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Changes of the Czech agriculture after accessing to the EU

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Abstract. Czech Republic has been a member of the European Union since 1st May 2004. This date became a starting point for an application of the Common Agricultural Policy in the Czech Republic. Because of significant structural and political changes which have occurred in last decades, the Czech Agriculture meets nowadays specific problems within the European Single Market. Adopting the CAP rules has also changed conditions for farming. The article analyzes an impact of rules implemented since joining the EU with respect to the historical development and explains reasons for specific position of the Czech agriculture within the European agriculture.
Key Words: Czech agriculture, European Union.

Introduction. The Czech agrarian sector has gone through radical changes after the Second World War. Compulsory switch to cooperative and state farming systems during the centrally planned economy period (1948–1989) influenced essentially a development of agricultural structures and activities. In view of the fact that an increase of agricultural production and maintaining low consumer prices were the main aims of this period, a strong support had been applying within the whole agrarian sector before 1989. Political changes after 1989 resulted in a substantial transformation of the whole agrarian sector. Agricultural support was reduced and agriculture fell into crisis, partly also due to an absence of a relevant agricultural policy. The development of agriculture was accompanied by serious economic problems in the 90´s, which reflected the general economic situation of the country at that time.

Joining the European Union in 2004 was accompanied by next significant changes within the Czech agrarian sector. These changes concerned mainly an adoption of the Common Agricultural Policy (CAP) and incorporation of the Czech agrarian sector into the Single Market. Specific agricultural structure can be considered to be one of the most important factors of a distinct position of the Czech agriculture within the Single Market (Doucha 2004; Tomšík 2009). An implementation of the CAP and opening of the markets has brought new opportunities as well as new threats for Czech farmers.

Materials and Methods

Basic Economic Characteristics of the Czech Agriculture and Initial Conditions. he Czech Republic belongs with its total area of 7,866 thousand hectares (ha) to middle sized EU-countries. Although the agriculture has not a great importance within the national economy (1.85 % of the total GDP in 2008), the total utilised agricultural area (UAA) covers with 4,244 thousand ha more than a half of the total territory of the country (Czech Statistical Office 2010). Prevailing part of the total UAA is represented by arable land (3,032 thousand ha) which determines the production structure based on cereals, oilseeds and other crops of the temperate climate belt. More than 50 % of the UAA is situated in less favoured areas (LFA). The above described proportions between UAA and arable land can indicate following problem resulting from the former development: a relatively high share of LFA and a high share of arable land mean that the crop production has been often situated into unsuitable areas where worse economic results are achieved. Although the share of grassland has been increasing in last decade (to 978 thousand ha in 2008), the process is still slow and insufficient.

The former Czechoslovakia became a part of a block of socialist states where centrally planed economy was implemented. This radical political and economic changes concerned agricultural sector as well. A process of collectivisation of original private farming system resulted into a shift to large-scale production and completely new agricultural structure. Because one of the main aims of that period was to reach self sufficiency at products of the temperate climate belt, a strong support of agricultural production was applying. The agricultural structure resulted into establishment of two types of agricultural enterprises – cooperative farms owned and managed collectively by farmers (members) with an average size about 2,500 ha UAA and state farms owned and managed by the state with an average area about 6,000 ha UAA.

Political changes in 1989 resulted into building-up a new economic system based on market economy. The new economic conditions encouraged next changes of agricultural structure. The processes of transformation, restitution and privatization resulted into a specific structure of the Czech agriculture of various types of agricultural enterprises. The former large enterprises were transformed or privatized into new cooperative farms, joint stock companies (JSC) or limited liability companies (LLC), the resituated land became a base for rebuilding of family farming. Such development has had a consequence that problems and needs of the Czech farmers became very variable.

Evolution of the Agricultural Policy in the Czech Republic. Not only a huge variety of farming structure caused by changes in ownership became the main problem after 1989. The general economic decline as a result of economic changes and quick liberalization and a collapse of the former agricultural policy resulted into serious problems of the whole agrarian sector. A decline of agricultural production was accompanied by a decline of competitiveness and for the most farms became their survival uncertain.

Since the middle of the 90´s, the accession preparation became one of the main aims of the Czech Republic. A weak agricultural policy needed to be reformed in order to be able to adopt obligations resulting from implementation of the CAP. The pre-accession agricultural policy was divided into two basic stages – revitalisation and adaptation. The first one (revitalization) should stabilize agrarian sector; the second one (adaptation) was aimed at meeting standards required to implement the CAP.

