Changes on Foreign Trade in Agricultural Commodities in the Czech Republic

Změny v zahraničním obchodu se zemědělskými komoditami v České republice

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Abstract

Czech economy went in last two decades through two important changes. The first of the changes was transition of central planned economy to market economy. Since this moment the Czech economy has been confronted with products from the entire world. The second important change was the EU entrance in 2004. Although in the period 2007–2013 one of the priorities of the European Commission was support of competitiveness, the new member countries did not have the same conditions for their economy – at this case agriculture – as the old members. The result of the uneven set conditions is enlargement of disparities in agricultural sector between old and new member countries. Nine years with lower volume of subsidies caused lower competitiveness of agriculture in most of new member countries, including the Czech Republic. That is one of the reasons why number of animals lowered very significantly and structure of plant production has changed according to subsidy schemes. Czech agriculture, mainly the animal production, is not able to product so many commodities as are needed, and is forced to import more products than in previous years. Aim of the article is to analyse by basic statistical and cartographic methods the change of export and import of the main agricultural products according to the SITC classes in last 10 years from the view of spatial distribution. Also some results of questionnaire survey with farmers in Czech regions will be introduced, mainly the opinions of farmers on barriers of development, problems with EU regulations and subsidies. These barriers are connected with foreign trade as well.

Keywords: agriculture, Common Agricultural Policy of the EU, Czech Republic, foreign trade, SITC class

Abstract in native language

České hospodářství prošlo během minulých dvou dekád dvěma výraznými změnami. První z nich byla transformace centrálně plánovaného hospodářství na tržní ekonomiku. Od té doby je český trh vystaven konkurenci celého světa. Druhou výraznou změnou byl vstup ČR do EU v roce 2004. Přestože v období 2007–2013 byla jednou z priorit Evropské komise podpora konkurenceschopnosti, nové členské státy EU neměly v agrárním sektoru srovnatelné podmínky se starými členskými zeměmi, což vedlo ke zvýšení disparit v zemědělství mezi oběma skupinami členských států. Devět let s nižšími dotačními zdroji způsobilo nižší konkurenceschopnost zemědělství ve většině nových členských států včetně České republiky. Jedním z důsledků je snížení stavu hospodářských zvířat, což vede ke snižování soběstačnosti České republiky a zvyšujícímu se dovozu. Dalším důsledkem je změna struktury rostlinné výroby, která se přizpůsobuje dotačním schématům. Cílem příspěvku je analyzovat pomocí základních statistických a kartografických metod prostorové změny dovozu a vývozu základních zemědělských komodit v posledních 10 letech dle tříd SITC. Rovněž budou představeny dílčí výsledky dotazníkového šetření se zemědělskými subjekty v regionech ČR, zejména názory zemědělců na bariéry rozvoje, problémy s nařízeními EU a dotacemi. Tyto problémy jsou také úzce spojeny se zahraničním obchodem.

Keywords: Česká republika, Společná zemědělská politika EU, třída SITC, zahraniční obchod, zemědělství

Introduction

Czech Republic has gone in the last 25 years through two significant changes. The first change was the transition from a central planned economy to a market economy. Czech Republic was suddenly exposed to competition with products from the entire world. Another significant milestone in the development of the Czech economy was joining the EU in 2004. Joining the EU would not be a problem in the event that the Czech Republic and nine other Central and Eastern European states came under comparable conditions as EU-15 countries.

Although support of competitiveness was one of the priorities for agriculture and rural development set by the European Commission for the programming period 2007–2013 (European Commission [on-line]), the conditions in the agricultural sector for old and new member states of the EU were set differently and a significant disparity between these two groups of countries occurred. In 2004 the new member states have received subsidies in the volume of 10% of the amount of subsidies old member states. Volume of subsidies then increased gradually each year until 2012 by a further 10%. However, nine years (2004–2012) with lower subsidy means enough to decrease the competitiveness of agriculture of most of the new EU member states.

Scientific papers dealing with agricultural production are numerous, focused both economically and regional-geographically. In both areas, however, attention is currently concentrated on the transition from traditional agriculture to multifunctional agriculture (Ilbery 1998, Konečný 2013). Many authors are also dealing with changes caused by the EU entrance (Baldwin, Francois, Portes 1997) and forecasts of next development (Cakmak 2004, Jensen, Frandsen 2003).

