

**РЕЗУЛЬТАТЫ ВНЕШНЕЙ ТОРГОВЛИ ПРОДУКЦИЕЙ
АГРОПРОМЫШЛЕННОГО СЕКТОРА МЕЖДУ СЕРБИЕЙ И
РОССИЙСКОЙ ФЕДЕРАЦИЕЙ**

**IMPACT OF THE FOREIGN TRADE OF AGRO-INDUSTRIAL
PRODUCTS BETWEEN SERBIA AND RUSSIAN FEDERATION¹**

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Аннотация: С 2000 года Республика Сербия и Российская Федерация регулировали свои экономические отношения посредством Соглашения о свободной торговле, которое способствовало взаимному обмену товарами после серьезного падения торгового оборота в 90-х годах XX века. В статье анализируется межстрановой обмен продукцией агропромышленного сектора за период 2004-2013 гг. с целью определения эффекта от реализации Соглашения о свободной торговле и выявления продуктов, по которым возможно увеличение объемов торговли. В анализе взаимного обмена указанными продуктами рассмотрены продукты попадающие под следующие коды Стандартной классификации международной торговли (Секция 0 – Продукты питания и живые животные и Секция 1 – Напитки и табачные изделия) и использованны такие статистические методы, как экспоненциальный тренд, средняя арифметическая, темп роста и коэффициент вариации.

Ключевые слова: продукцией агропромышленного сектора, внешняя торговля, Соглашение о свободной торговле, Россия, Сербия

Abstract : Since 2000, Republic of Serbia and Russian Federation have been regulated their economic relations through the Free Trade Agreement, by which is encouraged mutual exchange of goods, after a rapid fall in trade exchange during the nineties' of the XX century. In paper is analyzed the inter-countries exchange of agro-industrial products within the period 2004-2013, in order to determine the effects of Free Trade Agreement implementation and to identify those agro-industrial products whose exchange can be encouraged. Analysis of mutual exchange with mentioned products covers products by SITC classification (Section 0 - Food and live animals and Section 1 - Beverages and tobacco), using the certain statistical

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methods, as are exponential trend, arithmetic average, rate of change and coefficient of variation.

Key words: agro-industrial products, foreign trade, free trade agreement, Russia, Serbia.

Introduction

From the historical standpoint mutual relation between Republic of Serbia and Russian Federation has significant interest. After World War II, former Socialist Federal Republic of Yugoslavia (SFRY) represents part of the Eastern block that was led by the Soviet Union (USSR), with which it created special political-economic connections. "Russian-Serbian relations, despite the undoubted national and religious closeness of two nations, were always depend on, primarily on realistic and rational understanding of interests of both countries, as well as according to their objective possibilities in political, economic and military terms" (Vereš, 2000).

Mutual trade between Serbia and Russia during the nineties of XX century was drastically decreased, from 2,3 billion USA\$ in 1990 to only 284 million USA\$ in 1999 (Simić, 2014). In August 2000, Government of the Federal Republic of Yugoslavia and Government of the Russian Federation were signed the Agreement on Free Trade. Its main goal was to improve mutual trade. Agreement was under certain changes during 2009 and 2011. By signed Agreement were abolished mutual tariff protections on 99% of products for which can be proved that originate from Serbia and Russia.

In the period after the Agreement signing, both countries from year to year were increased the volume of mutual trade exchange. Starting from the first year of the Agreement implementation, mutual trade exchange increased for 91%, from 390,4 million USA\$ in 2000 to 744,4 million USA\$ in 2001. The largest mutual trade turnover was achieved in 2008, 4.041,7 million USA\$. "Because of the complementarity of USA and EU economies, and the effects of globalization, the crisis that covers financial and real sector of the USA slowly passed to EU and other world countries" (Radovanovic, Radovanovic, 2013), what in parallel results a decrease in volume of foreign trade between Serbia and Russia in 2009. In observed period, exchange of agro-industrial products between Serbia and Russia had a constant increase at average growth rate of 29,96% and with variation coefficient of 68,23%. The highest recorded value of mutual exchange of agro-industrial products was recorded in 2013, around 233,8 million USA\$.

