

# ACCESSION TO THE EUROPEAN UNION, THE COMMON AGRICULTURE POLICY OF THE EU AND ITS IMPACT ON FOOD PRICES AFTER SLOVAKIA'S ACCESSION

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*Integration into the European Union (EU) is one of the key priorities of Slovak foreign policy. Actual accession to the EU should soon become a reality. On accession, the Slovak Republic must adopt an agriculture policy and institutional structure compatible with the Common Agriculture Policy (CAP) of the EU with all its advantages and disadvantages. At present, the positive and negative aspects of Slovakia's accession to the EU are being discussed in Slovakia. The growth of consumer prices and especially of food prices is often mentioned as one of the disadvantages, but no quantification has appeared of this rise in prices and its impact on inflation. Only information about the assumed rise in the prices of agricultural commodities is appearing in the media. This is mostly discussed by experts from agriculture and the food industry. This article is an attempt to quantify the probable impact of adoption of the Common Agriculture Policy on the price of food to the consumer, through changes in the prices of agricultural commodities caused by the CAP.*

## Accession to the EU and adoption of the CAP

The Slovak Republic will enter the European Union on 1st May 2004 and at the same time will adopt the Common Agriculture Policy. What is this Common Agriculture Policy? The CAP is a set of economic, financial, legislative and institutional instruments intended to secure a single market in agricultural products. The aim is to secure effectiveness, stability and financial solidarity in the agricultural sector. The most important economic and financial instruments of the Common Agriculture Policy are direct subsidies to producers or processors, export subsidies, indicative, threshold and intervention prices, protection on the common frontiers, various specially directed resources and structural funds.

Price support is important from the point of view of price development. This support includes indicative, threshold and intervention prices.

- The indicative price is aimed at transactions in the framework of the EU. It is the expected price of agricultural products in the following year and is determined according to the price in the area with the lowest supply.

- The intervention price is derived from the indicative price as a certain percentage of it. It leads to intervention by national authorities, when the producers in a particular state are not able to sell their produce in the market.

- The threshold price is the price determined by the EU for produce imported from third countries. It cannot fall below a price threshold varying between the indicative price and the intervention price.

When Slovakia joins the EU, it will have to adopt these principles, which will clearly have some impact on consumer prices. The effect of adopting this policy on consumer prices of food will vary, depending on the price policy for particular commodities in the framework of the CAP.

As we already mentioned, the main pre-condition determining the development of the prices of agricultural products is whether a particular commodity is or is not price supported by the CAP, that is, whether it is purchased by the intervention agency at the intervention price, enabling farms to achieve higher profits, or a specific agricultural commodity is

<sup>1</sup> All views given in this article are the personal opinions of the authors and may not be identical with the views of the institutions in which they work.



sold on the market without support from the CAP. The following commodities have intervention support: wheat, barley, maize, oil seed rape, milk, beef and sheep meat. We can expect growth in these commodities. Production of potatoes, grapes, pork, poultry and sugar beet is not supported by the intervention policy. Sugar beet has an exceptional position among the non-intervention commodities. After accession to the EU, its price will probably significantly increase as a result of the special support regime for sugar in the markets of the EU. The prices for the other non-intervention commodities will be the prices in the market of the EU, but there will be commodity and regional differentiation, which means that some non-intervention commodities may not reach this level. On the other hand, some commodities may overpass the price level in the market of the EU. Their prices should largely depend on the development of prices in the surrounding countries, especially the Czech Republic, Hungary, Poland, Germany and Austria, so we can expect their stagnation or a moderate decline. Clearly, much will depend on the level of adaptation of the processing industry, the development of the income of the population, wage parity, inflation, the exchange rate and so on.

Analysis of the impact of the CAP on consumer prices of food commodities started from the dependence of changes in consumer prices of food on changes in the prices of agricultural raw materials. This dependence and the relationships in the development of prices along the line: primary production – processing – consumption, is analysed in the following section.