Results and Discussion

EU-accession and Agriculture Farm Structure. Negotiations concerning EU-accession were observed carefully both by farmers and the whole professional community. An expected impact of implementing the CAP was intensively discussing. The transformation of the Czech agriculture during the 90´s showed that a considerable shift to family farming would not occur. The CAP was built-up to meet requirements of West European agriculture based on family farming, whereas the Czech large-scale production faced other types of problems.

One of the main distinguishing features of the Czech agriculture is its specific farm structure – a result of the above described post-war development, which resulted into a special structure of agricultural enterprises with a variety of legal forms. On the one hand, the agricultural structure is represented by small family farms; on the other hand, large enterprises in forms of cooperatives, joint stock companies or limited liability companies form a character of the Czech agriculture. The current structure was developing during the 90`s and the EU-membership did not bring essential changes as illustrated in the Table 1. Private family farms cultivate more than one quarter of the total agricultural land. The share of family farms on UAA is slightly increasing, but this trend is continuing from the pre-accession period. Next increase of the proportion is not expected. Family farm cultivate in average 52 ha UAA (2008) [9]. Nearly three quarters of the UAA are cultivated by much larger cooperatives or companies. As evident from the

Table 1, the development of the number of agricultural cooperatives and companies was not influenced by implementing the CAP. A decline of cooperatives and increase of joint stock companies indicates a better adaptability of joint stock companies to current economic conditions. As joint stock companies as cooperatives belong to largest agricultural enterprises, their average area reached 1,427, respectively 1,448 ha in 2008. Limited liability companies are smaller with an average area of 490 ha (2008) (Czech Statistical Office 2010). The total numbers and average area of various types of agricultural enterprises are presented in the Table 1.

Table 1

Development of farm structure in the Czech agriculture

Legal form:	*2000*		*2003*		*2008*	
	No.	Share of UAA (%)	No.	Share of UAA (%)	No.	Share of UAA (%)
Family farms (over 3 ha)	20.115	23.5	19.975	25.4	19.193	28.1
LLC	1.171	21.7	1.181	21.4	1.655	22.9
JSC	519	21.6	536	24.2	568	22.9
Cooperatives	723	29.3	609	25.6	574	23.5

Source: Ministry of Agriculture, the Green Report.

Agricultural Production. One of the main problems of the Czech agriculture, which has been persisting since the early 90´s and which is still often highlighted by farmers and their unions, is a continual decline in the agricultural production, both in natural and monetary terms. This negative trend was influencing the Czech position during negotiations about integration of the Czech agriculture into the CAP. A weak agricultural output did not enable to negotiate desired conditions for Czech farmers. Setting-up the milk quota can be a typical example; the milk production drop during the reference period limited possibilities to acknowledge the original production level. The development of the total agricultural production in the Czech Republic is presented in the Figure 1.

Other disputable point of the accession negotiations concerned the importance of the agriculture within a general position of the Czech Republic. The agrarian sector has never been of a primary importance in the Czech Republic contrary to other member states and priorities of the other sectors were taking into account during the negotiations.

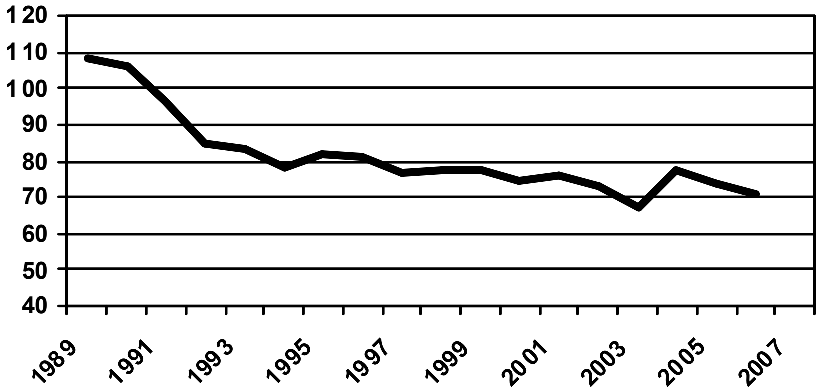

Figure 1. Total agricultural production (at constant prices 1989, bn. CZK). Source: Ministry of Agriculture, the Green Report.