A significant issue associated with agricultural production is also the market with agricultural commodities, both domestic and foreign. However, only few authors are interested in the topics of foreign trade, although it is very poignant topics to a number of states because of the rising cost of imports, and thus increasing cost of food for purchasing inhabitants. In the Czech Republic this problem is followed more by interest organizations (e.g. the Czech Agrarian Chamber) or the relevant state institutions (Ministry of Agriculture, Czech Statistical Office – study Foreign Trade of the Czech Republic in agricultural and food products), but no institution has the power or interest to influence foreign trade which is controlled by multinational chains. Foreign trade with agricultural products is the main research topic for Smutka et al. (Svatoš and Smutka, 2012, Svatoš and Smutka, 2010, Volosin, Smutka and Selby, 2011). They evaluate the development of agricultural trade and competitiveness of the commodity structures including external and internal influences on the Czech agrarian foreign trade.

Abroad, Grgic, Levak and Zrakic (2012) analyzed situation in Croatian foreign trade of agriculture and food products. In 2013 Croatia was in similar situation as Czech Republic was in 2004 – it has entered into the EU after difficult situation in the 90s and before (central planned economy and unlike the Czech Republic after war). Agri-food trade of the new member states since the EU accession was evaluated also by Török and Jámbor (2013). Miljkovic (2004) tried to determine whether the government transfers to farmers in the United States between 1965 and 1995, considering major programme crops such as wheat, cotton, and feed grains, were a product of the development of foreign markets for these commodities. Ramphul (2013) investigated the causality between agricultural exports and gross domestic product agriculture. Except to national and international policies, the world agricultural market is significantly affected by globalization processes (Disdier and Marette 2013), which is in particular dependent on transport development.

In continuity of above mentioned titles, the goal of this paper is to analyze the development of foreign trade in food and live animals according to SITC classes in last 10 years from the view of spatial distribution. Also results of questionnaire survey with farmers in Czech regions connected with foreign trade will be introduced, mainly the opinions of farmers on barriers of development, problems with EU regulations and subsidies.

Materials and Methods

Methods of research were determined in accordance with the aim of the paper. Data from the database of foreign trade published by the Czech Statistical Office (http://apl.czso.cz/pll/stazo/STAZO.STAZO) are the basis for the analysis of Czech foreign trade. The data of goods are divided into SITC classes on level of one- and two-digit codes. In this case, attention was paid to the categories: SITC 0 food and live animal, SITC 00 live animals, 01 meat and meat products, 02 dairy products and eggs, 04 cereals and cereal products, 05 vegetables and fruit. These are products of plant and animal production, except for class 03 fish, crustaceans and molluscs, which are not in terms of volume or significant cost item for the Czech Republic.

Data for the period 2002–2012 are analyzed using basic statistical methods – time series and base indexes. Also cartographic methods that clearly show the import and export of the countries neighbouring the Czech Republic are utilized. Data for 2002 and 2012 are captured. These two years were chosen for two reasons – 2002 was deliberately chosen as the year before joining the EU, when foreign imports could not be significantly affected by the Common Agricultural Policy of the EU. 2012 is the most recent year for which data are available. Ten years between the two years is a sufficient period for monitoring the trend of foreign trade. Import, export and trade balance will be monitored.

In the conclusion, data from own field research in the area of Vysočina region will be used. Questionnaire survey was made in 2010 with 114 agricultural subjects, who were asked about barriers to business development, problems connected with the Common agricultural policy of the EU and sale of their production.

Results

Foreign trade balance with food and live animals

The values of exports and imports of food and live animals for the period 2002–2012 increased continuously. The year 2009 was an exception for export – the economic recession caused a slight decrease in the value of exports. Of course, the values shown in Figure 1 are shown in millions of CZK, therefore, are influenced by the prices of exports / imports of commodities. However, if we compare the index of the prices of individual commodities (Figure 2) and the balance of foreign trade, change of prices has only a minimal impact.