The predicted prices of agricultural produce in the period of accession to the EU come from the materials worked out in 2002 by the World Bank, „Food and Agriculture in the SR, Challenges of Accession to the EU“ and the Research Institute for the Eco-

Table 1

	Change of prices of products of plant production (in %)
Wheat	+ 18
Barley	+ 4.0
Maize	+ 3.8
Oil seed rape	+ 37
Sugar beet	+ 80
Potatoes	- 33
Grapes	+ 1.6
<b>Average</b>	<b>+ 16</b>

Source: RIEAF, World Bank

Table 2

	Change of prices of products of animal production (in %)
Milk	+ 40
Beef meat for slaughter	+ 10
Pork meat for slaughter	+ 1
Poultry	+ 1
Sheep	+ 23.8
<b>Average</b>	<b>+ 16</b>

Source: RIEAF, World Bank

nomics of Agriculture and Food (RIEAF) „Impacts of the Accession of the SR to the EU in the area of the Agricultural and Food Sector“. A review of the expected growth of prices of the most important commodities according to these analyses is given in the following tables.

The overall growth in the prices of primary products of agriculture in Slovakia should be about 16% after accession to the EU. We expect approximately equal growth in the prices of animal and plant production.

### The relations between the development of prices along the line primary production – processing – consumption

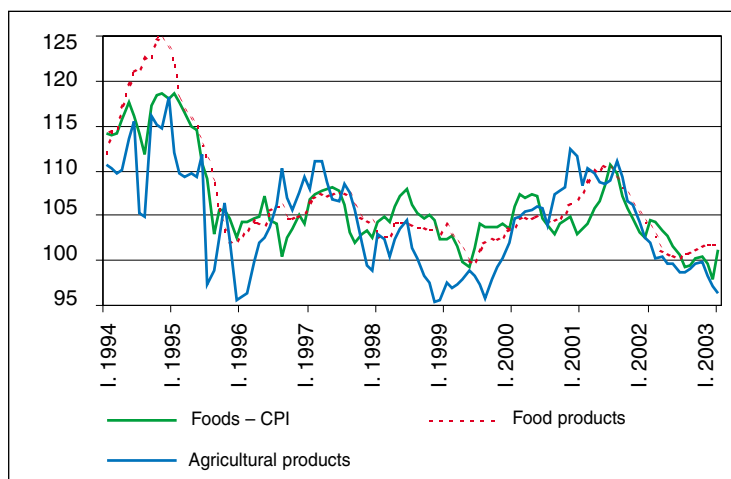
Since adoption of the Common Agriculture Policy should primarily influence the sale prices of primary agricultural products, we started by analysing how the changes of prices of primary products in Slovakia influence the prices of processors and the final consumer prices of food. Comparison of the development of the prices of primary products, processing and the consumer prices is given in the graphs on the next page.

The first graph shows the dependence of food prices on the line primary production – processors – consumers. In spite of the fact that the development of the prices of agricultural products shows a relatively high volatility, changes in their dynamics are reflected in consumer prices with a delay of 1 – 2 months. If we look at the individual commodities, we can see a similar development, which means that individual groups of products show almost the same trends, with the most significant correlation recorded in the case of the prices of poultry.

### Influence on consumer prices

To analyse the influence of the development of the prices of agricultural products on food prices,

Graph 1 Food prices (production, processing, consumption)

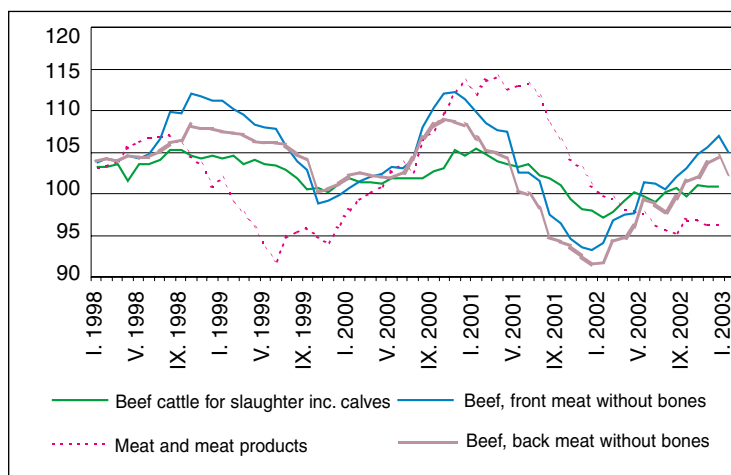


we used regression analysis by the least squares method. We put the prices of primary agricultural products and processing prices into the equation as independent variables. The basic indices of these