An adaptation to market conditions during the 90´s was negatively influenced by a rapid increase of input prices into agriculture which was not followed by an adequate increase of output prices. The growth of input prices was influenced by a collapse of many domestic agricultural suppliers and their replacement by foreign suppliers (offering inputs for higher prices), whereas the customers of agriculture were not prepared (or willing) to accept changes in the price level. The effect of price scissors in the Czech agriculture is illustrated in the Figure 2.

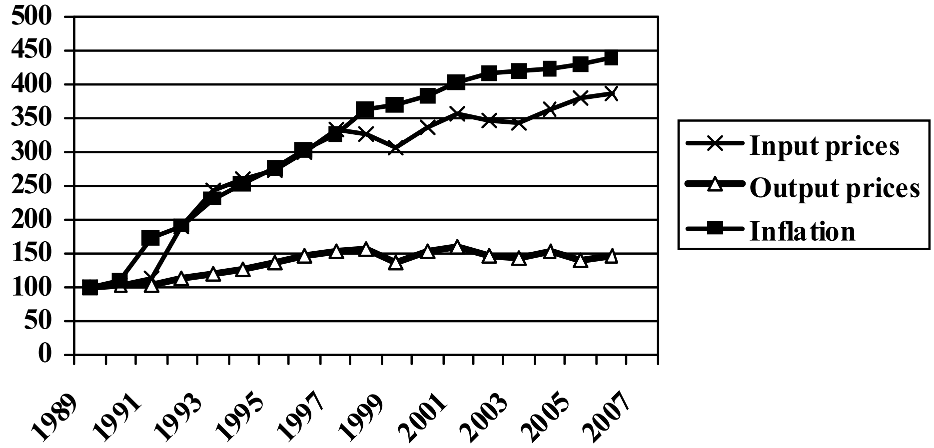

Figure 2. Price Development and Inflation (1989=100). Source: Ministry of Agriculture, the Green Report

Implementing the CAP – Impact of Direct Payments. An essential change after implementing the CAP-rules came with introducing of direct payments. The Czech Republic decided to introduce the Single Area Payment Scheme (SAPS) characterized by uniform payment per hectare. Because implementing of direct payments would lead to radical increase of farm income, there was negotiated to start just with 25 % of the old member states (EU-15) level in 2004. This percentage has been increasing step by step to reach a comparable level of EU-15 in 2013. Additionally, a support from national sources (top-up) can be used to bring down a difference between the Czech and EU-15 payments. This transition period became an object of criticism because of generating different conditions for farmers in old and new member states. On the other hand, the financial inflow has been very important for the Czech agriculture despite lower level of direct payments. More than CZK 12 billions comprised the total support of the Czech agriculture in 2004 (the first year in the EU), contrary to about CZK 4 billions one year before. The step by step increase of payments from 2004 to 2008 is presented in the Table 2.

Table 2

Direct payments and other market support (CZK Million)

Year	*National*	*EU*	*Total*
2004	6,185	6,302	12,487
2005	6,948	7,339	14,287
2006	7,473	9,308	16,781
2007	7,322	10,479	17,801
2008	7,093	11,693	18,786

Source: Ministry of Agriculture, the Green Report

An introduction of the CAP-rules in 2004 has brought a positive shift which turned economic results of the Czech agriculture into black figures. With respect to economic results, the EU-membership has brought unambiguously positive effect as shown in the

Figure 3. A slump in profit reached in 2009 was caused by generally bad economic situation which influenced agriculture as well.

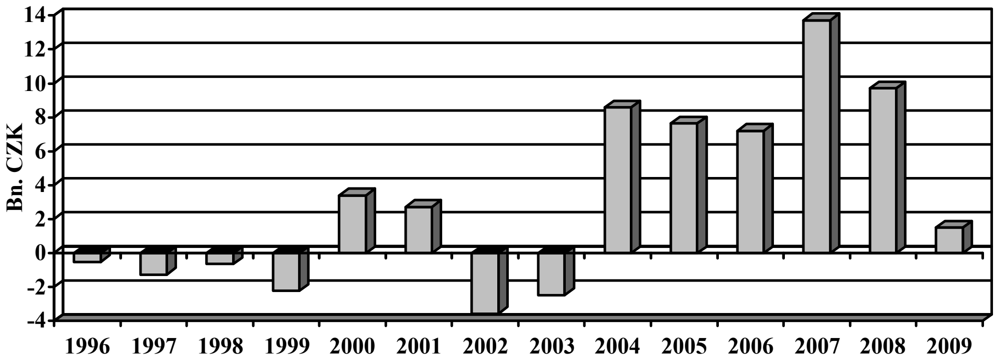

Figure 3. Profitability of the Czech Agriculture. Source: Ministry of Agriculture, the Green Report

Agricultural Production and EU-Membership. The most important commodities of the Czech agriculture are cereals, oil seeds, potatoes and sugar beet within a crop production, and production of milk, beef, pigs and poultry within an animal production. The economic situation of the Czech agriculture is thus sensible to a development of these commodities.