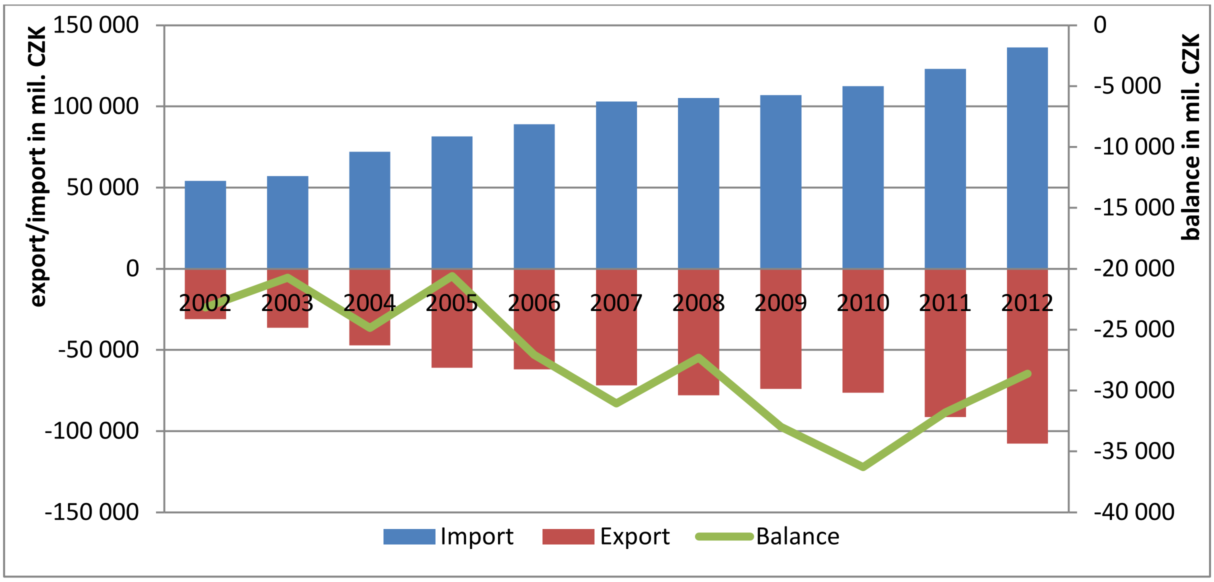

Figure 1. SITC 0 – Food and live animals. Source: Czech Statistical Office, own elaboration.

The trade balance of the Czech Republic has a long-term deficit. While until 2005 these values were in the order of a few thousands or tens of thousands millions CZK, in 2006 and 2007, the deficit began to grow. Under the favourable economic situation in this period, the balance between the years 2007–2008 decreased, but the economic recession caused a further increase in the deficit to the lowest value in 2010 (-36.3 mil. CZK). "The main factor that caused the fall in production is a sharp annual decline in prices paid to agricultural primary producers, and almost all agricultural commodities." (Translated from: http://www.czso.cz/csu/tz.nsf/i/zemedelstvi_loni_zazilo_nejhlubsi_propad_od_vstupu_cr_do_eu)

Figure 2. Export/import of food and live animals prices indices. Source: Czech Statistical Office, own elaboration. (2005 = 100 %)

Analysis of livestock production in relation to foreign trade

As fluctuations in crop production in monitored period of ten years are not significant, deeper analysis will be performed only of the state of animal production.

In the period 2002–2012 at the national level came to a significant decrease of number of pigs (index = 45.9 %), poultry (69.1 %) and a moderate decline in cattle (89.1 %). On the contrary, the state of sheep significantly increased (229.5 %) – see fig. 3. This high value is partly due to low initial status of sheep in 2002.

More significant differences in the development of the cattle, however, are evident in each region of the Czech Republic. The most significant decline in cattle is evident in the South-Moravian region (66.9 %), other regions correspond the average decline (89.1 %). On the contrary, the number of cattle has grown in two regions – Karlovy Vary and Liberec, where the number of cattle in 2002 was in comparison with other regions very low. This increase is caused mainly by the expansion of subsidized cattle suckler.

Much more significant changes occurred in the pig breeding. In Karlovy Vary region nearly the end of breeding during a period of almost 10 years was monitored. In some regions (Moravia-Silesia, Hradec Králové, Olomouc) fell the number of pigs on less than a third. Relatively the best situation is in the Vysočina region, where the state falls until 2012 “only” to 65.4 % of the state in 2002.

Similar is the situation with poultry. In three regions (Vysočina region, Olomouc and Zlín regions) also came to decline to the third between 2002 and 2012. On the other hand, in two regions (Hradec Králové and Pilsen) numbers of poultry become slightly increased.