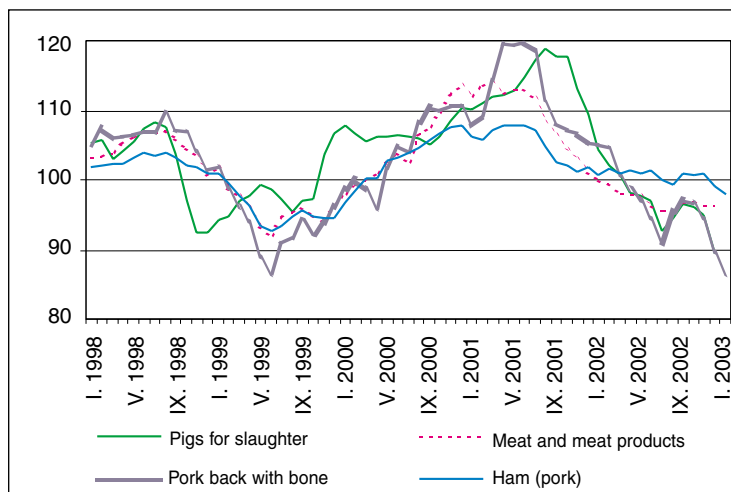
$$\text{Cpi food} = 0.408026 * \text{process.} + 0.080725 * \text{agri. price} + \text{AR}(1)$$

(4.686)	(1.998)	(39.735)
R <sup>2</sup> = 0.94	D. W. = 1.46	1998 – 2002

Graph 2 Prices of beef – all levels



Graph 3 Prices of pork – all levels



Source: Statistical Office of the Slovak Republic, Index ROMR = 100

sources formed the database. The index of consumer prices was adjusted from the influence of changes in indirect taxes, and we excluded the most volatile items of fruit and vegetables. Since the prices of agricultural products are statistically monitored only on a year-on-year basis (because of the specific determination of the basic period – individual months of the year 2000 represent the base), and because of the seasonality presented in the data, the equation includes, as a dependent variable, the year-on-year change of the price level of foods, which is explained by the year-on-year changes in the prices of agricultural products and

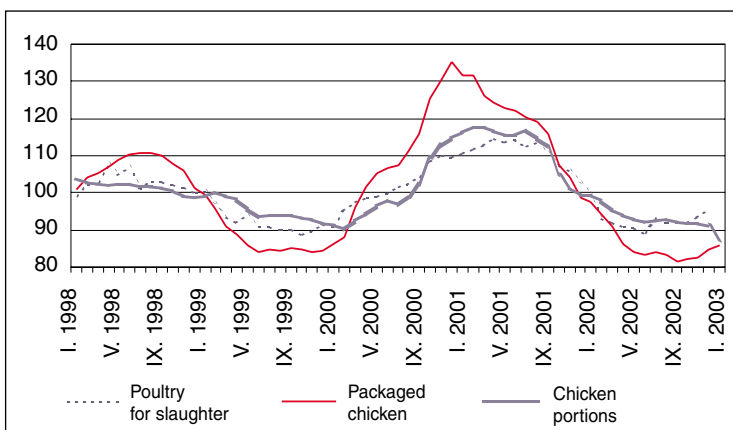
processed foods. To secure the stationarity of the time series (tested with the help of the unit-root test), it was necessary to transform the time series with the help of the differences of logarithms.

We have accepted hypothesis H1 about the statistical significance of the individual coefficients of the estimated equation on the level of significance of 95%.

