues calculated on the last three year average, for example -30% and +20%. When revenues are above the upper limit of the range, the exceeding revenues could be saved in a fund with a matching quota from the operational fund (or from EAGF). This money could be invested in EU state bonds earning interest paid. In the case the revenues fall below the lower limit, POs would have the possibility to withdraw money from the security fund to cover losses exceeding -30%. Such an instrument could also help in making more stable overtime financial resources needed by POs for dealing with risk and crisis management.

### **2.3. Contractual arrangements**

Contractual relations have gradually become established over the last decades as a result of the process of concentration that has accompanied the substantial growth of large-scale retail, causing a strengthening of contractual power vis a vis upstream suppliers, especially when they are operating in sectors, even as F&V, where many areas and productions are characterized by

a low level of concentration. This development has led to an imbalance in power relations within the agro-food market, bringing about significant change in the relations that large-scale retail has with agricultural producers, as well as in the process of formation of added value along the agro-food supply chain, at the expense of the agricultural sector, as highlighted in previous section.

This situation poses two questions which are closely interrelated, and which take on particular relevance in the F&V supply chain: the first concerns the increased buying power of large-scale retail; the second concerns the contractual relationships that large-scale retail maintains with upstream subjects in the chain, namely agricultural producers and the food industry. On the other hand, "an increase in buying power of large-scale retail also necessarily translates into strong negotiating power in contractual clauses with supplying subjects" (Marette, Raynaud, 2003) as well as an increased share in overall profits within the vertical structure that large-scale retail can require (Allain, Chambolle, 2003).

However, agricultural contracts can lead to improvements in efficiency of supply chain organization, through a transaction cost reduction, above all as a result of the remarkable transformation process that has involved agro-food chains. These changes, consisting in consolidation (increasing concentration in processing and retailing), new patterns of consumption (food quality and safety concerns), and technological changes, have stimulated changes also in organizational scheme towards greater degrees of vertical control by the downstream subjects (Vavra, 2009). The result of this process is an increased use in recent years of contracts in agriculture, characterized by a wide variety of arrangements that can differ a lot both among agricultural sectors and among single products within the same sector.

Considering that "action is needed to eliminate unfair contractual practices between business actors all along the food supply chain" the European Commission (2009a) suggested a number of policy initiatives aimed at overcoming problems tied to contractual imbalance associated with unequal bargaining power and promoting sustainable and market-based relationships between actors along food supply chain.

The recent proposal of European Commission (2010b) on contractual relations in the milk sector provides for optional written contracts between farmers and processors, to be drawn up in advance for deliveries of raw materials, which would include the key aspects of price, timing and volume of deliveries, and duration of contract. Member States can make these contracts compulsory. In order to take into account the specific nature of cooperatives, these are

not required to subscribe contracts on the condition that their statutes provide for rules addressing the same objectives.

It is worth pointing out the recent French experience, where Government has decided, for milk and F&V sectors, to make contractualisation between producers and their buyers compulsory. The commitments for fresh F&V regard a duration of contract of at least three years, as well as the specification of some relevant elements, such as volume and quality characteristics of deliveries, modality of produce collection and delivery, criterion of price determination for each product and so on.

Taking into account the above-mentioned experiences, it could be envisaged the possibility of developing, within a general framework outlined at EU level, a contractual model that provides the settlement of minimum standard conditions, although with a proper degree of flexibility accounting for specificities characterizing each F&V product and region. This could be entrusted to an interbranch organization which should draw up agreements on contractualisation stating guidelines and promoting best practices and market transparency in order to avoid unfair commercial practices. Furthermore, the “pricing” element of contract could be a mixed solution, in which a share of price could be tied to incentives to product quality and/or quantity commitments, as a safeguard mechanism to keep the economic sustainability of productions and returns for all actors in the F&V chain.

As far as the interbranch device (organization and agreements) is concerned<sup>56</sup>, it can lay down the necessary conditions for the market to function more efficiently (Bovet, Chappuis, 2001), with greater transparency and in accordance with a fairer division of risks and profitability from the production processes set up. It can strengthen the coordination and collaboration action between various stages of the supply chain, in order to counter and reduce opportunistic behaviour, while encouraging cooperative one, as well as restore balance in power relations on the market.

At the same time, interbranch device can play a fundamental part in helping individual producer associations to acquire a truly active role on the market and reach an effective level of concentration and control of supply, using the *erga omnes* tool (Petriccione, 2008). However, the issue of the *extension of rules* raises the problem of political choice, given that it has to be applied in accor-

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<sup>56</sup> For an in-depth analysis on the role and definition of the interbranch organization see: Coronel and Liagre (2006); Giacomini, Arfini and de Roest (2010). With this regard, it is worth mentioning the interesting French experience of interbranch organization and agreements, recognized as the most consolidated one at international level.

dance with certain conditions and with the guarantee of its compatibility with Community competition rules<sup>57</sup>.

#### **2.4. The issue of competition rules**

Encouraging sizeable POs, able to cope with large-scale retail and current market requirements, raise the issue of POs' consistency with competition rules. The agricultural sector is subject to the EU's competition rules under a special regime. The need of a special treatment of agricultural products derives from the major complexity of the relations between actors along the supply chain, which fuels a wide debate at political and scientific level on the controversial relationship between competition rules and agricultural policy, with particular reference to the issues of the increasing bargaining power of large retailers and their contractual relations with the upstream actors (European Commission, 2010a; VV.AA., 2003; Desai *et al.*, 2010).

Within the public debate on competition policy two issues seem to be particularly relevant: the increase of bargaining power of large retailers and their contractual relations with the upstream actors. There is no doubt that the retailers who hold a major bargaining power, also hold a big power to negotiate the contractual clauses with the upstream subjects. These relations put the question of legitimacy of certain contractual practices and of regulation that could set a limit to certain abuses of the retailers towards a fragmented agricultural supply. In this context, the issue of the role of POs and other forms of farmers' associations to increase the bargaining power of farmers is one of the key points analysing the interface between agricultural and competition rules (Cesarini, 2009; European Commission, 2010a; VV.AA., 2003).

Although competition law impose restrictions to farmers' agreements, there is however the opportunity for POs to operate as cooperative organizations, recognized by European Courts as pro-competitive structures, which may collectively negotiate. EU competition rules view such agreements favourably if the farmers involved in these forms of cooperation do not collectively hold a level of market power such as to restrict competition in the market to the detriment of consumers. As this regard, the recent "Milk Package" has proposed a quantitative limit (market share) which would allow POs to negotiate ensuring at the same time market competition. The market share is evaluated on the

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<sup>57</sup> It should be noted that there is no European legal body that delineates the range of action of an interbranch organization, even if the Single CMO recognizes its legitimacy by Member States on the basis of their national laws.

“relevant market” although positions in the debate on the ways to define the relevant market are still controversial.

Current competition rules can be considered still unfavourable towards agricultural producers affected by weak bargaining power *vis a vis* a sole large retailer. Public and scientific debates show a certain consensus on that, particularly based on the comparison between the Single CMO Regulation, which states concerns about the abuse of both “dominant positions” and common rules, with other legislation where the only concern is on avoiding dominant positions.

### **3. Trade policy issues: ongoing negotiations and possible outcomes**

The EU trade regime for F&V is rather complex and its measures are set differently according to products, partner countries and seasonality. This is also the outcome of different – and sometime conflicting – objectives stated in the EU trade policy for the sector: protection and stabilization of revenues of EU producer of F&V; large and differentiated supply of F&V products to EU consumers at reasonable price; integration of the import regime within the international relationships that the EU is promoting, particularly with developing and neighboring countries.

#### **3.1. Trade measures**

After the phasing out of export refunds, in 2007, external protection remains a cornerstone of the set of trade measures supporting EU F&V producers and it is mainly based on tariffs and an entry price system (EPS). Along with tariffs and entry prices (EP), sanitary and fitosanitary measures are to be mentioned as increasingly relevant for the purpose of external protection.

As far as export refunds (ER) are concerned, their phasing out made EU’s support to export competitiveness in line with WTO recommendations and has had impacts on EU’s F&V export that are as limited as support was. Impact on the overall EU domestic market should be of some relevance only for oranges and lemons, which absorbed, respectively, more than 58% and more than 17% of overall expenditure for ER.

On the import side, the EPS works by adding surcharges (maximum tariff equivalent – MTE) to the normal tariff whenever the import price is detected to

be below a defined level (triggering entry price – TEP)<sup>58</sup>. Tariffs, TEPs and MTEs change during the year according to the seasonality of EU production.

Table 4. Comparison of tariffs in selected HS Chapters

HS Chapt.		Ad valorem equivalents		Number of tariff lines falling in each tariff band			
		Average bound tariff	Maximum bound tariff	<20%	[20%,50%]	[50%,75%]	>75%
2	Meats	67.5	407.8	127	50	22	34
4	Dairy products	55.9	264.3	33	44	44	54
7	Fresh vegetables	25.0	118.9	109	7	2	4
8	Fresh fruits	25.2	117.1	140	60	0	1
10	Cereals	78.4	93.6	19	23	7	6
12	Oilseeds	0.3	179.1	78	0	1	1
15	Fats and oils	11.9	118.7	110	3	4	3
17	Sugar	129.1	218.1	30	6	2	9
20	Processed F&V	27.2	217.4	214	76	7	10
52	Cotton	0	0	0	0	0	0

Source: Jean-Laborde (2008). Authors' elaboration.

In the current scenario, while tariffs are already fairly low if compared with other agricultural products (tab. 4), the amount of MTEs is high enough that they can still be seen as prohibitive tariffs, capable to make effective the entry price as a minimum import price (Garcia-Alvarez-Coque et al., 2010). For the products selected in tab. 5, by adding the ad valorem custom duty to the MTE in percentage of its entry price, the indicative level of protection is over 70% for tomatoes, over 60% for apples, over 30% for oranges.

The functioning of such a protective system is weakened by the methodologies adopted for monitoring of compliance with entry prices<sup>59</sup> – which often

<sup>58</sup> Fresh F&V products under EPS are: Tomatoes, Cucumbers, Artichokes, Courgettes, Oranges, Clementines, Mandarins and similar citrus hybrids, Lemons, Table grapes, Apples, Pears, Apricots, Cherries, Peaches and nectarines, Plums.

<sup>59</sup> Technicalities can be derived from Commission Regulation No 3223/94 and the explanatory note concerning it [D (99) 01/10/1999]. Literature on the effectiveness of the EPS is wide enough, starting from assessments of the degree of openness of EU market at the outset of the

allow organized importers avoiding to bump into the TEP and pay the MTE – and also by preferential agreements with several countries.

Table 5. Elements of entry prices for selected F&V

Product	Tariff MFN (%)	Entry Price			Specific tariff	
		MFN (€/t)	Period of Application	Preferential (€/t)	MTE (€/t)	% of MFN EP
Tomatoes	8.8 – 14.4	526 – 1126	01.01 – 31.12	461	298	26.5 – 56.7
Oranges	3.2 – 16.0	354	01.12 – 31.05	264	71	20.1
Apples	0 – 11.2	457 – 568	01.01 – 31.12	-	238	41.9 – 52.1

Source: DG Trade, EU export-helpdesk. Authors' calculations.

More generally, effectiveness of entry prices in influencing the trade pattern and stabilizing domestic prices has been considered by a number of studies. The econometric analysis by Emlinger *et al.* (2008) through a gravity model approach showed that the import regime had effects on the EU import flows of F&V, although for some product other factors should also be taken into account. Goetz and Grethe (2009), using a multivariate statistic analysis approach, showed that the relevance of the EPS is not homogeneous among different products and origins, being wider for more perishable products and for neighbouring partner countries. As a whole, those studies suggest that the effects of the EPS on EU import flows of F&V are significant, but probably not generalized to entire set of products/partners.

Somehow similar is the picture offered by some recent studies targeting impact of the EPS on domestic prices. Here the main policy issue is assessing the contribution of the EPS to domestic prices stabilization. The recent evaluation report on the EPS (Agrosynergie, 2008b) suggests that it does not affect domestic prices globally, but for single products/country/month there could be significant effects. Garcia Alvarez Coque *et al.* (2009, 2010) used simulation of changes in the border measures with partial equilibrium models of four products finding that the removal of the EPS, as well as the reduction of the TEP and of the specific tariff while keeping alive the EPS, would have a moderate impact on prices of EU domestic products. Although the stabilization issue is not directly

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system (Swinbank-Ritson, 1995) and ending with recent works assessing EPS effects on domestic price stabilization (Garcia Alvarez-Coque *et al.*, 2009 and 2010; Cioffi *et al.*, 2010). Literature reviews and reading lists can be derived from Agrosynergie (2008b) and European Parliament (2011).

addressed in these papers, such findings also imply a certain effectiveness of the EPS in price stabilization. Furthermore, the recent econometric work by Cioffi et al. (2010) shows that EU domestic prices in some cases behave differently when import prices are above/below the TEP. Also this paper suggests that in some cases isolation effect of the EPS seems reached and the resulting stabilization effects.

Those studies tend to converge on showing that the EPS is most relevant for the import of artichokes, courgettes, cucumbers, lemons, plums and tomatoes; significantly lower for apples, clementines and pears; and least relevant for apricots, mandarins, oranges, peaches and nectarines and table grapes.

Results of the aforementioned studies suggest that, on the one hand, entry prices could be significantly lowered in several periods of the marketing year without substantially affecting trade. On the other hand, the system still helps to stabilize prices for certain F&V products in certain periods of the marketing year. Moreover, the system can work well in the contingency of an import surge and its elimination would increase price risks on the EU market.

### **3.2. Preferential trade agreements**

Trade preferences are very relevant in F&V trade of the EU, in terms of both import flows and concessions on tariff and non-tariff measures, although preferential treatments are sometimes bound by tariff rate quotas restricting concessions to predetermined quantities. Major preferential trade concessions for fresh F&V relate to agreements with Mediterranean partner countries (MPCs), most relevant due to both overlapping production calendars with EU domestic production and weight of import flows.

Trade concessions normally consist of reduced or zero tariffs, often bounded within TRQs, for a set of products defined for each country. Lower entry prices occur only in favour of few F&V products coming from some MPCs<sup>60</sup>. Preferential conditions are also granted to African, Caribbean, and Pacific countries (Cotonou agreements), other developing countries involved in the GSP, as well as fr/Yugoslavian countries (tab. 6).

The literature investigating the effectiveness of the EPS (see previous par.) provides analyses and evidence about the role of the preferential setting of EPs for some countries/products. Earlier contribution stressed a new feature of the EPS emerging from the URAA: imports from countries that enjoy a tariff

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<sup>60</sup> Detailed discussions of trade agreements with MPCs affecting F&V trade are available in Swinbank-Ritson (1995); Grethe-Tangermann (1998); INEA (2002), Garcia-Alvarez-Coque (2002); Cioffi-dell'Aquila (2004); Agrosynergie (2008b).

preference could be sold at lower prices on the EU market than those from MFN suppliers (Tangermann, 1996; Swinbank-Ritson, 1995). In this sense, the major losers from the EU's concern for traditional inner and outer providers of F&V would be "unpreferred" exporters.

Table 6. Structure of EU trade preferences to main partners for some fresh F&V products

Product/ Country	EU Import (2009) tonn	Tariff concessions			Preferential Entry Price	
		% tariff reduction	TRQ (t)	Period of application	Value (euro/tonn)	Period of application
<b>Tomatoes</b>		(*)				
Morocco	353.953	100	220.000 <sup>1</sup>	01.10 – 31.05	461	01.10 – 31.05
		60		01.01 – 31.12	-	-
Turkey	103.226	100	-	01.01 – 31.12	-	-
Israel	25.239	100	5.000	01.01 – 31.12	-	-
<b>Oranges</b>						
South Africa	333.823	-	-	-	-	-
Egypt	134.555	60	60.000	01.12 – 21.05	264	01.12 – 31- 05
Morocco	90.769	100		01.01 – 31.12	264	01.12 – 31- 05
Argentina	69.971	-	-	-	-	-
<b>Apples</b>		(**)				
Chile	186.318	100	-	-	-	-
South Africa	144.870	0	-	-	-	-
Brazil	80.199	0	-	-	-	-
Argentina	57.629	0	-	-	-	-

<sup>1</sup> Sum of monthly sub-quotas

(\*) A non-preferential tariff rate quota applies in some months according to the Uruguay Round agreement (1994).

(\*\*) A non-preferential tariff rate quota, with 100% tariff cut, applies in some months according to the Uruguay Round agreement (1994).

Source: COMEXT; DG Trade, EU export-helpdesk. Authors' calculations.

However the EPs have been kept at MFN levels for most of the preferential origin countries and with some of them trade increased after the signature of Association Agreements dealing with the removal of ad valorem duties only (South Africa, Chile) (Agrosynergie, 2008b). This matches with the suggestion

of reviewed studies that only in some cases EPs are effective in influencing the trade pattern and stabilizing domestic prices. This might make room for a selective approach to trade liberalization in the ongoing WTO and bilateral negotiations.

### **3.3. Perspectives of trade negotiations**

The main negotiating issues related to F&V trade policy consist of potential changes in the EPS and preferential quotas. Assessing future changes in the EPS as a result of the Doha Round, as well as of the deepening of bilateral agreements, needs to take into account the actual profile of EU's trade partners. The EPS is of lesser importance for off-season providers – though for some products the EPS may still be active in periods when Southern Hemisphere crops overlap early EU harvests – while on the Mediterranean scene entry prices and tariff-rate quotas can still be useful tools for stabilizing domestic prices, as well as for easing integration between Southern EU and Mediterranean Partner Countries (MPCs).

As far as the Doha round is concerned, based on the draft of the Chair of the Committee on Agriculture (Dec. 2008), Tab. 7 displays the perspective of tariffs and EPs/MTEs dismantling as a result of three relevant scenarios foreseen at multilateral level:

- a) A significant reduction of the bound tariffs. The proposal foresees tariff concessions that will be allocated according to a band system, with tariff reductions of 50% or higher. That percent reduction could be applied to the maximum tariff equivalent (MTE) or specific tariff to be applied in case of import prices fall below entry prices. If the procedure adopted in the previous Uruguay Round (UR) negotiations is adopted, the entry price will be reduced of an amount based on the value generated by the MTE cut. Note that these reductions will be significantly higher than those agreed in the UR.
- b) The hypothesis of the products involved being considered as sensitive products<sup>61</sup>. This could involve tariff cuts of one third of the normal cut and increase in TRQ. This is a possibility that could be applied to a very limited number of F&V and possibly can only be defended in those products where the entry price is still effective (see par. 3.1). Note that the sensitive products will be able to keep considerable protection but in turn

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<sup>61</sup> The Dec. 2008 draft set up, for developed countries, a threshold of 4% of tariff lines (about 80 lines at 6 digit level of HS) to be eligible as “sensitive products”.

market access will have to increase significantly through TRQs of a size up to 6% of the domestic consumption.

- c) The phasing out of the entry price system. This considers the elimination of the corresponding supplementary tariffs associated to the existence of entry prices, the ad valorem duties remaining at current levels.

Assessing these scenarios in the wake of the actual profile of EU's trade partners would suggest that on the Mediterranean scene EPs and preferential quotas can still be useful tools for their (limited and selective) property of stabilizing domestic prices, as well as for easing integration between Southern EU and North African agricultures by monitoring integration patterns and smoothing the process. The EU could even argue in favour of the maintaining the system, not only on the sake of protecting the EU F&V sector, but also on considering the risk of preference erosion against MPCs.

Moreover, a careful selection of sensitive products/months/partners as a guideline for trade deals might make room for reductions, or even phasing outs, for products where the impact of the EPS is negligible, while the EU should ensure that protection is granted to those products that are considered sensitive – that is, where the system actually helps to stabilize prices and avoid import surges – until a careful impact analysis. This would particularly hold for those seasons where overlapping exists for production in Southern EU regions and MPCs areas. These principles are also in line with previous recommendations made by the EESC and COPA-COGECA (EESC, 2008 and 2010).

It is also worth recalling that both the “finer tuning” of the EPS and the necessary improvement of border controls for managing the most sensitive liberalization issues would also call for a deepening of the analytical capacity to assess market prices and volumes. More generally, as far as border controls are concerned, a last recommendation relevant in the WTO context is the need of an effective use of the mechanisms foreseen in the WTO agreements to defend the competitive position of EU produce while careful moving towards trade liberalization. Such measures include (i) antidumping and safeguards, from the defensive point of view, and (ii) the resort to the SPS and TBT agreements when unjustified barriers are applied by third partner countries.

The progressive opening of EU markets for F&V will mainly proceed on the basis of preferential deals, with WTO multilateral discipline providing a consistent framework. As far as preferences are concerned, although those ones referred to F&V are of interest for a wide set of partners of the EU, the hot issues are mainly on the Mediterranean side. Trade deals with non-Med partners will go on with the slow pace of tariff dismantling which is already set up in the

framework of the agreements with South Africa and Chile and will be embodied in the agreements coming out from the recently re-launched EU-Mercosur negotiations, while the Mediterranean scene will need both more care and a strategic view on many policy dimensions.

Table 7. Scenarios for external protection of selected F&V in the Doha Round of multilateral negotiations

	Current			Hp. A			Hp. B			Hp. C		
	Tariff (%)	EP level (€/t)	MTE (€/t)	Tariff (%)	EP level (€/t)	MTE (€/t)	Tariff (%)	EP level (€/t)	MTE (€/t)	Tariff (%)	EP level (€/t)	MTE (€/t)
Tomatoes	8.8 – 14.4	526-1126	298	4.4-7.2	377-977	149	7.3 - 12	476-1076	248	8.8 – 14.4	-	-
Oranges	3.2-16.0	354	71	1.6-8.0	318,5	35,5	2.7-13.3	342	59	3.2-16.0	-	-
Clementines	16.0	649	106	8.0	596	53	13.3	631	88	16.0	-	-
Lemons	6.4	462-558	256	6.4	334-430	128	5.3	419-515	213	6.4	-	-
Mandarins	16.0	286	106	8.0	233	53	13.3	268	88	16.0	-	-
Apples	4.8 – 11.2	457 - 568	238	2.4 – 5.6	338-449	119	4.0– 9.4	417 - 528	198	4.8 – 11.2	-	-
Peaches/ Nect.	17.6	600-883	130	8.8	535-818	65	14.7	578-861	108	17.6	-	-
Table grapes	8.0-17.6	476-546	96	4.0-8.8	428-498	48	6.7-14.7	476-546	80	8.0-17.6	-	-

Source: WTO IDB notifications. WTO Committee on Agriculture, Chair's draft (Dec. 2008). Authors' calculations.

Here, both historical trading and political ties, as well as ongoing troublesome political changes, call for a strategic, long-term view of Mediterranean agriculture allowing for developing synergies between both shores of the Mediterranean. This long-term view certainly includes trade policy issues, but also lines of CAP reform, including the single payment scheme, the role of POs and rural development issues. On the trade side, suggestions previously summarized for the WTO context particularly hold in the Mediterranean context: insuring a slow expansion of tariff rate quotas, maintaining a preference margin for MPCs, accurately selecting products to be handled as “sensitive”, keeping the EPS in place for sensitive products - and, just as a device of statistical surveillance, also for other F&V products - improving border controls, monitoring of prices and quantities, and the use of safeguard clauses.

However the importance of the forms of coordination and economic integration with MPCs will make necessary paying attention to domestic policies too. The CAP's single payment scheme might have been (and might be) helpful to soften the social impacts of adjustments to a more open trading environment, but it is less effective to guarantee a sustainable development in rural areas. Territorial

policies supporting organization, business oriented practices, knowledge creation towards sustainable practices, keep being advisable in the F&V sector, as the main weaknesses of F&V producers and, often, of their POs lie in the capability of entering the most dynamic EU-based retail segments.

The strategic view to strengthening the EU competitive position through continuing support to POs is based also on the understanding that POs are an effective way to increase collaboration between growers and other members of the supply chain. This puts POs well oriented to partnerships with the most dynamic retail segment in the best position to gain from liberalization. The specific aid regime for F&V should therefore be maintained with a better orientation of resources and programs towards the promotion of a culture of management, business orientation and the achievement of larger POs. In such a policy context cooperation of POs with marketing and producing organizations in MPCs could be further encouraged.

## **Conclusions**

The current difficult situation of the European F&V producers arises mainly from long-term changes in the structure of the global F&V supply chain: consumers increasingly demand services, including convenience in food purchasing and preparation, taste, and variety, and are increasingly concerned for food safety and quality; sales are increasingly being controlled by fewer and fewer retailers, with a growing bargaining power; the role of the WTO and bilateral negotiations is becoming more important in widening competition; multinational agribusiness is now more important due to upgrading of logistics, communication and information technology, transport enabling fresh products to be transported from many origins.

These changes will continue to shape the future of the F&V economy in the EU and will deepen as the sector becomes more globalized and interconnected. Collective action at producer level and effective coordination within the chain appear to be pre-conditions for any successful strategy in coping with declining relative producer prices and the gap between farm and retail prices. Moreover, forms of producer organization should keep to be encouraged as an effective way to increase collaboration between growers and other members of the supply chain and develop partnerships around shared interests in cost reduction, quality upgrading and risk management.

EU experience has shown the key role played by POs in rebalancing the bargaining power and stabilizing prices and income, through the concentration and

the planning of supply. The European Commission itself considers POs “an economic necessity in order to strengthen the position of producers in the market”.

Notwithstanding several difficulties in the POs’ development path, the organizational model coming out from the current setup of agro-food markets, as well as the required competitive strategies, imply more stringent forms of both horizontal and chain integration where the retail stage coordinate the other actors. Producer Organizations can constitute a fundamental counterweight, restoring balance to market relationships, acting as a contractual tool for redistributing added value and contributing to cooperative behaviours along the chain.

The policy framework based upon POs should be maintained and their relevant tool, as operational programs. However room seems available to introduce simplification and flexibility of operational programs, adjustments in the mix of tools provided for risk and crisis management, refinement of incentives to POs, including forms of premium for commercialisation of quality products. Also, room would be needed for institutional solutions in matter of relationships between competition law and POs.

On the trade policy side, the progressive opening of EU markets for F&V will mainly proceed on the basis of preferential deals, with WTO multilateral discipline providing a consistent framework. A careful selection of sensitive products/months/partners as a guideline for trade deals might make room for reductions, or even phasing outs, of protection of products where the impact of the entry price is negligible, while the EU should ensure that protection is granted to those products that are considered sensitive – that is, where the system actually helps to stabilize prices and avoid import surges – until a careful impact analysis.

As far as preferences are concerned, although those ones referred to F&V are of interest for a wide set of partners of the EU, the hot issues are mainly on the Mediterranean side and need both more care and a strategic view on many policy dimensions. Entry prices and preferential quotas can still be useful tools in Mediterranean trade for their (limited and selective) property of stabilizing domestic prices, as well as for easing integration between Southern EU and North African agricultures by monitoring integration patterns and smoothing the process.

However the importance of the forms of coordination and economic integration with MPCs will make necessary paying attention to a wider set of policies. The CAP’s single payment scheme might have been (and might be) helpful to soften the social impacts of adjustments to a more open trading environment, but it is less effective to guarantee a sustainable development in rural areas. Territorial policies supporting organization, business oriented practices, knowledge creation towards sustainable practices, keep being advisable in the F&V sector, as

the main weaknesses of F&V producers and, often, of their POs lie in the capability of entering the most dynamic EU-based retail segments.

The strategic view to strengthening the EU competitive position through continuing support to POs is based also on the understanding that POs well oriented to partnerships with the most dynamic retail segment are in the best position to gain from liberalization. The specific aid regime for F&V should therefore be maintained with a better orientation of resources and programs towards the promotion of a culture of management, business orientation and the achievement of larger POs. In such a policy context cooperation of POs with marketing and producing organizations in MPCs could be further encouraged.

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## **Economic position and competitiveness of the Czech agriculture and food industry under the EU Common Agricultural Policy and on the EU single market**

### **Introduction**

There are large discussions in the Czech Republic and in the EU about future changes in the Common Agricultural Policy (CAP) after 2013. Any position from the point of view of the Czech government and other stakeholders to the changes should be based on analyses of the current situation in the agrarian sector, its development under the EU single market after EU accession in 2004.

The paper in Chapter 1 evaluates the competitive position of the Czech agriculture and farms, compared with other EU countries. Chapter 2 deals with the competitive position of the Czech food industry, issuing in relations in trade balances. Opportunities and risks for the Czech agrarian sector related to possible changes in the CAP after 2013 are discussed in Chapter 3.

### **1. Czech agriculture and farms on the EU single market**

Considering data and methodological barriers, there is a question, how competitive compared with EU and overseas countries is the Czech agriculture. For the sector assessment, it is possible to use the data of the Economic Account for Agriculture (EAA), complemented on the farm level by the data from the Farm Accountancy Data Network (FADN). For a deeper economic assessment of the farm economy it is also useful to apply commodity data from international agribenchmarks networks (Hemme 2009, Zimmer 2010), based on typical farms. The following indicators are applied for comparisons:

- Total costs (FADN), or total cash costs (agribenchmarks): consumption of production factors (including depreciations), which is (usually) linked with the current or future cash costs.
- Intermediate consumption (EAA, FADN): in principle costs on variable material inputs and services.

- Opportunity costs of own labour, land and capital (agribenchmarks): evaluation of own sources in the given country/region/locality.
- Economic costs (agribenchmarks): bookkeeping (cash) costs plus opportunity costs.
- Income from factors - Indicator A (Eurostat): Net Value Added including supports minus production taxes (NVA) per 1 Annual Working Unit (AWU) as a source to cover labour costs, rents for land and interests.
- Total profitability: FADN: (total production + balance of supports and taxes)/total costs; agribenchmarks: (incomes from production + supports)/total bookkeeping costs.
- Total economic profitability (agribenchmarks): (incomes from production + supports)/economic costs.

### **1.1. Competitiveness of Czech farms based on FADN data**

Compared with an average EU farm<sup>62</sup> (see Graph 1.1.1) the average size of Czech farms is more than 7 times higher, but employment (AWU/100 ha) more than 30% lower, corresponding with almost 40% lower livestock density (LU/100 ha). In spite of a very high livestock density the German farm shows low labour inputs by nearly 50%, indicating its higher productivity with higher capital endowment. Different characteristics show Polish farms: with on average a very small size and a lower livestock density it consumes labour by more than 100%. However, to indicate a real economic situation of farms (their viability, sustainability), prices of production factors and the level of supports have to be considered.

Graph 1.1.2 presents basic economic indicators for EU average farms. The level of production per ha is relatively very low in Czech agriculture. Undoubtedly, it is also the reflection of about 50% of agricultural land classified in Less Favoured Areas (LFA). Except the Slovak farm all other presented farms are able to cover with supports their total costs and they are able to survive in a long run. However, the Czech farm would not be able to survive without supports: its total incomes do not cover total costs.

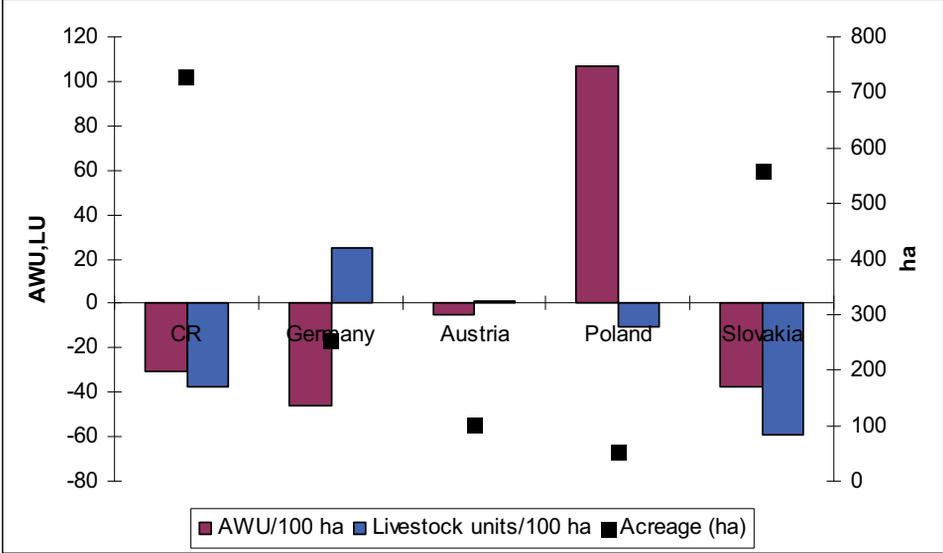
Which factors are influencing the presented results? Graph 1.1.3 presents the level of supports per 1 ha, clearly showing the “historical” differences between the old and new EU countries in this field. Among the new EU countries, the Czech farm has the highest level of supports from the both pillars of the

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<sup>62</sup> Arithmetical mean 2005-2007 in current prices.

CAP. The influence of higher co-financed supports on non-commodity outputs under the Pillar II is evident especially in Austria.

Graph 1.1.1. Characteristics of average farm in FADN 2005-2007 (EU-25 = 100)



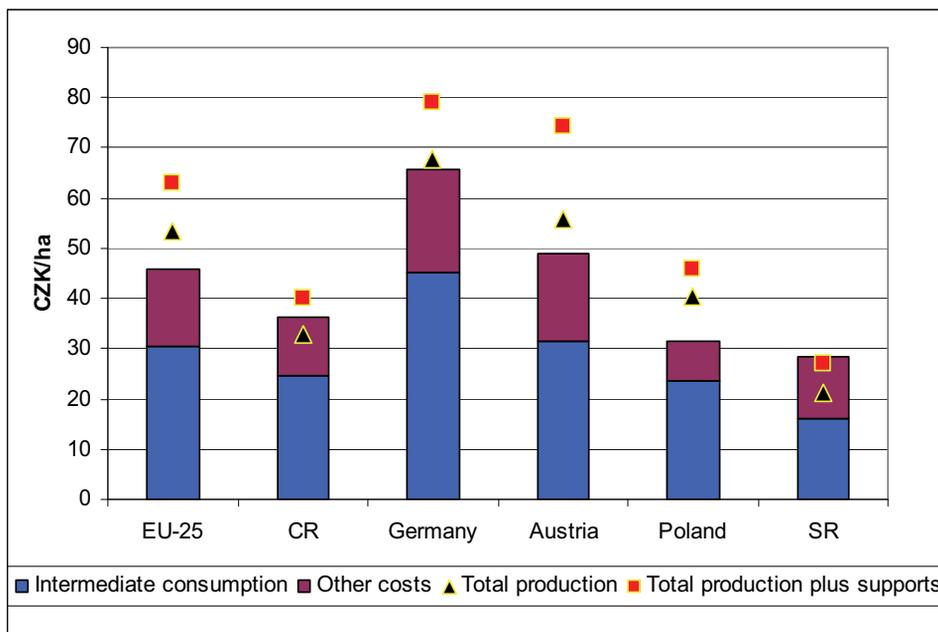
Source: EUROSTAT – FADN 2005-2007.

The effectiveness of the use of variable inputs and services, measured by the intermediate consumption /total production ratio, influences the economy of farms. It is evident from Graph 1.1.3, that Czech agriculture, except Slovakia, shows the lowest effectiveness among the compared countries. However, a low level of livestock production with lower labour inputs and other factors (e.g. a lower efficiency of down-stream sectors) have to be considered in these comparisons.

A comprehensive economic situation of farms is measured by NVA/AWU. The indicator for the Czech agriculture is about two thirds compared with EU-25, but re-calculated by the Purchase Power Parity the Czech farm slightly exceeds the EU-25 average (see Graph 1.1.4).

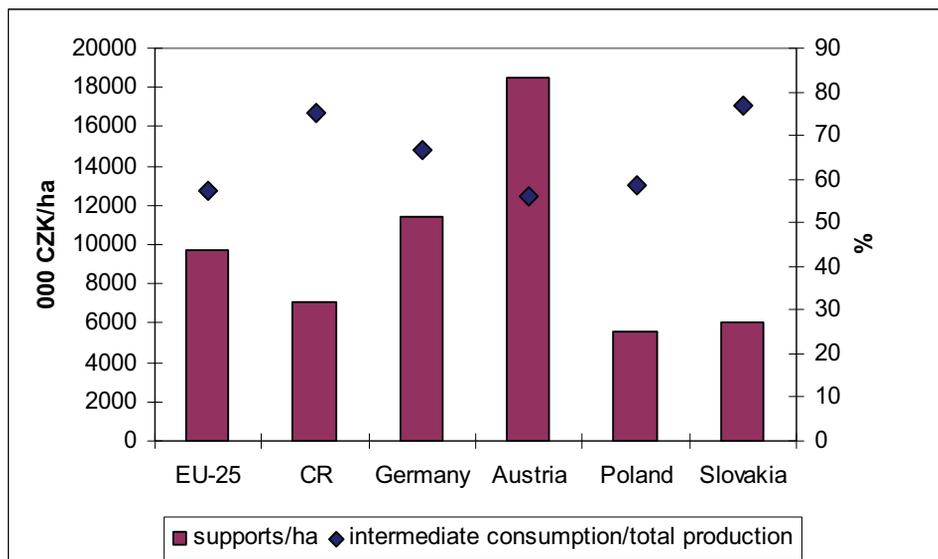
Graph 1.1.4 also presents the total profitability of farms. It is relatively very low in the Czech agriculture, particularly compared with Austria and Poland with high share of their own labour and land. However, a real economy considering opportunity costs on labour, land and capital is “a different story”, presented in Parts 1.2 and 1.3.

Graph 1.1.2. Economy of average FADN farms 2005-2007



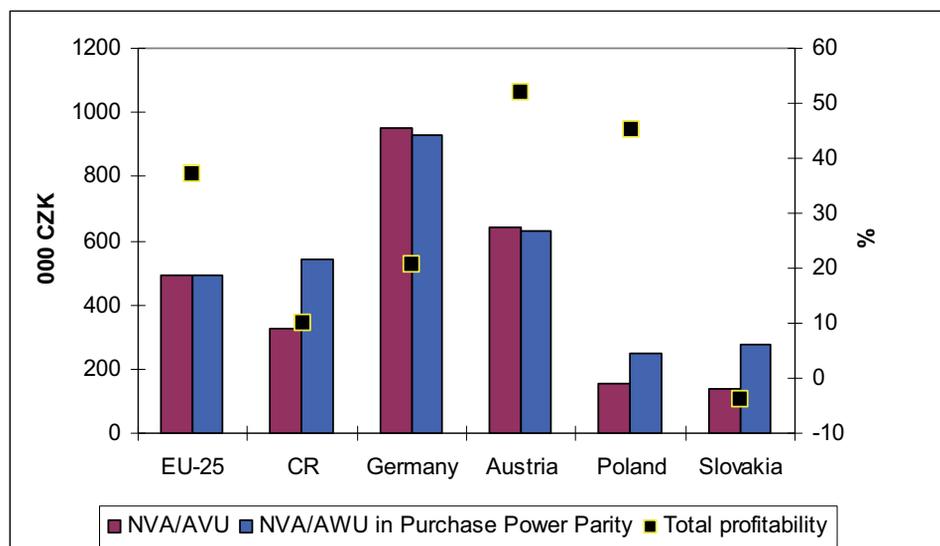
Source: EUROSTAT – FADN 2005-2007.

Graph 1.1.3. Supports and effectiveness of intermediate inputs on FADN average farms 2005-2007



Source: EUROSTAT – FADN 2005-2007.

Graph 1.1.4. NVA/AWU on average farms (FADN 2005-2007)



Source: EUROSTAT – FADN 2005-2007.

## 1.2. Competitiveness of Czech dairy farms based on benchmarking data

It is useful to complement the FADN data by other sources, even though commodity oriented. In the dairy sector it is possible to use the benchmarking data from IFCN Dairy network, based on typical dairy farms throughout the world. The first part of Table 1.2.1 presents the IFCN data for 2008 (Hemme 2009).

Graph 1.2.1 shows total economic costs and presents differences between bookkeeping (cash) and economic situation on farms. Considering all costs, small farms from Germany, Austria and France are unprofitable without supports. The Polish and the Austrian farms are unprofitable even with supports. The larger Czech farms with a higher share of hired labour and land (and with a lower opportunity costs) are profitable with supports. The graph also indicates differences between EU farms and farms from the third countries, represented by a farm from New Zealand. The differences are very significant, indicating a stronger position of the Oceania on the world dairy market.

The given cost/price ratios issue in the total profitability in the dairy sector, it means in the milk production including by-products (see Table 1.2.1). The second part of the table shows the data from FADN 2005–07 for farms of adequate size with prevailing milk production. It is possible to recognize significant differences between the bookkeeping and the real economic profitability on

smaller farms and also the differences in the level of NVA/AWU between the Czech and the other compared EU countries.

Table 1.2.1. Economy of dairy farms

Country <sup>1)</sup>	CR 490	ČR 417	POL 65	GER 80	GER 650	AUS 40	FRA 60	NZ 551
<i>IFCN data</i>								
Yield <sup>2)</sup>	5728	7190	7409	8712	7099	7531	8201	5134
Total bookkeeping profitability (%)	8.68	16.94	8.43	39.85	23.68	100.00	48.58	67.89
Total economic profitability (%)	2.64	10.88	-9.40	3.99	19.47	-0.68	11.70	34.82
<i>FADN data 2005-2007<sup>3)</sup></i>								
Total costs	40.0	40.0	27.5	65.8	79.4	45.6	43.6	
Total production	33.2	33.2	44.1	74.8	76.2	55.1	45.6	
Total supports	9.3	9.3	5.2	14.1	13.6	18.9	10.5	
Total bookkeeping profitability (%)	6.25	6.25	7.93	35.11	13.1	62.28	24.08	
NVA/AWU (000 CZK)	283.8	283.8	400.2	868.1	1173.9	653.4	652.1	

<sup>1)</sup> Numbers after the abbreviation of the country indicates the number cows; NZ = New Zealand.

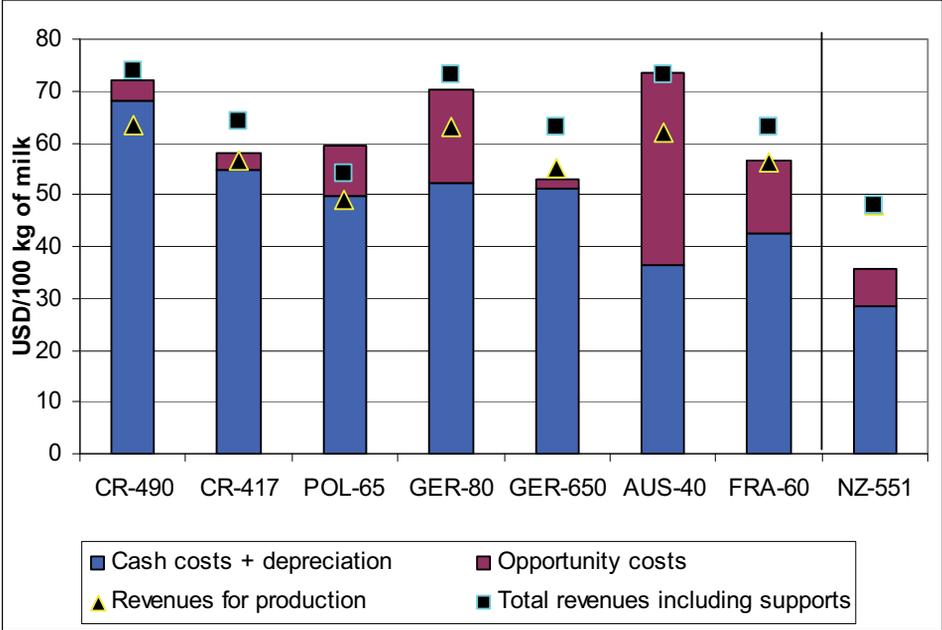
<sup>2)</sup> kg/cow and year. <sup>3)</sup> Data related to farms with prevailing milk production in a given size category (in 000 CZK/ha).

Source: EUROSTAT – FADN 2005-2007 and Hemme 2009 (IFCN).