Completely different is the situation in the sheep, which breeding is subsidized. In all regions there was an increase of farmed sheep.

Further analysis of the changes of livestock production at the district level of the Czech Republic made Věžník and Konečný (2011).

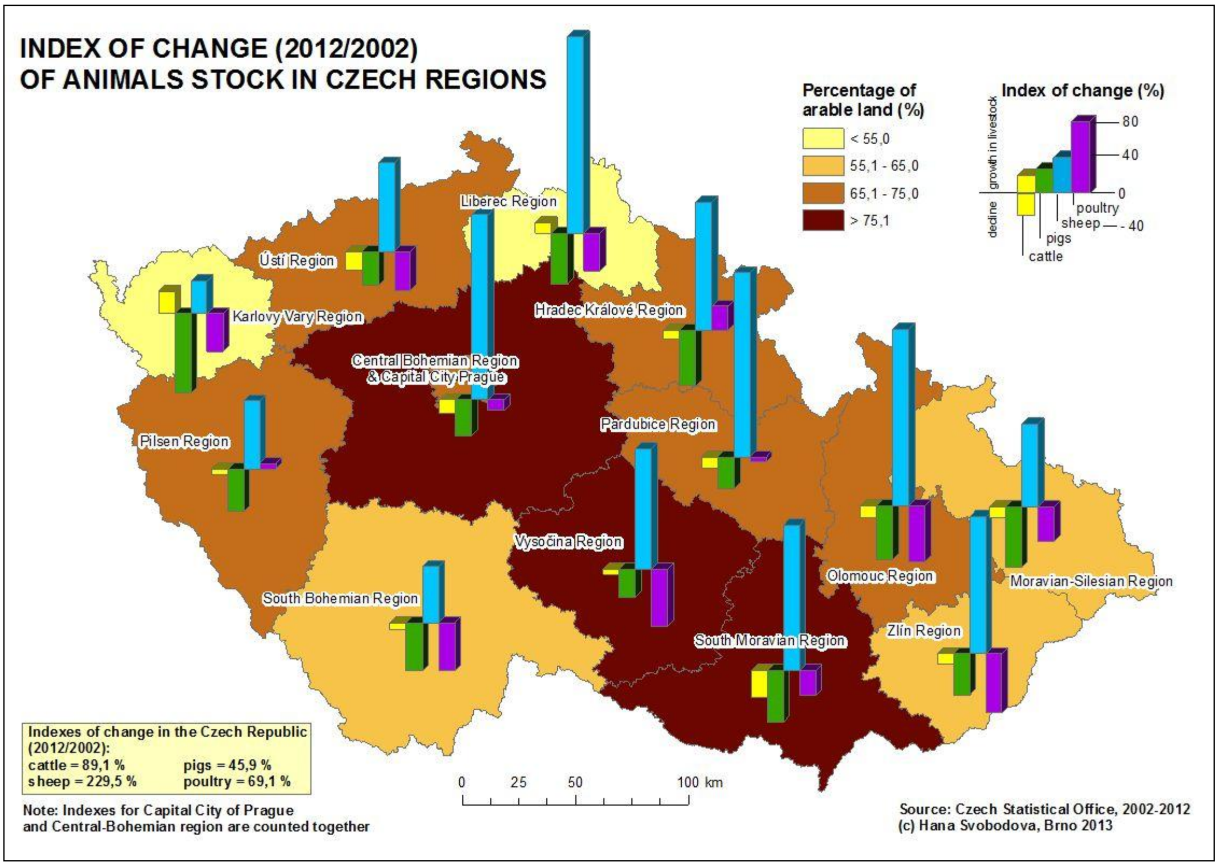

Figure 3. Index of change in livestock in Czech regions in period 2002–2012. Source: author, on base of data from Czech Statistical Office.

The consequence of the decline of number of animals (except sheep whose meat is in the Czech Republic consumed rather marginally) is less self-sufficiency of the Czech Republic in the production of meat and meat products (table 1). This difference must then be compensated by imports, which are the highest of the surrounding countries – Germany, Austria, Poland and Slovakia, a relatively high import is also from more distant European countries – Denmark, Holland, ...

Table 1: Self-sufficiency of the Czech Republic in the meat production in 2011 and 2012 (in %). Source: Agrarian Chamber of the Czech Republic.