The main commodity of the crop production – cereals – did not record any sudden change after implementing the CAP rules. It was partly caused by a former adaptation to the CAP which started in 2000. The production area fluctuate around 1.5 million hectares and it has been more stabile in recent years compared to the situation before becoming the EU-member. The total production was ranging from 6.4 to 8.8 million tonnes in the period 2004 – 2008, according to achieved yield. These figures prove that average yields achieved in the Czech Republic are still lower compared to West European countries. The first two years in the EU were achieved higher yields which pushed down the prices. The positive effect of an intervention under the CAP-rules could be observed.

The production area of oil seeds has been extended from 382 thousand ha in 2004 to 487 thousand ha in 2008; that means by 27 %. Nearly 80 % of the total oil seeds production area is used for growing rape which is a representative crop of oil seeds production. Growing rape is profitable in the Czech Republic in a long term horizon. The profitability was strengthened after accession to the EU by introducing of SAPS and top-ups and also by a support of methyl ester production as a fuel additive (since 2007 compulsory addition) (Foltýn 2008).

On the other hand, an essential production drop concerned sugar beet, although very good yields and quality were achieved in the first years in the EU and the Czech Republic achieved a positive trade balance. The production area declined from 71 thousand ha in 2004 to 52 thousand hectares in 2009 (by 27 %) and the total production fell from 3.5 million t to 2.6 million t in 2009 (by 26 %). The reform of the sugar common market organisations was the main reason for this development. During the 90´s, the sugar industry in the Czech Republic has come into hands of main European players. The offer to compensate a reduction of sugar production and giving up the quota has led to a decision of a big producer Eastern Sugar to close an essential part of its Czech production capacity. The Czech national quota has been reduced by 22.5 %.

More visible impact of the accession to the EU can be observed in the animal production. The EU-membership did not stop a reduction of number of milk cows (from 437 thousand in 2004 to approximately 400 thousand in 2009). The set up milk quota at the level 2.68 million t seemed to be too low with respect to historical production before the reference period. On the other hand, increasing milk yields were able to compensate declined number of milk cows and the Czech Republic did not face problems with exceeding the quota as former expected. The EU-membership has influenced the situation in a milk sector also by changes in trade with milk and milk products, where an increase of imports was faster than an increase of exports.

A drop in heads of cattle (total) was not slowing down since joining the EU, although the reduction was not enormous (from 1.42 million in 2004 to 1.36 million in 2009). The situation was generally influenced by a decline of demand. The CAP-mechanisms introduced payments based on livestock units within national top-ups.

Much greater decline is concerning the pig breeding and pork production. Whereas 3.13 million pigs were kept in 2004, less than 2 millions were reported in 2009. The situation was influenced by changes in trade flows after joining the EU which is described below.

The situation in poultry production has been characterized by an increase of poultry meat demand. This situation is better compared to the other animal production sectors; on the other hand, requirements to change battery farming reduce economic effects. An adaptation of CAP-rules within poultry production is thus related to high investments costs.

Lower production efficiency of the Czech Agriculture compared to the EU-15 is given also by the structure of agricultural production. Only small structural changes in the production have occurred since 2004. Contrary to countries like the Netherlands, crop production is prevailing in the Czech Republic with a proportion of 51 % of the total agricultural production. 43 % represents the animal production; the rest of 6 % belongs to other production (Fialová 2010).

Slumps in prices for milk and pork just leys stress on a reality that the profitability of animal production meets much more problems. Animal production is more suitable on mixed farms (with both crop and animal production) where an unprofitable production can be kept due to covering the lost from other profitable sectors, rather than on specialised farms.