However, a relatively good economy of the Czech farms is conditioned by very low prices for labour and land. The price for labour (see Graph 1.2.2) on the Czech farms is about a half to one third compared with the EU-15 farms. Technical efficiency of labour, measured by the quantity of milk produced by 1 hour of labour, is also very low, roughly only half and lower compared with the EU-15 farms (not considering differences in services substitut-

ing the labour on farms). Nevertheless, low prices for labour on Czech farms correspond with a lower labour efficiency.

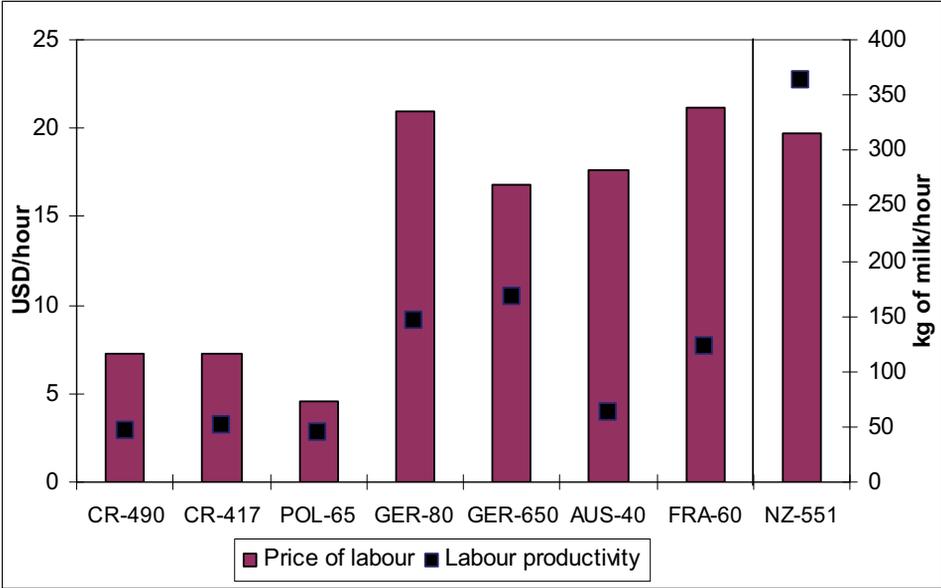
Graph 1.2.1. Economy of milk production on farms (IFCN 2008)



Source: Hemme 2009 (IFCN).

The situation in land prices (rents), but with larger differences among farms, is similar. The Polish farm indicates an extreme growth in land prices in Poland after EU accession. Also land productivity in principle corresponds to the relation “the lower land price the lower its productivity”.

Graph. 1.2.2. Price of labour productivity on farms (IFCN 2008)



Source: Hemme 2009(IFCN).

**1.3. Competitiveness of Czech crop farms based on benchmarking data**

The Agribenchmark network enables to compare worldwide the economy of crop production on arable land – cereals (wheat) and oil seeds (rape seeds). The following text, graphs and tables are related to 2008 for wheat on selected farms (see tab. 1.3.1).

Table 1.3.1 and Graph 1.3.1 demonstrate a different competitive position of Czech farms in crop production than in livestock production. Economy of size on the Czech farm with very low own labour and land, in spite of relatively low level of supports, is evident.

Total economic costs on smaller EU-15 farms (and also on the Australian farm), in spite of a higher labour productivity, significantly reduce the total profitability in wheat production. However, the FADN data for 2005-2007 in Table 1.3.1 confirm a weaker economy of the Czech average farms compared with the selected EU average farms of the given production orientation and size.

Table 1.3.1. Economy of wheat production on farms

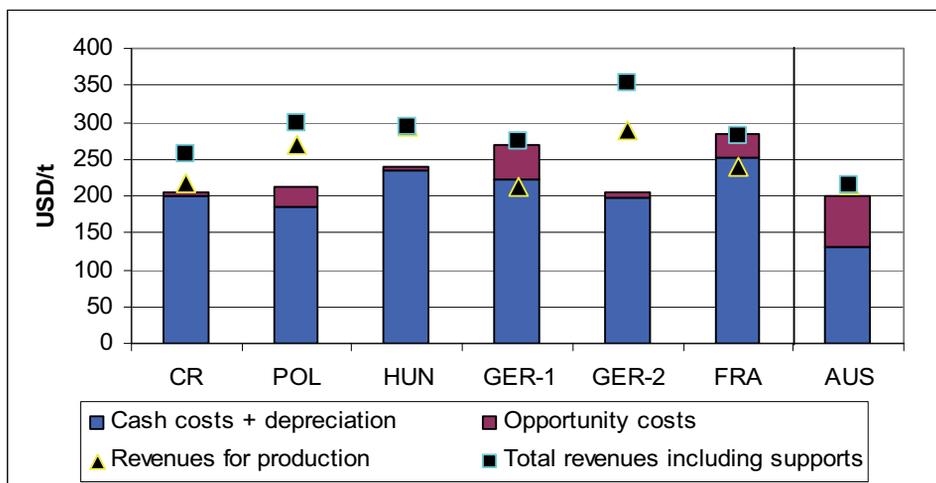
Country	CR	POL	HUN	(WEST) GER-1	(EAST) GER-2	FRA	AUS <sup>2)</sup>
<i>Agribenchmark data</i>							
Size of farms (ha)	1200	2000	1100	360	1600	230	650
Yields (t/ha)	6.0	6.4	4.8	8.5	8.2	8.6	3.5
Total bookkeeping profitability (%)	29.37	61.66	24.88	22.87	79.23	11.36	65.38
Total economic profitability (%)	26.27	41.07	22.62	1.48	72.97	-1.08	7.50
Labour productivity (t/hour)	1.68	3.01	1.39	11.17	5.18	2.9	3.31
<i>FADN data 2005-2007<sup>1)</sup></i>							
Total costs	38.6	26.4	29.9	41.5	45.6	32.4	
Total production	34.4	26.2	25.4	42.2	41.5	31.9	
Total supports	6.4	4.2	6.5	10.1	9.6	10.4	
Total bookkeeping profitability (%)	5.70	15.15	6.69	26.02	12.06	30.56	
NVA/AWU (000 CZK)	341.8	401.2	504.5	754.2	1385.2	734.2	

<sup>1)</sup> Related to farms with prevailing production on arable land of given size category (000 CZK/ha).

<sup>2)</sup> AUS = Australia

Sources: EUROSTAT – FADN 2005-2007 and Zimmer 2010 (Agribenchmark).

Graph 1.3.1. Economy of wheat production



Source: Zimmer 2010 (Agribenchmark).

#### 1.4 Conclusions for economy and competitiveness of Czech farms

- In spite of a lower level of supports compared with EU-15 countries, the Czech agriculture is still economically viable. However, its competitiveness, particularly in livestock production, is reduced by a lower input effectiveness.
- The lower input effectiveness is still to some extent eliminated by lower input prices, especially for labour and land.
- Expected increase of prices for labour and land with the continuation of their lower effectiveness is one of the main threats, but also prior reserves for the future.
- Large Czech farms have to more utilise the economy of scale, to overcome a higher economic flexibility of EU smaller family farms.
- The Czech Republic has a relatively high share of agricultural land allocated in regions with natural and climatic handicaps. A higher stress on multifunctionality and non-commodity outputs in agriculture should eliminate this fact.

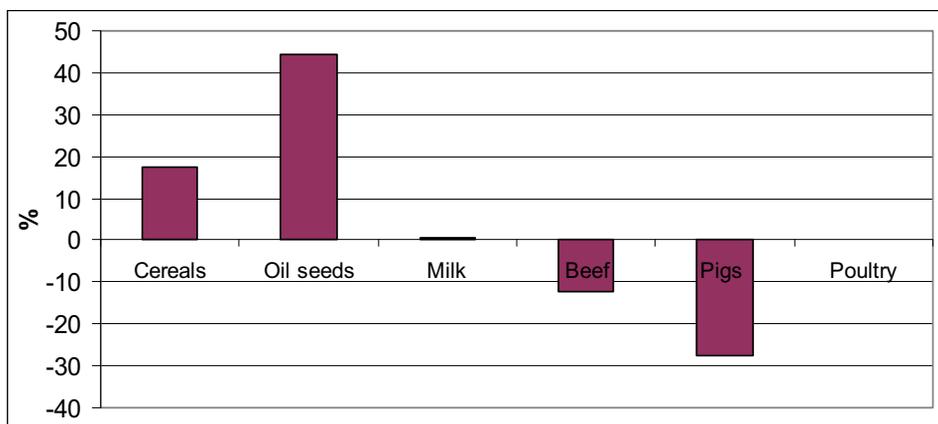
## 2. Competitiveness of Czech food industry and Czech agrarian trade

### 2.1. Conditions for Czech food industry after EU accession

After EU accession the Czech food industry has been exposed to a stricter global competition on the EU single market. However, contrary to global trends, new market segments and organisations have been developing, particularly markets for bio-products and foods with a specific labelling: (KLASA, protected origin, traditional specialities, regional and local foods, etc.), various forms of farm-gate sales, the development of small processing capacities on farms and increasing power of farm's sale organisations.

Food industry and developing new markets have been also supported by the public sources. The share of supports for food industry in the total supports for the agrarian sector have dropped from about 15% before EU accession to about 6% in 2007-2010, but direct subsidies for food industry firms have increased by more than 40% and also supports on marketing have been recently much higher. On the other hand, the reduction of export subsidies has concerned especially dairy sector, forcing it to change its commodity structure.

Graph 2.1.1. Development of agricultural production (index 2007-2009/2001-2003)



Source: Reports on the Czech agriculture. Ministry of Agriculture, 2002-2010.

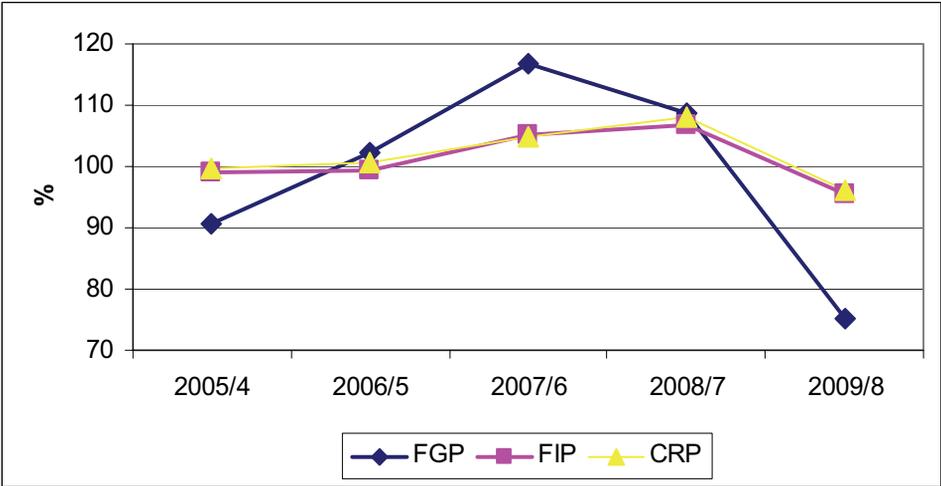
Besides the classification of the food industry firms by branches it is useful to define the segment of primary processing (with outputs as *transformed products*, with lower value added) and the segment of following processing (with outputs as *processed products*, with higher value added). Particularly the former segment is usually more closely linked with the domestic agricultural

production. This production during the period of 2005-2009, compared with the last pre-accession years, has (at constant 2000 prices) slightly increased (by 4,3%), but with a significant decrease of livestock production. Above it, the competition for biomass, linked with its growing energetic use, has been emerging in the crop production. The production of main agricultural commodities after 2004, compared with the pre-accession period, is presented in Graph 2.1.1.

In the feed production there are also links to the demand side of the market, influenced by the development of domestic livestock. Comparing the averages of 2001-2003 with 2008-2009, cattle heads dropped by 9,4% (of which dairy cows by 15,8%, but with the increase of suckler cows by 58,3 %), pigs by 35,7% and poultry by 5,9%.

In general, supply/demand conditions for the Czech food industry have been deteriorating after EU accession. They are also reflected in the development of price ratios in the vertical (Graph 2.1.2): farm-gate prices (FGP), food industry prices (FIP) and consumer retail prices (CRP).

Graph 2.1.2. Price development 2005-2009 (inter-annual indices)



Source: Reports on the Czech agriculture. Ministry of Agriculture, 2002-2010.

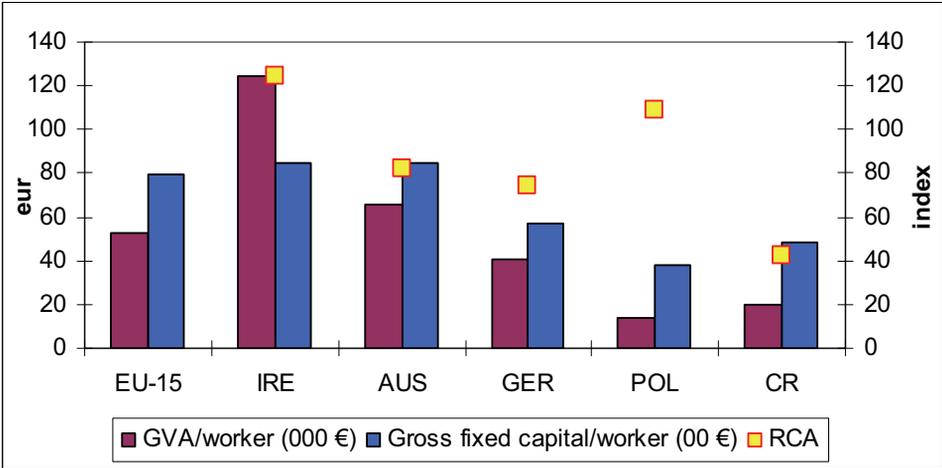
## 2.2. Structural and economic characteristics of the present Czech food industry

Total current number of food industry firms is about 15 800 with a growing number of smaller firms as physical entities. Only 270 firms have more than 100 employees, but about 1 060 firms are based on foreign investments. However, only

a small number of large firms, particularly in the segment of primary processing, reaches a (technological) concentration to correspond to global market conditions. The total efficiency of the Czech food industry compared with selected EU countries is presented in Graph 2.2.1 (EUROSTAT 2006). The Czech productivity, measured by Gross Value Added (GVA) per worker, is less than 40% compared with the EU-15 average, but slightly higher considering the value of Gross Fixed Capital/worker. RCA indicators<sup>63</sup> based on the data from the period of 2003-2006 signal that the Czech food industry (Carraresi, Banterle 2008) has the lowest comparative advantage among compared countries, just opposite to Ireland and Poland.

The share of costs in the total outputs ranges about 76-77% and has been decreasing after EU accession (80 % in 2000). According to Čechura 2009 total factor productivity in the Czech food industry based on innovations and the growing efficiency of the Czech economy has been improving, but technical efficiency has been stagnating and even decreasing in some branches (e.g. in the meat processing), so confirming an insufficient exploitation of capacities particularly in the segment of primary processing.

Graph 2.2.1. Competitiveness of food industry (2006)

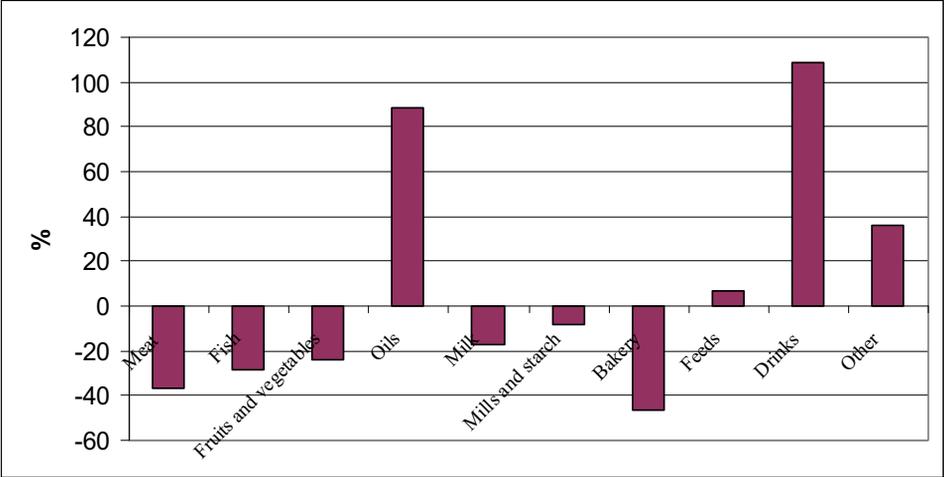


Source: EUROSTAT 2006, Carraresi, Banterle 2008.

<sup>63</sup> RCA = Revealed Comparative Advantage, here the country's share of food industry exports on the EU market in the total exports of a country on the EU market, divided by the share of EU food industry exports in the total EU exports (multiplied by 100). The value of the indicator higher than 100 indicate the specialisation on exports, issuing from comparative advantages related both to the world and to national economy.

Individual branches contribute differently to the total economy of the sector. Graph 2.2.2 shows the comparison of the value added per worker by branches (average 2008-2009, for firms with more than 50 employees). The sector economy is moved on by four branches: drinks, oils, feeds and other production (processing of non-competitive raw materials, sugar, etc.). The least effective bakery and meat processing find themselves on the opposite side. This situation has been characteristic for the Czech food industry for a long time and to some extent is reflected in the Czech agricultural trade (see also the RCA indicator).

Graph 2.2.2. Value added per worker by food industry branches (average 2008-2009; average of all branches = CZK 729 000 = 100)



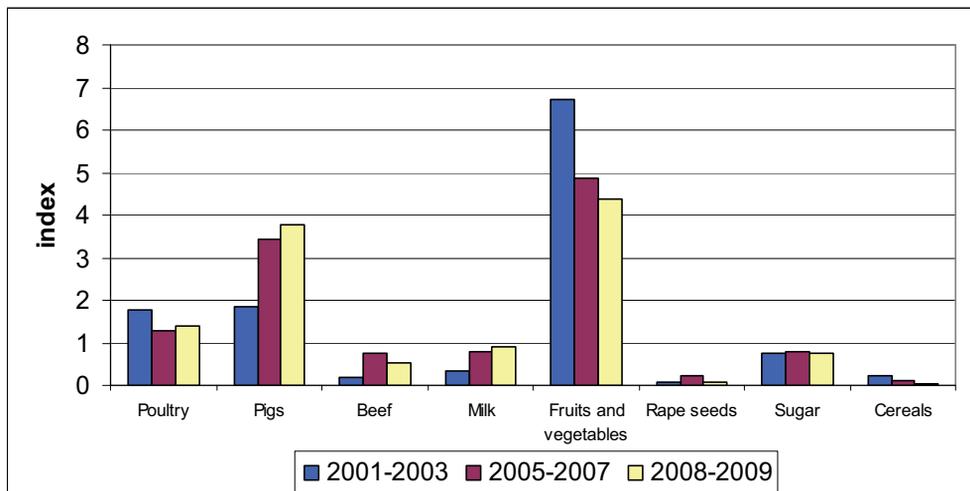
Source: Report on the Czech Agriculture 2009. Ministry of Agriculture, 2010.

### 2.3 Czech agricultural trade

The turnover of the Czech agricultural trade has doubled after EU accession, but with growing negative trade balance. Graph 2.3.1 presents the imports/exports volume ratios by the main agricultural commodities for the periods of 2001-2003, 2005-2007 and 2008-2009.

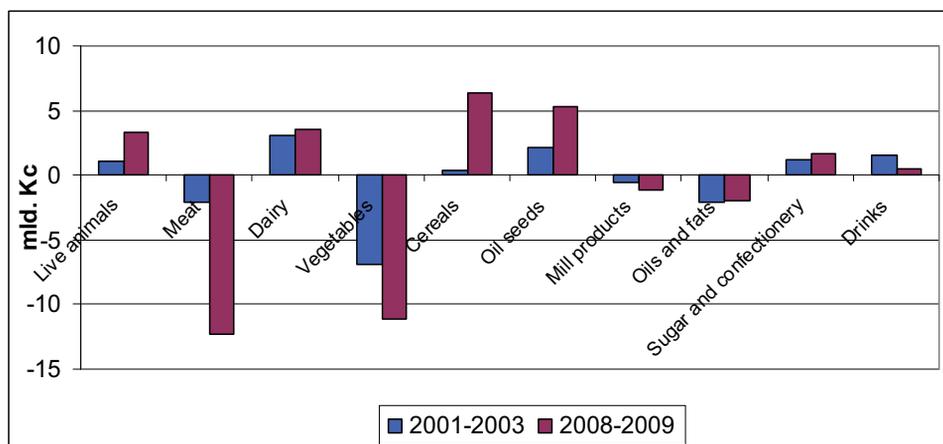
The similar balances in values, influenced by export/import prices (terms of trade), are presented in Graph 2.3.2.

Graph 2.3.1. Imports/exports ratios by the main agricultural commodities (in physical units)



Source: Reports on the Czech agriculture. Ministry of Agriculture, 2002-2010.

Graph 2.3.2. Trade balances of selected commodities (CZK bil.)



Source: Reports on the Czech agriculture. Ministry of Agriculture, 2002-2010.

Graphs 2.3.1 and 2.3.2 in the combination with Graph 2.2.2 evidently signal the following problems in the current competitiveness of the Czech agrarian sector:

- increasing exports of agricultural raw materials (live animals, milk, cereals, oil seeds), which are not utilised by the Czech food industry. Undoubtedly, it

is also the reflection of a lower efficiency of the domestic (primary) processors;

- increasing re-imports of food products, it means the products originating from the domestic raw materials (e. g. meat and meat products and dairy products).

#### **2.4. Conclusions for economy and competitiveness of Czech food industry**

It is possible to suppose the following changes in conditions for the Czech food industry in the future:

- Further reduction of the domestic agricultural output, or a reduction of the output for food use, respectively. It is especially the case of the still low effective livestock production and a growth in the use of biomass for energy.
- Progress in the functioning of the present producers' organisations, increasing not only market power of farms, but also improving regular farm supplies for processing in required time, quality and quantity.
- Increasing local or regional competition based on farm-gate sales and small processing capacities on farms.
- Increasing demand for Czech, regional and local foods (but with possible higher impacts on regional developments than on the food industry itself).
- Total abolishment of export subsidies, but on the other hand the enforcement of European food safety, environmental and social standards on imports from the third countries.
- Impacts of the current Czech law reducing economic power of retailers.
- Improvement of the transport infrastructure and logistics as both an opportunity and a threat for the Czech food industry.

Under these conditions it is possible to expect a further deepening of the dual structure of the Czech food industry. On the one hand it can issue in a further ownership and technological concentration (based also on foreign direct investments) as the condition for competitiveness in "mass" foods. On the other hand it can issue in a further increase in the number of smaller firms oriented on specialities and special segments of the market.

### 3. Common Agricultural Policy after 2013 and the Czech positions

Future changes in the CAP after 2013 are still only under discussions<sup>64</sup>. The actual official Czech positions of the Ministry of Agriculture to main projected changes compared with positions of the economic research (IAEI) are presented in the following Table 3.1.

Table 3.1. Positions to possible changes in the CAP after 2013

CAP changes	Official position	IAEI position	Comments (research)
Maintaining of two pillars	Yes.	Yes.	Yes, but stricter conditions for Pillar I payments.
Distribution of national envelopes for Pillar I	Fair, to avoid injustice among EU countries.	To apply environmental criteria combined with GDP/capita.	To utilise extensive character of Czech agriculture.
Capping of direct payments	No capping.	Capping is unavoidable, if direct payments are treated only as income (social) supports.	Owing to Czech farm structure with prevailing very large farms owned by "landlords" it is disputable to pay them social supports.
Greening of direct payments	No greening, to apply stricter cross compliance.	Greening as arguments for public goods delivering jointly with direct payments and a solution of widespread problems (erosion, crop rotation, water regime, etc.).	Greening changes direct payments to payments for public goods. No greening = capping unavoidable.
Special supports to small farmers	(Still) no objections.	Yes.	Yes, but problems with definition of small farmers.
Special supports to young farmers.	Yes.	Yes.	–
Direct payments only to "active" farmers.	Hesitation.	Yes.	Yes, but problems with definition of "active farmers".
Coupled payments	Yes for sensitive commodities, as at present.	Yes, but only very limited.	To avoid a deformation of competition on the EU single market.
LFA payments	To preserve in Pillar II.	To preserve in Pillar II.	Some form of degresivity needed.
Rural development	To preserve in Pillar II.	Rural development as a spacial problem to be solved by "territorial" programmes.	Use CAP only for improving relations of farmers to rural communities.

<sup>64</sup> Related to May 30, 2011.

General backgrounds for the position of the economic research are as follows:

- Each category of the CAP supports shall be joined with public goods related to environment or rural communities.
- Food security shall be defined in Czech conditions as the preservation of the acreage of agricultural land as much as possible *and* as the maintaining/improvement of the soil quality of the Czech agricultural land.
- Capping of direct payments and their greening is interlinked conception, providing arguments for Pillar I income supports.
- Saved sources from a capping of direct payments shall be left in a given country for the Pillar II and for research, technological development and other general services.
- Considering problems with soil erosion and degradation, water regimes, etc., an effective use of “greening” measures is very important for Czech conditions.
- CAP sources shall be more oriented on positive externalities generated by farms to rural areas and communities than on a general rural development. This development is a spatial, multi-sectoral problem that can be better solved by other horizontal policies.

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## **Population farms in the context of Food Security of Belarus**

### **Introduction**

In the Republic of Belarus, along with large agricultural enterprises, different categories of individual citizen farms are engaged in agricultural production: personal subsidiary plots of rural population; private farms of citizens; citizens who lead the collective horticulture and vegetable culture as part of horticultural societies, etc. All of them are presented as population farms in the materials of bodies of state statistics.

### **Changes of food production and consumption patterns**

According to the researches it has been established that for several years there was a steady tendency of the reduction of areas under crops, number of livestock and manufacture of many kinds of agricultural production in economic activities of this category of manufacturers of agricultural production (tab. 1). The analysis has shown that over the last 15 years (1995-2010) the potato areas have decreased by 296.6 thous. ha i.e. 2 times, number of cattle – by 605 thous. animals (3.9 times), small cattle – by 110.1 (2 times), pigs – by 659.9 (1.7 times), poultry – by 1752.7 thous. (1.3 times). Among main kinds of agricultural production in this period of time manufacture growth was observed only in grain branch, vegetable culture and fruit growing. In 2010 the indicators of grain volumes of output have exceeded the ones in 1995 by 48.3 thous. t (1.16 times), vegetables – 1100.2 thous. t (2.4), fruit and berries – 371.2 thous. t (2 times). At the same time potato manufacture has decreased by 1406.6 thous. t (1.2 times), milk – 1119.9 thous. t (2.3), honey – 420 t (1.1), eggs – 252.3 mln pieces (1.2) and cattle and poultry (live weight basis) was reduced by 54.8 thous. t (1.3 times).

Researches have shown that process of manufacture turning of agricultural production has been caused by a number of factors and the managing conditions which essence is in the following:

1. Since the middle of the 90th the state agrarian policy has been directed to gradual transition to market system relations, development of various patterns of ownership and subjects of managing, but with a priority of large manufacture to which the big investments in realization of the State program of revival and village development are directed.

2. The social orientation of economic transformations was accompanied with the growth of real monetary income of the population which have increased in 2009 more than 2.7 times in relation to the level of 1990.
3. In countryside the population is reduced as a result of excess of death rate over birth one and population shift to cities. So, from 1995 till 2010 it has decreased by 886 thous. people, i.e. by 27.3%.
4. The production in individual farms is notable for high labour-intensiveness, it doesn't always answer to qualitative parameters, therefore the competitiveness of production decreases.
5. Small-scale commodity production character in individual sector creates certain difficulties of preparation and realization of production. Marketability in individual farms of the population doesn't exceed 30% of output volumes.
6. The price conjuncture between procurement prices of made production and retail realization of ready foodstuff in a trading network has developed not in favor of personal farmsteads. For example, if in 1990 from a sale of 1 kg of milk the countryman could buy 1648 g in retail trade of bread, vegetable oil – 304 g, boiled sausage – 163 g, in 2009 these indicators are 454, 163, and 0.056 g, respectively.
7. In countryside as a result of development of enterprise activity trading the service of agricultural population has considerably improved, on sale there is a wide and accessible assortment of food goods which became unprofitable to make in house conditions.

However, despite the constant turning of manufacture of agricultural production in individual sector, they bring the essential contribution to formation of the food market and maintenance of food safety of the country (tab. 2). It is necessary to notice that in 2010 in population farms 30% of all production of agriculture in republic, including 86.9% of potato, 81% of vegetables, 91.8% of fruit and berries, 85.5% of honey, 32.2% of eggs were made. Proceeding from the cited data, it is possible to assert that activization of agricultural manufacture production in individual economy of the population is traced in destabilization of social and economic conditions, falling living standards and population incomes. In such economic conditions the population act as some kind of stabilizers and guarantors of food maintenance.

In the conditions of manufacture turning of agricultural production in population economy the role and their importance in a self-sufficiency agricultural population foodstuff has a little decreased.

Table 1. Dynamics of areas under crops, number of agricultural animals, poultry and manufacture volumes of agricultural production on farms of the population of the Republic of Belarus, 1991-2010

Indicators	Year										2010 to (%)	
	1991	1995	2005	2006	2007	2008	2009	2010	2010	1995	2009	
Areas under crops, thous. Ha	548.9	937.3	824.4	747.9	705.1	658.1	628.5	590.6	590.6	63.0	94.0	
Including:	51.0	147.1	176.1	165.2	145.2	131.3	122.7	112.8	112.8	76.7	91.9	
Crops												
Potatoes	404.7	608.3	414.8	393.2	363.4	342.1	329.9	311.7	311.7	51.2	94.5	
field vegetables	28.0	59.3	71.4	70.0	68.4	66.3	65.8	63.4	63.4	106.9	96.4	
Number of cattle and poultry at the year-end, thous. Animals												
Cattle	798.4	816.1	427	359.3	311.6	278.6	254.8	211.1	211.1	25.9	82.8	
Including cows	684.3	742.3	362.5	303.7	253.5	225.7	201.3	168.5	168.5	22.7	83.7	
Pigs	1506.0	1555.9	1007.2	974.0	941.2	914.9	922.6	896.0	896.0	57.6	97.1	
Sheep and goats	249.5	223.9	113.2	113.0	115.1	116.1	118.4	113.8	113.8	50.8	96.1	
Poultry of all kinds	22832.3	8043.2	6393.7	6339.3	6277.5	6176.8	6343.3	6290.5	6290.5	78.2	99.2	
Volumes of production, thous. T												
Grain	130.1	302.0	587.4	482.1	465.2	481.8	449.3	350.3	350.3	116.0	78.0	
Potatoes	5813.0	8211.0	7499.2	7510.7	7836.6	7646	6283.2	6804.4	6804.4	82.9	108.3	
Vegetables	501.0	791.3	1727.4	1767.1	1775.5	1781.7	1846.7	1891.5	1891.5	239.0	102.4	
Fruit and berries	299.4	363.0	344.8	644	377.9	542.8	627.3	734.2	734.2	202.3	117.0	
Milk	1789.0	1999.0	1494.4	1351.8	1198.6	1074.4	999.4	879.1	879.1	44.0	88.0	
Cattle and poultry (live weight basis)	218.0	232.2	205.1	202.6	197.6	186.4	181.5	177.4	177.4	76.4	97.7	
Honey, t	3387	3410	2450	2641	2712	2845	2887.0	2990	2990	87.7	103.6	
Eggs, mln pieces	1427.0	1392.1	1179.0	1148.2	1142.0	1127.4	1138.0	1139.8	1139.8	81.9	100.2	

Source: National Statistical Committee of the Republic of Belarus.

Table 2. Specific gravity of population farms in manufacture of agricultural production

Indicators	Year							
	1991	1995	2005	2006	2007	2008	2009	2010
<b>Real monetary incomes of the population in % to</b>								
1990 = 100	100.2	51.3	178.8	210.6	238.4	266.5	273.7	315.0
The previous year	100.2	66.4	118.4	117.8	113.2	111.8	102.7	115.2
<b>Specific gravity of population farms, %</b>								
In agriculture gross output	33.3	48.0	37.6	37.3	34.6	31.4	29.6	34,5
In production of:								
crops	2.1	5.5	9.1	8.1	6.4	5.3	5.3	5.0
Potatoes	64.9	86.4	91.6	90.2	89.6	87.4	88.2	86.9
vegetables	54.6	76.7	86.1	81.3	82.5	77.6	80.0	81.0
fruit and berries	96.2	94.8	90.4	89.9	90.1	91.7	90.7	91.8
Milk	26.3	39.4	26.3	22.9	20.3	17.3	15.2	13.2
Eggs	38.4	41.3	38.0	34.4	35.4	34.0	33.2	32.2
Honey	73.9	82.9	82.2	83.1	83.8	84.3	85.1	85.5
Cattle (live weight basis)	13.6	23.3	20.0	18.1	16.8	15.4	13.6	12.7

Source: National Statistical Committee of the Republic of Belarus.

From 1995 till 2009 in per capita terms annual consumption of vegetables has increased in countryside by 13 kg (15.3 %), fruit and berries – 24 kg (2.1 times), meat production – 14 kg (1.3 times), eggs – 32 pieces (18.2 %). At the same time specific gravity of production of own domestic manufacture in consumption has decreased on vegetables from 90.6 in 1995 to 81.1% in 2009, fruit and berries – from 69.2 to 59.9%, milk – from 67.5 to 20.7%, meat – from 66.8 to 32.5% (tab. 3).

### **The role of policies supporting rural development**

It is necessary to notice that for realization purposes of actions of the State program of revival and village development, 2005-2010 the government regulation of Belarus № 681 on May, 30 in 2006 had been accepted the Program of development and support of individual part-time farms of citizens, 2006-2010 (hereinafter referred to as – the Program). The main aim of the Program con-

sisted in creation of conditions and maintenance of the state support of personal farmsteads; increase in output volumes and preparations of agricultural production in population economy, increase of employment and citizens incomes.

Table 3. Dynamics of consumption of the basic foodstuffs in agricultural population households, 1995-2009

Production	Year					
	1995	2005	2006	2007	2008	2009
<b>Production consumption in households per capita, kg</b>						
Potatoes	180	128	116	117	109	101
Vegetables	85	97	101	101	99	98
Fruits and berries	21	36	44	38	42	45
Milk and milk production	369	299	293	292	285	273
Meat and meat production	45	57	60	61	62	59
Eggs, pieces	175	202	202	208	215	207
<b>Specific gravity of self production in consumption, %</b>						
Potatoes	97.5	96.6	94.9	95.9	96.2	95.0
Vegetables	90.6	80.7	79.1	81.9	81.4	81.1
Fruit and berries	69.2	57.2	56.7	43.9	49.9	59.9
Milk and milk production	67.5	41.2	35.7	27.2	22	20.7
Meat and meat production	66.8	39.7	35.7	34.6	32.8	32.5
Eggs	78.7	71.9	66.5	67.4	67.9	64.5

Source: National Statistical Committee of the Republic of Belarus.

At the same time, despite taken measures and allocated for development of personal farmsteads budgetary resources, in individual sector there was different situation, than it was provided by the Program.

In 2006-2010 from the state budget on Program financing of actions it has been used 270.4 bln roubles and 4,3 bln roubles was given to countrymen for conducting of personal part-time farm preferential credits from banks (tab. 4). On the whole, budgetary funds have been used at the level of 83.5%, and on preferential bank crediting only on 21.5%. The main reason of it was curtailment of production and production purchases in population economy, and also certain difficulties in development of bank means.

Table 4. Financing estimation of the Program of development and support of personal part-time farms of citizens, 2006-2010, billion roubles

Financing sources	Plan	Fact	% of development
Financial assets – total	329.1	274.7	83.5
Including:			
Means of republican fund of support of manufacturers of agricultural production, the foodstuffs and agrarian science – total	92.1	81.9	89.0
from them to:			
purchase of young cattle to 100 kg (live weight basis)	90.3	81.0	89.7
reduction in cost of potatoes seeds	1.7	0.9	54.1
Means of republican budget:	217.0	188.5	86.8
from them to:			
actions for preventive maintenance infectious and invasive diseases	12.8	10.6	82.9
payments to cows	33.1	33.1	100.0
Extra charges to procurement prices	171.2	144.8	84.6
Credits of OJSC “Belagroprombank”	20.0	4.3	21.5

Source: Ministry of Agriculture and Food of the Republic of Belarus.

In sphere of agricultural production manufacture in 2006-2010 predicted indicators of the Program on grain – 27.4%, potatoes – 4.8, milk – 26.1, eggs – 9 and cattle and bird realizations (live weight basis) – 9.9% have not been reached (tab. 5). At the same time, actual volumes of vegetables production, fruit and berries, honey have appeared above Program indicators – 18.9%, 47.6 and 42.9%, respectively.

The problem question for population small-scale enterprises is a sale of made production all the time. Level of purchases and marketability of agricultural production in individual economy of the population remains very low. In 2010 from the population for the state needs it has been bought 43.8 thous. t of potatoes, 36.1 thous. t – vegetables, 144.9 thous. t – fruit and berries, 354.2 thous. t – milk, 10.8 thous. t – cattle and bird (live weight basis), i.e. 0.6%, 1.9, 19.7, 40.3, 6.1% from all manufacture of these kinds of production in population economy, respectively. From 2006 to 2010 volumes of purchases of milk per a mid-annual cow have increased from 1584 to 1916 kg, i.e. by

20.9%, and young growth of cattle per 100 mid-annual cows – from 40.6 to 43.8 animals (2.7%).

Table 5. Performance of look-ahead indicators of the Program of development and support of personal part-time farms of citizens, 2006-2010

Production	2006			2010			In % of performance, 2006–2010.
	forecast	fact	% of performance	forecast	fact	% of performance	
Output volumes of agricultural production, thous. t							
Grain	605.0	482.0	79.7	624.0	350.3	56.1	72.6
Potatoes	7560.0	7510.7	99.3	7600.0	6804.4	89.5	95.2
Vegetables	1525.0	1767.1	115.9	1525.0	1892.5	124.0	118.9
Fruit and berries	225.0	628.9	279.5	450.0	734.2	163.2	147.6
Milk	1437.0	1351.8	94.1	1545.0	879.1	56.9	73.9
Cattle and poultry (live weight basis )	203.0	202.6	99.8	218.0	177.4	81.4	90.1
Honey, t	1697.0	2304.9	135.8	2119.0	2990.0	141.1	142.9
Eggs, mln pieces	1230.0	1148.2	93.3	-	-	-	-
Purchases of agricultural production at the population, thous. T							
Potatoes	150.0	31.6	21.1	155.0	43.8	28.3	34.3
Vegetables	33.19	32.4	97.6	36.6	36.1	98.6	97.8
Fruit and berries	86.5	140.8	162.8	96.5	144.9	150.2	153.4
Milk	532.4	527.6	99.1	488.0	354.2	72.6	85.6
Cattle and poultry (live weight basis )	19.2	14.9	77.6	21.7	10.8	49.8	67.8
Young growth of cattle, thous. animals	160.1	141.9	88.6	162.1	80.9	49.9	69.0
Facilitation to the citizens conducting personal part-time farm							
Realization to the population: seeds and seed material of high reproductions, t:							
Grain	3310.0	3864.6	116.8	3920.0	3798.4	96.9	117.3
Potatoes	4100.0	3333.1	81.3	20100.0	7654.7	38.1	55.7
Vegetables	1445.0	679.6	47.0	1445.0	873.7	60.5	60.1
fruit and berries	575.0	1136.1	197.6	622.0	680.5	109.4	143.7
young growth of cattle, thous. animals:							
Piglets	406.0	434.0	106.9	423.0	364.6	86.2	96.9
Poultry	3093.0	2496.8	80.7	3433.0	6366.3	185.4	144.2
formula feed, thous. T	171.0	227.0	132.7	200.0	296.2	148.1	143.3
Creation of household structures, units	249.0	95.0	38.2	42.0	29.0	69.0	46.3

Source: National Statistical Committee of the Republic of Belarus, Ministry of Agriculture and Food of the Republic of Belarus.

Among purchases of agricultural production confirmed by the Program the population in 2006-2010 executed had only a task on preparations of fruit and berries on 153.4 %. Level of performance of this indicator on a potato has made 34.3 %, vegetables – 97.8, cattle and bird (live weight basis) – 67.8, milk – 85.6 %, to young growth of cattle – 69 %.

Such a situation is explained with consumer character of personal farmsteads activity, inefficiency of procuring organizations' work with small suppliers, low prices for production bought from the population for the state needs, possibility of choice of the others, more trade channels of production. It is necessary to notice that state support in a kind of extra charges to procurement prices of milk, potatoes, young growth of cattle, paid to the population at purchases of these kinds of production hasn't provided a solution of a problem of purchases of agricultural production.

Thus, in modern conditions the question of the further development of personal part-time farms is ripened and acute problem of agro-industrial sectors of economy of Belarus, demanding an all-round estimation, working out of strategy, directions, features and their possibilities further functioning.

## **Discussion**

In globalization conditions of economy and development of scientific and technical progress there was a necessity of revision of positions concerning prospects of development and increase in manufacture of agricultural production in individual sector. Now it is erroneous to consider an individual small-scale economy as the managing form, capable to provide an agricultural production sustainable development, and a priority direction in maintenance of food safety of the state.

However, in the world financial conditions and economic instability it is not necessary to belittle value of personal farmsteads in satisfaction of consumer needs. In the conditions of social and economic instability consumer-commodity economy of the population act as some kind of stabilizers and additional guarantors of the food market, are capable in short terms, without essential additional investment and the state support, to stabilize manufacture of agricultural production, to improve position and a conjuncture of the food market.

In a certain measure personal part-time farms have some advantages before large manufacture. They are more adapted and quickly react to market condition change, for them solicitous attitude to means of production, high personal interest in the work end results is characteristic more. Conducting personal manufacture smoothes social intensity and provides more effective

manufacture in the sectors inaccessible to large business. Personal part-time farms of the population in separate regions became specialized zones of commodity manufacture of agricultural production.

Thus, in modern conditions increase of efficiency of their functioning provides perfection of forms and methods of regulation, an exception of unreasonable intervention in their activity, creations of conditions for deepening of specialization and concentration of manufacture, development of cooperation and integration with subjects of managing large commodity sectors of agrarian and industrial complex, reduction of labor input and increase of marketability of manufacture of agricultural production.

Proceeding from it, in modern conditions there is an objective necessity of realization of the legal, organizational, economic, social and other actions directed to efficiency perfection and increase of functioning of personal farmsteads.

Paramount problem of the further development of individual economy of the population is legal maintenance and current legislation perfection. It is necessary to tell that norms of the Law in force of Belarus from November, 11, 2002 № 149-Z “About personal part-time farms of citizens” have basically declarative character, have extremely become outdated and not comprehensible to modern conditions. Thereupon the new Law of Belarus “About personal economy of citizens” which will regulate activity of all forms of economy both city, and agricultural population should become the basic document of legal maintenance of activity of individual commodity-consumer economy of the population.

In the conditions of economic relations reforming and the developed organizational-economic conditions of managing in the legislation it is necessary to exclude concept of the “subsidiary” economy which have got such status in development of kolhozno-sovkhoz system of relations in agriculture, individual labor activity limiting the right and directed mainly on satisfaction of consumer needs of families of collective farmers, workers and employees.

In modern conditions for the increase of service degree of the countrymen making agricultural production, there is a necessity of revival and development of agricultural consumers cooperatives, creation and development of primary kinds of agricultural consumers cooperatives (supply and sales, gardening, agro-service, cattle-breeding, beekeeping, etc.). The Law of Belarus “About agricultural cooperation” should become a legal basis of creation and activity of such cooperative societies.

Agricultural consumer cooperatives are the most comprehensible organizational-legal form of activity at which independence of the subject of manag-

ing remains, intervention in its independent economic activities is excluded and the decision of the problems demanding joint realization on the basis of self-management, self-financing and self-checking is reached. Cooperation allows to provide steady functioning of small forms of managing in competition conditions, to raise security resources and intensity of conducting economy, to improve essentially agricultural population economic and social situation, to promote development of rural territories.

