

III. DEBIUTY EKONOMICZNE

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CONSEQUENCES OF RUSSIAN EMBARGO FOR POLISH AGRICULTURAL MARKET AND POTENTIAL DISTRIBUTION CHANNELS OF POLISH FOOD PRODUCTS COVERED BY RUSSIAN EMBARGO

Summary: The article discusses the assessed impact of the Russian embargo on Polish foreign trade in agri-food products and tries to identify possible distribution channels of the products covered by the Russian embargo. Searching for potential purchasers of Polish agricultural products was based on analysis of the balance of trade and food self-sufficiency of Asian, African and American countries. The analysis showed potential regions where Poland can export its products. These countries were divided into groups based on individual products analysis. The analysis was made in 2015 – only a year after introduction of embargo and its purpose is to show Polish producers where they could export their products. The analysis did not take into account the prices and transport costs.

Key words: Embargo, European Union, Russian Federation, import, export.

1. INTRODUCTION

Embargo¹, the word derived from the Spanish (Spanish „seizure”), according to the dictionary, is a ban of import or export of certain goods to or from the concerned country, or a limited trade and other relations with a specific country and its boycott on the international arena². The embargo is an instrument of administrative law, imposed by the government or international organizations, treated as a special retaliatory measure. The reasons for the imposition of the embargo may be trade of weapons and military equipment on conflict areas, creation of military threats and supporting terrorism, developing nuclear weapons and human rights

¹ *Słownik Wyrazów Obcych Kopalińskiego*, <http://www.slownik-online.pl/kopaliniski/64F0AC074442D007C12565BD00639ED2.php> [14.11.2015].

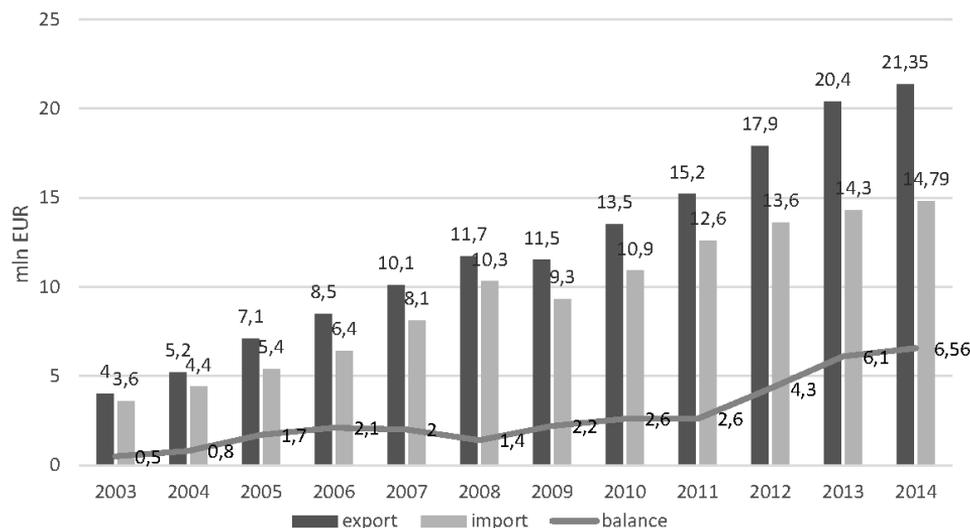
² *Trade Embargoes Summary* (ang.), University of California, <http://darwin.bio.uci.edu/~sustain/issueguides/Embargoes/> [14.11.2015].

violations³. In 2014 Russian Federation embargoed Polish agri – food sector. As a result, import of Polish fruits, vegetables and meat was suspended. In January 2014, Russia embargoed the import of livestock and pork from the European Union. In the first decade of August 2014 – import of meat, fish, dairy products, fruits and vegetables, some meat products, finished products, food products (including milk, based on vegetable fats) produced in the EU, Norway, Canada and the USA and Australia, in October 2014 – import offal and meal and animal fats with the EU⁴. The aim of the article was to assess the impact of the Russian embargo on Polish foreign trade in agri-food products and to identify possible distribution directions for the products covered by the embargo.

2. EXPORT OF AGRI – FOOD FROM POLAND IN 2014

Turnover of Polish agri-food products with foreign countries had been gradually growing (both in exports and imports – see graph. 1) from Polish accession to the EU. The upward trend was maintained also in 2014 in which the value of exports of agri-food products reached 21.3 billion and was by 4.5% higher than in 2013. Growth of imports was less dynamic. In 2014 the value of imports amounted to 14.8 mld EUR, by 3% more than in 2013⁵.

Graph 1. Foreign trade of agro products total in 2003–2014 in EUR million



Source: own study based on data from the AMA and the Ministry of Finance.