Methodology

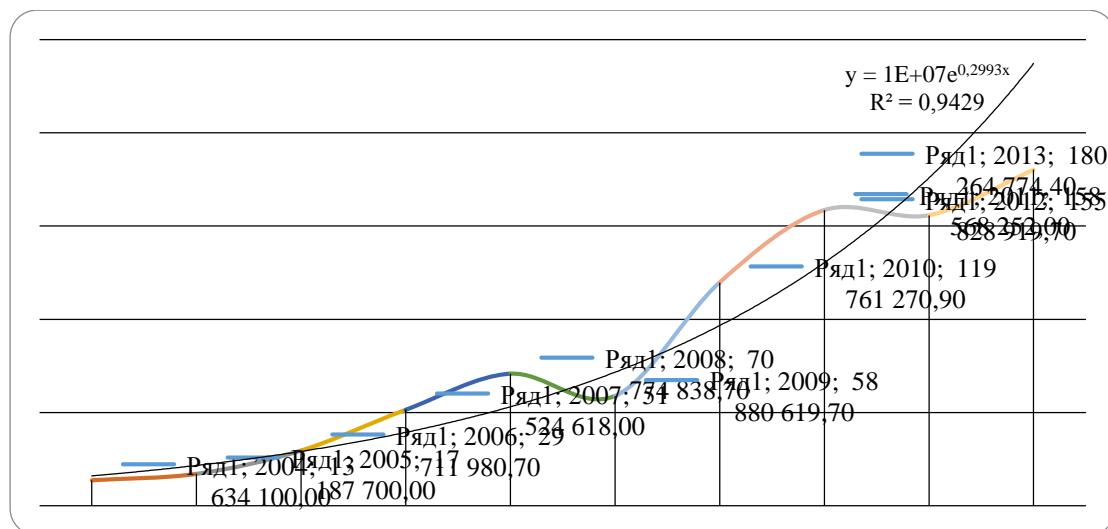
In paper are analyzed the trends in trade of agro-industrial products between Serbia and Russia using certain standard statistical methods, such are trend, arithmetic average, coefficient of variation and rate of change. Under agro-industrial products are considered all products of Section 0 - Food and beverage and Section 1 - Beverages and tobacco (Standard International Trade Classification

(SITC), version 4). All data about mutual trade exchange between Serbia and Russia represent official data from the Statistic Office of the Republic of Serbia (SORS) for the period 2004-2013.

Export of Serbian agro-industrial products in Russian Federation

In mutual exchange of agro-industrial products, during the period 2004-2013, Serbia has been recorded constant increase of export by average growth rate of 34,91% and variation coefficient of 73,26%. Previous shows a dynamic growth of the export value of this product group. Only year when export of agro-industrial products from Serbia was recorded slight fall is in 2009 (Graph 1). The highest achieved export value of observed group of products from Serbia to Russia was realized in 2013, and it amounted around 180,3 million USA\$.

Graph 1. Export of agro-industrial products of Republic of Serbia in Russian Federation during the period 2004-2013 (in USA \$)



Source: SORS, 2015.

On total, seven of twelve segments within the SITC sections 0 and 1 have had a share in export less than 3% in observed period. Export of live animals, fish and fish products, sugar and sugar products, coffee, tea, cocoa, spices and products for animal feed have not special importance for export to Russia, as their share in total export of agro-industrial products is less than 1%, while export of tobacco and tobacco products had in some content more significant share in export, around 1,83% (Table 1).

Export of meat and meat products in observed period had value of 24 million USA\$, what is around 2,86% of the total export of agro-industrial products. This group of products has a high average growth rate, 73,69% and extremely high coefficient of variation, 122,89% what indicate to significant fluctuation in exported quantities. Individually, export of frozen pork meat was recorded during the last

three observed years. It had a value of 8,7 million USA\$, share in total export of around 1,06% and average decline in export value of 47,55%. Export of slaughter products of pork meat (except liver) were realized export value of 6,9 million USA\$, with the share in total export of 0,81% and high export value growth by the average rate of 69,7%, what indicate to very high export potential encouraged with gaining of duty-free access for six Serbian slaughter houses in 2011. Although 2012 was the most significant year for the export of meat and meat products, it can be recorded the fall in export value, especially in export of frozen pork meat.