Labour. The number of labour has been slowing down since joining the EU. But the decrease was not as sharp as during the 90´s in the recent years. In 1989, more than 530 thousand annual working units (AWU) were employed in the Czech agriculture; only about 126 thousand were reported in 2008. The development of labour in the Czech agriculture after accession to the EU is presented in a Figure 4. Many economic indicators show better values expressed on a per AWU basis as on per hectare basis. A decrease of the total number of AWU improves the productivity of labour; on the other hand, unemployment has been increasing in rural areas of the Czech Republic, because of missing alternative job opportunities.

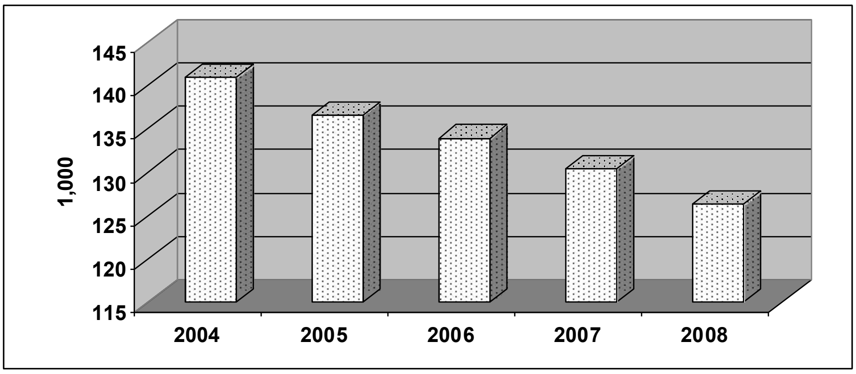

Figure 4. Development of labour in Agriculture after EU joining. Source: own presentation based on CZSO data

According to original expectations, a higher level of subsidies after 2004 should improve an agricultural income. Although a nominal value of the farmers` income has been increasing continuously, it is still laying below an average of the national economy. Whereas an average agricultural wage reached CZK 17,738 per month in 2008, an average of the whole national economy was CZK 23,542. That means the agricultural wage stayed nearly 25 % under the average of the national economy. The development of real wages after 2004 compared to a basis year 1989 is presented in the Table 3.

Table 3

Development of real wages (1989 = 100)

	2004	*2005*	*2006*	*2007*	*2008*
Agriculture	89.0	92.1	95.6	102.2	106.9
National economy	135.4	140.2	145.3	151.7	154.9

Source: Ministry of Agriculture, the Green Report.

Economic Aspects. Economies of scale can be stressed as one of the positive effects of large-scale farming. Producing goods more cheaply can partly eliminate unfavourable situation in the agriculture. But also large agricultural enterprises using advantages of economies of scale are still able to reach profits only due to subsidies, as shown in the Figure 5.

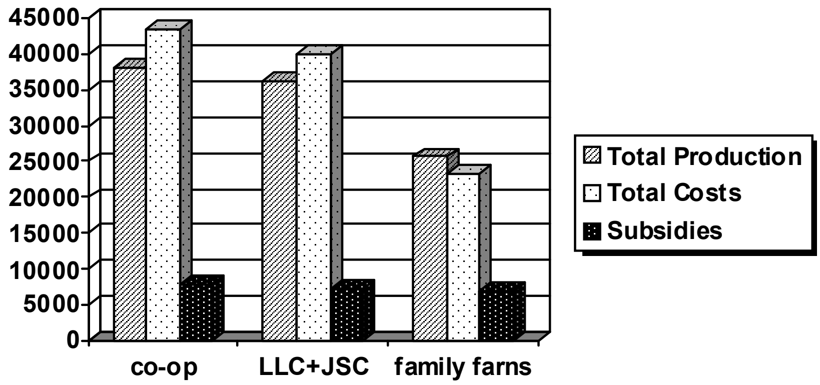

Figure 5. Economic results according to legal forms (CZK/ha UAA, 2007, FADN Sample). Source: UZEI, FADN investigation 2007

The Figure 5 illustrates, that big companies are able to generate a higher value of production per hectare compared to family farms. But costs per hectare are higher in big companies as well.

A lack of capital becomes a general problem of the Czech agriculture also after accession to the EU. Companies and cooperatives are operating with a higher share of debt. The debt to asset ratio reached 29 % at cooperatives, 21 % at JSC, 40 % at LLC and 10 % at private farms in 2007 (UZEI 2009). Big companies still do not use fully their advantage of the size. They should be more capital intensive and to reach corresponding economic results (Poláčková 2008).