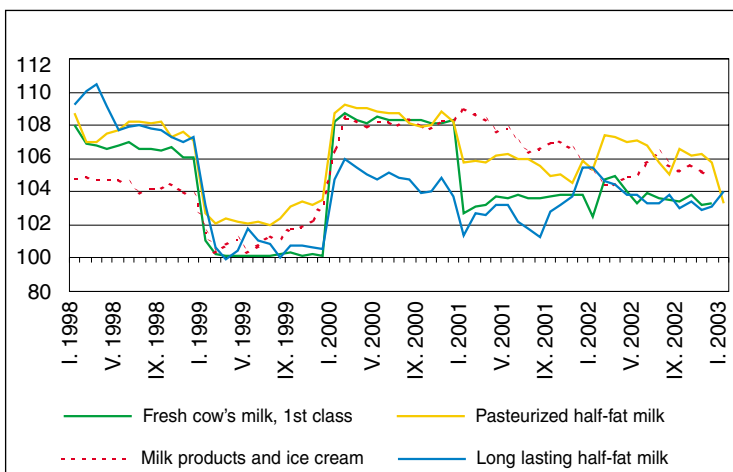
The overall result of the analysis shows a relatively strong connection between processing and consumer food prices (elasticity = 0.40), but a relatively weak dependence was found between the prices of agricultural produce and the price of food to the consumer (elasticity = 0.08). The presence of an auto-regressive member (AR = 0.97) confirms that the dynamics of food prices for the consumer is significantly influenced by development in the previous month. This means that the overall development of food prices for the consumer will depend after accession not only on the size of changes in the prices of primary agricultural products, but also to a large extent on their actual level in the period of accession. The equation also fails to consider other market factors, which may also have a significant influence on the final price of food.

Assuming the expected increase in the prices of agricultural products (according

**Graph 4 Prices of poultry – primary production and consumer**



**Graph 5 Prices of milk – all levels**



Source: Statistical Office of the SR, Index the same period of previous year = 100

to the data of the RIEAF and World Bank), the impact of adoption of the CAP on the price of food should mean an increase in the price of food approximately by 7 – 8%. The contribution of such an increase in food prices to overall inflation could represent about 1.0 to 1.2 percentage points, whereas the contribution of individual food products to

**Tab.3 Expected changes in prices of food for the consumer after accession to the EU (in %)**

	Expected possible change of prices
Flour, flour products	+ 3.4
Sugar, sugar products	+ 30
Potatoes	- 4.2
Milk, dairy products	+ 16,8
Beef	+ 5.3
Pork	+ 1.2
Poultry	+ 1.5

Source: calculation by the authors

overall inflation depends on the degree to which individual foods participate in the overall expenditure of households. For example, the price of sugar could increase by about 30%, but because much less sugar is consumed than, for example, milk and dairy products, its contribution to the overall rise in prices will be insignificant. It is necessary to emphasize that this increase will probably not have the character of a shock, but will be spread over a longer period. The probable impact on the prices of different groups of food for the consumer is given in table 3.

In an evaluation of the positive and negative impacts on the Slovak economy of adopting the CAP, a clearly positive effect will be increased profits for producers as a result of higher prices for agricultural products. This should enable Slovak farmers to consistently increase investment in production from their own resources, and so improve their effectiveness and productivity.

The increase in consumer prices of selected food products and so the increase in the cost of living of the population will be a negative impact of adoption of the CAP. However, according to the calculations of the prices rises given above, we can say that the impact of adopting the CAP on food prices need not be so

large in the end. Appreciation of the Slovak crown against the euro in the period up to the accession of Slovakia to the EU is one possible supporting argument for this conclusion. A second and no less significant argument is the fact that the estimated growth in the prices of agricultural products in the analysis given above comes from the expected difference between the intervention prices of the EU and the prices of individual agricultural commodities in Slovakia in 2004. According to the recent development of prices in agriculture, it could be lower, which would mean a smaller increase in the prices of agricultural products and so also in consumer prices. For comparison and an idea of the size of the impact of adopting the CAP, we could also say that the prepared changes in indirect taxation should make a bigger contribution to the overall rise in consumer prices than the above mentioned rise in the price of food after adoption of the CAP.