Export of beverages recorded a value of 27 million USA\$, share in total export of agro-industrial products of 3,15%, high average growth rate of 79,1% and coefficient of variation of 95,68%. Within the structure of the segment Drinks, the most important export product is wine of fresh grapes (except sparkling wines) that generated export value of 18,3 million USA\$ and share in export of 2,14%, with very high average growth rate of 97,7% and high coefficient of variation of 107,09%. There has been constant growth of export of wine from fresh grapes, and it was recorded the highest value in 2013 (5,7 million USA\$). Besides export of wine from fresh grapes, export of fermented beverages has recorded significant value of 6,4 million USA\$, with share in export of agro-industrial products of 0,74% and average growth rate of 43,15%.

Within the segment Miscellaneous edible products and preparations in the SITC classification, export value of 37,5 million USA\$ was recorded, or approximately 4,42% of the total export of agro-industrial products, with average growth rate of 13,66% and coefficient of variation of 42,86 % (segment shows stable export growth). The largest share in export was achieved in 2004 (17,17%), while the lowest share was achieved in 2011 (2,74%). Nominally, the largest export was achieved in last two observed years, in average around 6,3 million USA\$.

Table 1. Export parameters of agro-industrial products from Republic of Serbia to Russian Federation in period 2004-2013.

SITC - sections	Export value in USA \$	Export share of SITC 0+1	Change rate	Variation coefficient
00 Live animals	59.699,40	0,01%	64,43%	97,97%
01 Meat and meat products	24.053.134,90	2,86%	73,69%	122,89%
02 Dairy products ⁵	37.760.250,60	4,50%	432,83 %	95,46%
03 Fish and fish products	41.364,60	0,00%	170,40 %	127,13%

⁵ For calculation of change rate and variation coefficient in export of dairy products, impact of small export value in 2009 (45,6 USA\$) was excluded in order to achieve more realistic parameters.

04 Cereals and cereal preparations	43.226.243,60	5,05%	11,79%	51,02%
05 Vegetables and fruit	662.649.232,50	77,28%	37,36%	74,99%
06 Sugars, sugar products and honey	558.978,80	0,07%	95,75%	204,50%
07 Coffee, tea, cocoa, spices, and manufactures	1.242.975,00	0,15%	28,04%	73,72%
08 Feeding stuff for animals	5.724.050,80	0,68%	271,58%	104,02%
09 Miscellaneous edible products and preparations	37.527.330,30	4,42%	13,66%	42,86%
11 Beverages	26.969.443,20	3,15%	79,10%	95,68%
12 Tobacco and tobacco manufactures ⁶	16.324.370,40	1,83%	- 14,54%	135,23%
TOTAL	856.137.074,10	100%		

Source: Authors calculations according to SORS data, 2015.

By export importance, milk and milk products, as a segment, take third place with realized value of 37,8 million USA\$ and share in total export of agro-industrial products of 4,5%. Export of mentioned group of products records extremely high average growth rate (432,83%) with coefficient of variation of 95,46%. Reason for that can be found in fact that export began much later (2011), when several Serbian dairies got permission for free export, where from its start export was characterized by voluminosity. Within this group, the most important products are fresh cheeses with share in total export of agro-industrial products of 2,94%, which in last two observed years were exported in value of 23,7 million USA\$. Their average growth rate was 312,32% and coefficient of variation 88,93%. Besides fresh cheeses, other cheeses (e.g. Kackavalj) recorded a significant share in total export (1,37%). Realized export value was 11,6 million USA\$, while the average growth rate was 288,64% and coefficient of variation 67,83%. Processed (melted) cheeses, as well as other cheeses that contains no more than 40% of fat are excluded from the Free Trade Agreement, so they are not within the regime of duty free trade (Protocol 2011).

Second place is took by cereals and cereal products, which achieved export of 43,2 million USA\$ in observed period (5,05% of total export of agro-industrial products), with average growth of 11,79% and coefficient of variation of 51,02%. Within the mentioned segment dominates the export of seed corn (4,09% of total export, or about 35,1 million USA\$). For the export of seed corn is characterized the low average growth rate (7,42%) and coefficient of variation of 55,73% (relatively high value of coefficient is the result of export oscillations, where the highest export

⁶ As like in case of dairy products, for calculation of change rate and variation coefficient, negligible export value in 2010 (1,5 USA\$) was excluded in order to achieve higher objectiveness.

value was recorded in 2007, 2008 and 2013, when was realized more than 50% of total export of this product). Besides all, export of sweet biscuits, waffles and galette also recorded good results in total export of agro-industrial products (share of 0,84% and value of 7,2 million USA\$, or average growth rate of 36,03% and coefficient of variation of 64,78%). During the last three years have been realized over 50% of export of this product group (4,3 million USA\$).