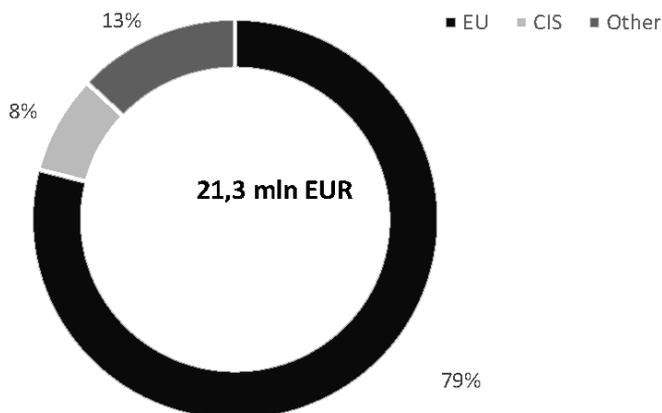
³ Embargo (ang.), [in:] Britannica, <http://www.britannica.com/topic/embargo-international-law> [14.11.2015].

⁴ Code CN: offal – 0206, meal – 0210, animal fats – 1501, 1502.

⁵ ARA calculations based on the available data from the Ministry of Finance; tonnage expressed in product weight.

The main trade partners of Poland are European Union countries, whose participation in the structure of exports in 2014 was 79% compared to 78% of the 2013 (see graph 2). The value of exports of agri – food products to the European Union was 5.3% higher than a year earlier and reached 16.9 mld EUR. The majority of Polish products were exported to Germany, which is the main recipient of fish, cereals, poultry, fruit juices, vegetables and mushrooms. In 2014 value of export to Germany increased by 2% compared to the previous year and reached 4.8 mld EUR. The share of this country in the value of exports of agri – food products from Poland, as in 2013, reached 23%. In 2014, the participation of countries of the Commonwealth of Independent States (CIS) in Polish exports decreased to 8%, compared with 11% year before. This was caused by the limitation of the possibility of exports of goods to Russia, which imposed an embargo on imports of selected food products and agriculture in 2014 (Mainly, embargo concerned apples, pork, vegetables and dairy products). Goods were exported to the CIS in 2014 in value of 1.7 mld EUR, compared to 2.2 mld EUR from the previous year, resulting in a decrease of 23%. In 2014 the value of total goods exported to Russia in the circumstances of introduction of the embargo was about 30% lower than in the previous year and amounted 882 mln EUR. The value of exports to Ukraine dropped by 22% (to 357,4 mln EUR), to Belarus decreased by 7% compared to last year (reached 273 mln EUR). Export to other countries (non EU and non-CIS) increased from 2,2 mld EUR in 2013 to 2,8 mld EUR in 2014, which is 25% growth, and thus the share of these countries in Polish exports of agri – food increased by 2 percentage points (pp), to 13% (graph. 2).

Graph 2. Geographic structure of Polish exports of agri – food products in 2014

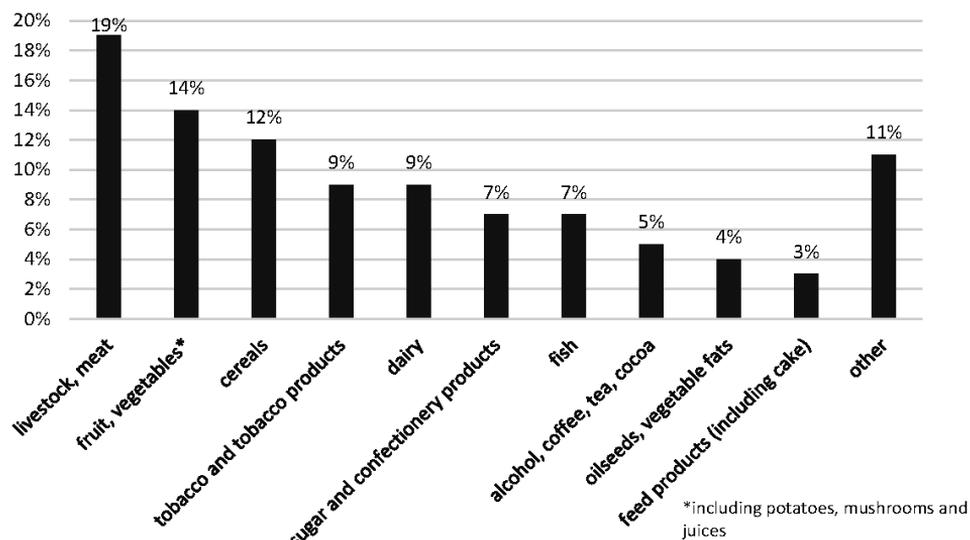


Source: own study based on data from the AMA and the Ministry of Finance.

In compare to 2013 in the commodity structure of Polish exports of agri – food products in 2014, the share of cereals (grains and milk), dairy products, tobacco and tobacco products increased. The share of fruits, vegetables and their products, and meat products (included livestock) and sugar and confectionery decreased. It may

also be associated with the introduction of the embargo. However, it should be noticed, that in spite of these changes in 2014 the largest share in the commodity structure of Polish agri-food exports were embargoed products group (graph 3). Export of meat ⁶ from Poland increased in 2014 r. to 280 thousand tons and 831 mln EUR (by 9% and 8%). This is due to the increase in exports of these products to EU (to 261 thousand tons and 781 mln EUR, respectively about 14% and 12%). Exports increased especially to the biggest recipients of EU (Great Britain, Germany, Italy). Exports of meat products to CIS decreased (to 6 thousand tons and 11 mln EUR, respectively about 64% and 63%). Export to non-EU and non-CIS countries was also smaller, which transported 12 thousand tons of meat for 38mln EUR (respectively about 5% more and 1,5% less than in 2013).