Not only the amount but also the structure of capital makes conditions for farming difficult. Large farms are often facing to unfavourable structure of their assets. As shown in the figure 6, large agricultural enterprises have only low share of own land - a basic condition for their entrepreneurial activities. This is due to high proportion of rented land as a result of restitution process. On the other hand, large companies and cooperatives have a high share of immoveable property per hectare, like storages, stables and other buildings. They are often a heritage of former socialist farms, offer too big capacities or they are no more productive.

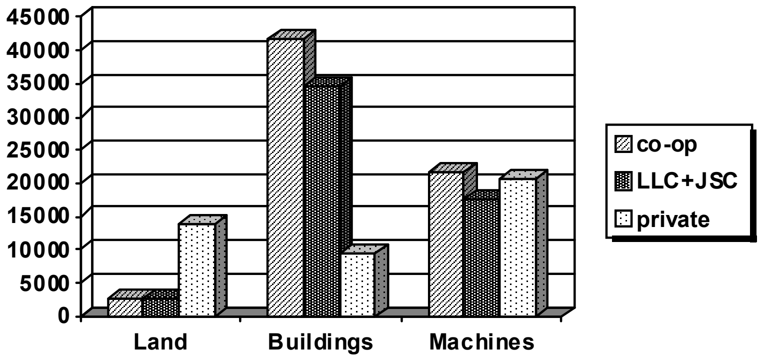

Figure 6. Structure of Long Term Assets (CZK/ha UAA, 2007, FADN Sample).
Source: UZEI, FADN investigation 2007

Agricultural Foreign Trade after EU-joining. The balance of the agricultural foreign trade has been negative in a long term horizon. Before joining the EU, there were some sectors with a positive trade balance, for example trade with cereals, milk and milk products, living animals or beverages. Entering the Single Market changed slightly the structure of foreign trade, but the most important changes concerned the dynamics of trade. After 2004, imports and exports were increasing significantly. But the structure of the agrarian trade is not too favourable. Generally, foreign trade is characterized by export of raw materials with a low added value, and import of proceeded products. The balance of agrarian trade is illustrated in the Figure 7.

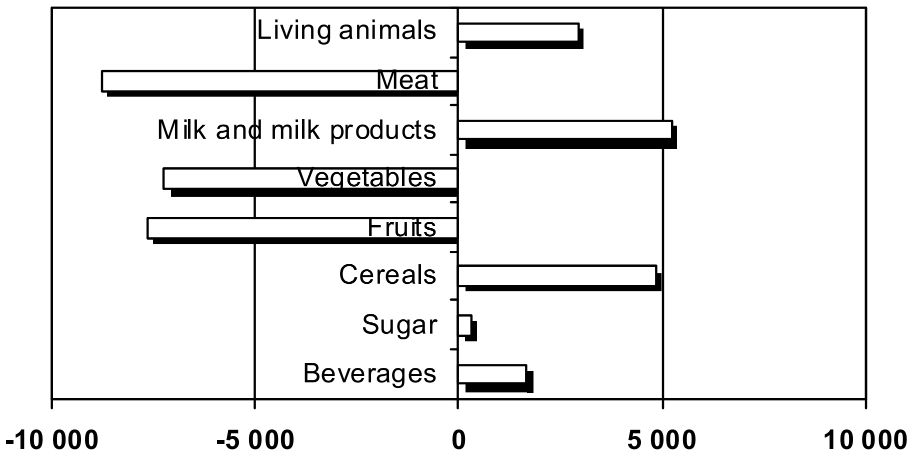

Figure 7. Balance of the Czech agricultural trade (CZK millions, 2007).
Source: Czech Statistical Office

For example, the Czech Republic is a net exporter of living animals but the meat and meat products belong to main imported articles. The trade structure which is not suitable for the Czech agrarian sector is illustrated in Figures 8 and 9. Positive balance was achieving at milk and milk product last years. This is partly caused by opportunities of the Single Market to supply German milk factories, partly by traditional exports of milk products with a higher value added (like special cheese to some Middle East countries).