For activation purpose of development of agricultural consumers' cooperatives and approbation of scientific workings out in this direction the Institute of System Research in Agroindustrial complex of NAN of Belarus renders the help in creation of the first agricultural consumer cooperatives. So, the consumer agricultural supply and sales cooperative (PSSSK) "Veskop" (Velemichi village, Stolinsky region) was registered on March, 30th, 2010, and on December, 27th the same year – agricultural beekeeping consumer cooperative (SPPK) "Melifera" (Osnegitsi village, Pinsky region).

Cooperation development will promote the level and culture increase of conducting manufacture of agricultural production in population economy. Nowadays conducting a personal farmsteads is based on primitive means of production and "antiquated" technologies. Application of progressive technologies is limited to the small sizes of economy. The considerable part of the population occupied with manufacture of agricultural production, not only in a condition to apply progressive technologies, but also has no representation about elementary processing methods of cultivation of agricultural production.

For increase purpose of incomes of the population occupied with independent economic-labor activity in agriculture, stabilization and a non-admission of sharp falling of manufacture of agricultural production in immediate prospects it is necessary to pay particular attention to development of vegetable growing, potato growing, fruit growing, beekeeping which in 80–90% are concentrated in individual sector and have an actual meaning in formation of the country food market. Thereupon, it is very important in developed government programs on immediate prospects ("Potato growing", "Vegetable growing", "Fruit growing", "Beekeeping") to include actions for development and support of these branches in individual economy of the population.

In industrial resources (seeds, fertilizers, protection frames, breeding young growth of cattle and birds, etc.) it is important to involve in service and satisfaction of requirements of the population subjects of managing of all patterns of ownership, and first of all the consumers' cooperatives organizations. In

the regional centers and agrosmall towns it is important to organize seasonal (autumnal-spring) exhibitions and fairs on sale of these kinds of production.

In immediate prospects financing of personal part-time farms should be carried out at the expense of an optimum combination of sources of own and extra means, including means of the republican budget.

In the conditions of manufacture falling and incomes maintenance of economy of the population in immediate prospects it is necessary to keep subsidized mechanism of the state support on production bought from the population for processing (milk, potatoes) and the young growth of cattle bought by the agricultural organizations for subsequent fattening. At the same time it is necessary to consider that the price mechanism, including direct payments in the form of extra charges to procurement prices of milk and potatoes bought at population for the subsequent processing, should be adequate for all subjects of managing. We consider that the increase in price disproportions will lead to negative social and economic consequences: increase in prices, manufacture redistribution in individual economy.

The credit policy should become the mechanism of stabilization and support of development of individual economy of the population. Thereupon, it is expedient to expand possibilities of preferential crediting of the citizens, provided by the Decree of the President of Belarus from June, 14th, 2010, № 302, for the period till 2015 with payment of interest for using credit resources at the rate of about 5 % annually. Now easy credits are given on the various purposes for the period from 1 till 5 years. It is considered necessary to add the directions of crediting of the population conducting beekeeping by granting of credits for the term up to 3 years on acquisition beefamilies, beekeeping stock and the equipment.

In modern conditions for development of credit relations it is necessary to create conditions for creation and activity of societies of mutual crediting of citizens (credit cooperative societies), occupied with manufacture of agricultural production and to define alternative directions of granting by it of extra means, including budgetary resources.

Now in the republic only 15 consumer cooperatives, including 2 cooperatives which are carrying out financial mutual aid of owners farmer and personal subsidiary plots are registered. The Club of mutual aid of "Komarovo" (Mjadel'sky region), created in 2005, was the first cooperative of financial mutual aid and the second – the Country club of mutual aid created in 2007 by heads of farms of the Minsk region.

Within the limits of the current legislation of Belarus probably creation of three basic forms of credit cooperatives:

- 1) societies of mutual crediting of subjects of the small business, created in the form of the consumer cooperatives as which members legal bodies and individual businessmen act;
- 2) consumer cooperatives of financial mutual aid of citizens;
- 3) consumer credit cooperative uniting interests of physical and legal bodies.

At the same time, for the development and support purpose of personal part-time farms of citizens it is important to confirm the Statute about consumer cooperatives of financial mutual aid of the citizens conducting a personal part-time farm. It will allow to provide financial support of personal part-time farms, including means of the republican budget.

In organizational-economic aspect of activity the diversification of manufacture and transformation of the advanced personal part-time farms in the commodity-focused forms of managing should become an important direction of efficiency increase of personal part-time farms.

The manufacture diversification in individual sector provides development of scarce kinds of production claimed in the consumer market, new branches (floriculture, cultivation of ornamental plants, etc.) and lines of activity (agroecotourism, craft, etc.).

Now among the CIS countries favorable legal and social and economic conditions for development of agroecotourism and craft activity are created in Belarus.

It is necessary to tell that from 2006 till 2010, after the acceptance of Decree of the President of Belarus from June, 2nd, 2006, № 372 “About measures on agroecotourism development in Belarus”, a number of agroekofarmsteads has increased 37 times (tab. 6).

Table 6. Dynamics of development of agroekofarmsteads in Belarus, 2006-2010

Indicators	Year				
	2006	2007	2008	2009	2010
Quantity of rural farmstead to the end of the year	34	188	474	884	1247
Quantity of the accepted tourists for a year, persons	906	18000	39052	70001	119214

*Source: Ministry of Sport and Tourism of the Republic of Belarus.*

As of January, 1st, 2011 there were 1247 subjects of agroecotourism in the country. According to the Ministry of Taxes and Tax Collection of Belarus, in 2010 agrofarmsteads accepted 119,2 thous. tourists, and the income of their stay was 10,25 bln roubles. The increase of the number of agroecofarmsteads in the country has been accompanied by active financial support of subjects of agroecotourism with the Program of participation of OJSC “Belagroprombank” in agroecotourism development in Belarus since 2007. In total, as of January, 1st, 2011 OJSC “Belagroprombank” financed projects of 342 subjects of agroecotourism, or 27.4% from number of the registered ones.

It is planned that the quantity of subjects of agroecotourism will have increased to 3000, and the income will have been 25 bln roubles by 2015.

The developed tourist infrastructure in countryside promotes a sustainable development of rural territories and allows:

- to create additional workplaces;
- to increase incomes of countrymen, in particular owners of guest-houses and rural hotels, attendants;
- to increase manufacture and commodity market of the agricultural production made in house economy;
- to increase tax revenues in local budgets thanks to occurrence of small enterprises and the individual private businessmen involved in tourist business;
- to modernize a local household infrastructure;
- to promote development of national crafts.

It is likely that development of scientific and technical progress and increase of living standard of the population of Belarus will lead to structural changes in activity of personal farmsteads. Small and inefficient economy will be transformed to amateur economy or integrated with the large agricultural organizations. Effectively functioning personal farmsteads become on a way of enterprise activity and will get the status of the commodity-focused subjects of managing.

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## **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.

The material was initiated and financed by the Ministry of Agriculture under the "Agriculture and food sector, rural development policy implementation, economic and social research" program and was carried out in the Lithuanian Institute of Agrarian Economics.

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.

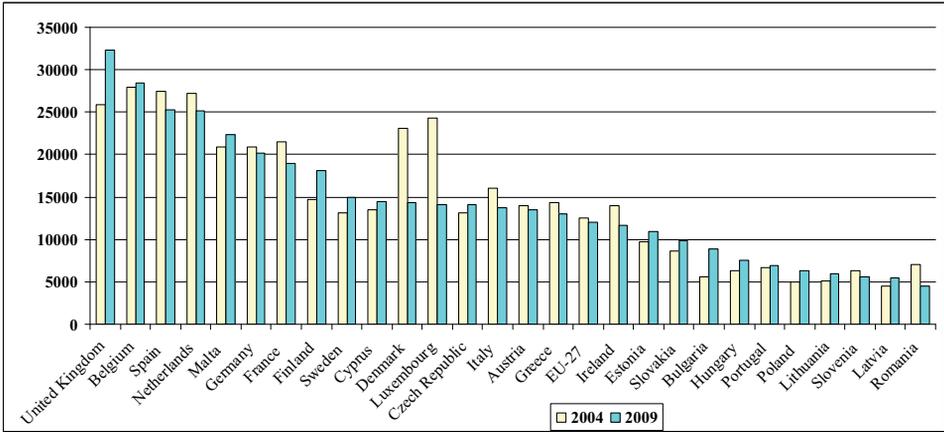
The indicator of net value added per one hectare of UAA in different countries compared to EU-27 average showed that the most effective agriculture was in Malta, Cyprus, Netherlands, Greece, Belgium, Italia, Bulgaria, Slovenia, Spain, and Poland. Especially Poland is worth mentioning, because this country 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.

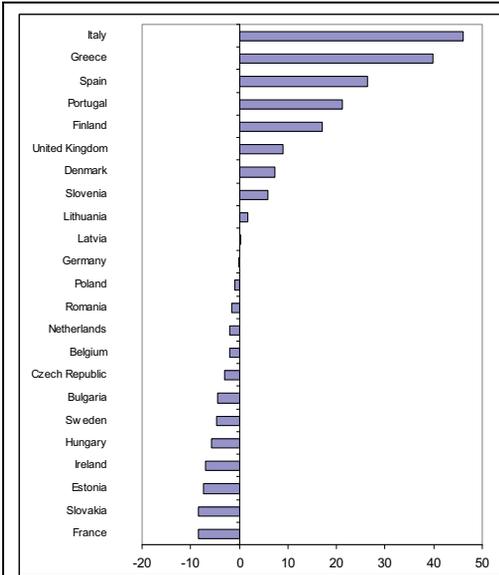


Figure 2. Differences of the wheat price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

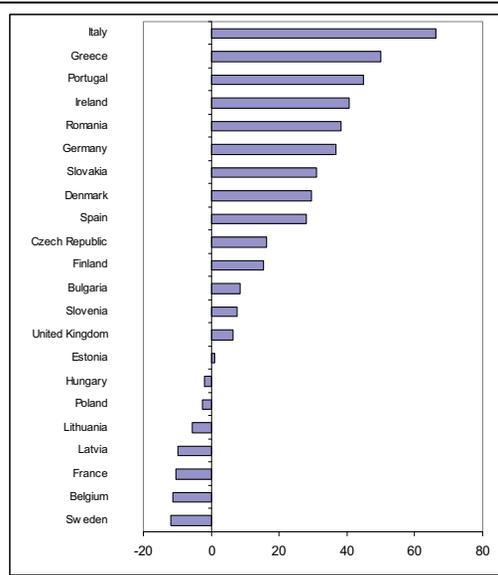


Figure 3. Differences of barley price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

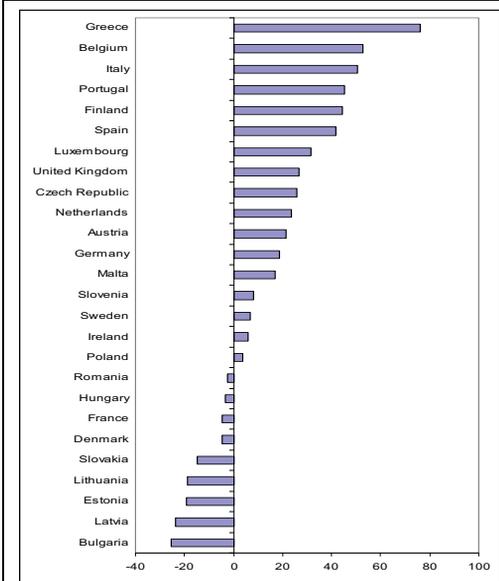


Figure 4. Differences of the beef and veal price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

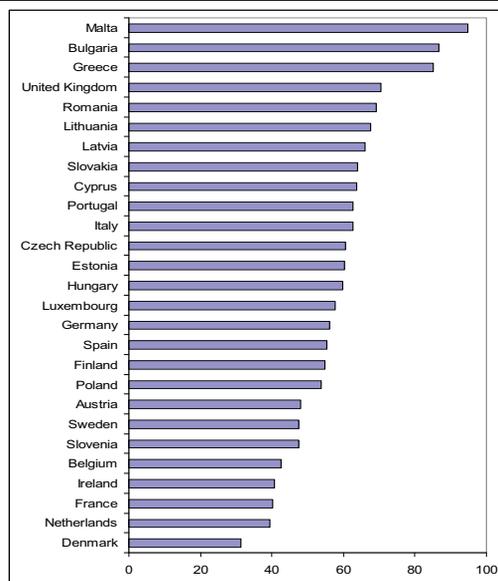


Figure 5. Differences of the pork price among EU-27, comparing with the World price in 2009, in percentage points (World price = 100 percent)

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).

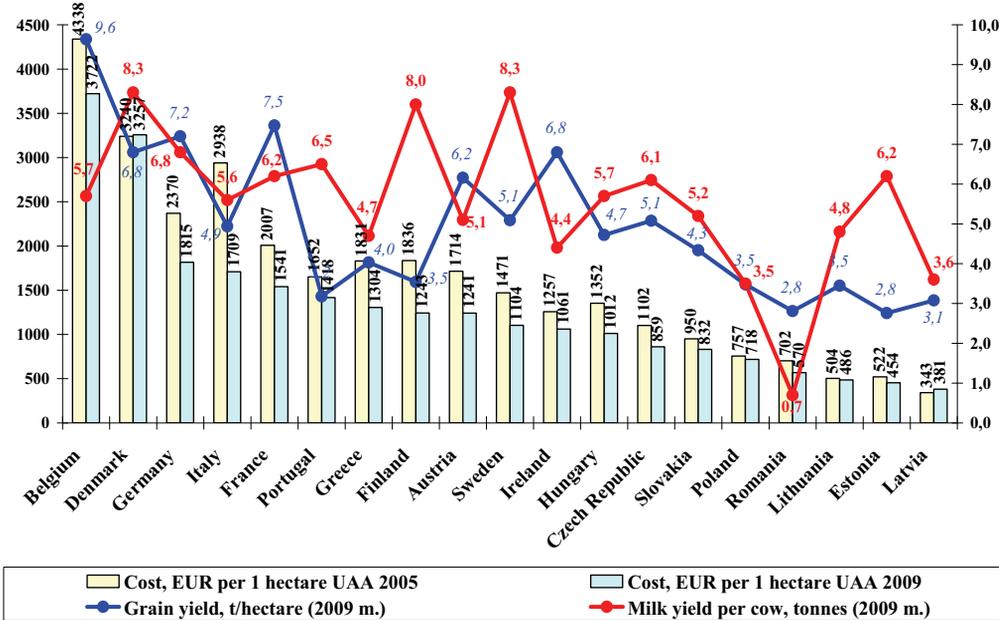
**The support** is other factor influencing agricultural competitiveness. Comparative analysis of EU-27 countries showed that the support in Lithuania was the lowest (after Romania) and, if compared with countries that had got the largest support such as Malta, Finland and Greece, the differences were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

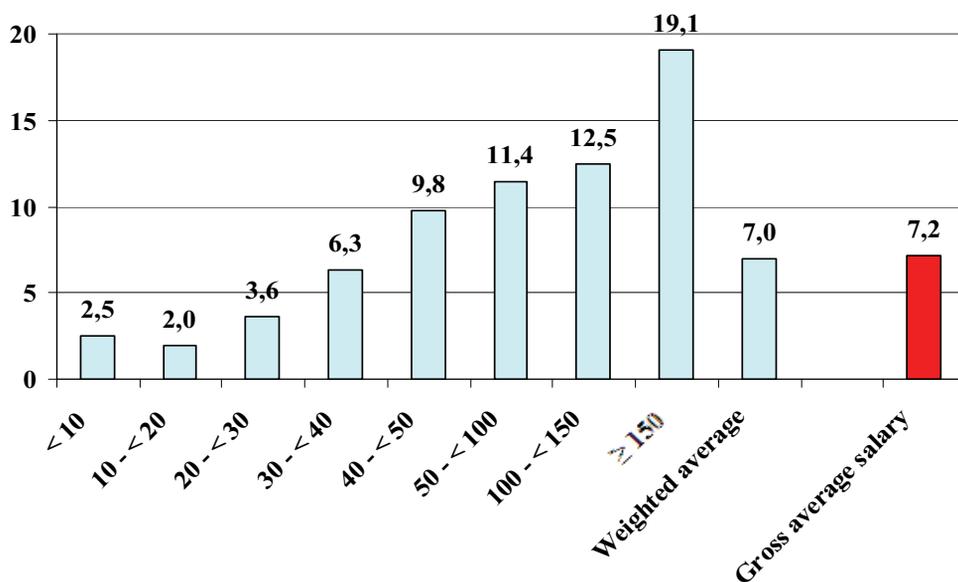
Source: *Ūkių veiklos rezultatai, 2010.*

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.

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## **Issues of Agri-food Sector Development in Latvia**

### **Introduction**

The Common Agricultural Policy (CAP) is a system of subsidies paid to European Union (EU) farmers. On 26 June 2003, EU adopted a fundamental reform of the CAP that will completely change the way the EU supports its agri-food sector.

In the past decade the EU's Common Agricultural Policy (CAP) has gone through major changes (CAP-IRE project, 2011). Since its inception, the CAP has evolved from a set of commodity-specific programs designed to improve food security and support farm incomes in Europe, to a system of industry assistance with multiple objectives (Costa et al., 2009), which benefits both farmers and consumers by guaranteeing quality as well as environmental and food safety (Eurobarometer, 2005).

However, changes in policies, membership of the European Union (EU) and its enlargement have influenced how the CAP affects EU economies (Costa et al., 2009). The most active debates regarding the impact of CAP has been observed among new EU member states - Eastern and Central Europe economies (Wenberg, 2010; Kawonczyk, Figurska, 2009; Baun et al., 2009; Bašek, Kraus, 2009; Doucha, Foltýn, 2008; Wilkin, 2008; Popp, Udovecz, 2007).

Expectations of new member states towards the accession to the EU focused mainly on the opportunities to improve economic effectiveness of the sectors, to restructure and modernize them as well as to increase income support, diversify farming activities in rural areas and improve trade balance (Office of the Committee for European Integration, 2009). Although after accession to the EU, new member states have enjoyed extensive financial benefits from the CAP injected into its agricultural sector (Kawonczyk, Figurska, 2009), not all outcomes of CAP are positive for agri-food producers (Popp, Udovecz, 2007).

The economic effects of the CAP on the food industry in the Eastern Europe are varied and complex. According to several study results (Baun et al., 2009; Wenberg, 2010; Kawonczyk, Figurska, 2009) the impact of the CAP on agri-food sector can be assessed by several indicators, for example, structure and volume of food production, structure of external trade.

Taking into consideration the above-mentioned situation analysis and position of Eastern Europe scholars, this paper focuses on the development of agri-food sector in Latvia through the prism of CAP. According to the set aim paper presents an overview of the developments in the Latvian agri-food sector from the year 2004 onwards. Attention is paid to changes which were influenced by the Latvia's accession to the EU in May 2004.

### **Role of agriculture in the economy of Latvia**

From the country's earliest days, agriculture has always held a crucial place in the Latvian economy and culture. Role of agriculture in the present economy of Latvia can be assessed by several indicators – changes of gross domestic product (GDP) and added value; persons employed in agriculture; agricultural output etc.

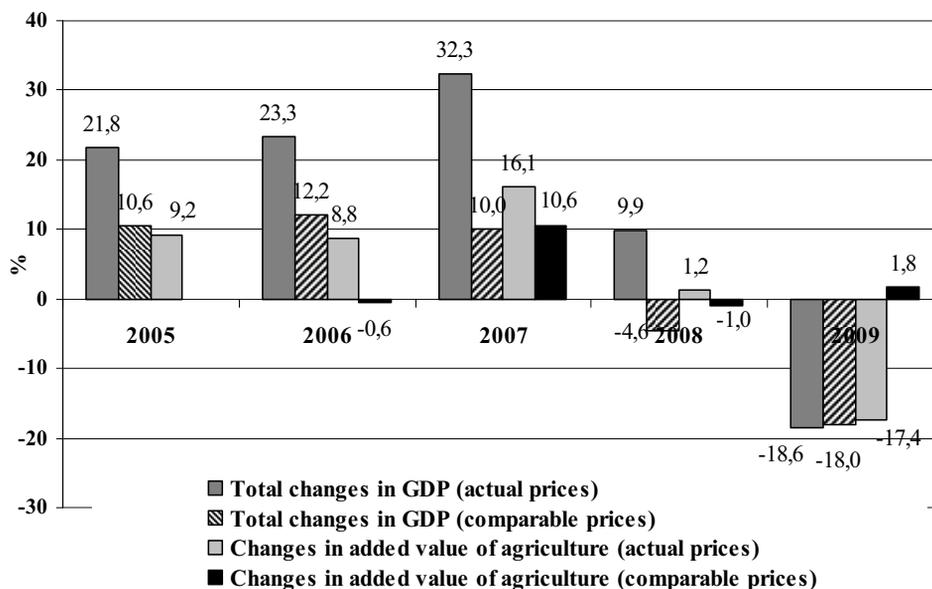
Since the accession of Latvia to the EU in the time period 2004-2007 there has been rapid development of the agricultural sector in the form of increased revenues of the farmers, higher production rates, export, etc. Such a positive tendency was promoted by successful use of national and EU support within the CAP. However, the economic crisis in 2008 had significant negative effect on agricultural growth rates, which continued to grow in 2009.

According to the data provided by the Central Statistical Bureau of Latvia (CSB) in 2009 the GDP of Latvia reached LVL 13 082.8 million showing decrease by 18.6% comparing to previous year. As well as the added value of agricultural sector has experienced drop – in 2009 added value of agriculture has decreased by 17,4% comparing to previous year (see Fig. 1).

Analyzing GDP (in comparable prices of 2000), the decrease by 18% can be observed however, in agriculture there was the increase by 3.5%. Agriculture is the only sector with positive indicator (Latvijas Republikas Zemkopības ministrija, 2010).

Results of the employment survey show that in total 986.7 thousand people (83% of the total population in the age group from 15 to 74 years) have been employed in Latvia. If compared to the previous year in 2009 there was the decrease of both the number of the employed (in 2008 the figure was 1124.1 thousand people) and the proportion of the employed within the total number of population (in 2008 this figure was 92%).

Figure 1. GDP and changes in agricultural added value in Latvia, 2005-2009 (% over previous year)



Source: authors' calculations based on data from CSB databases and Latvijas Republikas Zemkopības ministrija, 2010.

Similarly the number of those employed in the agriculture decreases every year. However, the proportion of those (in the age group from 15 to 74 years) having their basic employment in the agricultural sector has increased from 7.1% in 2008 to 7.3% in 2009 (see Table. 1). This can be assessed as a positive sign for further development of agricultural sector.

Table 1. Dynamics of employment of the population in Latvia, 2007-2009 (thous. and %)

Category	2007	2008	2009
Economically active population of the age of 15-74 years, thous.	1191.1	1215.8	1187.4
Employed, thous.	1119.0	1124.1	986.7
Employed in agriculture and hunting, thous.	107.5	87.3	86.6
Employed in agriculture and hunting, % from employed	9.6	7.8	8.8

Source: authors' calculations based on data from CSB databases and Latvijas Republikas Zemkopības ministrija, 2010.

To evaluate the dynamics and structure of the agricultural production in Latvia, as well as the main tendencies, we have summarized statistical data representing total agricultural output in the period 2004–2010 (see Table 2) and structure of final agricultural products in 2009 (see Fig. 2).

Table 2. Agricultural output indices (at constant prices) in Latvia, 2004-2010

Year	Agricultural output		Crop production		Livestock production	
	2000=100	% over previous year	2000=100	% over previous year	2000=100	% over previous year
2004	116.8	103.7	118.1	106.6	114.9	100.3
2005	127.2	108.7	138.0	116.9	115.9	100.9
2006	123.6	97.2	127.7	92.5	118.7	102.4
2007	136.1	110.1	145.3	113.8	126.6	106.7
2008	139.5	102.5	159.1	109.5	119.5	94.4
2009	138.0	98.9	152.3	95.7	124.6	104.3
2010	132.1	95.7	137.7	90.4	126.8	101.8

Source: authors' calculations based on data from CSB.

Total agricultural output value at basic prices (by product subsidies) in 2009 was LVL 593.7 million (-18% over previous year). The main reason why output values have declined is price reductions, as volume in the constant prices decreased only by 0.3%.

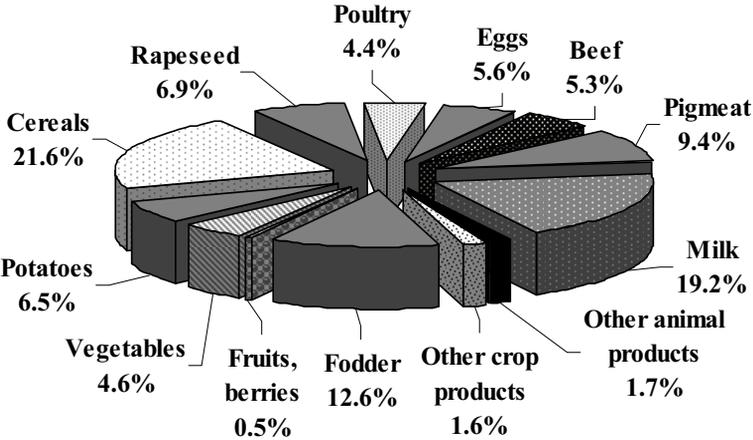
In the structure (basic prices) of the agricultural final products the share of crop-farming in 2009 was 54%, but cattle breeding – 46%. Compared to previous year, the role of crop farming has slightly decreased (-2.5%), but still in was higher than in 2006 when crop farming constituted 52% from total agricultural end-products.

The most significant types of production in 2009 were cereals (21.6%), milk (19.2%) and fodder (12.6%) (see Fig. 2).

If compared to previous year, due to the price reduction, the share of cereals and milk in 2009 have decreased accordingly by -1.4% and -2.3%. Likewise, the share of potatoes (-1.3%), rapeseed (-0.9%) and fruit, berries (-0.6%) has decreased.

Completely opposite trends were observed for fodder, pork, beef and eggs, whose shares in the structure of final agricultural products increased accordingly by 1.3%, 1.7%, 1.6% and 1.3%. For these products production volume has increased and the price drop was not so significant.

Figure 2. Structure of final agricultural products in Latvia, 2009 (basic prices)



Source: authors' calculations based on data from CSB.

Although since 2008 some of the agricultural sector indicators, like added value, employed people in sector, output, have declined; it appears that the situation in Latvia is similar to other EU member states. According to the data provided by Ministry of Agriculture Republic of Latvia (Latvijas Republikas Zemkopības ministrija, 2010) agricultural output value in real prices in the EU as a whole in 2009 decreased by 10.5%, gross value added at basic prices – by 12.3%, employment rate – by 2.3%. Furthermore, the reductions of value added in the new and old EU member states in 2009 were almost similar.

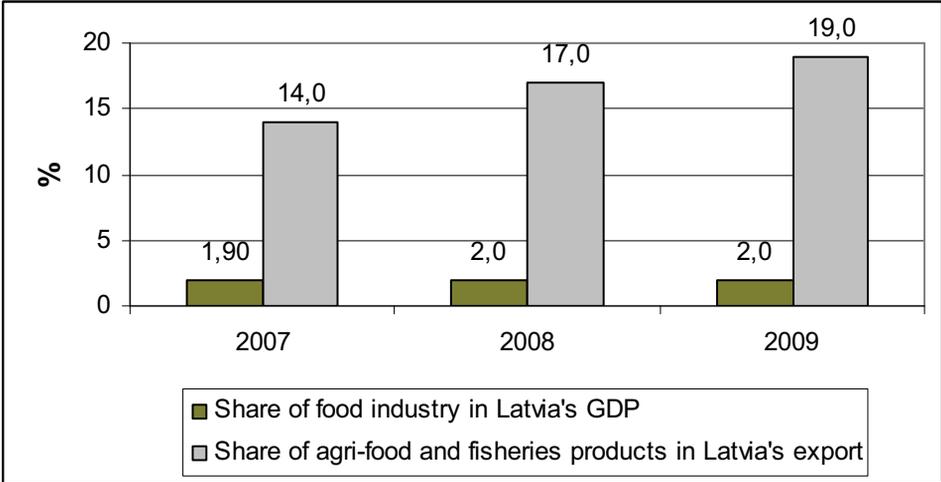
**Role of food industry in the economy of Latvia**

Despite being a relatively small country on the Baltic Sea, Latvia has a rich history in agriculture and food processing. Modern Latvian food producers have embraced the challenge of meeting the demand for food that tastes fresh and natural, whilst taking advantage of modern technologies to ensure consistency, availability and hygiene.

The food and beverage industry is the largest industrial sector in Latvia, producing around 2% of total value added in 2009 and 20% of value added in manufacturing.

Despite the economic situation and decrement of purchasing power the food industry has maintained its position as food ranks in one of the top places in the consumption basket. Although in the past year there has been the decrease in food and beverage production, in the future any substantial drop is not expected, as enterprises can export their production, and domestic demand remains stable.

Figure 3. Share of food industry in Latvia’s GDP and share of agri-food and fisheries products in Latvia’s export, 2009 (%)

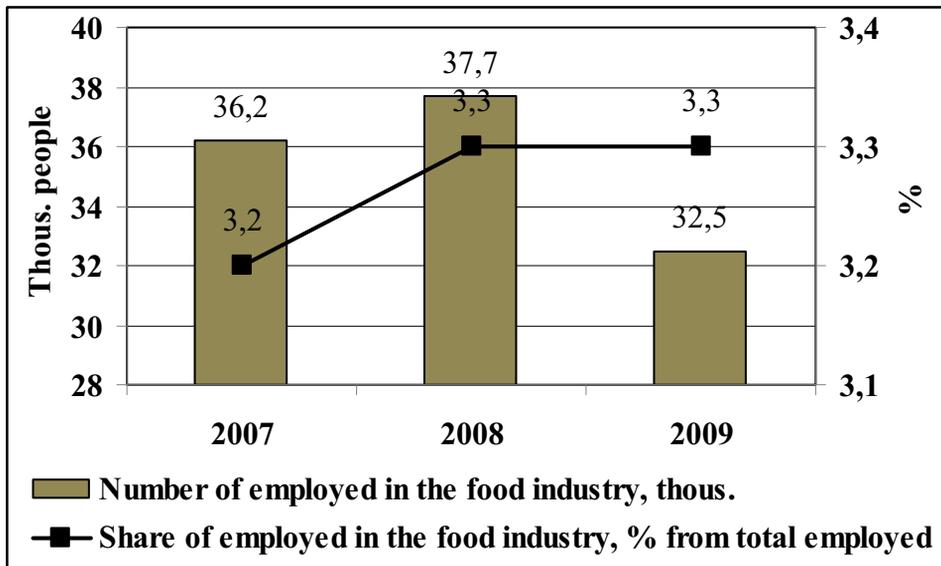


Source: authors’ calculations based on data from CSB.

Analysing sector performance in figures, it can be concluded that in 2009 food industry formed 23.6% of the total value added (% of GDP) of the whole processing industry. This shows that role of the food industry in the economy of Latvia has increased – in 2008 this figure was 21%.

Also share of food industry in Latvia’s GDP and share of agri-food and fisheries products in Latvia’s export shows positive increase tendencies. For the last few years food industry accounts for 2.0% of Latvia’s GDP, but share of agri-food and fisheries products in the total Latvian export balance increases from 14% in 2007 to 19% in 2009, demonstrating the important role of this sector in Latvia’s economy (see Fig. 3).

Figure 4. Dynamics of employed in the food and beverage industry in Latvia, 2007-2009 (thous. and % from total employed)



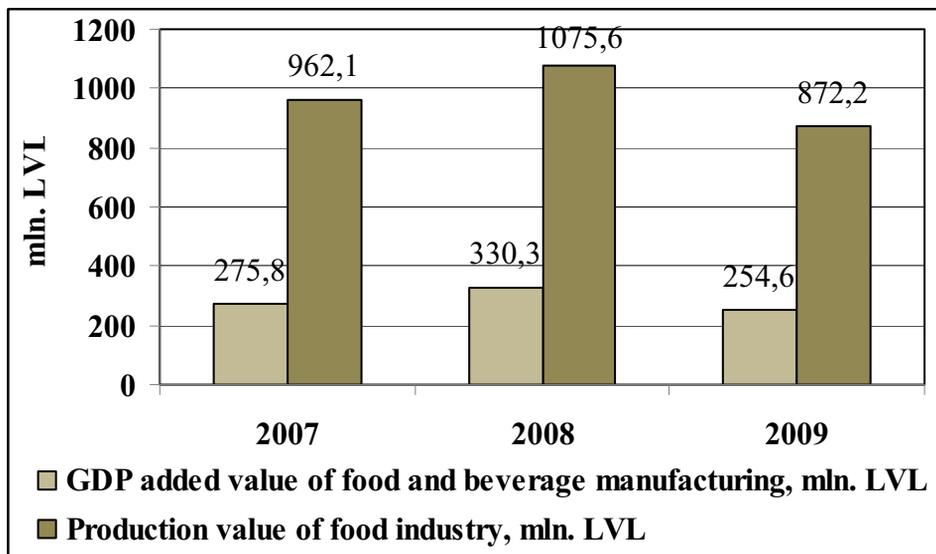
Source: authors' calculations based on data from CSB.

In 2009 the food and beverage industry employed 24.3% of whole processing industry workers and share of workers employed in this sector was 3.3% or 32.5 thousand of total employment in the economy. Looking at the dynamics, it can be concluded that the highest number of employed in the food sector was registered in 2008, but in 2009 this number fell by 13.8% (see Fig. 4). Decrease of number of employees in the food industry was slightly higher than the decrease of number employed in the economy (12.2%).

Detailed analysis of statistical data showed that added value from food and beverage manufacturing and production value in 2009 have shrunk – GDP added value by 23%, production value by 19% (see Fig. 5).

In 2009, significant decrease (-19.3%) in commercial value of food and beverage products, compared to previous year, was observed. The most affected was processing of fish and fish products, dairy products and beverage manufacturing. The sales value of fish and fish products declined by 27.5%, the sales value of dairy products – by 26%, but sales value of beverages – by 19.8% (see Table 3).

Figure 5. Dynamics of food industry GDP added value and production value in Latvia, 2007-2009 (mln LVL)



Source: authors' calculations based on data from CSB.

In general the decline of food and beverage sales value can be observed since 2008, both in domestic and export markets, but until now they were offset by price increases. However, within demand fall price growth expectations was exhausted and therefore in 2009 one could observe significant drop in product sales value.

Food industry is the industry which traditionally has focused on the internal market, however, export also plays an important role – each year around 24% of the total food products and beverages are exported. The largest share of exports in 2009 was observed for fish and fish products (64.2%), fruit and vegetable products (41%) and beverages (31.1%).

Moreover, recent trends show that food producers, within decreasing purchasing power of consumers, are forced to make cheaper products. In order to use the export opportunities, in most cases, producers have to invest significant financial resources in equipment that is more suitable for export (for example, to produce products with a longer sell-by date, different packaging, etc.).

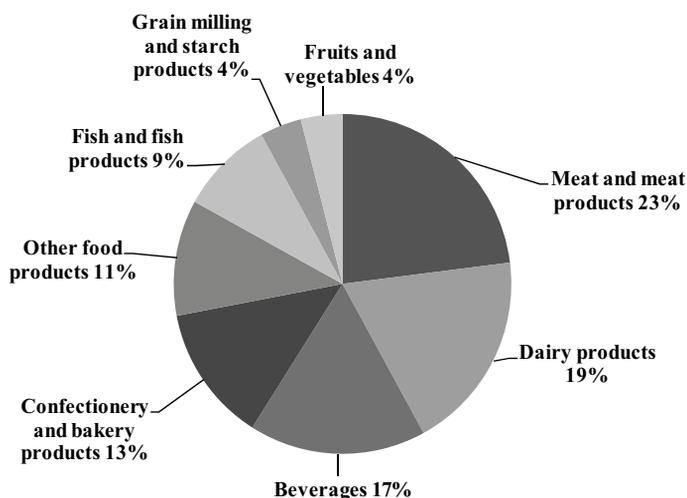
Table 3. Realization and export of food products in Latvia, 2007-2009  
(mln LVL) and % from total realization)

Branch	2007		2008		2009	
	Realization, mln LVL	Export, %	Realization, mln LVL	Export, %	Realization, mln LVL	Export, %
Meat and meat product manufacturing	211.0	6.9	230.5	7.6	198.7	10.8
Fish and fish product processing and canning	87.3	64.0	111.8	64.8	81.0	64.2
Fruit and vegetable processing and canning	34.1	39.6	34.8	39.9	32.2	41.0
Vegetable and animal oil and fat manufacturing	9.6	-	19.8	-	-	-
Dairy product manufacturing	211.3	25.9	217.3	22.4	160.7	17.9
Grain milling and starch product manufacturing	36.6	24.6	45.3	23.6	33.5	-
Confectionery and bakery product manufacturing	-	-	112.7	7.4	106.0	7.7
Prepared animal feed manufacturing	28.9	-	33.5	-	-	-
Other food product manufacturing	89.3	19.8	88.1	23.8	71.9	23.0
Beverage manufacturing	174.0	29.0	185.5	31.5	148.8	31.1
Total food and beverage manufacturing	975.7	23.9	1079.7	24.2	871.0	23.8

Source: authors' calculations based on data from CSB.

The structure of food and beverage industry from the previous year has not changed significantly, the largest proportion at the sector form meat and meat products – 23%, dairy products – 19% and beverages – 17% (see Fig. 6).

Figure 6. Structure of the food products and beverage production in Latvia, 2009 (%)



Source: authors' calculations based on data from CSB.

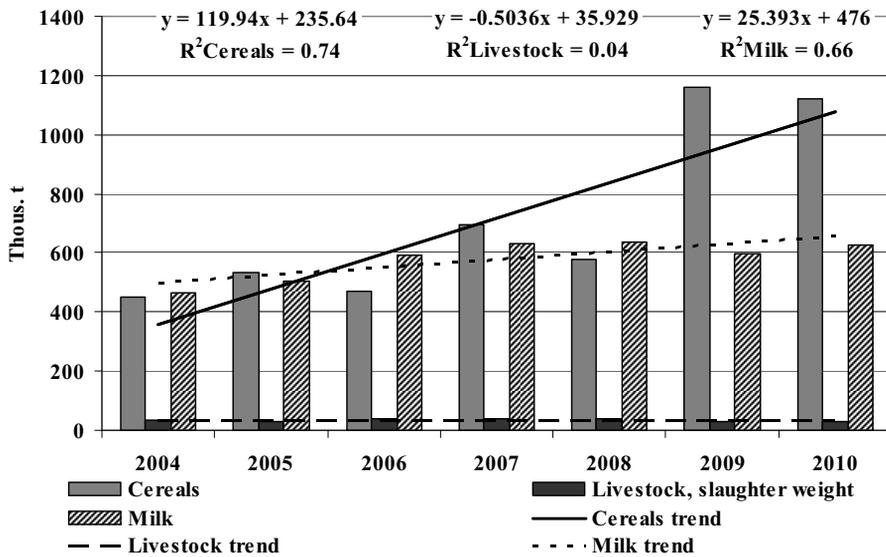
Although in Latvia there can be observed concentrating process of food enterprises, but despite this, in the framework of EU single market Latvia is characterized by fragmented food production structure with relatively small production volume and high cost burden. An important signal that identifies the sector weaknesses is labor productivity – in 2009 compared to the previous year, labor productivity rate has decreased by 4.2%. Also since 2008 the added value per employed in the industry has shrunk – in 2008 it was LVL 8180.4, but in 2009 only LVL 7833.8.

### Development of main food processing branches

In order to evaluate economic effects of the CAP on the food industry, we have analyzed processes and outcomes in the main food processing branches.

According to statistical data the main agricultural products marketed for processing in Latvia are cereals, milk and meat. Dynamics of production volume of these products shows that since 2004 there can be observed constant increase in cereal ( $R^2=0.74$ ) and milk ( $R^2=0.66$ ) production. However, production of meat (expressed in slaughter weight) in the time period 2004–2010 has not grown significantly ( $R^2=0.04$ ) (see Fig. 7).

Figure 7. Main agricultural products marketed for processing in Latvia, 2004-2010



Source: authors' calculations based on data from CSB.

Such production tendencies of main agricultural products suggest that most important effects of CAP can be expected in dairy and grain farming and in production of dairy and grain milling and bakery products.

### ***Dairy product manufacturing***

During the last decade, Latvian dairy industry has consolidated. The number of processing companies has declined from 86 to 31. However, still many dairies are not running at full capacity and industry as a whole is less attractive to milk producers as Lithuanian relatively highly concentrated dairy sector with mere 5 major dairies. Majority of Latvian milk producers, in turn, recently have joined either of 3 powerful dairy cooperatives, thus increasing their bargaining power. As Lithuanian dairies provide better prices and immediate payment for the milk delivered, lately Latvian raw milk export volumes have stabilized at around 20% of total milk marketed.

Statistics show that amount of marketed milk since 2004 has significantly increased – in 2008 amount of marketed milk has increased by 35% compared to 2004. However, slight decrease was observed in 2009 (see Table 4).

Table 4. Marketed and delivered milk in Latvia, 2004-2009 (thous. t and %)

Activity	2004	2005	2006	2007	2008	2009
Milk marketed thous. t	471	502	592	631	634	595
Milk delivered to dairies, thous. t	470	494	510	526	496	434
Milk delivered to dairies, %	100%	98%	86%	83%	78%	73%

Source: authors' calculations based on data from Dairy Board and CSB.

As a negative trend, constant decline in domestic milk and skimmed milk consumption can be mentioned. Nevertheless, production is more or less stable, as less milk is consumed directly from farm. The increase both in exports and imports of liquid packed milk may be attributed to a rise of two-way trade in privately labeled products between Baltic States (see Table 5).

Table 5. Balances of milk and skimmed milk in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	0.3	0.3	0.4	1	3	3
Imports	2	0.4	0.5	1	2	3
Production	63	73	74	79	85	73
Self-consumption, direct marketing	79	62	51	41	33	42
Total domestic consumption	144	135	125	120	117	114

Source: authors' calculations based on data from Dairy Board and CSB.

Similar tendencies can be observed in the production, domestic consumption and foreign trade of main dairy products – cream, fresh cheeses and curds, fermented milk products, cheese, butter, milk powders.

To better reflect the current situation in the dairy product manufacturing below we have carried out detailed analysis of these products.

Production volumes of *cream* are declining as less cream is consumed in the domestic market. Similarly to milk, increase both in exports and imports of cream has to be attributed to a rise of two-way trade in privately labeled products between Baltic States (see Table 6).

Table 6. Balances of cream in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	0.3	0.4	1.0	2.0	1.0	1.0
Imports	0.3	0.3	0.5	1.0	1.0	1.0
Production	31.0	32.0	30.0	29.0	29	27.0
Total domestic consumption	31.0	31.0	29.0	28.0	28.0	27.0

Source: authors' calculations based on data from Dairy Board and CSB.

Contrary to cream, production volumes of **fresh cheeses and curds** are stable along with the consumption. However, in the future production may decline, if cheaper Lithuanian products continue to be competitive. Exports are relatively small (see Table 7).

Table 7. Balances of fresh cheeses and curds in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	1	1	1	1	2	1
Imports	2	2	2	3	4	4
Production	17	16	17	16	16	16
Total domestic consumption	18	17	17	18	18	18

Source: authors' calculations based on data from Dairy Board and CSB.

Domestic consumption of **fermented milk products** is flat, and production volumes tend to be lower, losing out to steadily increasing inflow of imports from Poland and other EU countries. Export, mainly to Estonia and Lithuania are stable (see Table 8).

Table 8. Balances of fermented milk products in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	2	5	5	6	6	6
Imports	8	6	7	9	10	11
Production	32	39	41	40	39	34
Total domestic consumption	37	40	43	43	42	40

Source: authors' calculations based on data from Dairy Board and CSB.