Year / Meat	Pork	Beef	Poultry
2011	60.8	121.7	78.8
2012	52.9	82.4	68.8

Fig. 4 shows the average balance of foreign trade of the Czech Republic for the period 2002–2012, according to SITC 00 – live animals and SITC 01 meat and meat products, exact values are given only for neighbouring states. At the SITC 00 – live animals, the trade balance is positive, i.e. there are more exports than imports. At the

SITC 01 – meat and meat products there is a negative balance, i.e., that more goods are imported than exported. This situation can be assessed as follows: from the Czech Republic live animals are exported, while meat and meat products (i.e. products from live animals) are then imported in bulk back. Research of Kejíková (2014) shows that the reason for export of some kind of meat (young bull or lamb) is due to the lack of processing capacity in Czech regions and higher purchase prices in some neighbouring countries (Austria, Germany). Trade surplus, which is in the industry production evaluated positively, however, in this case, may seem counter-productive. Czech Republic exports live animals and often imports expensive meat and meat products of poor quality.

A detailed analysis of the import and export of live animals and meat and meat products to / from neighbouring countries shows that only Slovakia differs from other countries. Here, the balance of foreign trade in live animals and also meat and meat products is positive, which means that we export more products to Slovakia. Dimension of Slovak agriculture is smaller than the Czech, which may be one of the reasons to lower imports. Slovak farmers are also able to export products to "richer" countries than the Czech Republic.

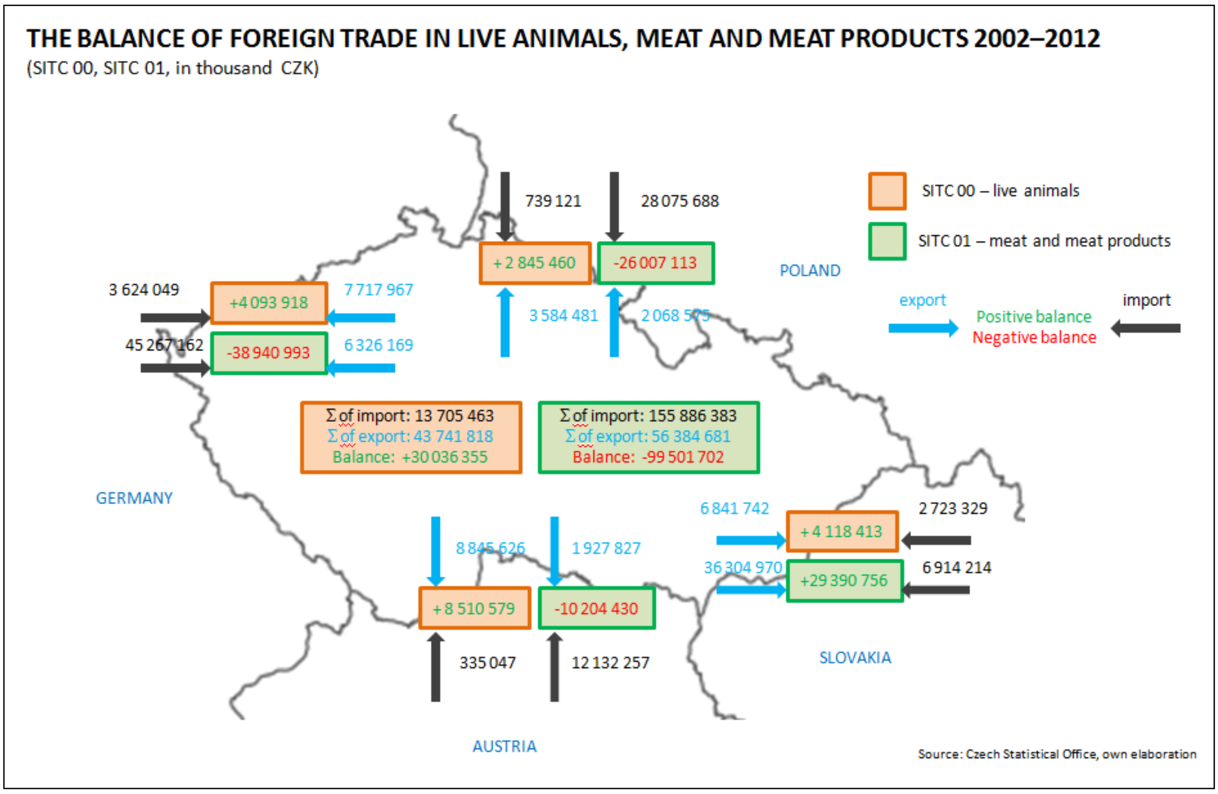

Figure 4. The balance of foreign trade in live animals (SITC 00), meat and meat products (SITC 01) during 2002–2012. Source: Czech Statistical Office, own elaboration.