The most important export products of Serbia to Russia are fruits and vegetables. Their value in observed period was 662,6 million USA\$, what makes 77,28% of total export of agro-industrial products. Export of this product group had a positive growth rate of 37,36% and variation coefficient of 74,99%. Within the mentioned group the most important are fresh apples with total export of 231,2 million USA\$ and share in total export of 26,84%. Apples have very high growth rate (65,34%) and significant variation coefficient (87,75%), what is a result of low export value at the beginning of period (241,000 USA\$), or the highest value recorded in 2011 (57,9 million USA\$). Apples are followed by fresh nuts with export of about 181,1 million USA\$ and share in total export of 21,13%. The most important export products of this group are plums, peaches, cherries, sour cherries and apricots. This group of products is also characterized by high average growth rate (66,23%) and high coefficient of variation (78,06%). Since 2006, their export has recorded constant growth, which in 2011 reached 37,7 million USA\$.

Also should be mentioned the export of fresh berry fruits. Dominates the export of fresh strawberries with 21,8 million USA\$ and share in exports of 2,58%, high average growth rate of 77,01% and high coefficient of variation of 106,36%. It is followed by the fresh pears and quinces, 9,5 million USA\$ and share in total export of agro-industrial products of 1,12% (extremely high average growth of 138,08% and high coefficient of variation, 138,99%). Then come raspberries, blackberries and similar fruit species, with export value of 8,3 million USA\$ and share of 0,98%, average growth rate of 23,34% and coefficient of variation of 86,56%. At all mentioned fruit species in recent years have come to significant growth in export value. The largest oscillations are expressed at raspberries, blackberries and similar fruits, where after rapid growth in export in 2011 compared to 2010 (310%), were recorded a certain decline in 2012, and later in 2013 the highest export value (2,2 million USA\$, or 3,2 USA\$ per kg).

Besides fresh fruits, Serbia also exports certain fruit processed products. Dried fruits are exported the most (total export value of 25,1 million USA\$ and share in export of 2,9%). Export of this product group records average growth rate of 24,27% and a high coefficient of variation, 81,6%. The highest export value was recorded in 2013 (6,6 million USA\$). On the other hand, the export of fruit and vegetable juices have also achieved significant results (20,9 million USA\$) and share in total export of 2,43%. It has a high average growth rate of 55,15%, and the highest export value was recorded in 2013 (6,2 million USA\$).

At vegetables, the most important export products are prepared or canned sweet corn and other vegetables (export value was 97,7 million USA\$ and share in

export was 11,5%) and mixed frozen vegetables (mixed vegetables, beans, green beans and peas) with realized export of 17,5 million USA\$ and share in export of 2,05%. The highest average export growth was recorded at frozen mixed vegetables, which was 128,74% (this was the result of strong export growth since 2010, where the highest export value was recorded in 2011, 5,6 million USA\$). Much lower average export growth was recorded at prepared and canned vegetables. It has also much lower variation coefficient (export volume of this product category was halved in 2013 compared to 2012).

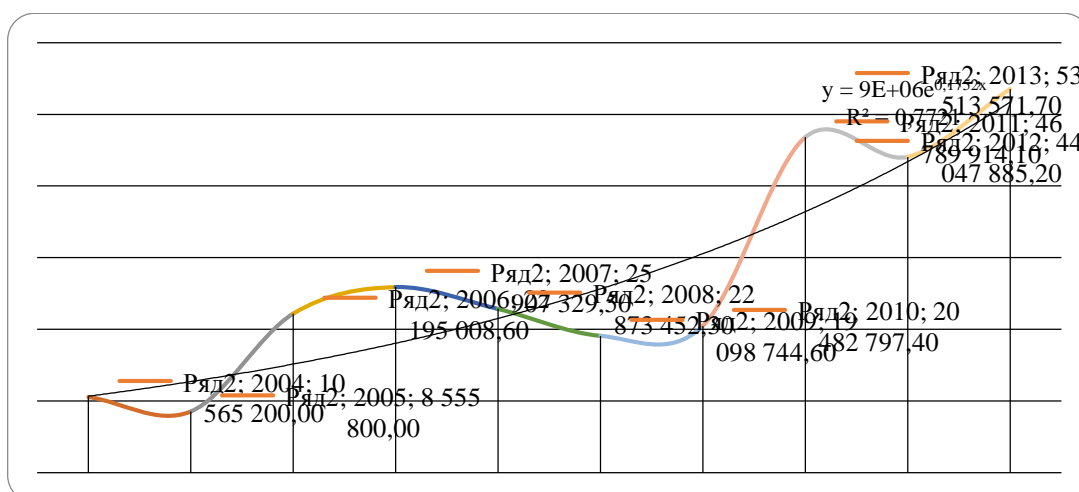
Import of agro-industrial products in Serbia from Russian Federation