Similar tendencies can be observed regarding **cheese**. Domestic consumption is flat. Production is somewhat lower, as exports have not fully recovered after the crisis in 2008. Imports are lower, reflecting changes in consumer behavior with shift to cheaper sources of protein (see Table 9).

Table 9. Balances of cheese in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	7	11	11	13	12	7
Imports	2	3	3	5	5	4
Production	17	19	20	21	21	17
Total domestic consumption	12	12	12	14	14	14

Source: authors' calculations based on data from Dairy Board and CSB.

Although **butter** consumption in Latvia can be characterized as low, it is still stable. Also production of butter tends to be low. The main reason for this is undigested export opportunities. Contrary to exports imports are stable (see Table 10).

Table 10. Balances of butter in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	3	3	3	3	1	2
Imports	1	0.3	1	1	1	1
Production	8	8	8	8	5	6
Total domestic consumption	6	6	5	5	5	5

Source: authors' calculations based on data from Dairy Board and CSB.

**Milk powders** are still considered by-products as milk volumes delivered to dairies are insufficient to focus just on milk powders. Thus the production volumes of skim milk and whole milk powder are unstable, depending much upon the situation in cheese and butter markets (see Table 11).

Table 11. Balances of skim milk and whole milk powder in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	3.0	4.0	9.0	7.0	4.0	9.0
Imports	0.5	1.4	1.3	1.3	1.1	1.0
Production	5.0	5.0	7.0	7.0	5.0	6.0

Source: authors' calculations based on data from Dairy Board and CSB.

Overall, the situation analysis showed that production amount of milk and dairy products is highly dependent on domestic demand. Consequently, the CAP's impact can be extended to other dairy product production influencing factors, i.e. foreign trade.

### **Meat and meat product manufacturing**

Although economically not a major player, meat and meat product manufacturing is socially and politically very significant. The three main meat types taken together – pork, beef and poultry – account for 19% of the total value of agricultural products, and meat and meat products account for 23% from total manufactured food products in Latvia.

In order to evaluate CAP impact on meat product manufacturing we have analyzed domestic consumption, production and foreign trade of most popular products – sausages and processed meat.

In the domestic processing of *sausages* traditionally imported pork and poultry meat are used. Imports cover about 45% of pork and 50% of poultry meat purchased for processing. Such a situation has developed due to fact that domestic – more expensive – supply is predominantly marketed as fresh meat.

Table 12. Balances of sausages in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	1	1	2	2	2	1
Imports	3	3	4	4	3	4
Production	55	56	59	58	57	49
Total domestic consumption	58	58	60	59	58	52

Source: authors' calculations based on data from CSB.

Statistical data summarized in Table 12 shows that production volume of sausages in the period 2004–2008 was almost stable, but in 2009 it has substantially declined (by 14%). Such a decline can be explained by overall decrease in domestic consumption (see Table 12).

Similar conclusions can be addressed to the production volumes of *processed meat*. Production volumes of processed meat have declined substantially in 2009 when consumer demand plunged. Similarly, foreign trade, imports of processed meat slightly prevail over exports. This tendency appeared in 2007 and continued to expand (see Table 13).

Table 13. Balances of processed meat in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	2	2	3	3	3	3
Imports	2	2	3	5	5	6
Production	13	15	17	15	14	10
Total domestic consumption	14	16	17	17	17	13

Source: authors' calculations based on data from CSB.

In general foreign trade of sausages and processed meat occurs mostly between Baltic States, caused by multiple retailers presence in all three countries, as well as specialization of processing companies within pan-Baltic mergers and acquisitions. As foreign trade volumes do not change, production volumes have lowered due to declining consumer demand.

### ***Fish and fish product processing and canning***

Latvian fish processing still has not been restructured, and mostly cheap canned fish for the Russian market is produced. Other important products are fish fillet and cured, salted, dried or smoked fish. In this paper we have analyzed domestic consumption, production and foreign trade of such fish products as canned fish, fish fillet, and cured, dried, salted and smoked fish.

Domestic consumption of ***canned fish*** is flat, therefore production volumes depend entirely upon the demand in Russian market, as other export destinations are consuming mere 15% of total exports. Latvian canned fish also cannot compete with up-market imports of canned tuna, molluscs and crustaceans (see Table 14).

Table 14. Balances of canned fish in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	59	69	70	57	60	39
Imports	3	4	4	6	7	6
Production	63	73	74	58	61	40
Total domestic consumption	7	8	8	8	8	7

*Source: authors' calculations based on data from CSB.*

Analysis of domestic consumption of ***fish fillet*** allows concluding that domestic consumers prefer cheaper varieties of herring fillet. Cod is the main export product to France, Germany and other EU countries. Imports of up-market products are redistributed to other Baltic States. Statistical data shows that in this market segment exports and imports assume equal positions (see Table 15).

Table 15. Balances of fish fillet in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	3	3	4	3	6	6
Imports	4	5	6	7	8	6
Production	17	14	12	11	12	14
Total domestic consumption	17	16	14	14	15	15

Source: authors' calculations based on data from CSB.

Different situation can be seen in *cured, dried, salted and smoked fish* balance. This market segment is rather stable with constant production volume and low share of imports. Export volumes are directed to other Baltic States (see Table 16).

Table 16. Balances of cured, dried, salted and smoked fish in Latvia, 2004-2009 (thous. t)

Activity	2004	2005	2006	2007	2008	2009
Exports	2.0	4.0	5.0	3.0	4.0	3.0
Imports	0.4	0.2	1.0	1.0	0.4	0.4
Production	10.0	10.0	10.0	9.0	10.0	9.0
Total domestic consumption	8.0	7.0	6.0	7.0	7.0	6.0

Source: authors' calculations based on data from CSB.

Such an analysis of statistical data shows that situation in fish and fish product manufacturing is ambiguous and considerably depends on market orientation of certain product.

### ***Grain milling and starch product manufacturing***

The main products of the Latvian milling sector are wheat flour and feed. As domestic demand from bakeries is on the decline because of less bread consumed, flour exports to other Baltic States enable millers to maintain production volumes. Exports of wheat flour in 2009 have increased twofold since 2004 reaching 30 000

tons. Similarly, decline in meat production has lowered the demand for feed. Feed exports have increased 3 times since 2004 up to 30 000 tons.

The domestic market for bread shrinks at a 3-5% annual rate and no reverse is anticipated. Moreover, cross-border trade is on the rise, providing 2-4% of total domestic bread consumption. At the same time, demand for pasta, sweet oven products and biscuits is only marginally lower. Exports and imports of these products are rather stable, and slight growth in exports exceeds the increase in imports.

Grain milling and starch product manufacturing seem to be among the branches which have benefited from Latvia's accession to the EU – since 2004 here increased production amounts and improved trade balance can be observed.

However, to fully understand relationship between manufacturing of different food products and implementation of CAP it is necessary to look at the performance of most important CAP support tools in Latvia.

## **Performance of some CAP support tools in Latvia**

### ***Export compensations***

Export compensations are one of the most important CAP support tools for Latvia. After the accession to the EU, Latvian manufacturers and exporters have obtained a possibility to receive export compensations for export of definite basic and processed agricultural products to third countries in order to cover the market price difference between the EU internal market and the world market.

The most significant changes in export compensations in 2009 hit milk and milk products. Taking into account the critical market situation in the dairy sector, from the January 23, 2009, granting of export compensations for milk and milk products was resumed. However, exporters were able to use this support tool only till November 19, 2009, when the European Commission again determined export compensation of EUR 0. Such decision was motivated by the fact that there were consistent improvements in the dairy market – increased market price and demand in the world, increased purchase price in the EU.

In 2009 the total Latvian export refunds were paid in amount of 417 thous. LVL. Export refunds were paid for three groups of products: milk and milk products (384 thous. LVL); processed products (30.8 thous. LVL) and sugar (1.7 thous. LVL) (see Table 17).

Table 17. Division of paid export compensations by product sectors in Latvia, 2007-2009 (LVL)

Sector	2007	2008	2009
Cereals	10 429.25	1 799.19	-
Sugar	101 881.56	69 510.50	1 733.44
Milk and milk products	1 719 845.94	188 608.79	384 316.58
Pork	151.75	-	-
Processed products	94 091.80	104 496.74	30 807.63

Source: authors' calculations based on data from Rural Support Service.

Latvian exporters have applied for most to the export compensations for milk and milk products – in 2009 export compensations for these products formed 92% of total Latvian export compensations.

Latvian entrepreneurs also receive export refunds for exports of processed products – in 2009 7% of total Latvian export compensations.

The next group of products benefiting from export refunds was sugar from processed fruits and vegetables – 0.4% of total Latvian export compensations.

In general it can be concluded that 47% of total Latvian export compensations were granted to products intended for export to Russia, 19% – to Algeria, 19% – to Azerbaijan and 9% – to Saudi Arabia.

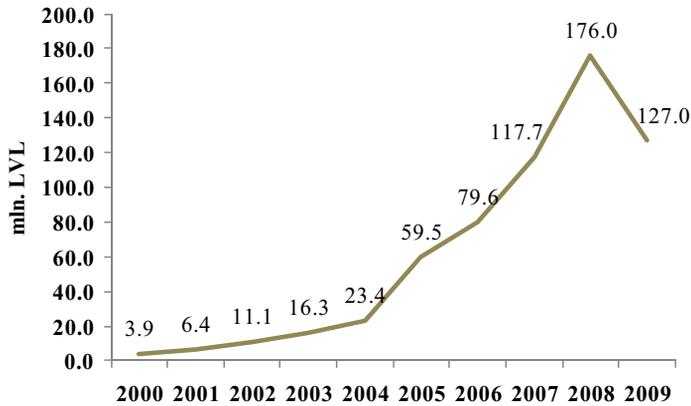
Such situation analysis allows concluding that CAP and its support tools have positive effect on foreign trade balance of several processed products, like canned fish, fish fillet, as well as milk and some milk products, like cheese and fermented milk.

### ***Promotion of cooperation***

The main role of agricultural service cooperatives is to promote and to seek new markets for products manufactured by their members, to take care of members' competitiveness and increase prosperity. Starting from 2000, favorable state aid policy contributed to the development of competitive service based on cooperative society.

In the recent years active formation of cooperatives can be observed. However, turnover of agricultural service cooperatives in 2009 has shrunk by 28% when compared to previous year (see Fig. 8).

Figure 8. Turnover of agricultural service cooperatives in Latvia, 2000-2009 (mln LVL)



Source: authors' calculations based on data from Latvijas Republikas Zemkopības ministrija, 2010.

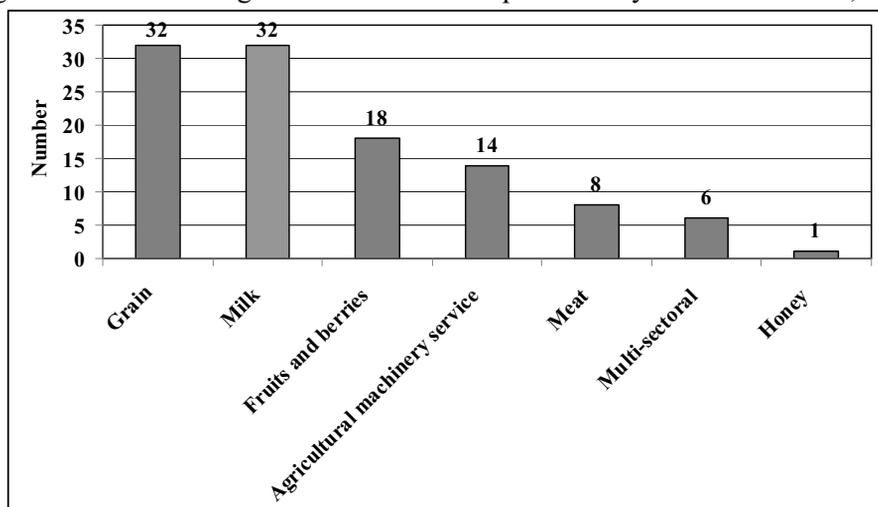
According to the national legislation, in 2009 55 agricultural service cooperatives were recognized, of which 51 received subsidies granted LVL 171 650. Likewise in 2009 the agricultural service cooperatives could claim to support of Rural Development Plan for 2004-2008 measure “Support for producer groups” amounted LVL 340 639.16.

Overall, in 2009 111 agricultural service cooperatives were operating. Of these, 32 was the grain primary processing and storage cooperatives, 32 – dairy cooperatives, 1 – honey production cooperative, 18 – fruit and vegetable production cooperatives, 6 – multi-sectoral cooperatives, 14 – agricultural machinery service cooperatives and 8 – meat production cooperatives (see Fig. 9).

Compared to other EU countries where development of cooperation has a long history, formation of cooperatives is regarded as rather new phenomenon in Latvia. Although direct impact of cooperatives on development of agri-food sector can be difficult to assess, according to conducted studies (Radžele-Šulce, 2010) number of signals can be observed that indicate positive effect of cooperatives on agri-food sector development:

- increasing average productivity of cows can be partly considered as merit of the dairy cooperatives – they advise farmers on cattle keeping, feeding, breeding etc., attract high-class professionals, this would not be possible for one farmer;
- dairy cooperatives are able to provide higher purchase price than milk processing plants that provide higher income for farmers.

Figure 9. Division of agricultural service cooperatives by sectors in Latvia, 2009



Source: authors' calculations based on data from Latvijas Republikas Zemkopības ministrija, 2010.

## Conclusions

To summarize our study results we would like to emphasize main conclusions and compare them with findings of other scholars.

Already seven years have passed since Latvia's accession to the EU and evaluating this period of time it can be concluded that Latvia has experienced sharp increase of the competitiveness of agricultural and food sectors in the form of increased revenues of the farmers, higher production rates, export, etc. Such positive tendency was promoted by successful use of national and EU support within the CAP. However, economic crisis in 2008 had significant negative effect on agricultural and food production growth rates, which continued to grow in 2009.

From the information summarized above, it can be concluded that in general in Latvia CAP has exerted positive influence on growth of agri-food production, especially production of grain milling products. Analysis of statistical data showed that the volume of agricultural production has been affected more significantly by other factors, the most prominent of which is domestic consumption. However, due to economic crisis performance of main agri-food branches in 2008 and 2009 has slightly decreased. Assessing the situation in other EU member states, some authors argue that accession to the EU and implementation of CAP in Central and Eastern Europe countries has negatively or neutrally affected growth of agricultural production (Jomini et al., 2010; Baun et al., 2009; Doucha, Foltýn, 2008; Vaněk et al., 2007).

After Latvia's accession to the EU food producers were under competitive pressure and added marketing acumen, and consolidation to stay afloat to their productivity, as imports of many agri-food products, like fresh cheese, sausages, processed meat, fish fillet, have increased. Similar situation can be observed in other EU new member states. For example, in the Czech Republic increased imports from other member states have cost domestic self-reliance in some key commodities, including meat, potatoes and fruit and vegetables (Bašek, Kraus, 2009; Doucha, Foltýn, 2008; Vaněk et al., 2007). In Poland pork market has been influenced by the extensive import of product from the Netherlands and Germany (Wenberg, 2010; Mroczek, Urban, 2007). In Hungary – in the beginning of transformation, agricultural and food products contributed 24.9% of total exports in Hungary, in 2006 it was only 7.2%. Likewise, Hungary has become a net importer of dairy products and pig meat (Wilkin, 2008; Potori, Nyárs, 2007).

Although imports are projected to increase further, it is important to introduce improvements in the commercial infrastructure to preserve positive trade balance in agro-food products. One of the main prerequisites that could help Latvia's food producers to increase their productivity and competitiveness is development of cooperatives. Already there are 111 agricultural service cooperatives in Latvia, which are operating to foster sector's development.

At the present time, the obvious advantages of the CAP introduction in Latvia can be attributed to the production of several products – milk; cheese; butter; milk powder; canned fish; cured, dried, salted and smoked fish. The export market and volume of these products has increased since 2004 and now positive foreign trade balance can be observed. Such performance of the Latvian agri-food producers was benefited by the introduction of CAP support tool – has led to export compensations.

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## **The Green Paper as a tool for Rural Policy formation: Lithuania's experience**

### **Introduction**

Prior to the accession to the EU, rural policy measures in Lithuania were financed only from the national budget and were in compliance with such rural vision of Lithuania that was visualized by the national policy makers. After the period of preparation for the accession into the EU was started, the EU priorities, formulated on the basis of the rural and agricultural development in the EU countries and political experience, started predetermining the trends and scope of support in rural policy.

The current CAP restructuring poses new challenges to Lithuanian rural policy makers. Whilst preparing the support system at the level of the entire EU, the primary rural problems of each country become inevitably leveled off. Therefore, *the ability to achieve that the EU support model would evaluate the specificity of the country to a maximum has become the major challenge to the national rural policy makers.* It will be of special importance when negotiating in respect of a new EU support model after 2013.

Until recently, the first version of various economic and social national strategies in the Lithuania was created by a small group of experts. In 2010, for the first time in Lithuania, attempts were made to take the first step in the strategy development by using another method – the Green Paper. The Green Paper in the knowledge-based society is becoming the especially effective tool in implementing reforms, since consultations with the public help to obtain a great deal of the tacit knowledge, permitting to create the high value added. Thus, answers to the questions, raised in the Green Paper, make it possible to integrate knowledge, accumulated in the state, and to use them in improving solutions, proposed by civil servants.

The Green Paper “Future of Rural Areas in Lithuania” was prepared on the initiative of the Ministry of Agriculture and the Lithuanian Institute of Agrarian Economics. This initiative attracted great attention of society and may serve as an example of how the citizens can be involved in the discussions with the Government.

The objective of this article is to present the Green Paper as a tool, intended for discussion with the public, and results of the discussions for formulation of a rural policy in Lithuania. The research was conducted on the basis of systemic and holistic methodologies, using content analysis, analogy, logic comparison, induction methods and scientific and information literature analysis.

### **Concept and Purpose of the Green Paper**

The Green Paper as a special document was used for the first time by the Parliament of Great Britain in 1967 (GREAT BRITAIN. PARLIAMENT. HOUSE OF COMMONS. Parliamentary Debates. 5th ser., v. 744, April 5, 1967, col. 245.). The term “green paper” was coined by London newspapers from the green colour of the covers of the document. It was “a statement by the Government not of policy already determined but of propositions put before the whole nation for discussion” (Ibid. v. 747, June 5, 1967, col. 651). This document has set the example for the continuing public discussions, initiated by the consultative document of the Government.

The Green Paper was started to be used later in other countries as well. In particular, a document of that type was used in Australia, Ireland, and Canada. The Green Paper in those countries is an official document of the Government whereby the public is informed of the planned guidelines in political solutions when they are still under debate. The Green Paper introduces policy innovations, and it is just the first step in the formation of the provisions of a new law or strategic political trends, the *stage of vision formation* in the future of the object under debate. Following consultations with the public, policy trends and ideas presented in the Green Paper are corrected to be in better compliance with the vision prevailing in the society.

The procedure for a public debate of political solutions may be prolonged. Following the debate of the ideas, incorporated in the Green Paper, another document, the White Paper, is being prepared by the Government. Political solutions, necessary for the implementation of a new vision, are described more specifically in the White Paper, and the ways of solution are planned in more detail.

Recently, the Green Paper has been started to be used more widely in the European Union (EU). The Green Papers released by the European Commission, are designed for initiating discussions, helping to stimulate debates and launching the process of public consultations on the selected topic throughout Europe. The Green Papers, published by the European Commission, commonly introduce new ideas and/or key problems that arose in dealing with the topic and are

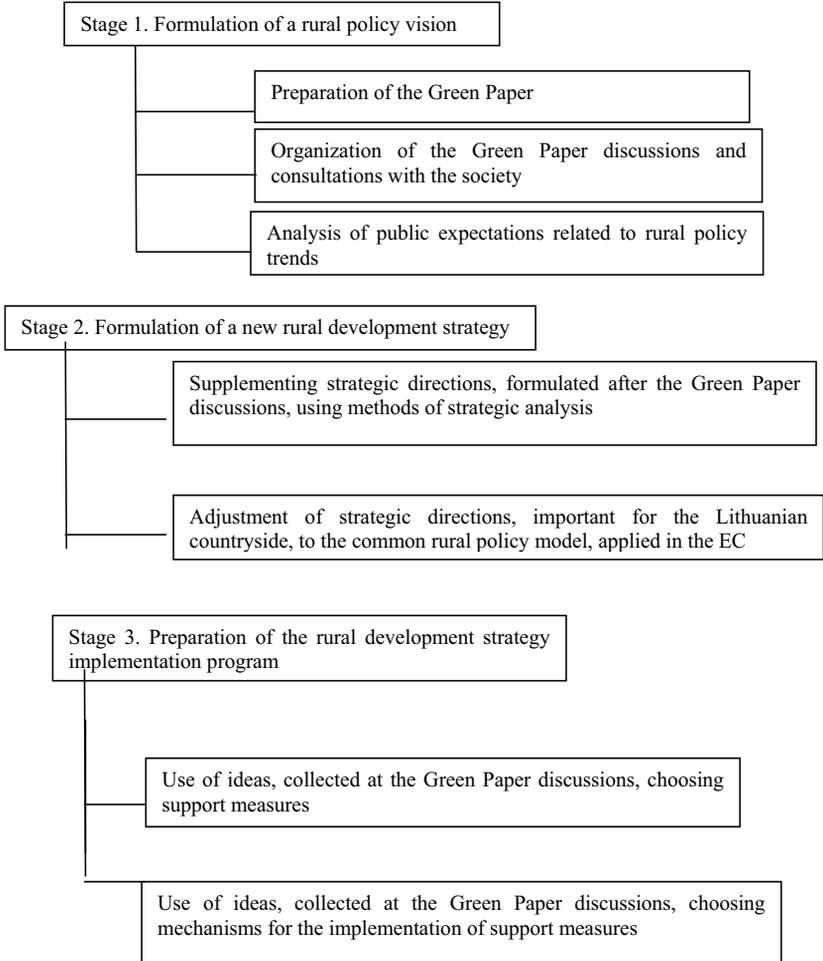
designed to encourage the people concerned or organizations to express their opinion and share the available information. Following the Green Paper the White Paper may also be prepared in the EU, which is a collection or a communiqué of official proposals which could later become the basis for legal acts.

The key task of the Green Paper is to discuss policy innovations and alternative ways for solving a problem. This is done by giving questions to the public and providing a brief explanation why such a question is being asked and what the context of a problem related to a question is. Questions are formulated believing that organizations or the individuals will submit not only their opinions, as is done during sociological surveys, but also arguments for their substantiation. The participants are requested to share their knowledge with the public as specialists. Thus, answers to questions, set forth in the Green Paper, make it possible to integrate knowledge accumulated by the citizens and to use them in improving solutions, proposed by civil servants. With the involvement of society into public debates, initiated by that document, an opportunity appears to use tacit knowledge, accumulated in the country, which often is left without due application. This tacit knowledge covers special research results, experience, gained by the citizens of the state in foreign countries, achievements in the spheres of activities, that are not directly related to the topic under discussion, etc.

The need to prepare the Green Paper on the future of Lithuanian countryside appeared as a result of the extremely rapidly changing public values and new information-communication technologies. This process requires not only new strategic solutions, but, in general, a new vision of rural Lithuania. Questions, raised in the Green Paper, should help to highlight the principal aims of the state and the value-related attitudes in Lithuanian rural policy after 2013, acceptable not only to lobbyist groups, but the whole society. Simultaneously, it is aimed at making use of knowledge and experience, obtained by different layers of society, especially urban residents, who until recently have been seldom involved in a rural policy decision-making process, disclosing the shortcomings of the present methods of support and creating new and more efficient support mechanisms.

Discussions in the Green Paper is just the first step necessary for the consistent implementation of the strategic planning process – to highlight expectations of society regarding the Lithuanian rural policy trends and to formulate political guidelines for the formation of a new Lithuanian rural development strategy.

Figure 1. The place of the Green Paper in the strategic planning process



Source: Compiled by authors

At Stage 2, in preparing a rural development strategy of Lithuania for a new programming period after 2013, the strategic rural policy directions, following the Green Paper discussions, should be harmonized with the structure of the common rural policy model proposed for the European Union. The strategy may be also supplemented by necessary strategic directions based on the opinion of experts, if it becomes clear that certain important issues were not given attention during Green Paper discussions.

At Stage 3 of strategic planning – preparation of the Lithuanian rural development strategy implementation program after 2013, ideas, collected during

the Green Paper discussions, on the possible support measures and their implementation mechanisms may be used (see Fig. 1).

### **Methodologies and principles for preparing the Green Paper**

Whilst preparing the Green Paper, certain changes occurring in the rural areas should be assessed. In the period of transition from the industrial to knowledge based society, the new lifestyle and values are being formed; the economic, social and cultural rural environment undergoes strong changes. Therefore, the concept of a rural development policy has to be changed and the rural areas should be treated as a territorial rather than sectoral formation. The time when national policy makers could put a sign of equality between the concepts “rural” and “agricultural” is already far behind. Many foreign (Diakosavas, 2006; Herrschel, 2005; Johnson 2001; Knickel, Renting, 2000; Kostov, Lingard, 2001; Kraybill, Kilkenny, 2003; Marsden, 2006; O’Conner et al, 2006; Storti, etc., 2004), as well as Lithuanian (Atkočiūnienė, 2008; Jasaitis, 2008; Melnikienė, Vidickienė, 2008; Svirskis, 2008) experts follow this approach. The newest rural policy paradigm seeks the comprehensive solution of all the problems of the rural areas as a “certain locality” (OECD, 2005; OECD, 2006 a and b). The main differences between a new rural place-oriented policy paradigm and the traditional rural paradigm are presented in Table 1.

Table 1. The new rural paradigm

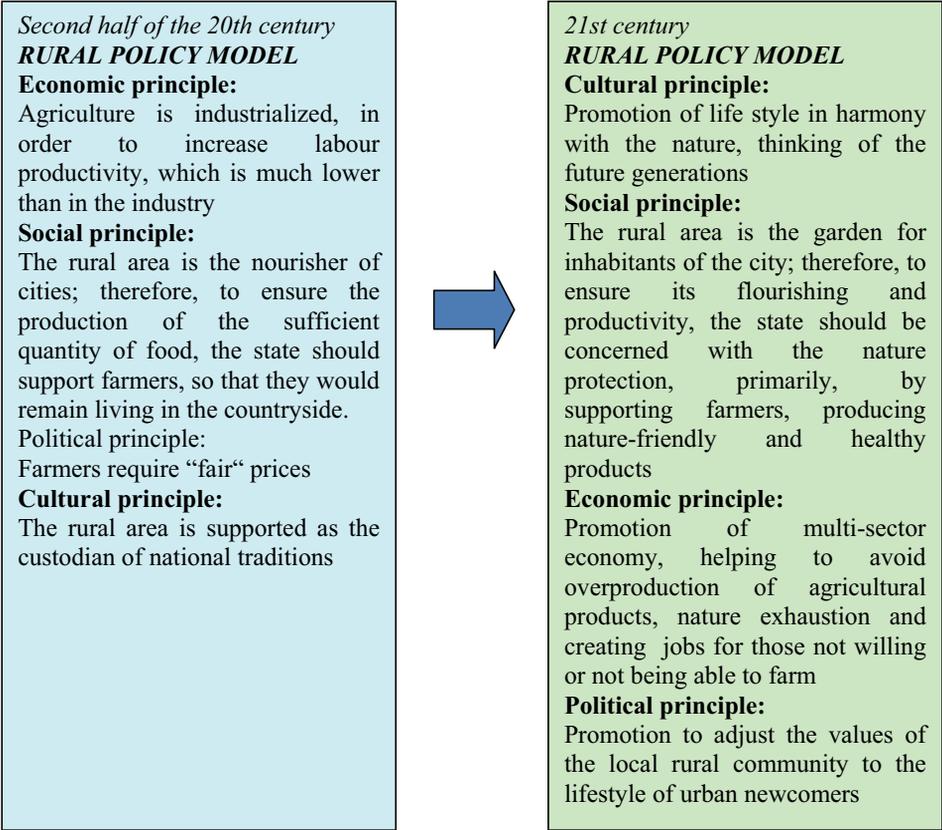
Specification	Old approach	New approach
Objectives	Equalization, farm income, farm competitiveness	Competitiveness of rural areas, valorisation of local assets, exploitation of unused resources
Key target sector	Agriculture	Various sectors of rural economy (ex. rural tourism, manufacturing, ICT industry, etc.)
Main tools	Subsidies	Investments
Key actors	National governments, farmers	All levels of government (supranational, national, regional, local), various local stakeholders (public, private, NGOs)

Source: OECD, 2006, p. 60.

A new paradigm has evolved in response to the knowledge society requirements. Therefore, in the 21<sup>st</sup> century rural policy, the stress is put already not on the economic but on the cultural principle, putting forward concern, what

we will leave to future generations and how to adjust their welfare to the present activity in the rural areas.

Figure 2. Comparison of rural policy models of the second half of the 20<sup>th</sup> century and of the 21<sup>st</sup> century



Source: Compiled by authors.

Following the new policy paradigm, support to the rural areas in EU is not any more identified with the support to farmers. In implementing those ideas, *alongside agriculture, the main axes of rural policy have become environmental protection, the quality of life and promotion of local initiatives.* Furthermore, the ways are considered of how to change the direct support mechanism, for it to contribute to environmental sustainability and orientation of farmers to the new needs of consumers for food quality. In addition, the EU residents require not separate and minor rural policy improvements, but to review the es-

sence of support provision, substantiate the public interest for support and indicate explicitly which public commodities and services the supported farmers produce. Safe and healthy food, nature-friendly farming, beautiful landscape and clean environment are the main items, for which still the few are ready to pay. However, the majority considers them to be valuable to the society. In respect that market forces do not promote the production of such goods and services so far, it is proposed to buy them for the money of taxpayers, providing support to those who experience additional costs when producing the healthier food, protecting the quality of soil and water, the biodiversity of nature, safeguard the cultural and historical heritage and landscape, etc.

Aiming to evaluate the ongoing changes, the systemic methodology was applied in the preparation of the Green Paper “Future of Rural Areas in Lithuania”. This methodology requires analyzing rural areas as the part of a bigger system. Lithuanian rural policy analysis was performed in three aspects as the part of:

1. Post-industrial knowledge-based society;
2. EU budgetary and Common Agricultural Policy reform;
3. Lithuania’s economic, social and environmental policy.

In the analysis of the rural policy as the part of the post-industrial society comparison was made of rural policy measures, characteristic of the industrial and post-industrial based society. Thus, the systemic methodology helped to stress the most important changes to occur in the formation of rural policy in the post-industrial knowledge-based society.

In the analysis of the rural policy as EU budgetary and Common Agricultural Policy reform, the systemic methodology helped to reveal alternative positions, which could be used in the negotiations for the EU policy in the agrarian sector and countryside.

In the analysis of the rural policy as Lithuania’s economic, social and environmental policy, a comprehensive evaluation of Lithuanian rural policy measures was carried out on the basis of comparative analysis with other states. The systemic methodology helped to reveal the areas where Lithuania is lagging behind compared to other developed counties in the rural policy measures, important for the post-industrial society. Issues raised in the Green Paper should assist in elucidating the reasons for such lagging behind.

The content of the Green Paper consists of six parts.

Part 1 of the Green Paper proposes a discussion on WHAT the aim of Lithuanian rural policy will be after 2013: industrial (modernist) or post-industrial (post-modern) countryside. In response to the serious discussions

concerning the EU budget and CAP reforms, Lithuania should have its own position based on the opinion of not only farmers' lobbyists, but also other parts of the society.

Part 2 of the Green Paper discusses WHICH approach of the rural support will be used:

- Countryside is lagging behind, it has to adjust to the modern city (modern approach);
- Lifestyle in the rural areas differs from that in the urban areas; therefore, the quality of life must be also measured by other indicators (post-modern approach).

The Green Paper invited Lithuanian rural inhabitants to state their criteria, which predetermine their preference to live in the rural areas rather than in the city, and to propose methods of how to ensure the improvement of the quality of life in the entire rural community.

The third part is devoted to discuss TO WHOM rural policy is beneficial. Do only the concrete receivers of the support feel the benefit or the whole society as well? It is stressed that lately support to farmers by urban and other rural inhabitants may give benefit only when the support will be intended for the supply of healthy and qualitative food products for Lithuanian consumers. Assistance from the society is also requested in constructing such support mechanism where the major part of the support funds, assigned for farmers and rural residents, would pass over to other Lithuanian rural areas – related producers, creators of local plant or animal species and new technologies. As a result funds would support their business development.

Part 4 of the Green Paper discusses WHAT we create when applying support measures, stressing possible negative effects of each support model:

- If an agricultural modernization model is applied, negative consequences may manifest themselves by agricultural concentration and monopolization; income disparity may become still more significant between the rural residents rather than urban;
- If the traditional rural reconstruction model is applied, negative consequences may appear as the cultural life stagnation, loss of economic and social viability;
- In the application of a post-modernization model, negative consequences may be revealed as conflicts between old rural residents and newcomers from towns, abuse of support in the suburban areas.

The public is invited to contribute to the elimination of the negative effects of support, sharing their experience and knowledge, since a possibility to improve the mechanisms for support provision always exists.

Part 5 is devoted to those WHO will be referred in the formation of Lithuanian rural future for the youth. It is underlined that a successful solution of the problem related to the change of generations in the Lithuanian the rural areas, is the most important guarantee of success, and therefore it is necessary to devote more attention to the needs of the youth. The large organizations, operating on the principle of membership were requested to group their answers by age groups, in case their expressed attitudes differ: youth (under 30), seniors (over 60) and others (30–60-year age group). The public is invited to contribute to the arsenal of political measures, to offer the ways of how young people could be stimulated to engage in farming, and young families to settle in the rural areas.

Part 6 of the Green Paper discusses WHERE the worthiness of rural areas is. It is invited to discuss what we would like to preserve in rural territories and in what ways they would be preserved, so it does not to stop the natural development of the life. The major part of the new 21<sup>st</sup> century ideas on the ideal future lifestyle model integrates in the world movement for the creation of eco villages. Simultaneously, new ideas are requested to be proposed of how the improvement of legal basis and support measures could help the more rapid spreading of ecological lifestyle in the rural territories of Lithuania, such as ecological farming and implementation of energy generation, housing construction technologies, but also fostering of family households, traditions and craft secrets and their transfer to the future generations.

The *structure* of the Green Paper became *oriented to target groups in the society*:

- Part 1 is devoted to experts, politicians, civil servants, interested in the general trends of the EU and Lithuanian rural policy reforms, and farmers, whose business may be directly influenced by the reforms;
- Part 2 is intended for collecting opinions and knowledge of local activity groups, rural community activists, municipalities and neighborhoods, school teachers and doctors;
- Part 3 is designed for clarifying consumers' approach and collecting of proposals on what agricultural, food product producers, methods of trade should receive support in the future so that the majority of the needs of the Lithuanian urban and rural residents could be satisfied by local producers;

- Part 4 is meant for collection of support mechanisms proposals of those Lithuanian inhabitants, who faced directly the concrete consequences of rural policy solutions;
- Part 5 is intended for different rural and urban youth organizations, expecting that they will help to direct the state support measures towards making Lithuanian rural areas ‘younger’;
- Part 6 is aimed for rural communities, settled in the territories, cherishing certain values, seeking new solutions how to make such the rural areas viable and to spread values in the society.

Titles to the parts of the Green Paper, the text structure and questions for discussions were formulated on the basis of the 21<sup>st</sup> century approach to the principles for selecting of public policy measures. The 20<sup>th</sup> policy measures most often were oriented to the struggle against negative social rural life phenomena, e.g., unemployment, poverty, crime, etc., i.e. attempts were made to overcome consequences. *Lately, efforts have been made to affect not the consequences, but causes; moreover, orientation is made towards the measures of stimulation of positive processes rather than fighting the negative ones.* In the post-industrial knowledge-based society such principle of policy formation, based on the positive thinking and the aim to “recruit” all local resources and to employ the creative potential, is much more efficient (Žalioji knyga, 2010).

Following this principle in the formulation of the future Lithuanian rural policy vision, the selected six target groups of the population were asked which rural policy measures could stimulate the greatest breakthrough in the development. The questions in the Green Paper shall help to clarify to what extent the Lithuanian population is ready to use the available resources, and what support measures would stimulate their creativity to the greatest extent.

### **Summary of Green Paper discussion with the Lithuanian society**

Despite a rather skeptical approach of some agricultural policy formatting experts to the potential benefit of Green Paper as a tool of rural policy formulation, discussions and consultations with the society have been very active and productive. Nearly a thousand statements, identifying problems and concrete suggestions on how to improve the Lithuanian rural development have been received. They have helped to highlight the unidentified problems by organizations that are representing farmers and the ones that yet have not been researched; original support measures have been proposed as well as their implementation mechanisms. It is a pleasure to know that socially active part of people in Lithuanian society is of very similar values, the same as the most famous

rural policy experts report, in terms of new rural development and policy trends of the counties with the highest level of development.

### ***Features of Lithuanian National Rural Policy after 2013***

Prior to accession to the EU the rural policy was financed entirely from national budget and corresponded the vision of national policy makers. The start of preparations for EU accession period, rural policy directions, tools and scope began to be formed on the EU priorities, on the basis of rural and agricultural development and policy experience of the EU countries. However, in the process of development of a system of support across the EU, each country will inevitably face the essential rural concerns. Therefore, the major objective of questions in the first section of the Green Paper was to clarify specific policy priorities for the future from the perspective of the rural population in Lithuania (Žalioji knyga, 2010).

So far, Lithuania's main uniqueness has been associated with the need to implement the process of land restitution and to reform the collective farming system inherited from the Soviet Union meanwhile, the Lithuanian agriculture after the regaining of independence in 1990 did not only have to formulate the private sector again, but also to provide farms with modern means of production. Consequently, rural policy has been concentrated on the agricultural industrialization in accordance with the twentieth century characteristic, following the view that only large farms can be modern and can achieve economies of scale in agriculture sector.

Society involved in the debate on features of national policy after 2013 is rather skeptical about further agricultural industrialization in Lithuania. Statistics show that Lithuania has successfully overcome the most important problems of restructuring and modernization in agricultural sector: labor productivity in the Lithuanian agriculture has grown much faster than in other industries and major threats have been evaded (mass migration to the city of rural residents). However, support measures and public opinion were only in favor of large farms. In the dispute on the rural policy after 2013, the participants stressed the need to draw attention to the differences of agricultural development policy methods in small and large countries. Lithuania as a small country is proposed to focus more on smaller farms to compete in the global market as a producer of environmentally-friendly products that acquire increasing demand in the world. Strengthening the Lithuanian farmers' competitive advantages, it is proposed to make Lithuania a synonym of environmentally clean area in the European Union (EU) and the world. Opinion holders stressed that if large quantities of organic

production were produced, it would be an additional guarantee to customers that the products produced in Lithuania are really healthy and clean. The debate clearly distinguished opinions by the large and small farmers, because they focus on different competing strategies, therefore, it would be appropriate to develop different packages of support – one suited to large, the other to the smaller ones (Vidickienė, 2010).

According to the most opinions it is asserted that Lithuanian agriculture is oriented towards market needs sufficiently enough, however, in the future it is important to maintain measures of market regulations – as the guarantee of stability of Lithuanian agricultural sector. It is proposed to introduce some completely new market-regulating measures, with particular emphasis on importance of the creation of crisis and risk management tools.

The opinion holders stressed in the debate that Lithuanian society does not sufficiently assess benefits of the environment-friendly farming practices, which, in turn, discourages farmers to practice it on a massive scale in their farming. It is, therefore, proposed to focus measures of state support on consumer education, organization of accessibility of ecological products from the manufacturer to the consumer, as well as the reduction of price.

### ***Quality of life differences between rural and urban areas***

In the second section discussions of the Green Paper, the majority of participants of dispute stressed that there must be an attractive rural model promoted, which provides living conditions for residents, which become increasingly valuable in the Lithuanian society: a peaceful, clean, healthy, socially friendly and safe environment surrounded by nature. Survey data shows that even ¼ of the population of the largest Lithuanian cities are considering migrate to the countryside (Žalioji knyga, 2010). However, particular importance to making the final decision to migrate to the rural area is the possibility of access to qualified health care, education, social security, police, government authorities and other services. Citizens want to know not only which lack of service development is considered to be self-evident part of life in the rural areas, but also to be involved in the decision making process.

In developing a new rural support program after 2013, it is proposed to direct more support to funding the projects for improving rural infrastructure, housing, and other important concerns which deal with quality of life. Lack of centralized water supply, sewage and even shortages of electricity supply systems are suggested to be compensated by the priority support for solar,

wind and other alternative energy sources in small towns and remote farm-houses and farms.

There has been a serious discussion if the state must assume obligations only for those services, which are dominated by the public sector (education, health, police and fire station). Partial view of the speakers considered support of businesses which are not able to survive in small towns on market conditions, for example, village shops or pharmacies.

There were also comments that the lack of desire to live in rural areas is determined not only by the lack of services, but the lack of diversity in jobs and employment, poor working conditions, poor relations between employers and employees. Farm modernization has led to structural changes in employment of the rural population. Only  $\frac{1}{4}$  of Lithuanian rural population are involved in agricultural activities and this kind of income takes only one sixth of all rural household income. Therefore, rural residents want more future support for employment creation as alternative activities and businesses with long-term promotion. It must also be focused on how economic activity is compatible with sustainable use of natural resources and health of population.

In order to take into account all the villagers' major concerns, speakers suggested a mechanism of cooperation among the ministries, which would allow to coordinate the flow of funds received from various national and international rural support programs. Many respondents have stressed that the quality of life depends largely on the rural community; it can greatly contribute to improving the quality of life. Support measures should encourage rural residents to get involved into rural communities, local activity groups and other community organizations more actively.

### ***Rural policy benefits for consumers***

In the discussion in this section of the Green Paper, the current support system for farmers has been criticized as overly focused on the individual interests of the beneficiaries. Participants have said that each support receiving project, in particular, should indicate how the other members of society, rather than the supported project owner will benefit. It was desirable that the support measures for farmers, in particular, pose such challenge, as healthy food supply for local consumers.

In addition to the support of individual initiatives of farmers and entrepreneurs, which strengthens the competitive capacity of individual operators, public interest (business infrastructure) projects should as well receive support, and the project would be implemented and co-financed by local governments and local

businesses. Consumers aim to eat fresher fruits and vegetables, require growers to deliver them to the consumer and create a completely different system of trade of the products. Therefore, as the most current issue of common interest projects where not only farmers but also society as a whole would benefit, was the setting of community pavilion, shops of farmers and their cooperatives, also mobile markets, facilities, roads and access to the reach places to the urban residents. It has also been proposed to support, not only production but also marketing, as well as permanent advertising and promotion of farmers' products. Restructuring of Lithuanian farms from mass, low cost production makers to healthy production manufacturers, who deliver products to the consumer quickly, would not only give benefit to consumers but also to farmers. This would strengthen the economic competitiveness of rural municipalities.

Lithuanian rural area is no longer only a food producer. Rural regions are increasingly seen as a place where it is a pleasure not only to relax, but to live regularly and lead a healthy life, that is, they are considered to be essential public recreational resources. Urban inhabitants wanted to strengthen this role of rural areas and support such measures, which provide better conditions to spend their leisure time, instead of in the areas of the intensive agriculture and pollution, but adequate resting-place surrounded by nature. This poses new challenges for support system to Lithuanian farmers, as it requires a new dimension to assess the benefits of intensive farming for community of Lithuania as well as EU.