Results of questionnaire survey with farmers

As well as the livestock production issue and the small change of crop production structure, the entrance of the Czech Republic to the European Union has brought a number of other problems, which farmers must deal with. As was found from series of surveys with farmers, these issues have a different impact on corporate farms and private farmers. Fig. 5 represents the results of surveys in the Vysočina region in 2010, where 114 farmers (47 corporate farms and 67 private farmers) were interviewed.

Corporate farms perceive as the greatest barrier to development low protection of domestic agricultural products market. Also this barrier is related to foreign trade. Czech products have no protection on the domestic market and can be easily pushed out by cheaper (in fact, more expensive, but more subsidized) foreign products. Next barriers are: administration and problems with purchasers and their payments. Private farmers perceive administration problems as the biggest barrier to development. This could be explained by the contrast between corporate farms and private farmers. Private farmers have no support for statement and request processing and this work represents a large burden for them. Low protection for the domestic agricultural products market is the second barrier and troubles with purchasers and their payments is the third. There are also concerns expressed by private farmers, which did not affect corporate farms – difficult access to bank loans and lack of a processing capacity. Unequal conditions for new EU states and old EU states were mentioned by both corporate and private farmers as being a significant problem.

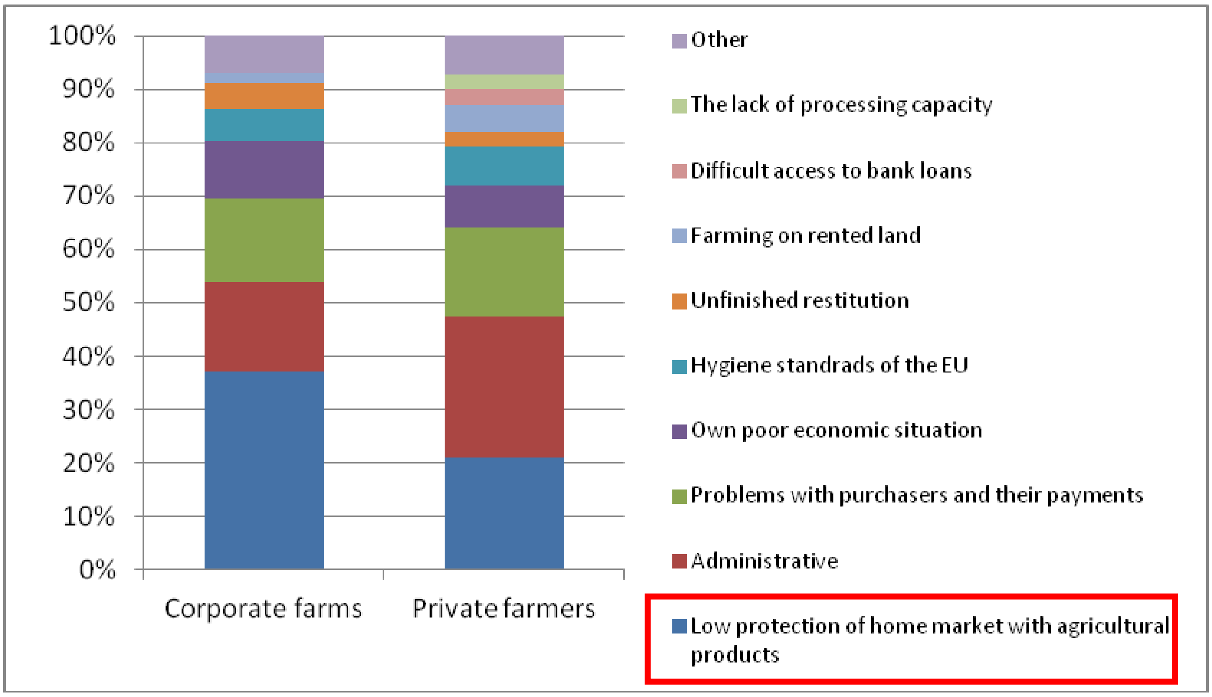

Figure 5. Barriers of agriculture development in corporate and private farms. Source: own questionnaire survey

Farmers often see an increase in financial resources as positive. Paradoxical is the fact that according to the survey 85 % of corporate farms and 81 % of private farmers would not be able to farm without funding.