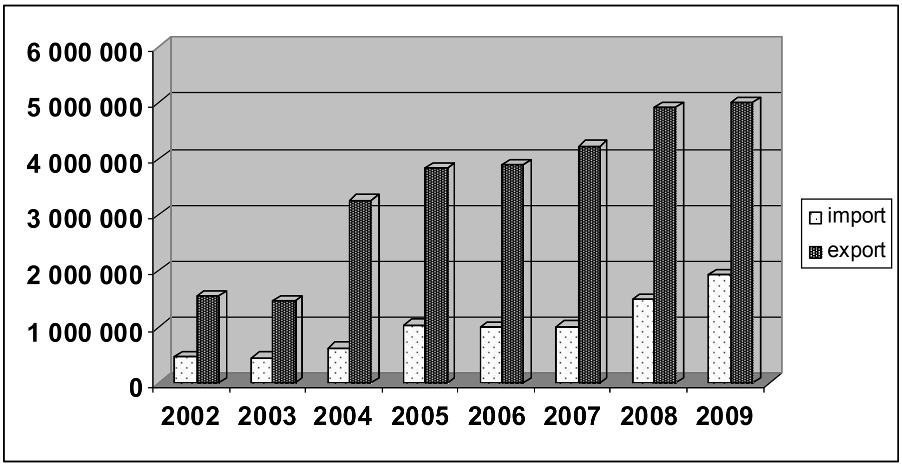

Figure 8: Import and Export of living animals (CZK 1,000). Source: own presentation based on CZSO data

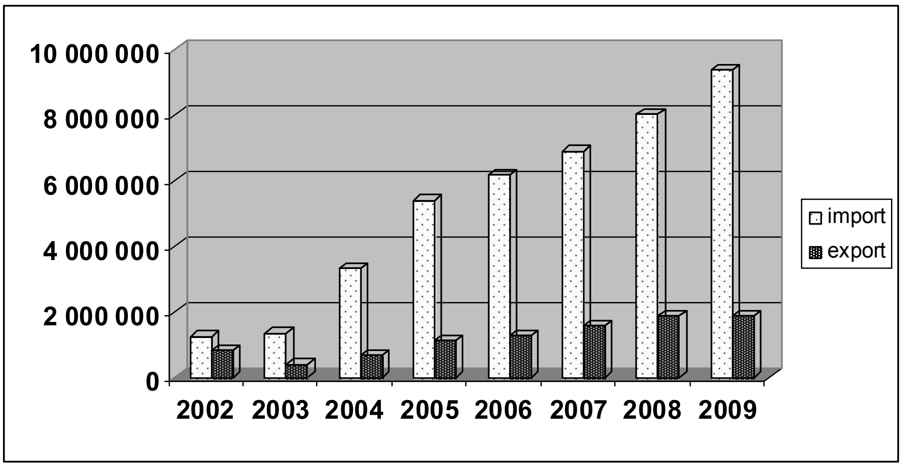

Figure 9. Import and Export of pork (CZK 1,000). Source: own presentation based on CZSO data

Conclusion. Czech agriculture applies the CAP-rules since joining the EU in 2004. Because of a different structure and development in the past, the consequences of the EU-membership are specific in many terms. Some changes influenced by joining the EU offer competitive advantages to the Czech agriculture, some of them have brought more or less negative impact.

The consolidation of farming and concentration on production can be evaluated positive. Despite of still running movement in the structure of the Czech agriculture, the changes are not dramatic today and the structure can be considered as relatively stabile. The large scale production, which is typical for the Czech agriculture, enables to take advantages from economies of scale, but this opportunity is still not fully utilized. Profitable big farms are able to minimize their production costs and to reduce their dependence on subsidies and they are more competitive within the Single Market. Large-scale enterprises are usually also able to achieve better position within supplier – customer relations. As the development indicates, advantages resulting from economies of scale stimulate further concentration of large companies and cooperatives. Production areas offer better conditions for such type of farming than LFA.

But also small farms have proved their economic viability. Although their competitiveness can be more difficult (compared to large farms), their opportunities consist in diversification (e.g. bio-production), looking for market gaps where the higher added value can be achieved.

The accession to the European Union has brought both new opportunities and new threats. The CAP and its support system have improved significantly economic results and increased stability of farmers` income. On the other hand, Czech farmers can feel increased competition and current support system is not able to prevent further diminishing of the agricultural production volume. For this reason, setting up an equal support system for the old and new member states after 2013 belongs to priorities of the Czech position.

Despite of above mentioned problems, the Czech agriculture has got a potential to be competitive within the European Single Market. To make it true, two strategies should be followed – to maintain a current competitive advantages (like low production costs) and to increase the added value of agricultural production (orientation on product quality and production based on approved tradition).

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