Although the import of agro-industrial products from Russia generally has not larger significance for Serbia, its structure still has to be analyzed, as in last three observed years its share in total import was in average around 2,28%. Import of agro-industrial products from Russia has positive trend with average growth rate of 34,89% and coefficient of variation of 73,32% (Graph 2).

Seven of twelve segments within the sections 0 and 1 of SITC classification in observed period have share of import lower than 3% (Table 2). Imports of live animals, meat and meat products, sugar and sugar products, as well as coffee, tea, spices and beverages individually does not exceed share of 1% within the total import, while import of segment fish and fish products has achieved in average share of 1,68%. Import of fruits and vegetables were around 8,1 million USA\$, what represents 2,98% of total import (average growth rate was 4,71% and coefficient of variation 65,61%).

Products from the group - Feeding stuff for animals had relatively significant participation within the import of agro-industrial product from Russia. They achieved import value of 29,6 million USA\$, what represents 10,69% of total import. Their average growth rate was 29,01% and coefficient of variation 53,68%.

Graph 2. Import of agro-industrial products in Republic of Serbia from Russian Federation in period 2004-2013 (in USA \$)



Source: SORS, 2015.

Having in mind segment no. 09 in SITC classification - Miscellaneous edible products and preparations, it can be noticed the high import value from Russia to Serbia (around 33,3 million USA\$) what represents 12,08% of total import of agro-industrial products with average growth rate of 17,65% and coefficient variation of 51,27%. Within this segment, the most important product is margarine in various forms (excluding liquid), which was imported in value of 25,7 million USA\$, what represents 9,27% of total import. Average growth rate of import is 54,21% and coefficient of variation 64,03%. The highest value of import was recorded in 2013 (5,3 million USA\$).

Table 2. Import parameters of agro-industrial products in Republic of Serbia from Russian Federation in period 2004-2013.

SITC - sections	Import value in USA \$	Import share of SITC 0+1	Change rate	Variation coefficient
00 Live animals	18.342,70	0,01%	-25,95%	132,78%
01 Meat and meat products	301.592,80	0,11%	58,01%	55,35%
02 Dairy products	1.627.543,30	0,62%	7,67%	93,89%
03 Fish and fish products	4.626.669,00	1,68%	-1,63%	61,51%
04 Cereals and cereal preparations	49.721.892,20	17,81%	-10,98%	78,32%
05 Vegetables and fruit	8.082.113,40	2,98%	4,71%	65,61%
06 Sugars, sugar products and honey	2.017.538,80	0,74%	37,73%	174,11%
07 Coffee, tea, cocoa, spices, and manufactures	684.170,90	0,24%	20,69%	100,39%
08 Feeding stuff for animals	29.573.699,60	10,69%	29,01%	53,68%
09 Miscellaneous edible products and preparations	33.270.665,30	12,08%	17,65%	51,27%
11 Beverages	621.097,40	0,22%	14,68%	82,58%
12 Tobacco and tobacco manufactures	143.483.751,50	52,82%	40,65%	96,85%
TOTAL	274.029.076,90	100%		

Source: Authors calculations according to SORS data, 2015.