Discussion

At the begging of 2014 it is possible to evaluate setting of the Common Agricultural Policy of the EU as a disadvantageous for the Czech Republic (e.g. Panke 2008). Livestock numbers decrease significantly (except sheep), the purchase price of agricultural commodities are very low, and thus Czech products are more and more often exported abroad, which is confirmed by interviews with farmers (Svobodová 2011). Agricultural products and processed food often of lower quality returns from abroad as imports and exports in/from the Czech Republic is not regulated.

The priorities set by the European Commission for the period 2007–2013 in the Czech Republic has not been fulfilled. The first priority "support of competitiveness" for agricultural entities in the "new" EU countries could not fulfilled, especially due to different subsidy system for EU-15 and EU-12 countries.

The second priority "landscape management" is also not accomplished as farmers adjust crop structure to subsidy systems (more subsidized products and products with higher purchase prices are more grown). Therefore there was a big boom of rape and other energy crops, while some traditional crops, such as potatoes in the Vysočina region are disappearing. This fact opens up more and more options for food imports from abroad.

The conditions set by the European Commission "from top" (i.e. very general) are not in the Czech Republic – and in combination with specific symptoms to the Czech environment often cannot be – achieved, which is one of the reasons of increasing exports of agricultural commodities, as farmers sell their products abroad for better price. On contrary, unfortunately, imports of lower quality processed food are still growing.

If the prices for Czech farmers were better set, farmers would not export the goods abroad and the trade balance would be more favourable for our trade and mainly for consumers. The current state of foreign trade lowers competitiveness of Czech agriculture, as products are replaced by products from other countries.

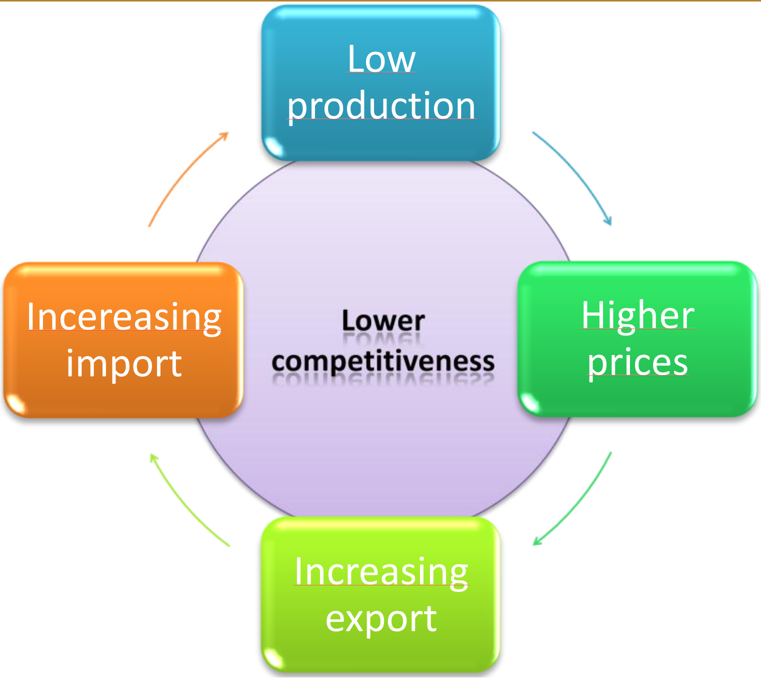

Figure 6. “Vicious circle” of low production. Source: own elaboration

This causes the “vicious circle” of lower and lower production and lower and lower competitiveness. Fortunately, in last few years new trends in consumption are occurring – people discover farm markets, direct markets from farms and they start to prefer domestic labelled food (Janssen, Hamm 2012). So it is possible that the negative trend of foreign trade balance will soon turn in favour of the Czech Republic.

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