### ***Undesirable effects of rural policy***

Long-term world practice indicates that the rural policy measures can lead to both positive and negative changes. Lithuanian society participated in the Green Paper discussion and named a number of worrying problems associated with the lack of spread of support, production and pollution levels, decline of small farms and growing social exclusion. It was stressed that the support of agriculture takes into consideration only the business through encouraging an increase of the size of farms, usage of chemicals, production of the same agricultural products (both in terms of range and quality), therefore, the number of jobs in rural areas decreases. Support for the majority of the rural population has been completely unavailable because of the conditions of its complexity. Support is primarily used in large farms, their competitiveness has increased, while the model of "small and medium business in agriculture" has suffered a complete failure. Small family farms, with an emphasis on careful use of natural resources, are excluded from the market by large agricultural producers with short-term profit aim. Participants also criticized the EU and Lithuania's gov-

ernment rural vision which is restricted to agriculture and activities similar to them. In their view, role of farmers is overestimated in the current rural policy as they are the only capable of diversification of the rural areas. This approach leads to a loss of economic vitality in rural areas and stagnation of other rural residents (non-farmers). Excessive emphasis on rural productive functions (to produce food) suppresses a number of other initiatives to exploit the benefits of rural tourism, health, recreational and educational activities and promotes the development of over-intensive use of natural resources.

Due to an improper or vague definition of rural regions, some rural policy has caused such negative phenomena as the support abuse in suburban areas, conflicts between the long-term rural residents and newcomers from the city.

### ***Generational change problems***

Lithuanian rural areas, as well as society as a whole, are aging rapidly. Rural population is aging not only due to declining birth rates, but also the reluctance of young people to live in rural areas. In particular, this is applied to intergenerational change in agriculture, because half of the owners of the land holdings are of retirement age, and young farmers (less than 40 years of age) account for only about 18 percent of those registered in the farmers' list. Most of the young, well educated people did not wish to inherit their parents' farm. Some of those young people who decide to farm, however, feel their potential is not totally used and they have given up their dreams to make a career in other fields.

During the Green Paper discussion that deals with problems of change of generations, the people highlighted that in order to maintain Lithuanian rural areas viable in the future appropriate support measures should be more focused on the needs of the youth. In order to attract more young people to the rural areas of Lithuania, it is not sufficient only to solve the problems of young farmers. In the process of the natural decline in employment of the Lithuanian rural population in agricultural sector, ***there must be conditions for young people living in rural areas to develop their professional activities consistent with their interests.*** New information and communication technology recently has created a large potential for jobs to move from institutions into home. Those living in Lithuanian rural areas can work in any location in Lithuania or in another country. Measures to encourage Lithuania's business people from cities to create such modern jobs for rural residents, could be an important stimulus towards encouraging more high-skilled young families to live in the rural areas.

In order to ensure a smooth takeover process of family farms in Lithuania it is not only important to motivate young people and engage farming, but also to find the best approaches for regulating inheritance. Discussions mainly focused on setting of a minimum knowledge requirements for the future heirs. The second problem, which appeared after the land restitution, was how to manage the farm with a few owners.

### ***The Life in value upholding rural areas***

Lithuania has many rural areas, where the main purpose is to protect and uphold certain historical, cultural and natural values. Most of these sites (in ethnographic villages, estates, national and regional parks, nature reserves and others protected areas) have a variety of activity restrictions which may limit people's initiative to develop business activity and adapt their homesteads for daily needs. Some rural communities, for example, eco-villages, follow certain restrictions voluntarily.

According to the assessment of experts of UNESCO and other international cultural organizations, Lithuania has still widely maintained the unique rural features; each region has characteristic architectural features of settlements planning, residential and farm buildings. Lithuania has 43 villages with a historical or cultural heritage. The wooden heritage is particularly appreciated, because of its unique construction techniques and decorative forms as it is not only national but also European value. 59 protected estates, parks and gardens are also located in rural areas.

Green Paper debate participants believed that preservation and renewal process of viability of the ethnographic villages and estates is impossible without private initiative. However, in order to encourage activity of local residents and supporters of heritage strict prohibitions should constantly be reviewed; also compensating mechanisms for those who follow the restrictions should be improved. At the same time it is important that Lithuania's rural tradition and the ancient craft techniques would spread to other villages, would become well-known and popular in society. It is, therefore, proposed to promote the craft and develop it as a business activity, combine it with rural tourism, recreation, administration, educational institutions and the various communities (e.g., artists, retired people), which could be located in former estate houses and can contribute to estate management and preserving.

A particularly large quantity of the speakers, in the discussion of the last chapter questions of the Green Paper, talked about a new phenomenon, so called eco-villages, and encouraged to establish procedures to ensure the ecological

state of the area. It has been proposed to support the pilot projects of promoting and establishing the idea of eco-villages.

### **Lithuanian rural policy vision proposed by the society**

Speakers' views in the Green Paper debate has shown that there is a positive attitude being formed towards living in Lithuanian rural areas and the desire to eat food produced in Lithuania. Ecology is no longer just one of the many rural policy aspects corresponding with the social vision, ecological concepts and eco-thinking permeates all proposals received by the Green Paper debate. Not only governmental but also the responsibility of farmers is emphasized in the process of conservation of natural resources for future generations in rural areas.

People particularly emphasize the quality of life in rural areas as they are largely determined by human choice, when the living place is considered. This kind of choice in Lithuania is still favorable for the city. Therefore, only an integrated approach to the key needs of people living in rural areas, in the process of formulating rural policy may stop migration of rural population to the city and encourage the development of modern Lithuanian rural areas.

Concisely described vision of Lithuanian rural areas, that has been expressed through the Green Paper discussions and covering parameters of the essential needs of people living in rural areas, which are important in the process of the modern rural policy formulation is as follows:

- Cherish Lithuanian rural areas where people would LIVE well;
- Create the conditions for Lithuanian rural population to WORK in their desirable field of activity;
- Lithuanian rural areas must become a place which people would like to VISIT (Vidickienė, 2010).

Participants of the dispute emphasize future of rural policy instruments which must be focused on the youth needs and values. Otherwise, it is difficult to expect that young people, especially after studying in the city for a few years will return to live in the rural areas, when there is the opportunity to stay in the city.

According to the summary of the views of the Green Paper debate, directions of strategic support to Lithuanian rural areas have been formulated, that can accelerate the implementation of the rural vision:

1. Adaptation of rural settlements to modern needs of their population;
2. Access to services for rural population;
3. Governmental support for public initiatives in rural areas;

4. Viability of family farms;
5. Bringing organic products closer to the consumer;
6. Improvement of business environment in rural areas;
7. Development and support of high-skilled jobs in rural areas,
8. Orientation of rural tourism towards services to families and foreigners on holiday;
9. Promotion of organization of events of national and regional importance in rural areas.

According to the Green Paper debate, strategic directions of rural support were presented in Lithuanian Government meeting on the 27<sup>th</sup> of December, 2010 and according to the protocol of government's decision it was recommended for the ministries to take into account public opinion on issues of rural development in the process of formulation of long term development strategy "Lithuania in 2030" and other strategic documents.

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## **Strategic priorities for food industry of Ukraine in the context of food security**

### **Introduction**

Since the mid twentieth century the problem of food became of world importance. Evolution of this problem has caused the introduction into circulation of the UN concept of "food security" in 1974. This concept was considered in the context of world food security and little means of maintaining stability in the markets of food availability in the basic food for all countries [1].

Rome Declaration on World Food Security 1996 determines the state of achieving food security as a condition when all people at all times have physical and economic access to safe and proper food in the quantity, quality and range of necessary and sufficient to meet their physiological needs and benefits that are necessary for a healthy life, physical, social and personal development, human health and population expanded reproduction [2].

Based on the definition of food safety guidance should note:

- *physical access* to sufficient quantities of safe food;
- *economic access* to food in adequate quantities and quality of all social groups of population;
- *autonomy and economic independence* of national food system (food independence);
- *reliability* – the ability of national food system to minimize the impact of seasonal, weather and other fluctuations in food supplies of the population of all regions of the country;
- *durability* – rational food system develops in the extended play mode [3].

Food security as defined by FAO – a system that clearly works to ensure that all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Recently strengthened the role of national food security system of global food security. Food security can be seen as providing a certain level of domestic production, which is based on full self-sufficiency of country, or in a support of critical minimum food [4].

## The concept and measurement of food security

The concept of food safety and food independence advocate interrelated. If food security – is to ensure the state population quality food at reasonable minimum standards of scientific nutrition, the food independence – a certain level of self-reliance of the country's food, to people in food through domestic production. Food independence is the necessary condition for food security.

An important aspect of research-level food security in the country is the development of indicators to assess its condition. In modern literature there is a large variety of indicators proposed for this purpose. S.S. Bekenov notes that food security is assessed by a wide range of indicators. First, such indicators were: average personal income, transient remnants of food grains, initially at 20%, and later – 16% of annual consumption. We have expanded the list of criteria and measurement become more difficult [5].

The modern criteria include population share of food in total expenditure of certain population groups, territorial accessibility products (compare the level of retail prices for identical products in different regions), convenience food (share in the consumption of modern products that reduce time losses and save it for performing other types of work), the degree of naturalness and quality of goods, the impact on quality of health and life expectancy and so on.

In summary assessment of food security is determined by population:

- *physical accessibility of food* – food availability throughout the country in every time and in the required range;
- *economic accessibility of food*, which is that the level of income, regardless of social status and place of residence of a consumer, allowing him to buy food, at least a minimum level of consumption;
- *food safety for consumers* – the possibility of preventing the production, sale and consumption of substandard food products that can harm human health.

N.S. Ohluzdin determines the achievement of food security with parameters:

- percentage of the population clean food of domestic production;
- availability of food prices for the bulk of the population;
- availability of strategic stocks of food for their population in case of emergencies;
- production capacity;
- state of scientific and technical base of the country and its compliance with the highest international standards.

In Japan from the late 1950s score using food self-sufficiency. This indicator is calculated as the percentage ratio between the value created and consumed in the country for food. Also used in calculations of food energy, making comparison of calories consumed and required by the standards.

Often used in determining the food security of food dependence coefficient (K):

$$K = I / P,$$

where I - the volume of imports a certain kind of product;

P-volume needs of the country for this type of product. To differentiate between three levels of food depends on:

$0,1 \leq K \leq 0,2$  - level food security is safe;

$0,25 \leq K \leq 0,3$  - level food security threshold;

$K \geq 0,5$  - level food security is endangered.

The food security is often defined as a system of economic relations in society which arise in connection with providing all its members food according to recommended standards of quality and quantity. Besides the necessary guarantees value and harmlessness of food products for consumer health. In connection with active use in the production of food additives and genetically modified products, chemicals and stimulants, artificial colors, flavours, emulsifiers and other components of unnatural origin question compliance by enterprises established limits their use and enforcement of standards and technological conditions.

Food security is regarded as the state are provided, when adequate resources for people, capacity and guarantees the state's ability to meet the needs of the population food (regardless of the external and internal threats) in the volume, quality and range that meet accepted standards and norms [7]. In the draft Law of Ukraine "On food security of Ukraine" [7] and the Integrated Programme to support the development of the Ukrainian village for the period until 2015 [8] food security is treated as the protection of vital interests of human and civil society and state, which is guaranteed by physical and economic accessibility and quality of vital food for all citizens in accordance with scientifically based food sets, maintained the stability of food supply and population ensured food independence of the state.

M.M. Basynska, speaking about the parameters that determine the level of food security, use the following parameters:

- dynamics of production of basic foodstuffs per capita (country, region), kg per year;

- dynamics of consumption of basic foodstuffs per capita (country, region), kg per year;
- self-sufficient entities (country, region, household) staples included in the consumer basket, %;
- level of physical and economic access to food for different categories of consumers (the structure of the diet, how much budget cover the costs of food);
- consumption of staple foods (kg per year) groups of consumers with different income levels;
- average daily calorie ration region's population of some consumer groups, kcal;
- relate to diet to scientific standards, the relative energy value and the actual composition of food;
- elasticity of demand for food for the price, income, etc.;
- proportion of the population with incomes below the subsistence minimum;
- inflation, price indices for food products;
- size of carry-over of basic foodstuffs in the country [3, 9].

This approach most fully identifies indicators of food security assessment. This approach to seize the survey. The main cause of food security is the national capacity of agricultural products and foodstuffs.

To ensure food security it is necessary to address the strategic objective – the creation in Ukraine of the powerful food industry to meet the needs of internal and external markets in food, food security, the development of the export potential, increase in foreign exchange and government revenue.

The importance of developing and implementing the strategy of Ukraine's food industry due to the need to create favorable conditions for domestic food production, introduction of high technologies in the industry, reducing dependence on food imports, the transformation of agriculture in the high, stable export-oriented sector to ensure food security.

### **Characteristics of the agricultural complex of Ukraine**

The place of the agroindustrial complex (AIC) in Ukraine's economy can not be overstated. Agriculture as its main component, has a large share of gross domestic product (GDP) of Ukraine. Despite the fact that the share of agriculture in the gross product tends to decrease at the expense of other sectors of the economy, agriculture plays an important role in national economy of Ukraine (Table 1).

Table 1. Share of agriculture in GDP of some CIS countries

The share in GDP,%	Years								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Ukraine	9.6	9.1	8.9	8.6	8.7	8.6	8.0	7.8	7.6
Russia	7.1	6.9	6.7	6.8	6.1	5.5	5.1	4.8	4.5
Kazakhstan	8.1	8.7	8.0	7.9	7.1	6.4	5.5	5.8	5.6
Belarus	10.7	10.1	9.6	9.0	8.4	8.0	7.5	7.0	8.3

*Source: calculated by [10].*

In addition to agriculture in Ukraine is the foundation of food security, to mention a significant social impact area. In agriculture in 2009 was 3131 thousand persons employed, representing 15.5% of the employed population. Despite the global process of urbanization, which takes place in Ukraine, the share of rural population in the country is 31.4% of the total.

Ukraine has favorable climatic and natural conditions, creating a safe foundation for the potential development of the agricultural sector. However, despite the significant resources, production performance of this industry remains relatively low.

The transition to a market economy has caused many problems worsening of agriculture and significant drop in output of agricultural products, led to restructuring of production in agriculture, caused the decline in production, resulting in a country still not reached the level of agricultural production in 1990. Thus, according to statistics the gross agricultural output in 2009 amounted to only 70% of 1990 levels.

Agriculture in Ukraine ranked fourth in terms of gross value added among economic activities. Also, it is one of the activities, In which positive trends has been observed. Restructuring of the economy of Ukraine became the reason for the decline is almost twice the share of agriculture in gross value added in the last ten years (8.1 percent points). Also took place gradually reducing the ratio to gross value added food industry with 7,2% in 1995 to 5,3% - in 2009 (Table 3).

Table 2. Indices of gross agricultural output

Years	Index of gross agricultural output, %		
	1990	1995	2000
<b>1990</b>	<b>100.0</b>	-	-
1991	86.8	-	-
1992	79.6	-	-
1993	80.8	-	-
1994	67.4	-	-
<b>1995</b>	<b>65.0</b>	<b>100.0</b>	-
1996	58.8	90.5	-
1997	57.8	89.0	-
1998	52.2	80.4	-
1999	48.7	74.9	-
<b>2000</b>	<b>53.4</b>	<b>82.2</b>	<b>100.0</b>
2001	58.8	90.5	110.2
2002	59.5	91.5	11.4
2003	53.0	81.5	99.2
2004	63.4	97.6	118.8
<b>2005</b>	<b>63.5</b>	<b>97.7</b>	<b>188.9</b>
2006	65.1	100.1	121.8
2007	60.9	93.6	114.0
2008	71.3	109.7	135.5
2009	70.3	107.7	131.1

Source [11, p. 39].

Table 3. Gross value added of industry and agriculture in total gross value added, %

Gross value added in total gross value added, %	2001	2002	2003	2004	2005	2006	2007	2008	2009
Agriculture	16,3	14,6	12,1	11,9	10,4	8,6	7,5	7,9	8,2
Industry	30,6	30,8	30,3	28,5	30,9	31,7	31,2	30,1	26,6
Food industry	6,5	6,7	6,3	4,8	5,0	4,9	4,8	4,6	5,3

Source: calculated according to [12].

The integrated program to support the development of the Ukrainian vilage the parameters that characterize food security, namely:

- *critierion of adequacy of food consumption;*
- *critierion of availability of food consumption;*
- *critierion of food independence.*

These criteria may join the group of indicators that allow them to describe.

The *criterion of adequacy of food consumption* can be determined by the following groups of indicators:

- dynamics of consumption of basic foodstuffs per capita (country, region), kg per year;
- consumption of staple foods (kg per year) groups of consumers with different income levels;
- average daily calorie ration region's population of some consumer groups, kcal;
- relate to diet to scientific standards, the relative energy value and the actual composition of food.

The *criterion of accessibility of food consumption* can be estimated by the following group of indicators:

- level of physical and economic access to food for different categories of consumers (the structure of the diet, how much budget cover the costs of food);
- elasticity of demand for food for the price, income, etc.;
- proportion of the population with incomes below the subsistence minimum;
- inflation, price indices for food products;

The *criterion of food independence*:

- dynamics of production of basic foodstuffs per capita (country, region), kg per year;
- self-sufficient entities (country, region, household) staples included in the consumer basket, %;
- size of carry-over of basic foodstuffs in the country.

Criterion of food consumption adequacy – a measure that is determined by the ratio of actual consumption to the scientifically based standards for major groups of food products.

## **Consumption and supply of food**

The problem of population food supply according to scientifically based norms of consumption exists for a long time. In 1982 the Soviet Union was developed and adopted by the USSR Food Programme, which included proof of the level and structure of food consumption to physiological norms. But this programme was done. Nevertheless, during the existence of independent Ukraine, consumption of Basic food products per capita not only reached the recommended standards, but in some important product groups are lower-level of 1990-1991 years. Table 4 shows the food consumption per person per year by 2000-2010.

Table 4. Consumption of food per person per year, kg

<b>Food</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Meat and meat products (in terms of meat, including fat and offal in kind)	33	31	33	35	39	39	42	46	51	50	51
Milk and milk products (in terms of milk)	199	205	225	226	226	226	235	225	214	212	206
Eggs, pcs.	166	180	209	214	220	238	251	252	260	272	272
Fish and fish products	8.4	11	11.9	12	12.3	14.4	14.1	15.3	17.5	15	14
Sugar	37	40	36	36	38	38	40	40	41	38	37
Oil	9.4	10	10.7	11.3	13	13.5	13.6	14.3	15	15	15
Potatoes	135	140	133	138	141	136	134	130	132	133	126
Vegetables and melons food crops	102	105	108	114	115	120	127	118	129	137	140
Fruits, berries and grapes (excluding wine)	29	26	29	33	34	37	35	42	44	46	45
Grain products (bread, pasta in terms of flour, flour, cereals, legumes)	125	130	131	125	126	124	120	116	117	112	112

Source: calculated according to [12, 13].

The dynamics of consumption of basic food products per person per year for rational norms for the years 2000-2010 can study according to Table. 5.

Table 5. Consumption of main foodstuffs to rational norms of consumption, % (consumption rate 100%)

Food	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Meat and meat products (in terms of meat, including fat and offal in kind)	41.3	38.8	41.3	43.8	48.8	48.8	52.5	57.5	63.8	62.5	63.8
Milk and milk products (in terms of milk)	52.4	53.9	59.2	59.5	59.5	59.5	61.8	59.2	56.3	55.8	54.1
Eggs, pcs.	57.2	62.1	72.1	73.8	75.9	82.1	86.6	86.9	89.7	93.8	93.8
Fish and fish products	42.0	55.0	59.5	60.0	61.5	72.0	70.5	76.5	87.5	75.5	71.3
Sugar	97.4	105.3	94.7	94.7	100.0	100.0	105.3	105.3	107.9	100.0	96.9
Oil	72.3	76.9	82.3	86.9	100.0	103.8	104.6	110.0	115.4	118.5	112.2
Potatoes	108.9	112.9	107.3	111.3	113.7	109.7	108.1	104.8	106.5	107.3	101.9
Vegetables and melons food crops	63.4	65.2	67.1	70.8	71.4	74.5	78.9	73.3	80.1	85.1	86.8
Fruits, berries and grapes (excluding wine)	32.2	28.9	32.2	36.7	37.8	41.1	38.9	46.7	48.9	51.1	49.7
Grain products (bread, pasta in terms of flour, flour, cereals, legumes)	123.8	128.7	129.7	123.8	124.8	122.8	118.8	114.9	115.8	110.5	110.5

Source: calculated by [12, 13].

In 2010, only oil, potatoes and bread products exceeded the rational consumption norms. Eggs and sugar almost satisfy physiological needs, and for

other basic foodstuffs are significant discrepancies rational norms and actual consumption of the average Ukrainian.

Meat and meat products consumption needs to physiological requirement of Ukraine were satisfy only in 63,8%, and milk and dairy products – only 54,4. Thus, level of consumption can not be explained by low supply of these products in the country, because request for them is much higher

On a serious problem with the quality of food shows the dynamics of population food consumption by one person a year compared with 1990. Thus, over the period examined, consumption growth took place only in the following product groups: eggs, oil, vegetables and melons. Foods that have a relatively high price, have the lowest level of consumption by the population of Ukraine. Consumption of meat and milk production in 2010 was only 75% and 55% of 1990 levels, respectively. The level of supply of these commodity groups do not provide the present level of purchasing capacity of population (Table 6).

Thus the analysis shows that the first criterion level of food security is achieved. The indicators that define it are at their worst than 1990.

Dynamics of food consumption in Ukraine in general, reflects changes in the amount of real incomes. The cost of basic foods by statistical data - a significant portion of the budget Ukrainian families. On the one hand it is a welcome development for the industry - increasing purchasing capacity will be accompanied by increase in food consumption. But on the other hand, the modern consumer-oriented foods relatively low quality at moderate prices for them.

Another indicator that determines the level of food security is the criterion of availability of food consumption. This score is determined by the ratio of annual value of food set that corresponds to scientific standards on one person, the annual income per person. Therefore, this indicator allows to determine what percentage of income the average consumer must spend on food for nutrition physiological norms.

Table 6. Consumption of main foodstuffs per capita relative to 1990, %

Food	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Meat and meat products (in terms of meat, including fat and offal in kind)	100	57.4	48.5	45.6	48.5	51.5	57.4	57.4	61.8	67.6	75.0	73.5	75.0
Milk and milk products (in terms of milk)	100	65.4	53.4	55.0	60.3	60.6	60.6	60.6	63.0	60.3	57.4	56.8	55.1
Eggs, pcs.	100	62.9	61.0	66.2	76.8	78.7	80.9	87.5	92.3	92.6	95.6	100.0	100.0
Fish and fish products	100	20.6	48.0	62.9	68.0	68.6	70.3	82.3	80.6	87.4	100.0	86.3	81.5
Sugar	100	64.0	74.0	80.0	72.0	72.0	76.0	76.0	80.0	80.0	82.0	76.0	73.6
Oil	100	70.7	81.0	86.2	92.2	97.4	112.1	116.4	117.2	123.3	129.3	132.8	125.8
Potatoes	100	94.7	103.1	106.9	101.5	105.3	107.6	103.8	102.3	99.2	100.8	101.5	96.5
Vegetables and melons food crops	100	95.1	100.0	102.9	105.9	111.8	112.7	117.6	124.5	115.7	126.5	134.3	137.0
Fruits, berries and grapes (excluding wine)	100	70.2	61.7	55.3	61.7	70.2	72.3	78.7	74.5	89.4	93.6	97.9	95.2
Grain products (bread, pasta in terms of flour, flour, cereals, legumes)	100	90.8	88.7	92.2	92.9	88.7	89.4	87.9	85.1	82.3	83.0	79.1	79.1

Source: calculated by [12, 13].

Consumption pattern that has developed in Ukraine does not allow people eat adequately. Over the period studied, significantly reduced calorie diet (table 7).

Table 7. Caloric food per person per day

Calorie of food	1990	1995	2000	2002	2003	2004	2005	2006	2007	2008	2009
Kcal / day	3597	2696	2661	2800	2798	2910	2916	2935	2940	2998	2946
In % to 1990	100	75.0	74.0	77.8	77.8	80.9	72.8	81.6	81.7	83.3	81.9

Source: calculated by [12, 13].

It is impossible to find using data on the structure of total household expenditures on average per month per household (table 8).

Changes in the structure of total household expenditures can be considered positive, as since 2000 the share of household expenditures on food has decreased, but it is still significant and in 2009 was 55.0% (against 67.9% in 2000). This was due to the growth of spending on non-food items, which in 2009 amounted to 32,8% against 25,4% in 2000. A positive growth of total non-consumer spending can be considered, whose share in the structure of total household expenditures from 2000 to 2009 almost doubled and in 2009 was 12,1%. These costs grew fastest - growth rate of more than 9 times.

### Development of prices and expenditures on food

Another factor that determines the availability of food consumption, the trend in prices in the country. Structure of household expenditures depends on changes in prices of commodities like food and non food (Table 9). You can explore the following trends: the proportion of expenditure on food in total household expenditures in 2000 decreased by 18,3% and is held in growth of total household expenditures over this period, almost 5 times with soaring prices for some types of food at about the same pace. Thus, over a period meat prices have increased 6 times, sausages - 4.1 times, butter - 3,4 times, milk - 4.5 times, bread and bakery products - 3,6 times.

The share of household spending on food is known to have an inverse relationship of income level households. For example, in the United Kingdom and the United States this share is less than 20%, Russia - 40%, Nigeria, Bangladesh - more than 60%. Value for Ukraine - 55.0%. Increasing food prices typically increase their share of the cost of acquisition [14].

Table 8. Structure of total household expenditures on average per month per household and their dynamics, %

<b>Total expenditure of households</b>	<b>2000</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
total USD per month	541.3	903.5	1229.4	1442.8	1722	2590.4	2754.1
in % to 2000	100	166.9	227.1	266.5	318.1	478.6	508.8
including consumer personal spending							
share. %	93.3	92.6	91.1	90.5	90	86.2	87.8
USD per month	505.03	836.64	1120	1305.7	1549.8	2232.92	2418.10
in % to 2000	100	165.7	221.8	258.5	306.9	442.1	478.8
including:							
food. share. %	67.9	61.7	61	57.5	55.8	53.0	55.0
USD per month	367.54	557.46	749.93	829.61	960.88	1372.91	1514.76
in % to 2000	100	151.7	204.0	225.7	261.4	373.5	412.1
non-food goods and services share. %	25.4	30.9	30.1	33.0	34.2	33.2	32.8
USD per month	128.28	258.52	337.12	430.89	530.03	741.33	793.14
in % to 2000	100	201.5	262.8	335.9	413.2	577.9	127.6
including: pay for housing. utility products and services							
share. %	6.9	7.7	6.4	7.1	8.5	6.6	7.7
USD per month	37.35	69.57	78.68	102.44	146.37	170.97	212.07
in % to 2000	100	186.27	92.8	102.9	123.2	95.7	110.1
Total non-consumer expenditures. share. %	6.7	7.4	8.9	9.5	10	13.8	12.2
USD per month	36.27	66.86	109.42	137.1	172.2	357.48	335.99
in % to 2000	100	184.4	301.7	378.0	474.8	985.6	926.4

Source: calculated by [12, 13].

In addition to changes in food prices on the availability of food consumption of the population affected by change in real incomes (tabl.10). For the analysis chose two product groups: milk and dairy products, meat and meat products in the food as they set the average Ukrainian have the lowest value relative to rational norms of consumption.

As a result the data show very low correlation between changes in consumption of milk and dairy products and meat and meat products and changes in real income. It reflects the low elasticity of food groups by income. This is because the satisfaction of physiological standards of consumption of these products has not yet reached the physiologically determined consumption

rates, and rates of change of real income for this period are considerably higher than the rate of change of prices for these products. However, a high cross elasticity is typical for foodstuffs . In conditions of low purchasing capacity of people almost all of which form the diet, are the goods-substitute. The level of accessibility of food consumption is characterized by a part of the population which has incomes below the subsistence level and availability of food for different groups.

Table 9. Rise in prices of some food products in Ukraine for years, times the previous year

Year	Type of Product				
	Meat	Sausages	Butter	Milk and milk products	Bread and bakery products
2000	1.69	1.38	0.97	1.19	1.58
2001	1.30	1.19	0.96	1.07	0.93
2002	0.90	0.97	1.10	1.03	0.96
2003	1.08	1.04	1.09	1.14	1.36
2004	1.49	1.28	1.09	1.22	0.98
2005	1.18	1.17	1.11	1.19	1.00
2006	0.98	0.98	1.09	1.07	1.17
2007	1.14	1.15	1.45	1.49	1.18
2008	1.34	1.35	1.12	1.08	1.25
2009	1.06	1.09	1.41	1.21	1.10
2009 in % to 2000 year	6.0	4.1	3.4	4.5	3.6

Source: calculated by [13].

Proportion of population with average per capita cash income in the month, below the subsistence minimum in 2009 was 30,4%, that is one third of the population lives in poverty. It should be noted that this figure compared to 2008 declined year (25,6%), although in 2007 this population was 39.8%.

Table 10. Dynamics of real personal income and changes in consumption of certain foodstuffs

Years	The pace of real income,% year on year	Rate of change of consumption of certain foodstuffs in % over previous year	
		milk and milk products (in terms of milk)	meat and meat products (in terms of meat, including fat and offal in kind)
2001	110	103.02	93.94
2002	118	109.76	106.45
2003	109.1	100.44	106.06
2004	119.6	100.00	111.43
2005	123.9	100.00	100.00
2006	111.8	103.98	107.69
2007	114.8	95.74	109.52
2008	107.6	95.11	110.87
2009	91.5	99.07	98.04
The correlation coefficient between the ratio of real income and population coefficients of individual food consumption		0.243323	0.318312

Source: calculated by [12].

Unequal access to food have different population groups in Ukraine. Thus, rural people with incomes below the subsistence level, population 46.1%, while in urban - 22,8% according to 2009.

Table 11. Proportion of population with average per capita cash income in the month, below the subsistence minimum, % of total

2007			2008			2009		
all house-holds	including those who live all households		all house-holds	including those who live all households		all house-holds	including those who live all households	
	in towns	in rural areas		in towns	in rural areas		in towns	in rural areas
39.8	31.3	57.4	25.6	17.3	42.7	30.4	22.8	46.1

Source: calculated by [13, p. 404].

Different level of income form different opportunities for various forms of consumption of individual products (Table 12). The difference in consumption of specific products for different quintile groups is up to 2 times.

Table 12. Food consumption in households by quintile (20%) groups in terms of average total income, (Average per month per capita, kg)

Food	Consumption for all households	including by quintile groups					of average total income per month, lower cost of living
		first	second	third	fourth	fifth	
Meat and meat products	4.8	3.3	4.1	4.8	5.6	6.9	3.1
Milk and milk products	19.8	14.7	17.7	20.1	22.6	26.2	14.1
Eggs, pieces	20	17	19	20	21	22	17
Fish and fish products	1.8	1.3	1.7	1.9	2.1	2.5	1.3
Sugar	3.2	2.7	3.1	3.4	3.5	3.7	2.6
Oil and other vegetable fats	1.9	1.6	1.8	1.9	2.0	2.1	1.6
Potato	8.0	7.6	8.1	8.2	8.3	8.1	7.6
Vegetables and melons	10.1	7.7	9.2	10.5	11.4	13.0	7.5
Fruits, berries, nuts, grapes	3.6	2.2	2.8	3.5	4.3	5.7	2.0
Bread and cereal products	9.3	8.6	9.2	9.6	9.6	9.6	8.4

Source: calculated by [13, p. 424].

In households with per capita income of 300 USD per month on food accounted for 70,2% of total costs, and in households with average per month in total income to USD 1020 - 59,7%, but while average spending on food of households in Ukraine in 2009 – 55,0%.

### Food industry and trade characteristics

Regarding the second indicator, the basis of the obtained data, it also does not correspond to the calculated indicators of food security. The third factor - the criteria of food independence. It should be noted that in 2009 - 2010's nearly one in five USD sales industry has been earned in the industry.

Food industry is one of five leading industries of the State Budget, supports some of the highest rates of growth in production volumes, ranks second (after the steel and metal) in terms of production structure of industrial production in Ukraine. The main obstacles for development of the sector are:

inadequate agricultural markets, the monopoly of large trading companies, poor quality of raw materials and finished products, failure of public food safety regulation of the European and international practices, ineffective system of providing credit (including subsidies) and the absence of land markets in conjunction with the moratorium on selling agricultural land. Strategy development of food industry and agriculture should be based on an analysis of current state and problems of the industry, identifying internal and external factors affecting the development of the industry and strategic objectives, development of forecasts for the long term, identifying the tasks of restructuring the industry, with identification and consideration of risks and threats. That the development of agriculture and food industry determines the level of people's satisfaction of domestic food production, the nation's health and pose a significant potential for growth of gross value added of the country.

Food independence of Ukraine - the state of food security, in which physical and economic access to essential food for the population is guaranteed by domestic production and stocks of these products to state reserves at a level determined by the law [15].

As far as the core products are concerned in 2009, self-sufficient is:

- Meat and meat products - 83,3%;
- Milk and milk products - 106,4%;
- Eggs - 107,4%;
- Grain - 176,5%;
- Potatoes - 100,9%;
- Vegetables, melons - 107,8%;
- Fruit, berries, grapes - 74,8%.

The share of imported food in total food consumption also characterizes the food independence. Threshold is 30%. The actual rate in Ukraine is at the level of 13,7% [16, p.12].

Table 13 shows commodity structure of exports and imports of agricultural products and food industry for 2008-2009. The share of imports of finished food increased from 3,8% in 2008 to 5,3% in 2009, but its scope in terms of value for the defined period decreased by 17%. There was also increase in the share of exports of finished food products from 3,1% in 2008 to 4,5% in 2009, while exports in value terms decreased by 34% during this period. Ukraine has a positive foreign trade balance (53,7 million USD). The country exported processed food products worth 2088 million USD, while imports of these products is of 2034.3 million USD.

Table 13. The commodity structure of exports and imports of agricultural and food industry for 2008-2009

Food	Share in total volume, %				Foreign trade in separate groups of products in 2009, million USD	
	2008		2009			
	Import	Export	Import	Export	Import	Export
Live animals, animal products	1.2	2.0	1.5	2.8	596.0	1267.5
Products of crops-growing	8.3	1.7	2.7	2.8	5034.9	1259.9
Fats and oils of animal or vegetable origin	2.9	0.7	4.5	0.8	1796.0	374.3
Finished food products	3.8	3.1	5.3	4.5	2088.0	2034.3

Source: calculated by [13, p. 260].

Despite some recovery over the past few years, exports of food still not exceed 25% of total production. In 2005, Ukraine became a purely general importer of agricultural products from the European Union, and fix this situation could only recently. The main reasons for the low share of exports in output production is insufficient competitiveness of Ukrainian goods, failure to meet international standards of quality and food safety, as well as barriers to trade, which lie in the legal and practical level.

For some commodity groups dynamics of exports and imports presented below (table 14).

Export growth during this period showed butter, potatoes, corn, vegetables. Imports of meat and milk have increased., and on meat and meat products trade balance is negative. Meat import has exceeded export 11 times. All components (production, supply, demand and consumption)of external conditions act upon the Ukrainian food market . Increasing world prices for products produced and exported by Ukraine (especially if the production has a competitive advantage), have the overall positive impact on exports and increase farmers' incomes. But in terms of global interdependence and mutual influence of increasing global prices. They have an effect on the domestic market price.

Table 14. Dynamics of exports and imports of basic foodstuffs in Ukraine, thousand tons

Main food products	2000	2005	2006	2007	2008	2009	2009 to 2000 (time, %)
<b>Meat</b>							
Import	38	325	278	245	550	439	11.6 t
Export	163	82	29	45	28	40	24.5%
<b>Milk and milk products</b>							
Import	50	112	150	199	234	455	9.1 t
Export	1100	1901	950	939	1140	919	83.5%
<b>Eggs*</b>							
Import	2	5	3	3	7	7	3.5 t
Export	0	1	1	16	23	58	x
<b>Grain</b>							
Import	1010	226	235	343	222	136	13.5%
Export	1330	12650	11168	4490	16668	26160	19.7 t
<b>Potatoes</b>							
Import	11	5	21	7	10	5	45.5%
Export	1	6	6	3	3	15	15.0 t
<b>Vegetables</b>							
Import	29	100	168	158	356	232	8.0 t
Export	30	150	201	298	251	347	11.6 t
<b>Sugar**</b>							
Import	x	177	120	25	91	92	x
Export	x	154	165	120	103	88	x
<b>Oil</b>							
Import	x	264	245	410	480	316	x
Export	x	900	1678	2140	1590	2483	x

\* Average weight of eggs - 57,75 g;

\*\* Excluding imported raw sugar used in sugar production.

Source: calculated by [11, p. 149-153].

Raising the same world prices for imported food and agricultural raw materials directly reduces living standards. In addition, there is also an indirect effect: if products purchased abroad, which is further handling and processing in Ukraine, such as cocoa beans and various spices, nuts, rice, fish and many other food products. One of the immediate conditions for further development of agribusiness in Ukraine is to implement policies to protect the domestic food market.

## **Discussion**

State policy of Ukraine on ensuring food security addresses the needs of the population with vital food, mostly locally produced products. Cabinet of Ministers should specify the optimal level of provision. As for the types of food that are not produced in the country, the task of government regulation is to set low tariffs on their import or complete abolition of import tariffs. State regulation also applies to quality and safety of food products and raw materials. This provided for state regulation of quality and safety, state registration, certification, installation and compliance with the importation into Ukraine of food, state supervision and control [15].

Food security is affected by complex factors, which are divided into internal and external. The internal factors include: the effectiveness of the agricultural sector, the level and distribution of income consumers, climate, condition and quality of land resources; maturity agricultural market, agricultural policy of the state. Among the main external factors stand out: the conditions in world agricultural markets and food markets openness, predictability protectionist tools that implemented trade partners, countries, agricultural policy and regional integration associations.

With these factors are related the major threat (shock) of the state food security. The dominant origin of internal shocks, in our opinion, are: lack of logistical support for agriculture and its weak investment attractiveness, reducing the motivation to work among the rural population; ineffective market mechanisms for agricultural products, low quality of life in rural areas, especially in remote from major urban areas, much of the cost of food in the structure of consumer expenditures of households.

Threats of external nature are discriminatory impact on trade policies of partner countries smuggling and exportation of food; inconsistency imported food quality and safety standards, the impact of external economic conditions. However, agricultural production and food processing industries of Ukraine remain, which do not fully realize its investment potential. Foreign direct invest-

ment would be much greater, if improving the investment climate. The main obstacles for the development of food industry and agriculture are inadequate agricultural markets, because one of the immediate conditions of their further development is a deliberate policy of protecting the domestic food market. The development of international agribusiness does not guarantee domestic food security, does not reflect the country's agricultural export opportunities.

Recently in Ukraine, multinational agribusiness corporations have intensified their activities that lead to destruction of the productive capacity of domestic agribusiness. In addition, the deterrent of monopoly are the major trading companies, poor quality raw materials and finished products, failure of government regulation of food safety to European and international standards, ineffective system of providing credit (including state support), and lack of market land in conjunction with the moratorium on selling agricultural land.

Food security is based on the following basic principles:

- 1) availability of food: Food should be available as a result of local production, the use of reserves (reserves) and / or import;
- 2) stability - the food should be in the right amounts and proportions of the time, regardless of circumstances and changes;
- 3) efficiency - products should accordingly be stored, processed, be of good quality, safe and beneficial to consumers;
- 4) availability - food should be accessible to all segments of the population as in the physical sense and in purchasing power.

Food security should be guaranteed by the state. From this perspective, it identifies the following main aspects:

- a) socio-economic, which means the state's ability to provide food for the population, organize and hold special food reserve funds;
- b) political-economic, the ability to mobilize domestic resources and agricultural potential of the country to meet those needs [15].

Thus, a food security system of Ukraine requires a lot of time. This problem has become one of the strategic policy priorities. Adoption of Doctrine of food security can contribute to the development and implementation of a number of planned measures to achieve the level of food independence and food security of Ukraine.

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## **Large property under the impact of land market and Common Agricultural Policy in Romania**

### **Introduction**

Large property, as well as medium or small property have equally, strengths but also weak points, which excludes the possibility, when we judge impartial, to tip the balance either in favour of one, or the other, or to consider that, whatever one of them, can substitute, pending disposal, the other two.

Otherwise we would repeat the same mistakes that the policy makers from the totalitarian period have made in considering that everything that was large, objectively, is also more productive, and more efficient, and what was small needed to be abandoned, removed or destroyed.

Their actions were dictated by the reasoning of order doctrine, which allowed us to understand their attitude, but not to forgive it. Even worse is the fact that ideas like this can still be felt in theoretically and decision frame.

We must not repeat the mistakes of predecessors, or by what we do today, but especially for what we let those who come after us.

Such an approach, require, first, to identify characteristics which personalizes each type of property taken in the study - large, medium and small - and only after that, to designate areas or issues through which those three types can act jointly towards achieving the overall objectives of the agriculture and economy.

Specialized studies place within the large structures all agricultural entities that have in property and / or exploitation more than 50 hectares of land (Cecilia Alexandri and et., 2008).

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From the same sources, also results the exploitation class <<very large>> that have the minimum 100 hectares.

Based on methodological reasoning, we consider that the most appropriate is to have one single category, namely the <<large property>>, which contained all structures more than 50 hectares of land.

Here are some statistics from the year 2007 (Table no. 1) under which it was formulated some feedback regarding the position of large farm households in the Romanian agricultural landscape.

Table 1. The main characteristics of the farm

Number	Absolute, ha	14.399
	% in total agricultural holdings	0.37
Total area	Total area, thousand ha	5.500.6
	% in total agricultural area of Romania	40.0
	Average ha/ holdings	382

Source: National Institute of Statistics, agricultural structure survey, 2007.

Compared with the other categories of farms, large structures, even if they are insignificant by number (not more than 0.27%), regarding the worked land are close to the threshold of 40.0% of the country's agricultural land fund. That is why the average size of a large house holding, is 109.0 times larger than the average size of a farm in Romania, which is 3.5 meters.

#### Box no. 1 Areas of knowledge for agriculture

Questions regarding large property	Area of knowledge
1) How it evolved in time	- Agrarian reforms
2) Which are the phenomena that will mark its future existence	- Land market
3) What will it generate in the economical social and political field	- Common Agricultural Policy

Based on what was previously shown we can talk about a real bipolarization of the property and land exploitation from agriculture, on one hand there are the large structures, few in number but with lot of land and on the other hand,

there are the small and medium-sized structures which are very numerous (over 3.8 millions) and with less land.

To understand the role of the large property within the structural landscape from agriculture, we started from three basic questions, which naturally led us to specific areas of knowledge, according to which this material was structured as follows:

### **Land market**

After the last agrarian reform, which took place in the year 2000 and in the frame of general growth the agricultural land property arises concrete evidence of refreshing.

Previously reported phenomenon deserves special attention because the causes which have generated are quite different than those during the agrarian reform, and nearly all the anticipated effects lead us to the directions and horizons where the structural architecture of the Romanian agriculture can be more open to performance and efficiency.

Currently, the land market is, as any market for goods, a type of competition and free, has relatively acceptable legislative and institutional scaffolding, and a favourable situation, issues that assure functionality. In this market, the large property has the quality of buyer and may impose its own rules, fact that contravene to economic theory, which claims that on the land market, the offer has taken the priority of the demand. The situation in question explains the fact that in the process of purchase of land, competition is insignificant in the small properties, and very pale from the medium, however large property has the monopoly position.

The current competitive model of land market, which leaves demand, in a relevant proportion in the hands of the large property, is based on:

- the considerable diminishing of size of social pressure for land, whereas the countryside, who bear interest, but also the responsibility of agricultural labour, underwent significant changes: decreased, aged, and its feminine (Table no. 2).

Today, the thirst for land support by reasons of records that generations and generations of poor peasants were motivated throughout history, to fight in wars (in which many of them died or were left maimed for life), to be visceral enemies of those with more land (which has plunged to uprisings, riots, revolutions and so on) or to mobilize all resources to buy a patch of land (often just by starving their families), are almost unknown phenomena for young people who are living in rural areas.