The second most important product segment in total import of agro-industrial products from Russia are cereals and cereal products. They were realized import value of 49,7 million USA\$, or about 17,81% of total import of agro-industrial products, with an average fall in import value from 10,98% and coefficient of

variation of 78,32%. Decrease in import value was result of import of primary products, like other wheat types, spelled, meslin and sprouted grains only in one year (2004), when it achieved the import value of 6,6 million USA\$. Over time, import of other bakery products⁷ was gaining in importance. They had total import value of 28,9 million USA\$, with share in total import of 10.17%, what launched other bakery products on second place within the list of imported products in Serbia. Average growth rate of import of this group of products was 23,29% and coefficient of variation 108,79%.

The highest share in import of agro-industrial products from Russia has tobacco and tobacco products. They have realized the import value of 143,5 million USA\$ (52,82% of total import), with average growth rate of 40,65% and such a high coefficient of variation, 96,85%. The largest share in total import, mentioned group of products had in 2011 (about 72,21%), while the lowest share was achieved in 2004 (only about 3,41%). Nominally expressed, the highest import was realized in 2013 (36,5 million USA\$). Import of cigarettes containing tobacco dominates (45,43% of total import of agro-industrial products within the observed period). Import of processed tobacco and other extracts is also present (6,04% of total import from the Russian Federation).

Conclusion

Free Trade Agreement between the Republic of Serbia and the Russian Federation is the main driver of growth of mutual trade with agro-industrial products within the period 2004-2013 (all major export products of Serbia are in the regime of free trade with Russia). Although the achieved results are satisfactory, the huge potential of Russian market is still not properly used. Importance of the exchange of agro-industrial products in total trade is relatively modest, with participation of 4,13%. However, the share of export of agro-industrial products in total export has far greater importance for Serbia (16,1%) compared to the import of agro-industrial products in total import (1,25%). This is one of the few economy sectors where Serbia generally achieves a constant trade surplus with other countries.

In export of agro-industrial products to Russia generally dominates export of primary agricultural products, with increasing trend of value added products (processed products). Despite the importance in export of processed products promotion, it is necessary to provide strong support to export of fresh products, such as fresh apples and fresh nuts (they make up to half of the total export), or support to primary products that have high growth potential, such as strawberries, pears, quinces, raspberries and blackberries. Of course, export of processed products with value added, as dried fruits and fruit and vegetables juices should be also forced. Vegetables are mostly exported as canned, prepared and frozen, having a satisfactory export potential.

⁷ According to SITC classification, other bakery products consider other type of bread, pastry, cakes, biscuit and bakery products that (not) contain cocoa, and other similar products.

Products with the highest export dynamics are in the segment Milk and dairy products. Although they participate just with 4,5% within the total export of agro-industrial products, they possess extremely high average growth rate (432,83%). Export of fresh and other type of cheeses, in second half of observed period, have recorded excellent results in Russian market, so export of these products achieved the highest value per unit of measure 4,2 USA\$ per kg.

Potential for further export increase have, before all wines from fresh grapes, slaughter products of pork meat and fermented beverages.

Unlike the export of agro-industrial products where dominate the export of primary agricultural products, at import assortment structure is moved towards the products that pass higher stages of processing. Cigarettes and tobacco extracts dominate, where their import value significantly increased in last three years. Products from the segment - Feeding stuff for animals, from the aspect of quantity are the most imported products, but with their value they are positioned at second place within the list of the most significant import items. They represent products with the most stable import growth. Various forms of margarine (excluding liquid) characterize significant import, so by their growth rate they represent products with the fastest import increase.

Although Serbia, in observed period, if we come from the aspect of agro-industrial products, were used in great extent all possibilities offered by Free trade agreement, in upcoming period should be necessary to work on improvement of trade cooperation between the Serbia and Russia. The main goal has to be improvement of Serbian production capabilities, with the accent to the development of processing sector. Also, it will be necessary that cooperation with the Russian Federation has to obtain further widening of tax free regime. Before all it can cover export of poultry meat, other type of cheeses, white sugar, cigarettes and alcoholic beverages. Considering the fact that Serbia exports mainly primary products with low value, "the costs of transport can play a crucial role in the creation of trade relations" (Knezevic et al., 2012), so in current trade relations it has be established a support system for transport companies in order to decrease transport costs. Of course, moving the export structure to products that pass higher phases of processing will decrease the significance of transport costs in close future. On the other hand, it is necessary to encourage those productions that can contribute to import substitution. Primarily in focus is the development of some segments of processing sector, such as production of animal feed, margarine and bakery products that can be successfully produced in Serbia.

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