Table 2. The rural population and the population engaged in agriculture, range 1948-2008

Specification	1948	1990	2000	2005	2008	
Rural population, %	76.6	45.7	45.4	45.1	45.0	
Employment in agriculture, % Thousand persons	74.2	27.5	42.0	34.0	30.0	
The rural population over 65 years, %	9.0	10.0	13.3	14.75	14.85	
Gender structure of rural population, %	Men	49.0	49.3	48.9	48.8	48.7
	Women	51.0	50.7	51.1	51.2	51.3

Source: *Corresponding Statistical Yearbooks of Romania, 2009.*

In conclusion, the danger of developing a new land reform, after the earlier treated model and land market competition from small properties, are minimal.

- Much lower economic potential of small properties, excludes any form of serious competition from them in the fight for the land, with large property.
- The transition to post-industrial society based on knowledge transfer (Council of Europe, at the meeting in Lisbon in 2001, said that the current period of transition from industrial to the post-industrial society, based on knowledge), will certainly determine relevant mutations and as regards the attitude of public powers to the agrarian problem. In this context, agrarian reforms, given their lack of content in the new realities of agriculture, will be substitute with land market actions, which moves the centre of gravity from small to large properties.

In conclusion, small property, the victim of historical mistakes from the state side and under the weight of its own shortcomings, will be exposed through the land market to new economic and political pressures.

Therefore, agricultural policy should pay special attention to phenomenon that occurs on the land market so that those two actors, large property, as buyers and small property, as seller, to occupy equal positions in the translation land tenure process.

Only through such an approach, the land market may prove its role as an effective tool, but also morally, with legitimacy in front of future generation, to increase the size of agricultural property.

### **Common Agricultural Policy and land policy**

CAP, doctrinaire, can occur within all economic, social, financial relations within agriculture, but less in those on property relations, which, under the rules of constitutional law are exclusively in the hands of national authorities. Precisely because of this reason, considered by us fundamental, Sicco Mansholt's attempts, from 1980's, when he was Commissioner for Agriculture, concerning the adoption of criteria for optimal sizing of the farm, had no chance of success. However, without any reports of property we can not speak about either land market or therefore no possibility to determine directly, the size of the property, regardless of type, large or small.

But CAP, through instruments and measures, with which worked were in Pillar I and in Pillar II constant has left its mark, even if not directly, upon the size of property that usually has orientated towards increase. Nobody can say, however, how much was the contribution of national policies and how much of those common in the effort to increase the size of the property, it is important that the results were positive in all member states, from its time integration. For example, in the 1950-2005 period the average size of agricultural holdings has increased in Germany about 7 times, in England and France over 3 times, and in Italy and Spain was, more than 2.5 times.

In these conditions we can expect the phenomenon to be repeated also in Romania, which joined the EU after January 1, 2007.

However, facts are not so simple because the structural architecture of our agriculture has many aspects which distinguish it from that of most EU countries and, moreover, the economy is heavily shaken by the shock of financial and economic crisis that swept almost all mankind. Here are some of the phenomena that CAP can generate both at supply and demand for land level on land market.

**A) *On the land supply side***, whether it is for sale or exploitation of contract (as cooperation, association, lease, rental, concession), the large side of agricultural economics research supports the idea that because of incentives per area, will undermine the owners interests, usually those of small categories, and those foreign by location, so those with subsistence or underperforming properties, to dispose land.

In fact these incentives, in case of small holdings, are not generating any performance in service or welfare for peasants.

To demonstrate the above mentioned we will start from the example of a medium-sized household, respectively those of 2.4 ha, that grow grain and oilseeds (crop component that represents the classical crop rotation in Romanian agriculture) and which received the following subsidies in 2008 related to area (Table no. 3).

Table 3. CAP subsidies area awarded in 2008

Specification	Euro/ha	Lei/ha
The single area payment of EU funds *	60.75	227.28
Additional National Direct Area Payment *	46.71	174.76
Total per hectare*	107.42	402.04
Average size ha/ farm household	2.4	2.4
Total per farm household	257.8	964.9

Source: \* MAFRD Data, 2009.

Regarding the spending of revenue from these subsidies, the peasant is put to face with three following decision options (Table no. 4):

- to make an investment in construction, agricultural equipment, land or animals, which is unlikely because of the modest real value of received funds. For example, in 2004 and 2005 for investment, it was spent at least, 1,7 and 1,6% respectively, of total cash expenses incurred on average by a farm household;
- to acquire a productive inputs, like circulating assets, such as seeds, planting materials, chemicals, fuel and other relatively accessible in terms of purchasing power of a farm, but very difficult to complete, because of the major shortcomings of trading system, from the local communities. For instance, for production has been allocated in 2004 and 2005, respectively 4.0 and 4.1% of the total money from a farm household level;
- to bear a part of household expenditure, food, or to save, versions that, in our opinion, is what consumes most of the subsidies received by small holdings. Also in the years 2004 and 2005 for food, beverage, industrial goods, and farm households spent the most, 37.2 and 44.0% respectively.

Table 4. Total expenditure pattern of farms households

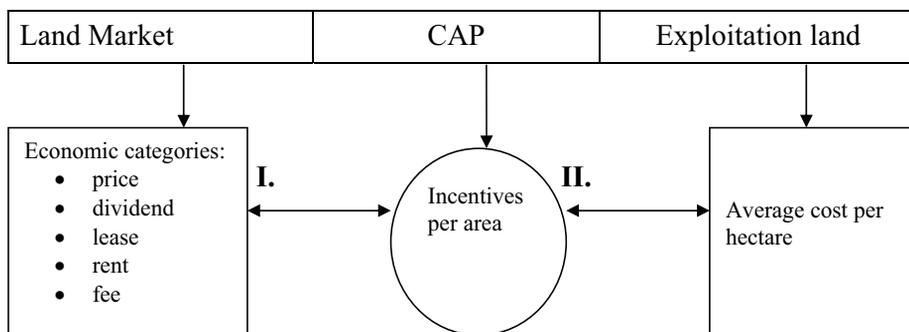
No.	Specification	2004	2005
I	Total expenditure (Rd. 1+2)	100	100
1	Expenditure of the money for: (Rd. 1.1+1.2+1.3+1.4+1.5+1.6)	47.8	54.7
1.1	Food and Drink	15.7	17.9
1.2	Non-food goods	14.7	17.7
1.3	Services	6.8	8.4
1.4	Investments	1.7	1.6
1.5	Production	4.0	4.1
1.6	Taxes, contributions, uses Fees	2.0	1.8
2	Value of agricultural resource consumption from own resources	52.2	45.3

Source: \* *Statistical Yearbook of Romania, 2006.*

In conclusion, the way of subsidies spending doesn't provide a sufficient incentive for the owners' decision to reduce the supply of land alienation, which has resulted in both decreased flow intensity on the land market, especially the alarming increase in the share of abandoned land. According to MAFRD estimations in 2009 were abandoned more than 1/3 of the country's arable area.

The causes must be sought elsewhere, namely within the value relationship between incentive on area and economic categories of the land market in the first place, and average exploitation costs per area in the second place (Figure 1.).

Figure 1. The scheme of casual relationships that underlie the small owner's decision for land alienation



The report between incentive payments (Table no. 4) and economic categories of the land market (Table no. 5) generates two distinct situations:

Table 5. Economic value of the land market categories in 2009

Actions of the land market	Economic categories	Amount in kind Wheat-kg-ha	The average price of wheat lei/kg	Value lei/ha
Lease	- lease	600	0.45	270
Cooperation-Association	- dividend	600	0.45	270
Rent	- rent	600	0.45	270
Sale-Buy	- price	x	x	5000

Source: Data from own investigations in Calarasi, Giurgiu and Ialomita area, 2009.

a) In case of those actions when is transferred only the use of land, such as rent, lease, cooperation and association, the value of corresponding economic categories, namely lease, rent and dividends (about 270 lei/ha), is lower to incentives CAP per area (402,04 lei/ha). We mention that this difference will increase further in the coming period, because, as CAP planned the incentives per hectare will increase to the threshold of 2013.

In our opinion this is the main reason for which small land owners reduced the land offer for exploitation on contract.

b) In the sale of land, the decision is based more on situation reasons, when the economics is not always on the first place. Excluding neighbouring ar-

areas of large cities, and those with development potential for tourism, industry, construction and other payable non-agricultural activities where land prices are approaching and even exceeding, in many cases, those from EU countries economically advanced, in the rest of the country, especially in consecrated agricultural areas the land prices are accepted by sellers. Although they are under the rent because of the social risks faced peasants, such as aging, illness, death, specific to older generating families or actions that generate additional costs for young families, such as children education, external migration, household utilities and others, have the main solution the sale of land.

In conclusion, the sale is still economically not attractive, for example at this moment, due to the economic crisis, in some southern areas, such as Braila, Ialomita, Calarasi, Giurgiu, one hectare of arable land, could be bought in 2008 from 10.000 at the price of 12.000 Ron and in 2009 with not more than 5.000 Ron.

## **Discussion**

The ratio of incentive payments on area (Table no. 3) and the average cost per hectare clearly shows the superiority of the latter mentioned (Table no. 6). To understand the effects of this report it is necessary, above all, to enter into the logic of decision after the funds are managed at the level of subsistence agricultural structures, so the farms household, which in accordance with the vision of agricultural policy should mainly focus in direction to support land supply on land market.

Subsides per area together with cash incomes from non-agriculture sources (pensions, aid, benefits, salaries and others), which increased substantially in the last decade have led to a modest but reliable independence of family farmers over production, and incomes from own farm household.

Therefore, peasants with more difficult situations, namely the poor, the elders, unemployed and others, prefer to withdraw land from sale or from exploitation of any contract form, being attracted by the subsidy quantum, because it is granted to those who work the land, whether are or not owners.

But these lands are largely abandoned, because peasants, as discussed above, they have not sufficient resources to exploit it and, in addition, the institutions empowered to review how implemented CAP's measures are have not yet proved effectiveness.

Table 6. Estimated average cost per hectare for the main crops, 2008

No.		MU	Wheat	Corn	Sun flower	Rape seeds
1	Seeds	Ron/ha	225	400	210	180
2	Chemical fertilizers	Ron/ha	240	200	300	240
3	Chemical treatments in culture (insecticides, herbicides)	Ron/ha	31	72	80	71
4	Diesel 75 l / ha * 2.7 lei (*The price of diesel is reduced by the subsidy provided)	Ron/ha	202	202	202	202
5	Income and equipment depreciation	Ron/ha	150	150	150	150
6	Crop insurance	Ron/ha	20	20	20	20
7	Lease	Ron/ha	270/500	270/500	270/500	270/500
8	Total costs**	Ron/ha	1138/1368	1314/1544	1232/1462	1133/1363
9	Subsidies, European funds+ national funds	Ron/ha	560	400	400	520
10	Average production	Kg/ha	3000	6500	2700	2027
11	Capitalization average price	Ron/kg	0.45	0.4	0.87	1.15
12	Production value	Ron/ha	1350	2600	2349	2331
13	Total cash income	Ron/ha	1910	3000	2749	2851
14	Yield	Ron/ha	212/-10	1286/1056	1117/887	1198/968
15	Yield rate	%	18.6/-0.7	98.0/68.4	90.7/60.7	105.7/71.0

\* Data were obtained from the farm household members of producer groups from Vâlcelele and Ogorul localities, Calarasi County.

\*\* Changes in costs are driven by oscillating levels of lease.

Source: Data from own investigations in Calarasi County, 2009.

The land demand level, especially when it comes from large properties, the effect of CAP's actions, are as for supply, indirect results from the application of measures within Pillar I or Pillar II. The role of the CAP, is, above all, to make agriculture productive activity to be profitable, and therefore with attractiveness for investment in land.

The data from Table no. 6 shows, even if results from empirical field research exist, that under a practice of an intensive farming system, the rate of return in agricultural businesses in Romania is very attractive. This is also why, in the next period in Romanian agriculture, the large property will increase in number but also in size and role in the final production.

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## **Competitiveness of the food economy in Hungary after the EU-accession**

### **Introduction**

The consolidated structure brought higher level of asset endowment as well. In Hungary with so called “dual” farming structure both end of the farming are still suffering by a kind of “transition phenomena”. The small farms are generally too small and farmers are inexperienced and they lack resources, while the large ones still have some heritage of the collective farming system with some embedded inefficiencies.

The preparation of the Hungarian food sector for EU-accession was not a success story. The transformation of Hungarian agriculture has still not been completed; the country’s position cannot be compared to that of the EU-15 Member States which have been accustomed to a market economy for decades. Hungary has competitive disadvantages inherited from the past that have become even more apparent in the more intense market competition following the accession.

Hungary has suffered loss of markets partially due to the inherited weaknesses (weak organisation and obsolete technology, dispersed land structure, extreme differences in the quality of the production and farming activities, etc.) and macroeconomic, social and political factors a great number of agricultural producers have discontinued their farming activities. Following the EU enlargement, the loss of markets and deterioration in the livestock and horticultural sectors has further accelerated. Excess cereals went to intervention stock, later to private stock because the South European regions imported grain at lower prices from South America or from the new independent states of the former Soviet Union.

In Hungary, the livestock sectors are largest consumers of cereals. Of these, production of pig meat and poultry will remain the dominant factor in the development of total demand for feed grains<sup>68</sup>. Prior to accession, prices of

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<sup>68</sup> Pig meat production, compared to poultry meat production, uses about twice as much feed grains for each kg of product in Hungary.

milk, beef and pig meat were supported by a system of guaranteed, intervention and guidance prices. For these livestock products, output-based payments were used to cover the gap between market prices and guidance prices. In addition, price premiums for high-quality production were paid mainly for milk, beef, pig meat and poultry. For dairy cows, pigs, sheep and goats, headage payments were provided. Export subsidies constituted an important policy instrument to regulate animal product markets, especially in the case of pig meat and poultry. Although livestock producers in Hungary enjoyed some direct subsidies, they had almost no access to investment and capital aids in the pre-accession years, which was partially the reason for a drop-back in production, even with headage payments being continued after accession to help pig and poultry producers to meet EU environmental, animal-health and -welfare requirements.

Having huge excess stocks of cheap feed grains, one would expect these sectors to expand. However, because of structural problems, the lack of capital, the urgent need for modernisation, compliance with EU environmental, animal-health and -welfare requirements they are all deterring production. Within a very short time, Hungary became a net importer of some basic commodities (e.g. pork meat, dairy products and fruits). Restrictive land policies (e.g. in Hungary) and the lack of land and farm consolidation has been a factor negatively influencing the utilisation of the advantages of the enlarged markets by constraining significantly the flow of outside capital to the agricultural sector. As foreign investors are discouraged *inter alia* by the existing land law (legal entities and foreigners are excluded from the land market), the prospects for pig and poultry meat production in Hungary look rather slim even in the mid-term.

This paper aims to analyse the competitiveness of the Hungarian agro-food sector after the EU-accession, while underlining the structural disadvantages of agricultural sectors and the food industry. Cooperation between stakeholders of the food chain, retail and the structure of the trade balance are also highlighted.

### **Agriculture's place in the economy**

The role of agriculture in national economy is best characterised by the share of agriculture in GDP, which is shrinking all over the world. This tendency continued after accession in Hungary as well. In 2009, agriculture in Hungary contributed 2.5 and 4.6% respectively of GDP and employment (Table 1). The contribution of agriculture and the food industry to total exports was 7.3% in 2009, down 0.7% from 2000. The share of food products in the average

household budget remained relatively high over the past decade and stood at about 26% in 2009. The food industry has a 2.1% share in GDP, a 3.5% share in employment and a 2.5% share in total investments.

Table 1. Agriculture's place in the Hungarian economy (1990-2009)

Specification	1990	1995	2000	2005	2009
Share of agriculture in GDP (%)	12.5	5.9	5.4	3.6	2.5
Share of agriculture in employment (%)	14.2	8.0	6.6	5.0	4.6
Share of agriculture in total investments (%)	8.7	2.9	5.0	4.5*	5.6*
Household income spent on food (%)	37.0	28.4	29.2	25.1	26.0
Share of agricultural and food products in total exports (%)	24.9	22.7	8.0	5.8	7.3

\* Includes agricultural investments of households.

Source: Hungarian Central Statistical Office (HCSO).

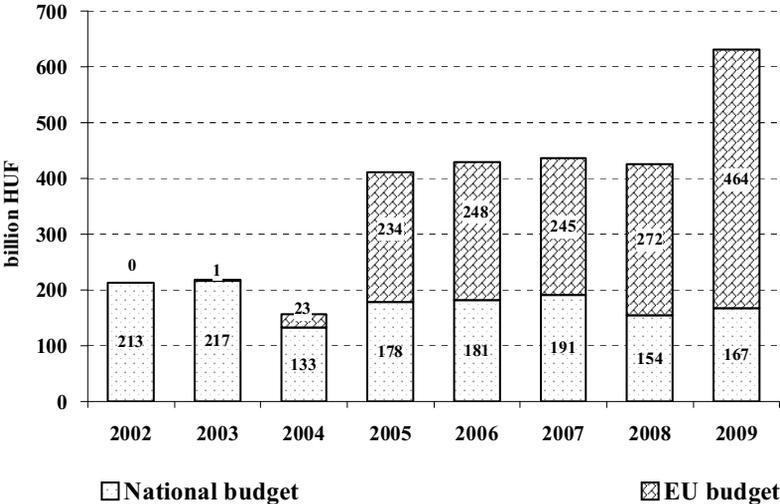
### **Agricultural support**

EU membership has led to a significant increase of subsidies received by the farmers leading to the increase of farmers' income (Figure 1). The support of the food industry accounts for only a few percentage of that in agriculture. The support, however, is not evenly distributed. Small farmers are handicapped in many ways. Though they are also eligible for direct payments, due to the small farm size and administrative procedures, most of them receive marginal amounts or even not part of the system. Moreover, Pillar 2 funds conditions almost fully exclude smaller farmers.

In Hungary, agricultural policy means in practice "support policy" with the main objective of getting the available EU funds in full and dispersing them as widely as possible, without taking into consideration the long term economic and social effects. The Hungarian system of agricultural subsidies has encouraged excessive investment in machinery. No efficient methods have been developed for monitoring the results and the long term positive effects for preventing irresponsible decisions.

Rural development subsidies constitute the most important sources of investments and improvements in the years to come. However, drawing down of subsidies remains below the expectations, especially as regards livestock farmers, because the great majority of market players is not attracted to modernisation due to the acute lack of capital, the expensive loans, the market conditions and prospects, as well as to the maintenance for several years of the production obligations imposed as precondition to eligibility for support.

Figure 1. Support to Hungarian agriculture (2002-2009)

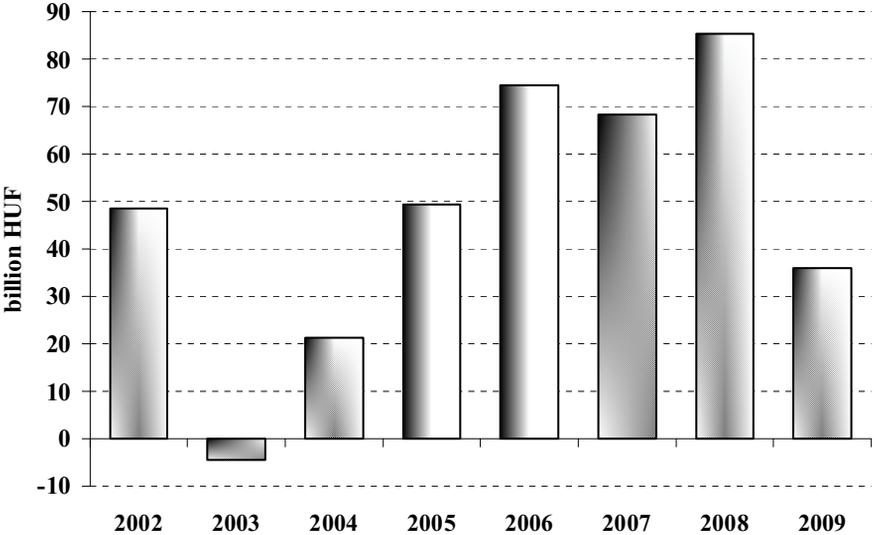


Source: Ministry of Rural Development.

The introduction of the CAP with SAPS payments has had different impacts on the different sectors. Thanks to the increase of supports and incomes, the arable crop farmers, especially producers of grains, oilseed, protein and fibre plants, have gained a favourable position (Figure 2). EU-accession created mainly favourable impact on crop production (cereals and oilseeds) but not on the livestock sector. From among livestock farmers, ruminants (beef and sheep) receive direct supports. On the other hand pig and poultry sectors are not directly regulated, and therefore falling into a disadvantageous position following the EU-accession and they may receive support from the national budget only for financing the establishment of animal welfare conditions, waste disposal and veterinary costs.

The food industry has suffered from the weak concentration, the absence of important investments and the lack of international competitiveness. The profit of the food industry has fluctuated after the accession (Figure 3). Consolidation, rationalisation and specialisation may contribute to improve the competitiveness of the food industry in Hungary. Market players need to competitively supply retailers with respect both to quantity and quality of products. Horizontal and vertical integration along the food supply chains can facilitate cooperation between stakeholders in order to strengthen business relations and to increase bargaining power.

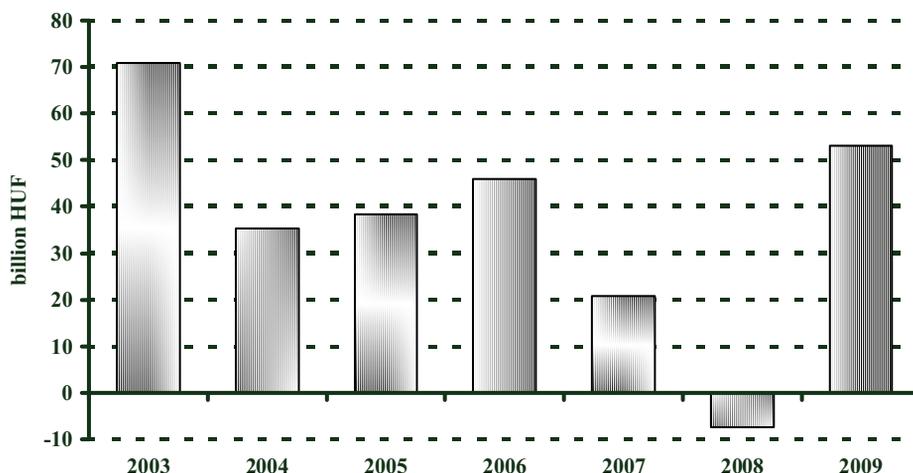
Figure 2. Profit before tax of agriculture farms\*(2002-2009)



\*Farms with double entry accountancy

Source: Kapronczai [2011].

Figure 3. Profit before tax of the food industry (2003-2009)



Source: Kapronczai [2011].

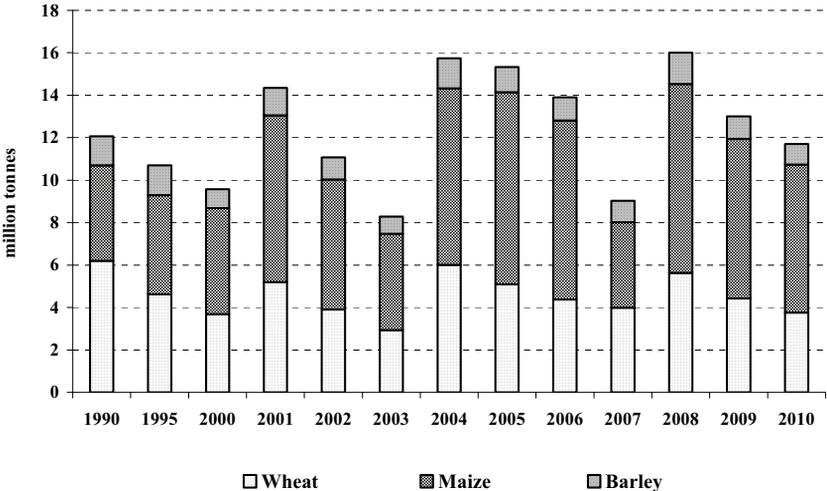
## Crop and livestock production

### *Cereals and oilseeds*

Cereal production has increased in Hungary, however, there have been huge fluctuations of production quantities annually reflecting the weather pattern of a given year. The Common Agricultural Policy (CAP) created more incentives for cereal production than existed in Hungary prior to accession. Therefore, accession had a mainly favourable impact on this sector. In the Hungarian agriculture cereals and oilseeds production has been most integrated into the international market. The presence of international trading companies, the established business relationships and the relatively settled market has allowed the country to exploit the sales possibilities abroad. Under normal conditions, 14-15 million tonnes of cereals are produced a year with a domestic consumption of about 7-8 million tonnes (Figure 4). During recent years, 4-5 million tonnes of maize and about 2.5-3.0 million tonnes of cereals have been used by the livestock and processing industry. According to stakeholders, no remarkable increase in the demand for raw materials can be expected in the processing industry; however, there is a possibility for rationalisation of the market. Despite this, Hungary did not succeed in properly managing the market disturbances which emerged – partly due to the introduction of the common market regulations – following the EU-accession [Popp and Potori, 2006].

Due to the continuous decline in livestock output, domestic demand for grain has decreased, therefore, in addition to exports, more sales possibilities could be expected only from industrial processing. Bioethanol production may attract investments in the future.

Figure 4. Production of major cereals in Hungary (1990-2010)



Source: Hungarian Central Statistical Office (HCSO).

Extreme weather conditions result in extreme variations in production. The harvest of cereals and oilseeds is mainly dependent on weather conditions, above all on the annual rainfall and its distribution. In addition, the available stock is characterised by lack of homogeneity, by quality variation, imputable to the dispersed land structure, the excessively wide assortment, the withholding of inputs and to the mixing of lots. Thus, in case of a supply market, competitors have an advantage over Hungary. Large foreign mills require homogeneous goods. Hungarian wheat exports are typically sold for feed; only in better years is some wheat sold for quality improvement to neighbouring countries.

The lack of irrigation constitutes a further problem. The expansion of irrigation seems to be the most simple solution for preventing or reducing drought damage; however, in addition to high costs, the implementation of new irrigation systems has several other drawbacks (e.g. when implementing a water supply backbone system, the approval of landowners along its path has to be obtained). The ratio of irrigable lands declined from 6.8% to 3.3% (the EU average exceeded 13% in 2005, according to EUROSTAT data). Taking into

account the climatic, soil and other conditions in Hungary, at least 10% of the agricultural area is to be irrigated.

None of the cereal processing industries is in a favourable situation, indicating the danger of Hungary becoming a raw material producer. As a consequence, marketing risks for farmers may increase, while the added-value may be realised abroad (the country exports jobs). The competitive edges of the processing industry are principally corrupted by unexploited capacities, the low level of technology, the black economy, and the pressure exercised by commercial chains on prices. As profitability is low, investments may primarily be expected by foreign owned companies.

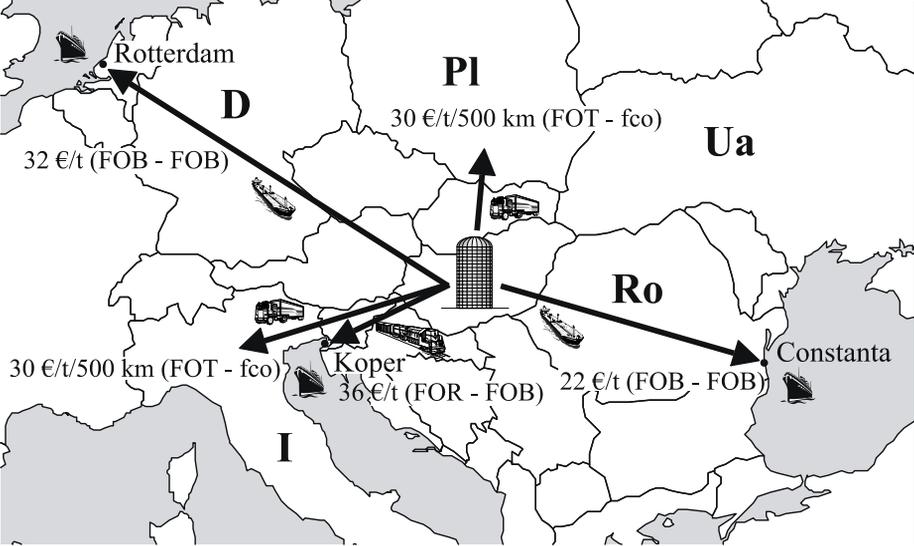
The quantity of oilseeds available for export depends on the raw material requirements of the domestic processing industry, among others on the implementation of the envisaged new vegetable oil (or perhaps biodiesel) production capacities. The already existing large crushing mills and the ones planned in the short term may process approximately 1.5 million tonnes of oilseeds annually. It is not possible to meet this demand from domestic production only, but potential imports should be taken into account, for example from Ukraine and Romania. It can be expected that Hungary's main markets (i.e. the Netherlands, Austria and Italy) will also require Hungarian oilseeds in the future; however, rape-seed exports may strongly fall back or even entirely cease in the medium term.

Due to the high transport costs, in case of a strong supply market, Hungary can be competitive in Europe and in the Mediterranean region only at very low prices. The logistic disadvantage deriving from the country's isolation from seaports is further enhanced by the weak competitiveness of the railway transport (expensive track use, long turn-round times, and lack of covered loading platforms and of weighbridges). The transportation of dry bulk commodities on the internal waterways is not easy either, due to the lack of covered loading platforms and of vessel capacities; but above all, to the extreme changes in the water level (the Danube is navigable in about six to nine months in a year). The advantages of road transportation consist in the relatively quick access to the national road network, the oversupply of transport capacities, in the possibility of return cargo and in the relative stability of the related costs.

The high transport cost of cereals due to the scarcity of shipping capacities and the inefficiency of infrastructure is a serious drawback for wheat and maize, produced under otherwise good natural conditions in the CEE region, competing within the EU or in third country markets. The transport potential of the Danube and its tributaries is unexploited: traffic is held up by undersized and obsolete waterways but the foremost problem is water level fluctuation. Grain

transport on rails has been too expensive in the last years, therefore the share of railways in Hungarian grain exports decreased year by year. Hungarian cereal exports could be regarded as most competitive within a limited radius of the Rhine-Main-Danube Canal; however, as regards wheat, practically all regions along this waterway can and will satisfy their own commercial needs (Figure 5).

Figure 5. Cost of shipping cereals by different transport modes from Hungary to EU destinations/exits (May 2011)



Source: Research Institute for Agricultural Economics.

*Fruits and vegetables*

In Hungary, horticultural production is characterised by two extremes. Some farmers are producing with obsolete methods, due to the lack of capital, with low yields as a result. At the same time, a group of producers has emerged that employs intensive and professional growing technologies; their yields are close to the best in Europe. Horticultural products account for about 17-18% of the gross production value of the country’s agriculture. In Hungary, the vegetable growing area decreased from 120 to 90 thousand hectares in the years following EU-accession, while that of fruit production varied between 80 and 90 thousand hectares. However, at the same time the production quantity of fruits decreased considerably, falling back to one quarter of the average yields of the 1990s for some fruits (e.g. for apricots and plums).

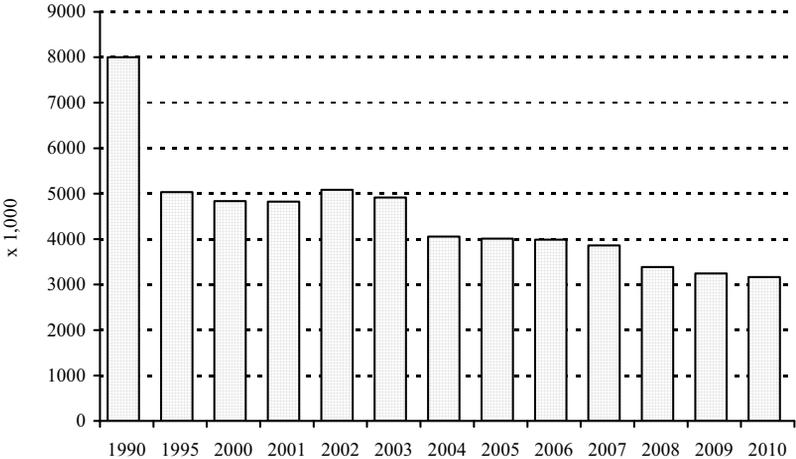
Export revenues from fresh and processed vegetables and fruits increased after EU-accession. At the same time, the share of these two sectors within the

aggregate export value of the agriculture and food industry decreased from 19.3% to 13.6%, which can be explained by the dynamic increase of exports of other agricultural sectors. 80% of the Hungarian vegetable and fruit export is directed to the EU Member States. The foreign trade balance of the horticultural products has been always positive, due to the exports of vegetables. The efficiency of the horticultural production and marketing is impaired by the small proportion of irrigable lands and the low degree of organisation of the producers. Producer organisations market only 20% of the total Hungarian vegetable and fruit production. About 26% of the vegetable growing area and only 6% of the orchards are irrigated.

*Pig meat*

The decline of pig stock in Hungary started already prior to the EU-accession. On 1 December 2010 the number of pigs totalled around 3.2 million, 1.8 million less than on 1 December 2003 (Figure 6). Also the changes in the number of sows reflect the pig stock decrease. On 1 December 2010 the sow stock totalled 219 thousand heads, compared to 327 thousand on 1 December 2003.

Figure 6. Development of pig numbers in Hungary (1990-2010)



Source: Hungarian Central Statistical Office (HCSO).

In 2004, Hungary became a net importer of live pigs both in quantity and in value. The overwhelming majority of live pig imports originated from Poland and the Netherlands. As regards pork meat, the foreign trade balance was negative in quantitative terms but remained positive in value.

The pig farms have not specialised in Hungary, though different raising technologies are required for the breeding stock and for fattening pigs. As regards efficiency, the most severe problems are in the smaller progeny, the slow weight increase and the low efficiency of feed utilisation, the long fattening period, the extended rotation of sows, as well as the considerable labour costs. Due to the geographical location of the country, both the purchase of protein resources and the exports of pork meat to third countries are remarkably more expensive than in the case of the competitors, as a consequence of higher transport costs. Also the heating and cooling costs are higher than for example in Denmark or in Brazil, where temperature fluctuations are not that high. Additional problems to be faced by the domestic pig farmers consist in the high interest rate of foreign capital (10%), the unorganised product chain and the lack of professional consulting.

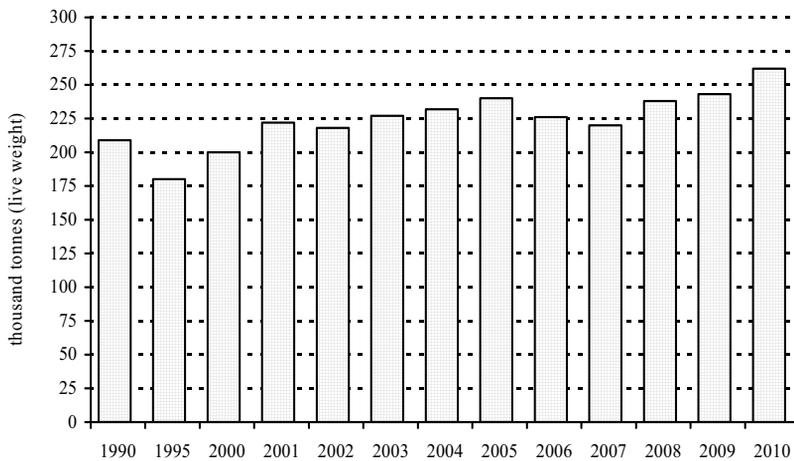
The crisis impacted the supply of raw materials for Hungarian processing. Processors reported that not only the pig market but also the entire meat sector was in a better and more stable situation than the crisis would suggest. The consumption of basic food did not decrease to the same extent as of other products, therefore the drop in consumption had a smaller effect on producer prices.

Hungarian pig farmers were expecting serious consequences when the economic-financial crisis developed, but in fact seasonality, i.e. the classical pig cycle, had a stronger impact than the crisis. Though prices were at the acceptable level, buyers began to delay their payments, thereby weakening the liquidity of pig farmers towards input suppliers who were requiring prompt payments. In order to avoid using credit, some farmers extensified their production and owed more to input suppliers. Considering streamlining of operations and cost cutting in production, adjustments in such a short time were not possible for pig farmers. The feeding of on-farm produced grain and scraps became more common. Investments were postponed, even EU regulated compulsory investments for manure storing and handling, which are the conditions of future operation. Today in Hungary, the income positions of the companies performing further processing are more stable, while pig slaughtering is usually not profitable. It is expected that the production of high value added products will be better able to yield profits in the long term; therefore, slaughterhouses must make serious efforts to improve their efficiency.

### *Poultry meat*

The consumption of poultry meat has increased and shifted to the highly processed convenience products in Hungary. Nearly 80% of the Hungarian poultry stock consists of hens and broilers. The broiler production showed significant fluctuations from 2003 to 2010, between 225 and 260 thousand tonnes a year (Figure 7).

Figure 7. Development of broiler production in Hungary (1990-2100)



Source: Hungarian Central Statistical Office (HCSO).

The requirements concerning animal health and welfare have contributed to the decline of broiler meat production after the accession. However, in the last three years production has increased. The trade balance of poultry meat has remained positive, thanks to the rise in turkey, duck and goose meat sales on foreign markets. The trade of broiler meat is pretty much balanced with a slight net exports position. Though broilers raised in Hungary are up to the world standard, producers are able to exploit the genetic potential of the breeding stock only in part, because the raising technologies are of a lower standard. Remarkable differences may be detected among the groups of poultry farmers as regards their technical equipment, skills, efficiency indices and production costs and profitability.

A few large producers now control the market. Due to the weak concentration of the processing industry, several enterprises may be terminated in the short term. In the absence of important financial investments and/or sufficient

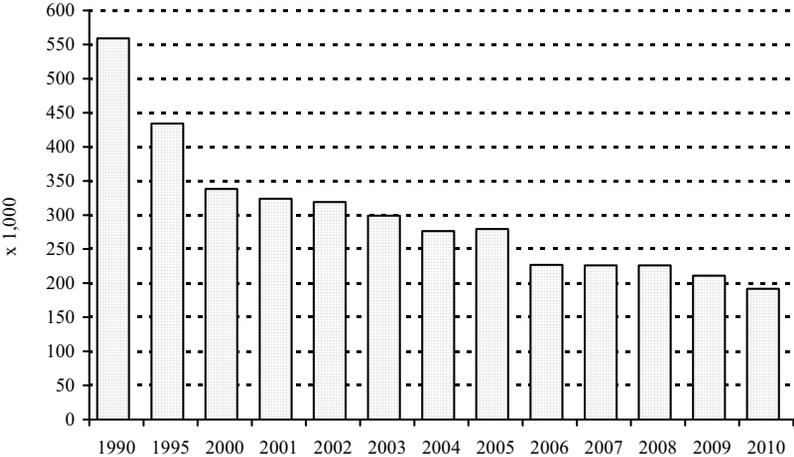
capital reserves, any developments improving international competitiveness are likely to be achieved in the next years. Commercial chains are prevailing in the finished product marketing; their share in the fresh meat sales is steadily increasing. The black economy is considerable also in the poultry sector, it hampers concentration. In addition, an enormous challenge is also represented by the fact that cheap parts (i.e. legs and wings) are dumped on countries like Hungary from other Member States, where the demand is concentrated on high priced chicken breast.

The vertical integration implemented on the waterfowl product chain is very beneficial in terms of efficiency. The foreign capital behind the different processing plants interested in processing fowl for roasting and for meat products highly contributes to the modernisation of slaughterhouses and processing plants.

*Dairy*

The cattle stock in Hungary has almost continuously decreased in recent years. The number of cows presents a decreasing trend; it fell by over 30% between 2003 and 2010, reaching 192 thousand on 1 December 2010 (Figure 8).

Figure 8. Development of the number of dairy cows in Hungary (1990-2010)



Source: Hungarian Central Statistical Office (HCSO).

Following the EU-accession, domestic milk production has also declined. In comparison to the EU average, the cow stock per dairy farm in Hungary is

high, production is more concentrated. In the cost structure, feed costs constitute the weakest point in the country. The relatively high costs of labour reveals a disadvantage in the field of organisation and productivity, though global competitiveness will be determined by the relative cost efficiency already in the medium term. As from 2004, Hungary has become a net importer both in volume and in value of the foreign trade of milk and milk products. The share of imported dairy products in final consumption is estimated at 30 to 55%.

Since EU-accession, Hungary's raw milk exports have increased to about 15% of the production. In milk equivalent, 20 to 25% of the dairy products are also exported. The structure of exports regarding both the countries of destination and the range of products has been changed during the last years. Although raw milk deliveries to Italy still represent the bulk of the exports, the share of Romania and Slovenia has grown considerably. Producer prices of milk in Hungary are mainly determined by the sales prices of exports to Italy, besides the indirect effects of prices in Germany. The imports of raw milk, cream and bulk butter have also continuously increased since the accession. The utilisation of the national milk quota hardly reaches 85%. The gradual elimination of the quota system may have an indirect but shocking influence on the milk sector in Hungary. Member States with better production efficiency may take over the Italian market, thus narrowing the sales possibilities for Hungarian farmers, while as a consequence domestic prices could become even more depressed.

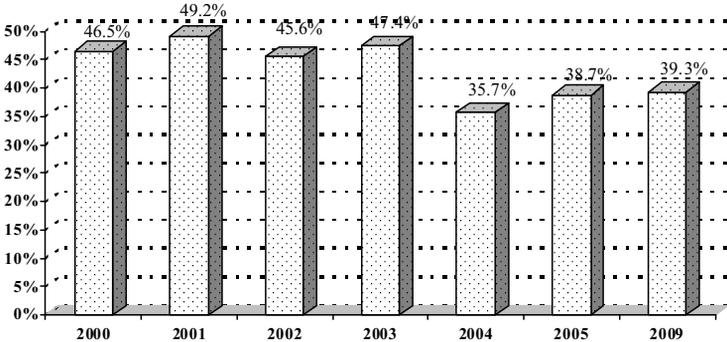
Despite the large number of processors, concentration in the dairy industry is relatively high. The utilisation of capacity has slightly improved during the last years on average, but continues to be very low (just around 50%, according to estimates). The milk market is characterised by a high degree of inelasticity; neither producers nor processors are able to quickly react to the market changes. In order to better utilise their capacities, processors should co-operate with each other; the lack of such co-operation is one of the factors weakening their competitiveness. While in the past the dominant strategy focused on the increase of market share, today the increase of profits has become the main objective, e.g. through restructuring the product range or better utilisation of capacity. Although processors aim at product development and at more up-to-date packaging and marketing, they still lag behind their competitors as regards innovation. In addition to that the domestic market is still dominated by brands which existed prior to the transition of market economy.

The dairy industry is under pressure from two sides; the commercial sector depresses prices because of the strong competition for consumers, while processors are competing with each other and with exporters for raw materials and for the better utilisation of their capacities. Since the Hungarian dairy indus-

try has a disadvantage against competitors in terms of efficiency and technology, the market share of dairy plants in Hungary may further shrink, leading to an inflow of foreign capital.

The structure of production after the accession has moved toward a more extensive direction, namely toward crop production. The share of the livestock production in total agricultural output has decreased to around 40% indicating a significant shift toward an extensive agriculture (Figure 9).

Figure 9. Share of livestock products in total agricultural output (2000-2009)



Source: Hungarian Central Statistical Office (HCSO).

**Downstream sectors**

Transport, refrigeration and other logistic issues will have an ever increasing influence on the international competitiveness and on sustainability (environmental protection, crude oil prices, etc.) in the different product chains. Concentration, specialisation and regionalisation of processing and trade will further increase in the future. In the long term, there is no rationale to look for tools which prevent the imports of agricultural and food products, or to experience the restrictions on imports as a “success” and to communicate this as an “achievement”, instead of focusing on the possibilities of improving international competitiveness.

Large food companies in Europe and overseas have transferred and continue to outsource their activities abroad, with the aim of gaining markets. In Europe, the borders are steadily losing importance (also) in this respect. The Hungarian food economy is necessarily integrated into the regional “division of

labour". Due to the specialisation and expansion of the leading companies, the principal question is: will Hungary remain a country mainly producing raw materials or a country manufacturing products with higher added-value?

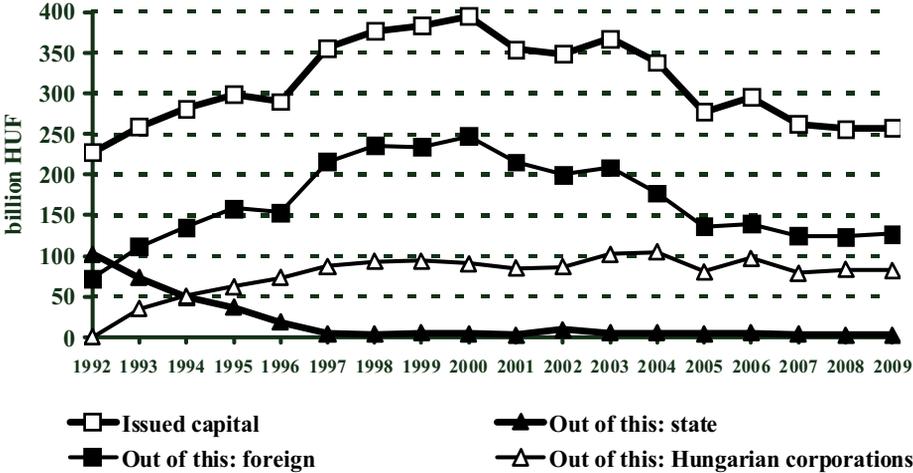
As a consequence of regionalisation, the efficiency and thus also the profitability of the food industry and food trade improve, as the advantages deriving from the differing consumption structure of the different countries may be better exploited (e.g. pork lard is popular in Hungary, while it is almost unmarketable in the neighbouring Austria; therefore a company operating in the field of secondary processing and food retail will of course attempt to optimise to some extent the distribution of pork meat in the markets preferring different products). Also, primary processors endeavour to optimise their output according to the local consumption habits and to the demand. Holdings have production facilities in several countries and compare the production costs, processes and practices ("customs") on a daily basis and usually invest in countries where the highest profits may be realised. As a matter of course, their decisions are influenced by the "profit transfer" possibilities granted by the different national regulations, which are not available for domestic enterprises operating only within their own domestic market.

Hungary represents a small consumer market and the enterprises (Hungarian companies and local businesses and subsidiaries of foreign companies) are small in international comparison; they are compelled to predominantly satisfy the domestic market demand with their production. Hungarian owned enterprises try to maintain their market share but only a few of them are able to expand their activities due to the lack of capital, to the obsolete technology, poor innovation and small volume. They mainly produce food products intended for niche markets. The export-oriented food producers have withdrawn from the country and have abandoned production. For the time being it seems that Hungary will not have a leading role in regional food production with the exception of arable crops that may be considered as raw materials [Udovecz *et al.*, 2009].

Due to the price increases of raw materials and energy, taxes and employers' labour costs, outdated factories and obsolete products production capacities and jobs are steadily lost, however, investment support has been granted to small and medium size factories. Reasons for factory shutdowns and production cut include bankruptcy, outsourcing, rationalisation, as well as the change of technology, replacement of labour, currency exchange rates, input prices and loss of markets. It is still not clear whether the final objective of the concentration of the food industry is through market acquisition in the product chains or in the rationalisation of production. Hungary did not succeed in controlling the increase in imported foodstuffs. It is also evident that the economic difficulties

have contributed to the deterioration of the position of the domestic food industry and especially that of the meat and milk processing enterprises (Figure 10)

Figure 10. Development of registered capital in the Hungarian food industry (1992-2009)



Source: Kapronczai [2011].

Continuous innovation constitutes an important precondition of survival. However, from the EUROSTAT assessment it is clear that the development and investment ability of the Hungarian food industry enterprises is very low in international comparison. Neglect of innovation may be attributed to several reasons. Firms with really strong capital position and modern technologies are mainly owned by foreign investors and operate as subsidiaries of multinational companies. In case of multinational companies R+D tasks can be divided among the subsidiaries in different countries. The really innovative, new products are often developed and manufactured by the parent company, and subsidiaries take over the know-how against payment of a fee or the finished product is directly imported. The medium size enterprises are poor in capital, with limited resources remaining for R+D.

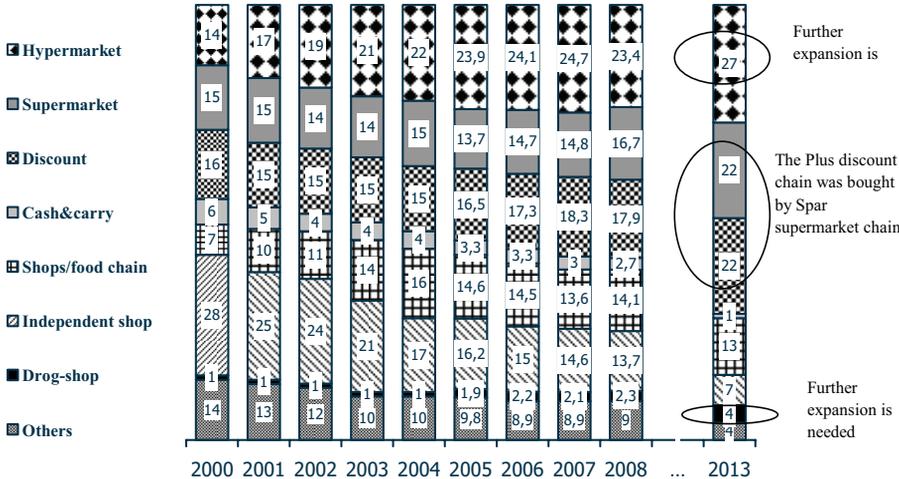
**Retail trade**

The restructuring of agricultural markets has started in the mid ‘90s in the regions. The EU membership has made Hungary part of a large, rather competitive market. This market offers tremendous opportunities for the agricultural

sector of Hungary. At the same time, the national agricultural sectors are faced with a significantly increased competition in their domestic markets. Trade figures indicate that agricultural sectors in Hungary have limited potentials so far to withhold these competitive pressures. Changing market conditions, the quick emergence of vertically coordinated food chains including hypermarkets, supermarkets and multinational agro-processing companies with regional procurement systems created new conditions both for producers and consumers. Due to very strong price competition, consumers are generally the beneficiaries of these changes, while producers are not always able to adjust.

The emergence of product based value chains and the fast increasing role hyper- and supermarkets are the most important outcomes of this process. The EU-accession has accelerated this process and created very strong competition on the domestic retail markets. The share of products with foreign origin increased significantly (up to 25% of food consumption), domestically produced products have to compete with the free flow of foreign produce.

Figure 11. Share of top food chains and food shops in the national market in %



Source: Feiner [2009].

There has been a strong concentration of retail trade with a major role of multinational food chains in national markets (Figure 11). The top 10 chains in retail trade gained decisive role, their share increased to around 90% of the national food market. These changes require adjustment both from processors and primary producers. The concentrated and Europe-wide procurement systems

of the major chains create high requirements for suppliers and put strong price pressure as well. The heavy competition among retailers results in low priced products often with low quality. At the same time, suppliers often have to cope with occasionally not fully fair business practices from the chains' side [Csáki et al., 2008]. The share of independent small shops, the most important partners for SMEs (small and medium enterprises) is decreasing in the national food market. The consequence of this is that SMEs are becoming the suppliers of hyper- and supermarkets.

Retailers' private label products undoubtedly benefited from the changes in consumer behaviour (consumers had become even more price sensitive). In the retail chains, the share of private label products has reached 30% of the total sales. Processors cut back on spending where possible, but invested in improving efficiency. They laid off some employees but recognised that if they were to expand production in the future, it could be extremely difficult to find skilled and experienced work force on the labour market.

Price is the most important factor in the purchasing decisions of consumers and it became even more so in the crisis. Thus, in general, the crisis impacted first the demand of goods/brands which can easily be substituted by less expensive alternatives. Many food products belong to this category and, in general, consumers at least in Central and Eastern Europe are believed to be less loyal to brands than their Western European counterparts. For these reasons, and also because competition was very tough due to the presence of many retail chains in some of the countries, the choice of relatively cheap food products increased and special price offers became more frequent. Consequently, suppliers of low priced mass products had to deliver greater volumes while others needed to change their production structure. The demand for private label products increased considerably, and these will definitely have a larger share of turnover in the future. It was also underlined that, due to the crisis, consumers were spending less on high value added processed goods, while the demand for basic foods (e.g. flour, sugar, many lower value added bakery products, fruits and vegetables) remained rather stable.

Quite often, the calls for tenders by multinational retail chains for the production of private label food products are international. Experience in Central and Eastern Europe showed that suppliers in Poland and the Czech Republic were less affected by the crisis than in Hungary or Slovakia, where the impacts were more severe either due to the macroeconomic instability, or to the introduction of the euro in Slovakia. Retailers claimed that contract terms and conditions with suppliers did not alter, and stakeholders were expecting no major changes in front and back margins in the near future. In some sectors, produc-

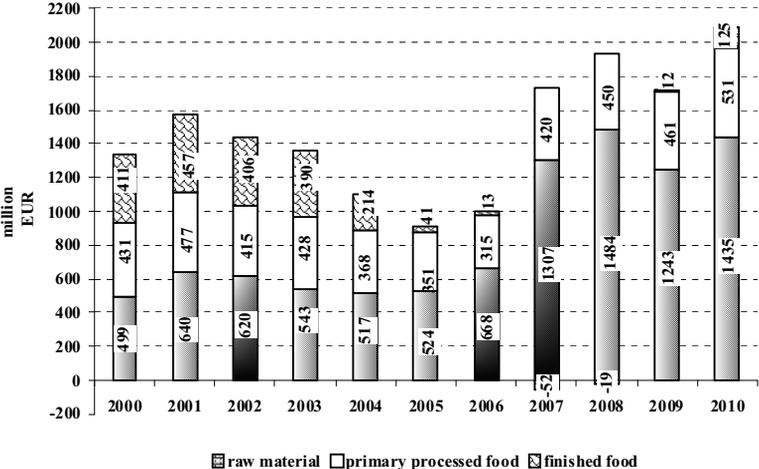
tion and processing had long been facing difficulties and thus the decline of production and sales was only partly due to the crisis.

In Hungary, protectionist and even nationalist rhetoric has inevitably gained some popularity. For example in Hungary, to increase the proportion of domestically produced goods on the shelves of retail chains, and to regulate contract conditions. Notwithstanding the failure of efforts like this, the preference of domestic goods by consumers increased in recent years, mainly due to the devaluation of the national currencies. The direct marketing of agricultural goods increased substantially. This was particularly true for milk and basic dairy products, in which case the declining purchasing power of the consumer and the oversupply on the dairy market shortened the distribution chain, especially in rural areas.

### Agricultural and food trade

Hungarian agricultural and food products are traded mostly with European countries. The enlarged huge market has created tremendous new opportunities and challenges as well.

Figure 12. Trade balance of agricultural and food industry goods (2000-2009)



Source: Research Institute for Agricultural Economics.

As regards agricultural and food trade, Hungary has maintained its position as a net exporter after accession. Exports and imports have increased further, the agricultural and food trade balance of Hungary has remained positive. The posi-

tive agricultural and food trade balance has fluctuated between EUR 0.9 and 2.1 billion over the past decade. Raw materials and processed products contributed to agricultural exports to a different extent. Share of raw materials in agricultural exports is high and increasing. After EU-accession the share of raw materials has increased in the Hungarian agricultural exports. On the other hand the share of finished food in agricultural imports has increased as well (Figure 12).

### **Macroeconomic and legal environment**

Unfavourable macroeconomic environment contributes the problems of the Hungarian agriculture and food industry. High taxes are accompanied by poor quality public services like law enforcement, health care, social policy, education and training. Taxes imposed on labour are particularly high; the actual tax burden in this field considerably exceeds even the old Member States average. The high costs of labour encourage illegal employment.

The administrative charges borne by the enterprises in Hungary are excessive, amounting to 6.8% of GDP, placing the country among the tail-enders within the EU [European Commission, 2007]. Only one third or one quarter of the burdens derives from EU obligations, the major part is generated by the Hungarian regulatory and administrative environment. Stakeholders face complicated legal provisions.

The incidence of the black economy in the GDP is estimated at 20 to 30% in Hungary, in contrast with the 7 to 8% in the old Member States [Udovecz *et al.*, 2009]. According to experience, the hidden economy flourishes where tax burdens are relatively high, legal security is weak and there is acute corruption and enduring and widespread unemployment. The lack of transparency in the taxation system corrupts mainly the tax morality of smaller enterprises. As any activity can be more profitable in the black economy, it is not worthwhile joining the legal economy (e.g. a producer organisation or a producer group). This is (also) a reason why a considerable proportion of Hungarian producers are not organised and do not use professional consulting, leading to major competitive disadvantages.

The black market exercises huge pressure on buying and selling prices (e.g. a considerable portion of the goods in cross-border grain trade is transferred without being invoiced, therefore even the largest traders are compelled from time to time to abandon some of their important markets). Illegal enterprises operate at lower costs, thus reducing the output prices and forcing up input prices (e.g. in the pig meat sector, higher prices are paid for piglets and pigs for fattening) and they sell their products at higher prices (without invoice

and VAT payment) that are cheaper for processors, while legally operating enterprises are forced out of business.

The strength of contractual relationships is fundamental for the competitiveness of the economy. In Hungary, the situation is especially critical due to payment delays, non-payment, black marketing and to default or failure of delivery by subcontractors or suppliers. The lack of legal knowledge and legal advice of managers (entrepreneurs) contributes to this situation. In Hungary, the high level of interest rates impairs the competitive position of domestic enterprises both in the domestic and foreign markets, as they have access to resources required for the financing of their production only at high costs.

### **The government sector**

The financial and economic crisis impacted the agro-food sector significantly; however, to a lesser extent (at least in the first half of 2009) than some other sectors of the national economy. The negative effects of the crisis had been amplified by the inflexibility of the decision making and administration system of the EU, and the inefficiency and the weak communication of the national administration. Although most of the stakeholders appeared to be unaware of any agro-food sector specific action taken by the government in response to the financial and economic crisis, the list of the policy measures aimed to lessen the negative effects included guarantees for agricultural investments via the government-owned Hungarian Development Bank; advance payments to enterprises for which investment support from the EU Rural Development Funds had been granted; working capital loan programmes for cereal producers and dairy farmers; abolition of milk quality analysis fees; additional coupled payments to dairy and cattle farmers, tobacco farmers and fruit and vegetable producers from 2010; aid to wineries for the distillation of excess wine stocks; earlier payment of EU direct support; and lower VAT on bakery and dairy products. On the other hand, the budget for cofinancing EU direct payments was cut in 2009 and 2010, with a further cut due in 2011.

### **Policy recommendations**

Many stakeholders, with the exception of multinationals, call for measures such as more subsidies, more state intervention including price controls, more protectionist measures and even the creation of state owned monopolies. They are examples of the short-term policy responses which can have negative impacts of rural poverty. Where governments do intervene in the market, they must ensure that they minimise the risk of causing market distortions. A deteriorating

economic situation may encourage protectionism and, for example, to delay the implementation of legislation and other efforts geared towards environmental sustainability. Any price movement due to the increased volatility of the market should not be interpreted as a trend, but may encourage protectionist responses amongst governments. Protectionist measures are not a way out of the crisis situation and are not able to avert the occurrence of crises in the future [Potori *et al.*, 2009].

The government should distinguish between agro-economic priorities and social policy issues and focus on the establishment of resilient, economically viable, diverse, innovative agro-food chains which are capable of meeting changing market needs such as consumer desire for safe, healthy foods, perhaps coupled with issues such as lower environmental impact farming and improved animal welfare. In the longer term, rising food prices and an efficient and productive agro-food chain help rural communities to escape poverty by increasing farmers' incomes. The limited funds for investment subsidies should be targeted at the professional viable enterprises with a long-term business plan. Increased investments have been a major driving force behind the recent economic growth in the agro-food industry. However, as national budgets tighten, there will be implications for agricultural spending. The economic downturn may add further impetus for policy makers to re-evaluate the uses to which agricultural expenditure is put, and to re-focus it where it might provide the greatest level of benefit.

Access to credit is a key issue and the problem was compounded by a reduction in asset values which reduced stakeholders' capacity to borrow money. To maximise reliable access to credit, initiatives may include expanded credit guarantee funds and support for credit insurance in order to improve the financial circulation within the agro-food supply chains. Other possibilities include credit warrants, credit unions, cooperative banks, microcredit, an insurance system against natural disasters and better information about the availability of credit. Offsetting of debts etc. is never applied to the general population and the implementation of such measures in response to the financial crisis would further weaken business trust and increase political and legal risks perceived by stakeholders, would nurture corruption and weaken social integrity.

Many parts of the agro-food supply chain in Hungary are undercapitalised. This can lead directly to production losses. The greatest technical challenge to avoid soaring food prices is to develop and introduce more productivity increasing (or at least stabilising) farming technologies that are sustainable. New technology can increase gross value added (GVA) throughout the supply chain, ensure compliance with health and safety and other regulations, as well as allow new market opportunities to be exploited through new products. Government

cofinancing should take into account not just the needs of the beneficiary but also the potential impact of the investment on the wider local economy.

Spending money on innovation and R+D must be increased. All tiers in the supply chain must continue to innovate both in terms of new products and production systems to maintain their economic viability and to access new markets. Whilst such innovation can often be led by the private sector, substantial investment in public sector agricultural research and development is also required, particularly in developing countries. Technological support to farmers and other stakeholders, including advisory services and effective animal and plant breeding programmes can help to strengthen the entire agro-food industry. Measures to promote information and technology transfer, particularly from the public to the private sector, are a crucial but frequently neglected component of this process. Improved market information services will help stakeholders to respond more quickly and effectively to any future crises, and could possibly be delivered through greater use of ICT [Potori *et al.*, 2009].

Supporting marketing activities would strengthen the market position of the domestic processing industries. Tax simplification could encourage new entrepreneurs into the market. The development of logistics can lessen the costs of handling, storing and transporting goods and thereby increase the competitiveness of the supply chain.

The provision of risk management subsidies to farmers help them to cope with increasing price volatilities. The government should encourage the use of derivative market instruments such as commodity futures and option contracts, for example to manage the price risks which have increased due to the volatility of the markets. Before this happens, they should ensure that stakeholders have more information about the use of these instruments and also create an environment where market participants can accumulate the necessary capital to cover the costs of using such instruments and where regional commodity futures markets could perhaps emerge which would be able to attract liquidity (contract volume).

The trading environment for all stakeholders in the supply chain would be encouraged by more helpful public administration, respect for existing laws by public officials and other stakeholders, and transparency in government and government measures. Investors should not be faced with unnecessary political risks through unnecessary government intervention. Measures aimed at increasing quality standards for imports and exports, and stronger food safety regulations in general are to be welcomed, but such regulations should not simply be a “front” for trade barriers.

The consumer shift to cheaper products has clearly benefited own label brands and may have strengthened the position of the major retailers, who can call on strong negotiating positions and economies of scale, in the agro-food chain. However, some stakeholders have already responded to the crisis by exploiting “niche” market opportunities. Support for producing goods with “added value”, bearing in mind the longer-term trend towards safe, healthy foods may help smaller players in the supply chain to exploit new business opportunities.

More effort to educate consumers and children about agriculture, nutrition and kitchen culture is of importance. Whilst it might seem inappropriate to look beyond the issues of poverty and basic food security at a time when these are increasing, the gradual ‘westernisation’ of the diet has attendant health issues such as obesity. Healthy eating, including the greater consumption of so-called ‘functional foods’ can have both social (e.g. greater life expectancy) and economic (a healthier workforce) benefits.

Liberalisation of the land market can provide access to investment capital which can revitalise the economic performance of primary agricultural production which in turn is the basis of agro-food supply chains which can employ large numbers of people and contribute considerable GVA to the economy. Hence we support liberalisation of the land market implemented by the Hungarian government in the form most appropriate to local conditions.

## **Conclusion**

The current CAP is designed based on the conditions of EU-15 countries. The experiences of the first five years in the new member countries indicate that even with the possible modifications, this system does not fully fit to the conditions of the new member countries and especially to the poorest segments of new Member States. In these circumstances, still poverty and competitiveness of the agricultural sector are the most pressing issues.

EU-accession had modest but not uniform impacts on the production of major products and overall agricultural output, enhanced by fluctuating yields with remaining gaps. The Hungarian meat sector suffered a double pressure after accession coming from growth of cereal prices and the breakdown of border protection (free trade). Along the same lines with meat production, milk sector experienced hard times after EU-accession, mainly due to decreasing prices, higher competition, which resulted in decreasing numbers of cows.

The impact of enlargement on certain markets has not been unambiguously positive in Hungary. Inefficiencies in production still exist along with

inadequacies in the infrastructure. These factors, along with the expected stagnation in livestock numbers are likely to keep cereal market prices in Hungary under pressure in the next few years.

Horizontal and vertical integration along the agro-food supply chains should be encouraged in order to facilitate cooperation between stakeholders, to strengthen business relations and restore business trust, to reduce transaction costs and to increase bargaining power. The means for achieving this include changes to the legal environment, preferential taxation, co-financing aid for investments and state guarantees. Consolidation, rationalisation and specialisation contribute to create viable market players which can competitively supply retailers with respect both to quantity and quality of products. In addition to full-scale mergers, farm associations, grain procurement cooperatives and export groups can strengthen the negotiating positions of their members through collective purchasing and selling. Capacity building measures are needed to help their establishment, plus changes to the legal environment and co-financing aid. Less formal cooperation could include the setting up of representative farmers' associations whose members could benefit from shared services. Such cooperation could be encouraged with tax incentives.

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## **CAP Impact on Bulgarian Agri-food Sector**

### **Introduction**

A four-year period is not quite sufficient for making thorough conclusions on the CAP impact on the development of the Bulgarian agriculture. Moreover, this process is strongly influenced by the accession conditions to the EU. To make initial conclusions, in the report the features of the starting conditions are considered and the Bulgarian agriculture development after the accession and on this base the proposals are worked out for some of the main points of the Bulgarian agricultural policy.

### **Place of the agricultural sector in the national economy**

The agricultural area of Bulgaria represents 57.4% of the country's territory, while in the EU it is 41%, i.e. the natural resources of the country are favorable for the agriculture development. Although the share of the created Gross Value Added in agriculture decreased from 13.9% in the year 2000 to 6.1% in 2009 it still exceeds the average share of GVA in agriculture for the EU of 1,2%. The significance of the sector for the national economy is still more important referring to the employment – every fifth employed is in agriculture.

Significant as well is the participation of the sector in the formation of foreign trade turnover, as the agricultural export demonstrates a sustainable trend of increase. Compared to 2005, the export doubles, and even in crisis conditions its value grows. In 2009, in the general export structure, its relative share of 17.19% is the highest achieved during the last two decades.

The export of agricultural goods exceeds the import so the agriculture is one of a few sectors with a positive foreign trade balance (Tabl.1).

Table 1. Share of the agrarian sector in the national economy

№	Indexes	2005	2006	2007	2008	2009
1.	<b>GAP Gross Agricultural Product, mln BGN</b>	<b>6 871</b>	<b>7 033</b>	<b>6 678</b>	<b>8 904</b>	<b>7 611</b>
2.	<b>Gross Value Added in agriculture and forestry mln BGN</b>	<b>3 491</b>	<b>3 339</b>	<b>3 027</b>	<b>3 990</b>	<b>3 313</b>
	- factor of change of GVA to the previous year, %	96.0	95.6	90.7	131.8	83.03
	- share of the GVA for the sector, %	9.4	8.5	6.2	7.3	6.1
3.	<b>Agricultural export, mln USD</b>	<b>1 267</b>	<b>1 316</b>	<b>1 647</b>	<b>2 858</b>	<b>2 801</b>
	- change to the previous year , mln USD	+212	+ 49	+331	+1211	-57
	- share of the agriculture in the total export, %	6.8	8.80	8.86	12.69	17.19
4.	<b>Agricultural import, mln USD</b>	<b>921</b>	<b>1 117</b>	<b>1 801</b>	<b>2 639</b>	<b>2 393</b>
	- change to the previous year ('000 USD)	+113	+196	+684	+838	-246
	-share of the agricultural import in the total for the country, %	3.39	3.24	4.43	5.67	7.70
5.	<b>Currency balance of agricultural commerce</b>	<b>+347</b>	<b>+199</b>	<b>-154</b>	<b>+219</b>	<b>+408</b>

Source: MAF, Annual report 2010.

## Land utilization

The agricultural production is closely linked to the rational utilization of the most important natural resource – the land.

The land resources analysis for the period (2005-2009) shows that:

- The area with agricultural utilization purpose was reduced by 0.24 mln ha, with a sustainable trend of decrease. Yearly, the agricultural fund was reduced by 47200 ha, transformed into non-agricultural land. This represents a serious loss of natural and irrecoverable resource and basic means of production (Tabl. 2);
- the UAA was reduced by 23.5 thousand ha;
- in the case of the arable land (AL) due to the stimulant role of the direct payments an increase was recorded for the last two years of 65 thousand ha and the area size near the base of 2005.

Table 2. Arable land (AL), utilized agricultural area (UAA), agricultural area (AA), ('000 ha)

Specification	2005	2006	2007	2008	2009	2005 : 2009 %
<b>I. Area with agricultural purpose of utilization (AL)</b>	<b>5 726</b>	<b>5 709</b>	<b>5 666</b>	<b>5648</b>	<b>5490</b>	<b>95.8</b>
- difference, compared to the previous year	X	-17	-43	- 18	- 158	- 236
<b>II. Utilized land area (UAA)</b>	<b>5 265</b>	<b>5 190</b>	<b>5 116</b>	<b>5 101</b>	<b>5 030</b>	<b>95.5</b>
- difference, compared to the previous year	x	- 75	- 74	-15	-71	-235
<b>III. Arable land (AL)</b>	<b>3 128</b>	<b>3090</b>	<b>3 058</b>	<b>3 061</b>	<b>3 123</b>	<b>99.8</b>
- difference, compared to the previous year	x	-38	- 32	+3	+62	- 5

Source: MAF, „Agro statistics”, BANSIC: Employment and territory utilization in Bulgaria.

## State of the plant-growing production

### *Cereal crops*

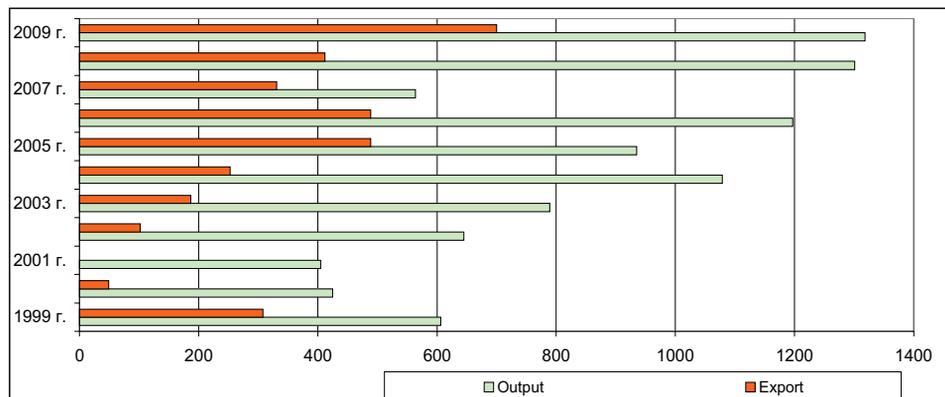
Table 3. Cereals output in Bulgaria by periods

Crops	Average annual output by periods, tonnes				
	1989-1993	1994-1998	1999-2003	2003-2006	2007-2009
<b>Cereals total</b>	<b>7 860 344</b>	<b>5 613 632</b>	<b>5 212 630</b>	<b>6 291 999</b>	<b>5 486 711</b>
Wheat	4 455 016	3 153 973	3 125 683	3 580 375	3 666 557
Barley	1 317 665	859 894	799 117	794 997	718 814
Grain Maize	1 797 471	1 441 090	1 173 192	1 765 509	990 680

Source: MAF, Directorate „Agro-statistics”.

## *Oil-seed crops*

Figure 1. Dynamics of the output and export of sunflower in Bulgaria, ('000 tonnes)



Source: MAF, Directorate „Agro-statistics”.

## *Vegetable production*

Table 4. Dynamics of the area under vegetable crops, ('000 dca)

Types of vegetables	2000	2005	2006	2007	2008	2009	2009/2000, %
<b>Vegetables</b>	<b>446.8</b>	<b>415.8</b>	<b>399.0</b>	<b>410.9</b>	<b>300.1</b>	<b>287.2</b>	<b>64.24</b>
Tomatoes	288.3	53.9	70.2	48.3	34.7	30.1	10.43
Peppers	196.5	51.3	85.2	55.0	37.5	50.1	25.52
Cucumbers	95.0	7.8	5.6	8.6	3.7	9.8	10.20
Bulb onions	132.0	15.3	22.2	12.6	12.8	11.8	8.90
Cabbage	99.3	33.0	28.2	22.5	64.9	39.4	36.64
Potatoes	528.2	240.0	244.7	224.3	217.1	140.0	26.50

Source: MAF, „Agro statistics”, BANSIC: Employment and territory utilization in Bulgaria.

## *Fruit production*

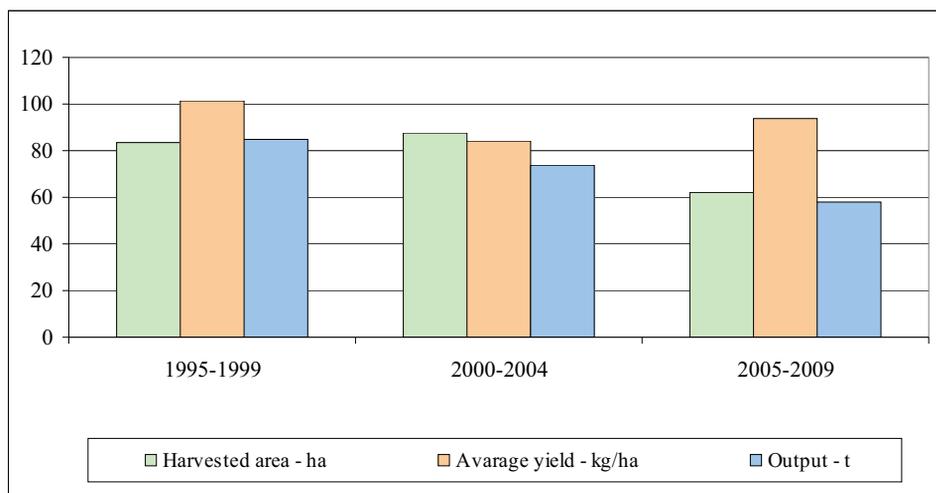
Table 5. Area of harvested orchards, ('000 ha)

<b>Fruit variety</b>	<b>2000</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009/ 2000, %</b>	<b>Structure, %</b>
Apples	12 957	3 127	2 979	3 524	3 427	4 321	33.34	17.80
Apricots	5 606	3 038	2 719	2 553	1 983	1 863	33.23	7.67
Peaches	7 295	2 646	2 755	2 903	2 820	3 029	41.52	12.48
Plums	12 288	5 926	5 899	6 731	4 604	4 219	34.33	17.38
Cherries	6 973	4 723	4 791	5 007	4 411	5 169	74.12	21.30
Walnuts	6 731	3 194	2 980	4 164	1 628	2 046	30.39	8.43
Raspberries	1 330	1 182	1 364	1 129	1 034	932	70.07	3.84
<b>Total</b>	<b>74 965</b>	<b>26 343</b>	<b>25 978</b>	<b>28 361</b>	<b>21 927</b>	<b>24 269</b>	<b>32.37</b>	<b>100.00</b>

Source: MAF, Directorate „Agro statistics”.

## *Viticulture*

Figure 2. Dynamics of area, yields and output of wine grapes by periods, compared to a base 1990–1994, %

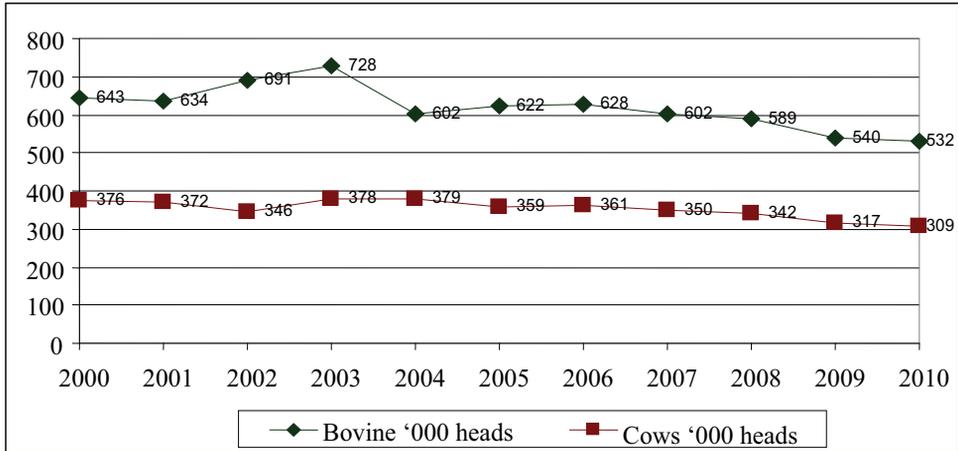


Source: MAF, Directorate „Agro-statistics”.

## State of the livestock-breeding production

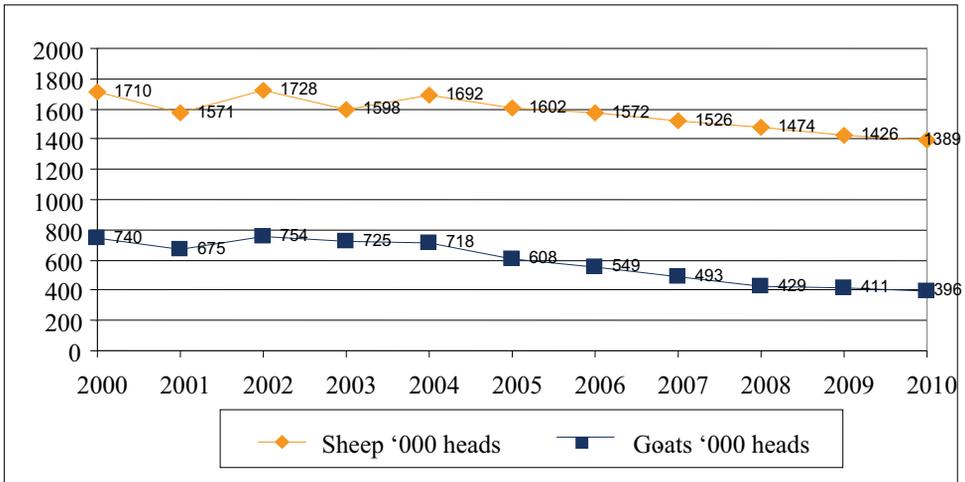
### Milk livestock-breeding

Figure 3. Extrapolation forecast for the number of cattle



Source: MAF, Directorate "Agro statistics" and own calculations.

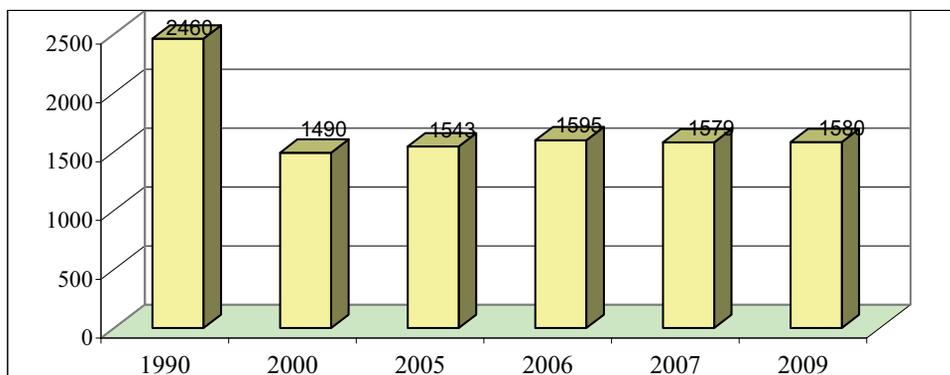
Figure 4. Extrapolation forecast of the number of sheep and goats



Source: MAF, Directorate "Agro-statistics" and own calculations.

## Poultry breeding

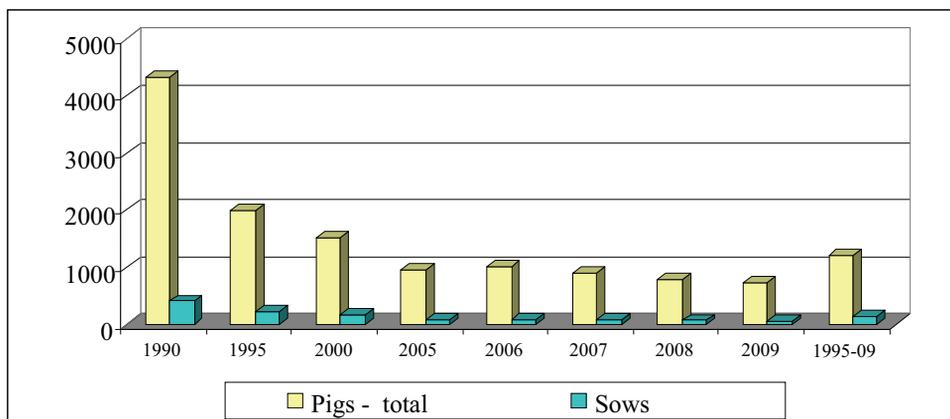
Figure 5. Output of eggs in Bulgaria (1999-2009), million



Source: MAF, Directorate "Agro-statistics".

## Pig-breeding

Figure 6. Dynamics of the change of the number of pigs ('000)



Source: MAF, Directorate „Agro-statistics”.

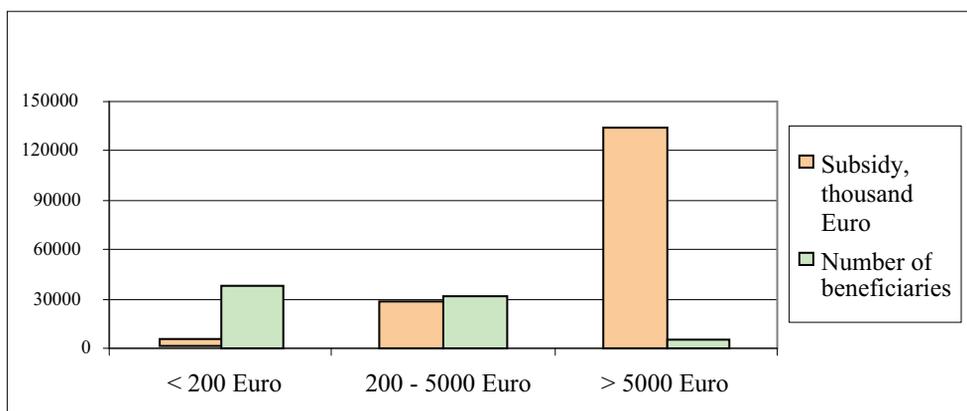
The production of basic agricultural goods shows a clear trend of relative stabilizing in plant-growing and decline in stock-breeding. In the plant-growing sector relatively good results are registered in cereals and industrial crops production, while in the case of vegetables and fruits they are drastically reduced. The decline of the livestock-breeding products is a result mainly of the decreased number of animals. Particularly strongly is impacted the pork and beef.

## CAP impact on Bulgarian agriculture development and competitiveness

### *Impact of direct payments and national complementary payments*

The distribution of the subsidy for direct payments shows that the main part of the funds is destined for a few beneficiaries and the predominant beneficiaries' part obtains symbolic sums. The half of beneficiaries (50,2%) received under 200 euro and the part of the subsidy is 2,4% only. The beneficiaries who, received over 5 000 euro accounted for 5 079 farmers (6,8%) and the paid funds accounted for 80,6% from the subsidy. Approximately 43% of beneficiaries received between 200 and 5 000 euro i.e. 17% of the subsidy.

Figure 7. Distribution of beneficiaries according to the direct payments amount



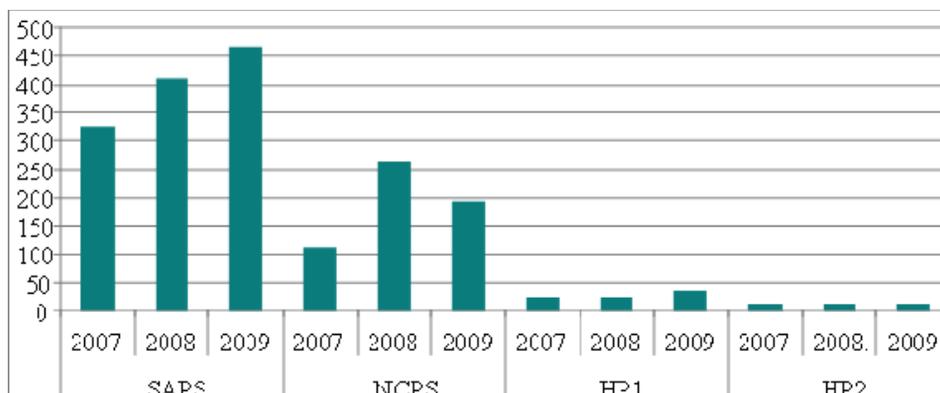
Source: Data from State Fund "Agriculture", 2009.

The main challenges and questions emerging in regard to direct payments impact on agricultural farms development are:

- The differentiation between big and small farms is in process of deepening and the bipolar agricultural structures' model becomes more and more expressed. Large economic structures cumulate considerable incomes and will enlarge their economic limits. Direct payments will enable the development of big farms (predominantly growing cereals and sunflower) even in wider framework than the average for EU. The lack or the insignificant financial supports accelerate the current processes of diminution small farms number, independently of their specialization. The most expressed is the reduction of the mixed farms' number, with intensive crops and ruminants.

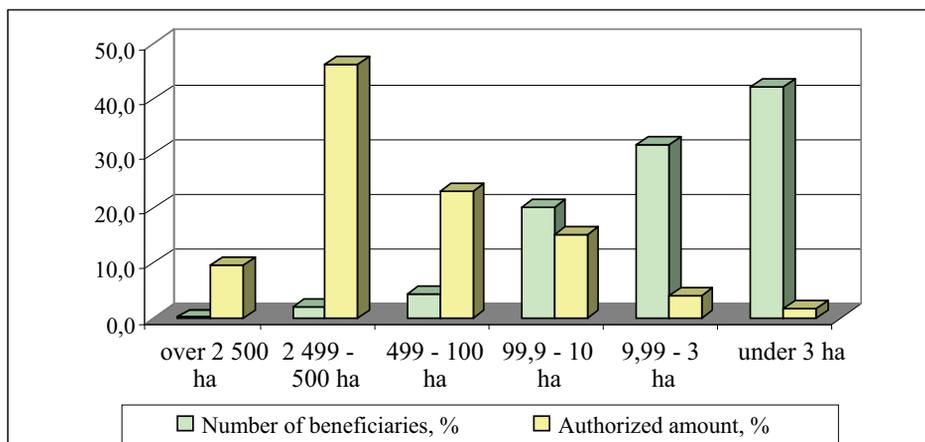
- The payment of the same subsidy per area unit at considerable costs differences for the various crops (the relation costs/subsidies per area unit for basic crops – wheat 3,4:1; maize 4,73:1; sunflower 6,7:1; tomatoes 42,4:1; apples 31:1) stimulates in practice only the extensive crops producers. This leads to conservation of the mono-crop production.
- Excluding the large farms, specialized in vegetables-growing and oilseeds (sunflower), the direct and the national complementary payments (NCPS) will not have any substantial impact on incomes of the rest of farms.

Figure 8. Dynamics of authorized amount, million BGN



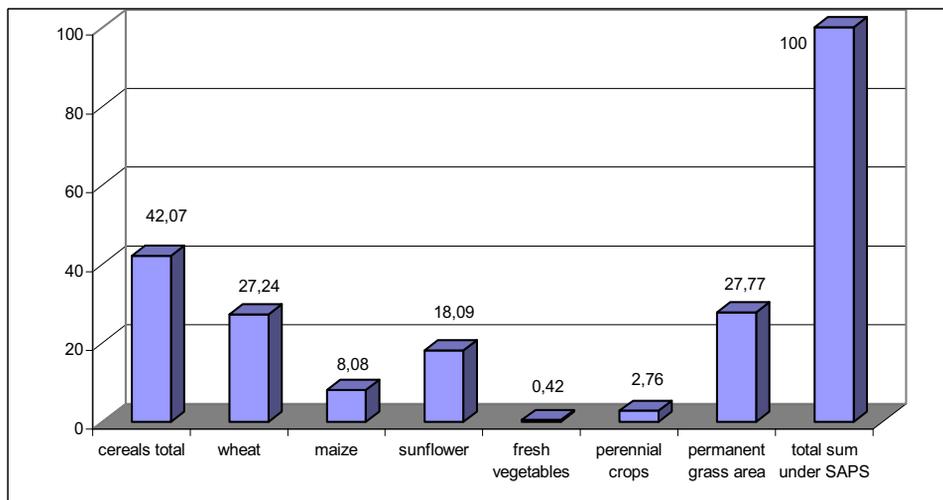
Source: MAF, Directorate “Agro-statistics” and proper evaluations.

Figure 9. Average structure for SAPS for the period 2007-2009



Source: MAF, Directorate “Agro-statistics” and proper evaluations.

Figure 10. Distribution of authorized amounts under SAPS for the main crops and groups for 2007-2009

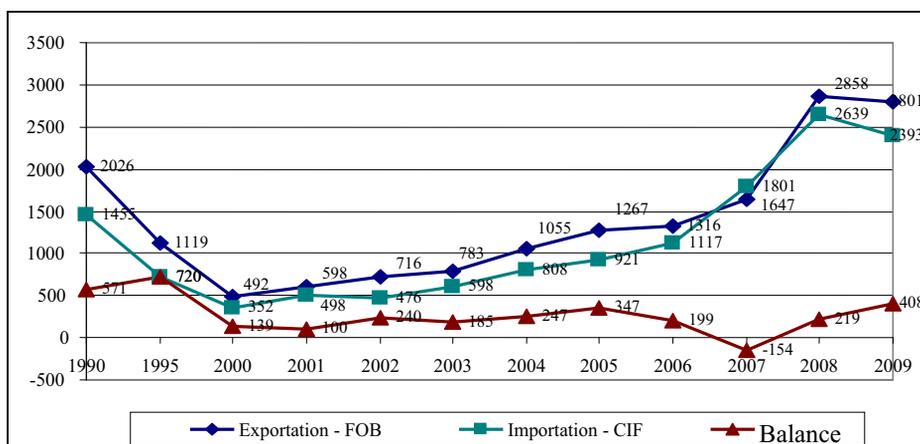


Source: Directorate "Agro-statistics" and proper evaluations.

### Foreign trade exchange

The considerable increase of the agricultural foreign trade exchange capacity is a testimony to the process of sector's integration in the world and in the European economy, in priority.

Figure 11. Dynamics of the Bulgarian foreign trade exchange 1990-2009, million USD



Source: MAF, EUROSTAT.

Table 6. Exportation and importation of agricultural goods by economic communities and regions, %

Trade zones	2001	2004	2005	2006	2007	2008	2009
<b>EC-15</b>	<b>EC-15</b>	<b>EC-25</b>	<b>EC-25</b>	<b>EC-26</b>	<b>EC-26</b>		
Exportation	38.4	45.9	46.3	54.41	59.92	57.65	71.80
Importation	40.5	51.4	54.4	61.68	75.33	75.86	75.12
<b>Balance, million USD</b>	<b>29.6</b>	<b>69.1</b>	<b>82.4</b>	<b>27.0</b>	<b>-357.9</b>	<b>-279.3</b>	<b>212.4</b>
<b>OECD*</b>							
Exportation	51.5	26.8	26.5	19.98	23.94	15.54	11.69
Importation	51.6	20.5	18.5	16.70	21.03	6.44	8.47
<b>Balance, million USD</b>	<b>51.5</b>	<b>116.9</b>	<b>164.3</b>	<b>76.3</b>	<b>18.0</b>	<b>270.0</b>	<b>124.7</b>
<b>Balkan countries **</b>							
Exportation	9.4	7.5	8.4	8.85	7.05	5.49	4.32
Importation	1.3	2.4	1.7	1.81	3.47	2.66	4.02
<b>Balance, million USD</b>	<b>43.2</b>	<b>59.2</b>	<b>90.8</b>	<b>96.3</b>	<b>53.7</b>	<b>86.0</b>	<b>24.8</b>
<b>CIS***</b>							
Exportation	8.1	5.9	6.1	6.09	7.55	4.92	2.88
Importation	2.0	2.7	1.1	0.89	2.35	1.92	0.87
<b>Balance, million USD</b>	<b>33.1</b>	<b>40.3</b>	<b>67.0</b>	<b>70.3</b>	<b>81.7</b>	<b>88.3</b>	<b>59.8</b>
<b>Arabic countries</b>							
Exportation	10.3	8.2	8.3	5.05	4.92	7.57	3.63
Importation	1.1	0.6	0.6	0.77	0.37	0.89	1.13
<b>Balance, million USD</b>	<b>48</b>	<b>80.9</b>	<b>98.9</b>	<b>57.9</b>	<b>231.2</b>	<b>186.0</b>	<b>74.8</b>

Source: National Statistical Institute, Agricultural report- MAF, 2005, 2006, 2007, 2008, 2009, 2010.

The balance of the agricultural goods trade in the period is positive, except 2007. The positive trade balance in the last 2010 is record-breaking. Structural changes in the exportation show unfavourable trend to increase the share of non-processed products in the exportation and of these having high added value in the importation. At the end of the first decade of 21 century,  $\frac{3}{4}$  of the agricultural goods' foreign trade exchange of Bulgaria was with EU countries.

### ***Rural areas development***

Statistical data show clearly that differences regarding the demographic processes, the economic development and the access to basic services between urban and rural areas deepen. The reason for the above-mentioned is the concentration economic activity and new labour places, especially in the high-technology branches, and of the better access to services (education, health, public services etc.) for the urbanized centers. Towns are the engines of the economic development and centers of the public life; therefore they are attractive point for a part of rural population.

The impact of introduction of the CAP in Bulgaria can be summarized as:

- Agricultural production shows stability, as a whole, particularly after 2000, but at a low level.
- The added value and the factor income diminish.
- From structural aspect, Bulgarian agriculture is characterized by a polar farms grouping with definite specialization – on one hand, big group of small farms, predominantly in the livestock-breeding and the horticulture, and on the other hand, relatively small group of large-scale farms specializing in the cereals-production and some industrial crops.
- Constraint and imbalanced product structure
- Diminution of the utilized agricultural area
- Reduction of the number of employed and insufficient investments.

The EU membership of the country has transformed CAP in a decisive factor for the Bulgarian agriculture development. This gave stability to the policy and the economic environment, but the concrete conditions in the country have outlined some new problems:

- Weak administrative capacity, non-allowing the complete absorption of supporting agricultural funds;
- Unequal support for the different sub-sectors, engendering structural disparities;
- Deepening structural weaknesses of Bulgarian agriculture (polar structure and lack of dynamic sector from family farms) decreasing the European market sector competitiveness;
- Non-competitive food-processing sector, unadapted to the market and especially to the increased role of the food chains;
- Lack of approved brands of quality agricultural products;

- Weak livestock-breeding competitiveness, especially of the milk cattle-breeding;
  - Withdrawal of labour force to towns and abroad because of the low incomes;
  - Low education and qualification level;
- Regression of rural communities.

### **Conditions for development of European agriculture**

The inequality between new and old country-members, regarding the agricultural support means:

- Loss of welfare in the framework of the Union as a consequence from irrational resources' distribution;
- Decreased competitiveness of European agriculture;
- Loss of opportunities for favourable effect on the environment in result of the conservation of the unequal charging of the lands and other natural resources with fertilizers, preparations and others.
- Disadvantages for the consumers because of unused opportunities for quality and cheaper food production;
- Reinforced migration and emigration from rural areas in Bulgaria and Romania in result of the agriculture decline;
- Unequal situation of the new member-states, especially Bulgaria and Romania after the agriculture regression;
- Unequal new member-states' situation, predominantly for Bulgaria and Romania, resulting from the law base of the chosen reference approach, which embarrasses the agricultural sector and rural areas development in these countries.

### **SAPS implementation impact**

The positive sides of the SAPS implementation can be generalized in the following points:

- Direct payments, defined on the basis of the utilized area increase undoubtedly the incomes and the interest to the agricultural activity;
- They act as an effective security net, because their receiving is not dependent on the production, including unfavourable natural conditions;
- They create stimuli for the abandoned lands returning to economic turnover;

- They create conditions for the agricultural activity conservation in areas with natural restrictions;
- They have undoubted positive impact on the environment;
- Their administrative burden is relatively low.

At the same time, direct payments have some other economic impacts, calling in question their effectiveness:

- The single payment per hectare has strong impact on the economic behaviour of producers. In general, these payments benefit mostly the extensive productions, i.e. these having the lowest investment per hectare – the cereals and some technical crops, because of the highest share of the subsidy in the income. Thus, these payments impact on the production structure and the allocation of resources in the sector. The producers from the intensive sectors were injured – vegetables, fruits, relatively predominant for Bulgaria and livestock-breeding.
- The support is directed preponderantly to the large-scale farms, as these from the cereal production, because the competitive production in this sector requires big compact areas. This way, the direct payments per area have an impact on agricultural farms structure, deepening the formed disunion – first: small number of large farms in the cereal production and some industrial crops, second: numerous groups of small farms in the labour-intensive branches.
- This way of agricultural supports organization has limited impact on the socio-economic situation improvement in rural areas, predominantly regarding the unemployment. In practice, sectors having high labour productivity, requiring small number of qualified workers.
- Under these conditions, the production diminution in the vegetable and fruit-growing is inevitable with the consequent unfavourable effects for the food-processing sector.
- The introduction of obligatory rules, aiming the prevention of agricultural lands abandonment.
- Considerable part of agricultural support has been capitalized in the land price and received from the owners, which in most of the cases are not related to the production and therefore, to the support destination. At the same time, in the concrete conditions of Bulgaria, over-profits have been realized, in result of the numerous proprietors, having small parcels.

In these circumstances Bulgaria is interested in using the opportunities for differentiated support of some agricultural production sectors.

### **CAP development**

The discussion in EU about the CAP future shows the following expectations:

- The CAP budget would be conserved, at least nominally. In practice this means 20% reduction of the real support by direct payments;
- Complete separation of direct payments from the production, through the abolition of the opportunities for binding between the supports and some products;
- Strengthening of the incomes modulation and even, introduction of a limit for the support for one farm. The purpose is to restrict subsidies for large-scale farms;
- Consolidation and conservation of the First CAP pillar, aiming for the support for structural farms adaptation, utilization of the agricultural potential in the less-favoured areas and economic activity diversification;
- Support under the Second pillar of farms, in regards to the new challenges – climatic changes, water use, RES utilization, biodiversity preservation etc.

### **Position of Bulgaria**

- Equalization of conditions for economic activity in the sector by achieving of equal access to agricultural supports (mainly direct payments). This means abandonment of the so-called historical approach, including in relation to reference approaches and nominal equalization in 2013.
- Creation of unified for EU methodology for direct payments level definition, which will take in consideration the natural conditions, the employment and other objective factors;
- Distribution of national support packages, warranting equal support for the different agricultural sub-sectors;
- Simplification of administrative procedures for support payments (requirement for cross-compliance etc.);
- Equal access to compensatory payments for farms in different countries and transition of compensatory payments from CAP pillar II to CAP pillar I;

- Admission of approach keeping interests of the sensitive sectors at the transition from SAPS to SPS (introduction of special rights).

### **Rural Development Program 2007-2013**

This Program realization allows some initial conclusions:

- RDP is not able to overcome the negative rural areas development trends;
- The planned funds under some measures would not be absorbed;
- The modernization funds have been directed to the cereal production and food-processing sectors;
- The delegated budgets for the livestock-breeding would not be absorbed;
- Agricultural support in the mountain and other less-favoured areas has a positive impact on their general development;
- Ineffective funding of cereal-production and sunflower-production is available;
- Investments support reinforces regional imbalances;
- The funding for Local Development Strategies (LDS) has considerable delay;

For the next program period the measures are necessary in the following directions:

- Remodeling of definition for rural area. The present definition for rural area at level LAU 1 (municipality) leads to considerable inconveniences and does not address correctly the support for the real rural areas. The re-definition of rural areas must be to the level of settlement LAU 2;
- To precise the measures to be adopted in the next programming period and on the basis of the acquired experience, to elaborate the rules and the requirements for the beneficiaries;
- To adopt a complex policy regarding rural areas, which would not rely only on RDP measures, but would be focused more on the villages as administrative units in the municipalities management;
- To reach an augmentation of the funds under RDP Axis 3, destined for the rural economy diversification support and the local infrastructure building and for Axis 4 (LEADER), aiming the local development capacity use and instrument for the Program decentralization.

## **Sector policy priorities**

- Structural reform continuation in agriculture through the reaffirmation of the property right on agricultural lands and building on this base of sustainable production units. This presupposes the availability of good-functioning cadastre and property register of agricultural lands;
- Budget investments' support in the so-called land meliorations (irrigation, fight with the erosion etc.), leading to a durable fertility increase and for the scientific researches development and the knowledge dissemination;
- Support for the agricultural products having unique qualities;
- Reforms in the education system, allowing the acquisition of the necessary qualification of persons willing to realize agricultural activities in the future; Effective utilization of the funds for education and training under RDP;
- Consolidation and increase of State institutions effectiveness in the agricultural sector;
- Support for the rural areas economy diversification and to agricultural farms activity;
- Improvement of the administrative-territorial country partition and of the normative base for the local authority functioning and the participation of citizens in the municipalities management.

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## **The possibilities of European Union Food Sector Expansion in Georgia (problems, perspectives)**

### **Introduction**

In the article Georgian and EU legal relations basis, is presented, as well as problems for import-export of production according to whole EU Agricultural Politics (CAP). The export of competitive products from Georgia is emphasized. The problems concerning the existing situation of Georgian agriculture and food sector, and our opinions for solving these problems are discussed.

### **Regionalisation of agriculture production in Georgia**

Georgia – the state in Eurasia bordered in North by Russia, Eastern side of Black Sea coast, in South by Turkey and Armenia and in South-East by Azerbaijan. The transcontinental state is situated at the crossroad of South-East Europe and West Asia, though from the point of social political and cultural view it is the part of Europe.

Georgia may be considered as a bridge connecting several economic regions and it is especially important transit state. Being on the crossroads of Europe and Asia it plays part of natural transportation corridor. Georgia is the shortest transit route between West and Central Asia for transportation of oil, gas and various cargo items.

Area – 69, 700 sq.m, takes 120 places in a World. Mountain - 54%, foothill - 33%, Dplain - 13%. In agriculture used grounds - 30,600 sq.km-44%. Planting – 25%, Pasture – 35 % Perennial – 40 %. Population 4,636,400 takes 121 place in a World. Georgia is divided into 9 regions and 2 autonomous republics. These in turn are subdivided into 69 dialectal districts. Rural population 2 179 100 mln- 47% of the whole population. Population 4,636,400, takes 121 place in a World. Georgia is divided into 9 regions and 2 autonomous republics. These in turn are subdivided into 69 dialectal districts. Rural population 47% of the whole population. The average age is 45 and more, with prevalence of women, children and elders. The population as a whole is being reduced.

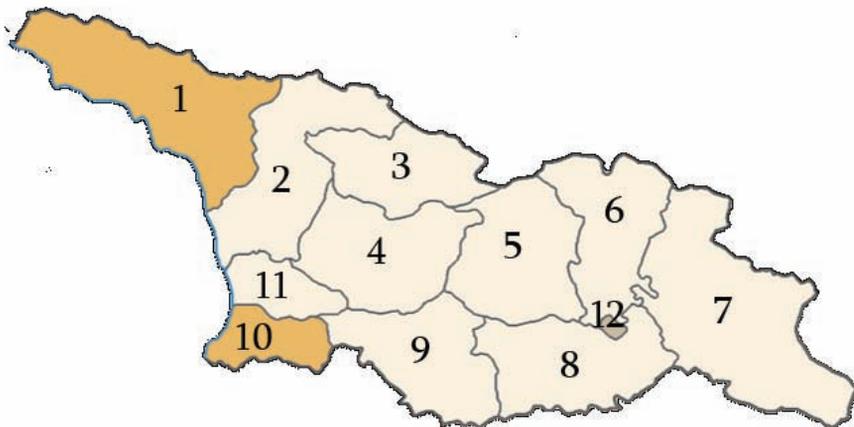
In Georgia there are all types of grounds which can be found all over the World. It is difficult to find just one type of ground due to that the farm worker has to plant various types of plants.

The climate transfers from subtropics (beg. of Georgia) till continental one (Western Georgia).

According to ground-climate Georgia is divided into 13 zones and 8 subzones:

- I. Viticultural zone of inner Kakheti;
- II. Grain-growing stockbreeding and viticultural zone out of Kakheti;
- III. Suburb an agricultural zone of Tbilisi;
- IV. Mountain stock-breeding zone of East Caucasus Range;
- V. Fruit-growing and suburban agricultural zone of inner Kartli;
- VI. Mountain stock-breeding and potato-growing zone of Samtskhe-Javakheti;
- VII. Viticultural and stock-breeding zone in Imereti;
- VIII. Stock-breeding and viticultural zone of Racha-Lech khumi;
- IX. Mountain stock-breeding zone of West Caucasus Range;
- X. Suburban agricultural zone of Kutaisi;
- XI. Subtropical agricultural and stock-breeding zone of Kol kheti Lowland;
- XII. Subtropical and suburban-resort agricultural zone of Abkhazia;
- XIII. Subtropical agricultural and mountain stock-breeding zone of Adjara;

Map.1. Competitive food stuffs according to regions



Source: [www.lemill.net](http://www.lemill.net)

The suitability of production is as follow: without treatment: (1,2,3,4,7,9,10,11), walnut (1,2,3,4,7,9,10,11), grapes (2,4,6,7,10,12), small fruit (3,4,5,8,9), feijua (1,2,4,10,11), fig (1,2,4,5,7,9,10,11,12), lemon (1,2,4,10,11), mandarine (1,2,4,10,11), orange (1,2,4,10,11), kiwi (1,2,4,10,11), Cherry-laurel (1,2,4,7,9,10,11), ebony (1,2,4,7,9,10,11), granet (5,6,7,8,9,12), greens water-melons (4, 8, 5, 7), spices (4, 8, 5, 7), medical plants (1,2,3,4,5,6,7,8,9,10,11,12).

The food processing regionalization: wine, industrial and imeretian technology (3,4,5,7,8,12.) chacha and alcohol drinks (3,4, 5,7,8,12.), tea (1,2,4,10,11) canned food – sefaty technology (1,2,4,5,6,7,8,9), children’s food – (4,12), juices, ajika – (1,2,4) dried fruits, candies fruits, churchkela (1,2,4,5,6,7,8,9), honey (1-12), cheese (sulguni, imeruli, gudis) – (1,2,3,4,6).

Semifinished products: natural silk – (2,4,5,7,8,9,10,11), lamb meat from Imereti – (4), natural conservants-(1,2,4,5,6,7,8,9).

## **Interrelation between Georgia and EU**

Relationships between Georgia and European states dates back for centuries and their foundation is supposed to be in ancient times as evidenced by archeological discovery of remains of two European human beings so called “Zezva and Mzia”. The archeological diggings continue in Dmanisi, Georgia.

The consolidated close relationships with Europe in political and economic sphere were established from antique times. This is vividly exposed in Greek legend of the Argonauts who arrived in Georgia for “Golden Fleeth” and they mastered skills of gold manufacturing.

Recent cooperation can be described with legal acts development:

- In 1992 the EU recognized Georgian independence and started active cooperation therewith.
- In 1994 Georgia started working on engagement for partnership and cooperation with EU. On April 22, 1996 EU member states representatives, the EU President and the President of Georgia signed “Partnership and Cooperation Agreement” (Partnership and Cooperation Agreement - PCA), which came into force in 1999.
- In years 2001-2003 Government of Georgia approved “National Program on harmonization of Legislation of Georgia with Legislation of EU” by Decree dated May 8, 2004.
- In June 14, 2004 the EU Council of Ministers approved Decision on engagement of Azerbaijan, Georgia and Armenia in European Neighbourhood Policy. Therefore commercial economic relations between Georgia and EU entered the new phase and got more intensive feature.

- In June, 2005 the changes and amendments in Law “On Copyrights and Adjacent Rights” were made. By the mentioned changes the Law reflects several requirements of EU (91/250/EEC, 92/100/EEC, 93/98/EEC, 2001/29/EC, 2001/84/EC, 93/83/EEC, 96/9/EC) aiming to be close with the principles of EU first guideline.
- In 2005 Georgia became one beneficiary out of two (Moldavia) in the CIS area, though in worldwide view became one beneficiary of a few left out of 15 states according of GSP scheme (EU GSP +), discounts for sustainable development and efficient governance. This is new important factor in point of promotion of export from Georgia.
- From January 1, 2006 took benefits as GSP+ beneficiary status with Turkey.
- In December, 2005 the changes and amendments were made in Law of Georgia “On Commodities Trademarks”.
- In December, 2005 by changes in Law of Georgia “On Border Activities connected with Intellectual Property” has been achieved further harmonization with World Trade Organization TGIPS requirements.
- In 2005 the ultimate reform of technical regulation and standards sphere has been carried out. The state has been completely transferred to Standards voluntariness system (Georgian Law), achieved separation between functions of state and private sectors in sphere of quality provision. As a result of changes made in Law “On Certification of Production and Service” the ultimate principles of EU guideline 2001/95/EC on goods harmlessness were elucidated.
- In years 2006-2007 technical regulations in metrology sphere was approved .
- On November 14, 2006 Agreement on plan of actions of European Neighbourhood Policy between EU and Government of Georgia was approved which support implementation of cooperation strategic objectives and economic priorities.
- On July, 2006 new customs codewas approved which mainly conforms the EU Customs Code (regulation 2913/92) and secondary Customs Legislation (Regulation 2454/93).
- In years 2006-2008 numbers of acts were approved subjected to law on food harmlessness and the plants protection sphere as well according of EU Regulations.
- Since 2007 the legislation harmonization bahs been continued according to Agreement on plan of actions of European Neighbourhood Policy (ENP AP).

- In 2008 the first step was made based on EU Customs Legislation appropriate risk directed to introduction of customs control mechanisms.
- In 2008 EU extended general system of preferences with three years validity (2009-2011) for efficient governance and sustainable development (GSP+).
- In May, 2008 the Polish Company CASE had completed study connected with exploration on opportunities to make Free Trade Agreement between EU and Georgia. According to study the statement has been made that – the positive effect to be given to Georgia would be conclusion of Free Trade profound and comprehensive Agreement.
- On December 3, 2008 was published European Commission Communiqué “On Eastern Partnership”. “Eastern Partnership” with eastern neighbouring states of EU (Ukraine, Moldova, Georgia, Azerbaijan, Armenia, and Belorussia) is an update form of a partnership.
- On May 7, 2009 in Prague summit on eastern partnership (27+6) was held, where was adopted the joint declaration.
- On November 30, 2009 in Brussels was signed the joint declaration “Partnership for Mobility”.
- On February 16, 2010 officially started cooperation between EU and Georgia in framework of “Partnership for Mobility”.
- On May 10, 2010 in Brussels Mandate was approved submitted by European Commission on Agreement concerning association with Georgia by General Affairs Council connected with starting negotiations thereof.
- In June 17, 2010 Agreement for routine on facilitation of visa formalities was signed.
- On November 22, 2010 Agreement on re-admission was signed.
- On July 15, 2010 talks concerning association were started.
- On December 2, 2010 Agreement “On General Aviation Space” was concluded.
- In 36-th Session of Commission on Georgian Integration into EU the documents were review checked according to remarks of European partners and elaborated due to references of European Commission: “Strategy on Competition Policy”; “Strategy on Food Harmlessness”; “Strategy of Standardization, Accreditation, Evaluation of Conformity, Technical Regulation and Metrology”; and “Program of Introduction of Legislation Reforms and Technical Regulations”.

## Macroeconomic Overview of Georgia

- In 2010 the GDP growth rate amounted to 6,4% (preliminary data). GDP in current prices amounted 20 791 million GEL (11 663 million USD) and GDP per capita equaled to GEL 4 686.0 (2 629.0 USD).
- In 2010 the inflation rate amounted 11.0%. (In 2009 the inflation rate in Georgia was 3.0%; in 2008 the inflation rate in Georgia was 5.5%; in 2007 inflation rate was 11.0; in 2006 the inflation rate was 8.8%).
- The FDI's in 2009 amounted to 658.4 mln USD.
- The FDI's in 2010 amounted to 553.1 mln USD.
- In 2010 the foreign trade turnover amounted to 6678.0 mln USD (21.0% increase in comparison with the same period of the last year), where the export was 1583.0 mln USD (40.0% increase in comparison to the same period of the last year) and import – 5095.0 mln USD (17.0% increase in comparison to the same period of the last year). The negative trade balance of Georgia was equal to 3512.0 mln USD (9.0% increase in comparison same period of the last year). The ratio of import coverage by export was 31.1 per cent.

Table 1. Main Economic Indicators (2006-2010)

Specification	2006	2007	2008	2009	2010
Real GDP Growth (%)	9.4	12.3	2.3	-3.8	6.4 (preliminary data)
Foreign trade turnover (mln USD)	4670.4	6456.9	7555.8	5513.3	6678.0
Export (mln USD)	992.6	1240.2	1497.7	1135.0	1583.0
Import (mln USD)	3677.8	5216.7	6058.1	4378.3	5095.0
Exports (growth,%)	14	32.5	21.5	24.1 (reduce)	40.0
Imports (growth,%)	47.8	41.8	16.2	30.6 (reduce)	17.0
Inflation Rate (%)	8.8	11.0	5.5	3.0	
Foreign Direct Investments (mln USD)	1 190.0	2 014.8	1 564	658.4	553.1 (Preliminary data)
GDP (mln USD)	7 762	10 171	12 800	10 767	11 663.0 (preliminary data)
GDP per capita (USD)	1 764	2 315	2 921	2 455	2 629.0 (preliminary data)

Source: Above mentioned table is made according to data of the Ministry of Economy and Sustainable Development of Georgia ([www.economy.ge](http://www.economy.ge)) and statistics department ([www.geostat.ge](http://www.geostat.ge)).

## **Foreign direct investment in Georgia**

Georgia is the state in Eurasia bordered in North by Russia, Eastern side of Black Sea coast, in South by Turkey and Armenia and in South-East by Azerbaijan. The transcontinental state is situated at the crossroad of South-East Europe and West Asia, though from the point of social political and cultural view it is the part of Europe. The attractiveness to invest in Georgia can be summarised in ten points:

1. Political and Liberal Economic Reforms
2. Attractive Macroeconomic Environment
3. Competitive Trade Regulations
4. Liberal Tax Code
5. Privatization of State Property
6. Modernized Business Licensing System
7. Reformed Technical Regulation System
8. Strategic Geographic Location
9. Competitive Banking Sector
10. Georgia - A Country of Ancient Culture and Traditions

Reforms and initiatives, carried out by the Georgian Government since 2003, aiming at improving investment climate in the country, produced positive results as evidenced from international studies and evaluations:

The Foreign Direct Investments (FDIs) in 2005 amounted to 449.8 mln USD (499 mln USD in 2004). The decline from the previous year was caused by the completion of Baku-Tbilisi-Ceyhan oil pipeline construction project, however non-pipeline investment increased by 44 mln USD from 139 mln USD in 2004 to 183 mln USD. FDIs in 2006 amounted to 1,190 mln USD (increased by 740.2 mln USD in comparison to 2005). FDIs in 2007 amounted 2 014.8 mln USD (increased by 824 mln USD in comparison to 2006). FDIs in 2008 amounted 1 564 mln USD (decreased by 450 mln USD in comparison to 2007). In 2009 FDIs amounted 658.4 mln USD (decreased by 905.6 mln USD in comparison to the same period of 2008). The Foreign Direct Investments in 2010, (preliminary data) amounted to 553.1 mln USD (decreased by 16% in comparison to the same period 2009).

Table 2. Main Countries' Share in the Stock of FDI in 2010

Country	Volume (mln USD)	% of total
Total	553.1	100
Netherlands	143.2	25.9
USA	108.4	19.6
Russia	51.3	9.3
International Organizations	50.2	9.1
Azerbaijan	46.6	8.4
United Arab Emirates	39.9	7.2
Turkey	37.5	6.8

Source: Above mentioned table is made according to data of the Ministry of Economy and Sustainable Development of Georgia ([www.economy.ge](http://www.economy.ge)) and statistic department ([www.geostat.ge](http://www.geostat.ge)).

Table 3. Direct Investments by EU Countries in Georgia (mln USD)

Countries	2006	2007	2008	2009	2010
Total	1190	2014.8	1 564	658.4	553.1
EU	407.1	1132.7	476.6	224.1	174.7
Austria	10.7	11.4	51.5	14.5	5.8
Czech Rep.	15.0	227.9	34.9	15.1	0
Denmark	42.5	158.1	0.3	0.1	0.02
UK	186.8	145.5	149.0	63.5	8.6
Spain	0	3.6	5.5	0	0.3
Estonia	0	0.6	0	4.6	0
Germany	20.4	57.0	40.6	3.7	10.8
Ireland	1.2	0	0.22	0.05	0.09
Italy	47.2	15.2	6.0	1.2	0.4
Cyprus	40.1	148.6	26.2	0	0
Luxembourg	0.3	9.2	5.7	6.2	7.6
Netherlands	18.5	299.3	135.9	105.7	143.2
Poland	0.5	0	0.02	0.006	0.02
Greece	2.5	1.3	0	2.5	6.9
France	17.2	43.7	8.2	11.9	0
Sweden	0.2	6.8	7.6	0	1.6
Hungary	0.3	1.0	1.0	0	0
Latvia	0	3.1	0.76	0	0
Lithuania	3.4	0.3	0	3.4	2.9
Bulgaria	0.3	0.02	0.01	0	0
Belgium	0	1.6	0.06	0.1	0.02
EU share (%)	33.9	56.2	30.5	29.5	31.7

Source: Above mentioned table is made according to data of the Ministry of Economy and Sustainable Development of Georgia ([www.economy.ge](http://www.economy.ge)) and statistics department ([www.geostat.ge](http://www.geostat.ge)).

Foreign Direct Investments from EU member countries in 2006 amounted to 407.1 mln USD (that on 163.4 mln USD increase a parameter of the last

year). Despite a nominal growth, however, the EU share in total investments sharply dropped in both annual and quarterly terms. This can be explained by the fact that the South Caucasus (Shah-Deniz) gas pipeline entered the final phase of its construction. In 2007 FDIs from EU member countries amounted to 1132.7 mln USD (increased by 725.6 mln USD in comparison to 2006). In 2008 FDIs from EU member countries amounted to 476.6 mln USD (decreased by 656.0 mln USD in comparison to 2007). In 2009 (preliminary data) FDIs from EU member countries amounted to 224.1 mln USD (decreased by 252.5 mln USD in comparison to same period 2008). The Foreign Direct Investments from EU member countries in 2010 (preliminary data) amounted to 174.7 mln.USD.

### **Georgia and Poland**

The way passed by Poland before entering EU in 1994-2004 and continue to go Georgia has to pass now. Therefore the great importance is given to sharing experience accumulated with Poland.

Before deliberation of present relationships let us review historical dates:

- as far as in XV century when creation of counter-Ottoman coalition by separate states became actual King of Kartli Konstantin sent his Ambassadors to the King of Poland Alexander Jagelon. Georgian diplomatic mission aimed searching of allies against Ottoman Turkey. Later the King of Poland Ian III Sobeski tried to establish contacts with Georgia;
- sometimes the Polish Kings sent Georgians living in Poland as Ambassadors to Iran, one of them was Ambassador Bogdan Gurjitski of Georgian origin who in 1668 was sent to Iran with emergency mission by the King of Poland;
- In XVII century King of Kartli Vakhtang V sent the letter to Ian Kazimir, King of Poland which contained Georgia-Poland relationships;
- among catholic missionaries who was living engaged with their activities in Georgia in Middle Ages was Ian Rota, public figure of XVIII c.
- from time to time tsarist Russia exiled the Polish patriots to Georgia and Georgian to Poland. For example, the 1830s after suppression of strike directed against tsarism in Poland about 3000 Polish patriots were exiled to Georgia;
- some Georgians lived and activated in Poland since XIX, two high-ranked Georgians from Russian administration were known in Poland – General Petre Bagrationi, who was

working in Warsaw-Vienna as a Head of Railway and Alexander Imeretinski who was General Governor of Warsaw and Military Chief of Warsaw county;

- Georgian scientists, journalists, physicians carried out activities in Poland including famous clerical person, Archimandrite Grigol Peradze;
- from XIX Georgian-Poland ties were extended in culture and education spheres. In a wake of XX c. many Georgian students got education in Higher Education Entities of Warsaw, including Noe Jordania – leader of the first independent Government;
- at the end of XIX and beginning of XX c. Georgia-Poland economic relations were expanded. In Warsaw Georgian cognac and wine were sold along with silver crafts and silk, there were Georgian wine store-houses. The Caucasian mineral waters were in great demand;
- in the 1920s Georgia-Poland Club was established aimed to establish close cultural, public and economic relations between Georgians and Polish people;
- since 1918 when Georgia and Poland became independent from Russian empire, the two states established large-scale, diplomatic, political and military relations;
- In years 1920-1921 the Embassy of Georgian Democratic Republic functioned in Warsaw under leadership of Giorgi Sidamon-Eristavi, First Ambassador of Georgia in Poland;
- on April 28, 1992 the diplomatic relations between Georgia and Poland were renewed. In 1997 Embassy of Poland Republic in Tbilisi was established. Since 2005 the Embassy of Georgia in Poland Republic has functioned in Warsaw;
- in 2008 while Russian aggression the Poland was the first to support Georgia;
- at present time between Georgia and Poland close partner relations were established the Poland was transformed from the partner state into strategic partner of Georgia;
- exactly with assistance of Poland implementation of scheduled programs and sharing of experience are being carried out.

In corresponding Ministries of Georgia the Agreements on cooperation were formed, which became the base of implementation of programs directed to local governance, mass-media, tourism development, court reforms and other trends.

Especially should be noted participation in programs for development in rural area. Rural Development Programmes, according to up-to-date CAP from about 350 billion EURO envisaged for 2007-2013 should be spent 96 billion. The Programs objectives are as follows:

1. Adaptation of rural facilities oriented to market;
2. Elaboration of new ways of sale/dealership in competitive markets;
3. Raising of level of economic and employment activities;
4. Development of micro-business;
5. Introduction of innovation and studies;
6. Facilitation of dynamic entrepreneurship;
7. Improvement of management of current processes in agro-food chain;
8. Usage of information technologies.

The portion belonged to CAP till present time is directed to creation of farmers consulting system, which provide information to farmers about which technologies they may use to meet demanded conditions. According to above mentioned solutions creation of consulting service is indispensable task of national governments. At the same time these services either state or regional is also the part of EU innovation systems.

Aiming to teach farmers principles of working and to develop consultation service from year 2008 in the Polish Program for Cooperation-Development which is approved and recommended by Foreign Ministry of Poland Republic was engaged Georgia in the framework of projects “Encouragement of Multi-functional Changes in Agricultural Economics and Small Entrepreneurship” and “Encouragement Rural Multi-functional Development – Border Cooperation”.

In Gdansk Pomorskie Agricultural Consulting Center based on Agreement concluded between Stare Pole Area and Union of Young Agrarikos Scientists of Georgia in years 2008-2009 more than 90 agro-consultants, farmers and persons engaged in farming raised their qualification. They got familiarized with activities of Polish colleagues and the style of working of consultants practically engaged in facilities, interesting and comprehensive lectures. Implementation of experiences is carrying out on the spot, in Georgia.

In this way joint programs are planned for farmers in direction of accounting education.

Since 2008 till present time business relations have been proceeding with Warsaw Institute of Agricultural and Food Economics, its representatives are staying in Georgia.

Such relationships make great contribution into successful proceeding of current reforms in the country.

### **Opportunities for development of food export form Georgia to EU**

EU is the main importer of agricultural products produced in developing states (40% of imported production). Volume of agricultural production exported from developing states to EU market exceeds the total production volume exported from the USA, Japan and Canada to EU market.

In the last decade Georgia got the opportunity to export its production to EU market. Introduction of free trade mode with EU for Georgia is one of the most important topics especially since the closure of such a big sale market as the Russian market. Sanctions established by Moscow over Georgian production much more increased diversification significance of export for economic safety of the state.

As we have already noted, the Polish Company CASE completed survey connected with studying opportunities of Free Trade Agreement (FTA) signed between EU and Georgia. In accordance with survey it was concluded that the positive effect of Georgia will be making of Comprehensive Agreement on Free Trade.

With export trend for Georgia the great potential will be opened. Export of any kind of products from Georgia to EU will be simplified. The ultimate barriers for trade are not represented by tariffs but non-tariff technical barriers which arise when standards and legislation environment of one state differs from another and thereby the product entry into the market become complicated. Already it will be possible to make Agreement on inter-recognition of evaluation systems on conformity of quality. This implies that the Certificates on Quality issued in Georgia will be tacitly recognized in EU area. To achieve all of these is considerably important.

#### ***Discounts in EU Market:***

- Inculcation of promotion conditions for Georgia is the matter of priority, the more so, because it is the EU trade partner.
- Support to export means facilitation of economic rising. The foreign experts reckon that Georgia is able to have the economy oriented to export. Georgian export in EU market is regulated by number of legislation acts.

- Majority of partners of Georgia are the members of World Trade Organization (WTO). Georgia takes benefit of priority along with other 149 member states.
- Georgian agro-industrial sector has large perspective to master the European market. Easing of trade regiments creates useful conditions for export of the products including fruits, vegetables, juice, jams, fruit concentrates, beverages, natural fruit juices, red and white wines, brandy, spirits, spices, tea, mineral waters, Georgian natural silk, plants with curative properties.

### *System of Generic Preferences*

- Only two states of CIS take benefits from system of generic preferences – “GSP+” with EU and Turkey. Among them is Georgia (together with Moldova). This is the important factor in view of export promotion from Georgia.
- Above mentioned routine is beneficial for agrarian manufacturing, though GSP+ doesn’t envisage discounts for wine products main varieties, sugar, tea and other products of Georgian profile. It may take positive part while exporting raw material and mineral waters to EU market.
- According to 2009 data the agro-products export comprises \$340 million that is 30% of total export.
- Import of agricultural production involved \$818.5 million that is 18,6% of the whole import.
- Production of preferential regime is exported from 23 states of EU out of 27 members. 73,44% of export falls seven states; Germany – 20,60%, Italy – 14,47%, Holland – 9,18%, Spain – 8,34%, Greece – 7,63%, France – 7,22%, Bulgaria – 6,11%.
- In year 2010 in the framework of preferential regime with EU states Georgian export benefits (utilization) involved \$3, 8 million.
- In 2010 in EU the total export of \$205 million was implemented. Out of it products exported with GSP+ routine involved 36, 6%.
- Based on 2009 data according to export carried out from Georgia to EU the biggest partner was Bulgaria, its portion in EU export comprised 34, 6%. The second place was held by Italy. Despite decrease of Georgian export to Germany (by 30, 3%) this state holds the third place. Spain took the fourth place. It should be noted that as a result of impressive boost of export from Georgia to Belgium (88%) this state appeared to be the fifth biggest partner among EU states.

- Last year was characterized by yearly boost of chestnut export from Georgia to EU states (by 2.2). Georgian chestnut met demands mainly of Germany (25, 8%), Italy (16, 4%), Czech (14, 3%) and Spain (13, 8%). It also should be noted that export to EU of this product involves about 66% of the total esport.
- In 2009 63% of mineral and nitrogen fertilizers export from Georgia fell on EU states. According to yearly cost index, this category of export dropped to 35, 2% that is explained by interruption of export of this products to UK and France. The main customer of nitrogen fertilizers export to EU is Bulgaria (36, 2%), Greece (15, 3%), Spain (14, 5%), Romania (14, 2%) and Italy (13, 7%).
- Last year in comparison with former year export of Georgian mineral waters to EU was sharply reduced (by 37, 5%). 84% of mineral waters was exported to Lithuania.
- Export of natural wines has been significantly reduced (by 15%). It is mainly connected with drop of export of this product in Lithuania by 2, 2, so the portion of export of wine products to this state in comparison with the last year was reduced from 32, 6% to 17, 6%. Among European customers Poland was distinguished with its share that comprised 30%.
- In 2010 24 varieties of products were exported to EU market with preferential routine with amount of \$75.09 million. Among them 75.01% of export falls on three varieties (\$56.32 million): hazelnut – 31, 01% (\$23, 28 million), ammonium nitre – 28, 42% (\$21, 34 million), ferroalloys – 15, 57% (\$11, 69 million).
- 2010 trade turnover in comparison with corresponding period of last year has been increased by 17, 7%, out of it the products export has been increased by 41, 2%.

### ***Problems***

The list of the goods of Georgian export which are not going to European market is still large because the agrarian sector is not ready to meet demands of the European markets (certain standards). The competition rates of EU states market are rather high. Unfortunately the corresponding products for EU market are not produced here and this is still the problem of Georgian export.

There are actual and subjective factors preventing manufacturing of products with competitive abilities. Survey of agrarian sphere shows, that:

- In years of independence significant reduction of manufacturing of agricultural products in Georgia falls on two periods: 1991-1994 and 2006-2009. After the

first period (1991–1994) tendencies the manufacturing boost were observed, as to the second period (2006-2009) it is characterized by comprehensive downward curve dynamics.

- After announcement of independence Georgia came out of USSR political and economic close space and became the subject of the world market and Georgia had no experience of functioning in these conditions.

- Reality is as follows:

- Reduction of product manufacturing such as sowing, seedling, husbandry, drop to critical verge of food safety of the country, deformation of products export-import up 1: 3.5.

- Reduction of usage of weed and pest-killer chemicals, productive seeds and husbandry, irrigated and drained lands. Irrational utilization of technique.
- By using of extensive methods creation of natural facilities not able for competition.
- Owners of 24,6% of facilities own 0,25 hectares: 20% - from 0,25 to 0,50 hectares; 21,1% - from 0,50 to 0,75 hectares; 18,6% - from 0,75 to 1,0 hectares; 17,1% - from 1,0 to 1,50 hectares; 0,4% - from 1,5 to 2,0 hectares and over 2,1 hectares are owned by only 0,6% of facilities owners. Deficit of skills, financial recourses, weakened science absence of motivation of intellectual references.
- All kind of migration, first of village in comparison with towns, reduction of live birth.
- Increasing the number of people being under verge of poverty more in rural area in comparison with towns.

## **Conclusions**

The course of Georgia for entry to Europe should be directed to manufacturing of eco-products. Georgian agro-climatic conditions and diversity of plants give full opportunity to manufacture ecologically pure products. Creation of strong infrastructure for information consulting service represents important condition for development of agrarian sphere. By merging of science and practice to deepen cooperation between the state and the private sector and consolidation of their ties and trust to each other. By extension of agro-consulting centers network will be founded new model of business, creation of rural jobs and boost of population revenues.

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