Graph 3. Commodity structure of Polish exports of agri – food in 2014. (shot valuable)



Source: own study based on data from the AMA and the Ministry of Finance.

In 2014, there was a significant increase in Polish exports of meat and offal from poultry⁷. Exports, expressed quantitatively reached 709 thousand tons (about 21% higher than in 2013), expressed in value reached– 1,4 mld EUR (22% higher). Poultry was directed mainly to the EU countries (80% of volume of polish export of poultry and 90% its value) and other non-CIS countries (15% volume and 9% value). In 2014 r. Polish export of meat and poultry to the EU, quantified about 18% higher than in 2013, expressed in value – about 21% higher, to non-CIS

⁶ Since august 2014 embargoed products by codes CN 0210 – meat and edible offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal and CN 1601 00 – sausages and similar products of meat, offal or blood; food preparations based on these products.

⁷ Products embargoed since august 2014.

countries respectively about 40% and 31% higher than the year before. Among the EU countries the main recipients of Polish poultry meat were: Germany (17% of volume and 25% of value), Great Britain (8% of volume and 13% of value), Czech Republic (9% of volume and 8% of value), France (6% of volume and 8% of value) and Netherlands (equally 7% of volume and value), and non-CIS countries – Benin (4% of volume and 3% of value), Hongkong (4% of volume and 2% of value) and Kongo and China (equally 1% of volume and value). From Poland to CIS countries exported a small amount of poultry (35 thousand tons, i.e. 5% of volume and 21 mln EUR, 1,5% of value of export in this group). The volume of shipments of poultry meat to the CIS countries was 10% higher than in 2013 (increase of 3,2 thousand tons), but its value – of 8% lower (decrease of 1,9 mln EUR). Export to Ukraine increased (by 9 thousand tons), exports to Russia decreased (by 6,9 thousand tons) and to Belarus (by 0,2 thousand tons).

In 2014 exports of pork decreased to 380 thousand tons (by 15% in compare to 2013), its value decreased to 699 mln EUR (24%). Such a significant drop in exports of Polish pork was due to the Russian embargo on imports of the EU pork products and the cessation of imports from some countries because of African swine fever in feral pigs. Exports (by volume and value) of Polish pork to Russia and Belarus, was c.a. 95% lower than year before. exports to Ukraine also decreases (75% by volume and value). In effect volume of export to CIS countries was c.a. 88% lower than in 2013, its value – 90% lower. The share of CIS countries in the volume of Polish exports of pork decreased from 24% to 3% (which is to 12 thousand tons), and in value from 28% to 4% (which is to 27 mln EUR). At the same time exports to non-EU countries not belonging to the Commonwealth of Independent States fell to 89 thousand tons and reached 141 mln EUR, respectively by 22% and 30%. The biggest decline was recorded in exports to China, Japan and South Korea (by 82–85%). Export meat from Poland to EU countries increased (to 279 thousand tons and 532 mln EUR, respectively by 24% and 13%). In 2014 export of meat reached 289 thousand tons in compare to 290 thousand tons in 2013, its value decreased to 898 mln EUR (6%). Volume of export of beef to CIS countries decreases to 13 thousand tons (26%), and budget revenues decreased to 40 mln EUR (35%). The decrease in exports to Russia amounted respectively 42% and 47%. Exports to EU countries also decreased (to level 255 thousand tons and 802 mln EUR, respectively 2% and 7% decrease). To 21 thousand tons and 56 mln EUR increased export of beef to other countries. In terms of volume it was two times more than in 2013 r., in terms of value – 85% more. Increase of export was recorded especially to Bosnia and Herzegovina (from 3 thousand tons to 7 thousand tons), Hongkong (from 0,1 thousand tons to 3 thousand tons) and Kosovo (from 0,8 thousand tons to 3 thousand tons). The EU's share in Polish exports of beef was similar to 2013 – about 90%. Volume of dairy products export in 2014 reached 2,8 mld l and was 25,5% higher than in 2013. The value of export of dairy reached the level 1,9 mld EUR, about 11% higher than year before. Dairy products was exported to EU countries. After losing an important market, which was Russia and limiting exports to Ukraine, the share of CIS countries in the export

decreased to 8%, from 11% in 2013, in spite of the increase in exports to Belarus. The total value of exports of dairy products to CIS countries in 2014 was 18% less than a year earlier and amounted to 155 mln EUR. At the same time significantly (to 480 mln EUR, by 93%) increased exports to other countries such as: Algeria, Saudi Arabia, Indonesia, Cuba, Egypt, Malaysia, Philippines, Thailand, Niger. In 2014 the share of non-EU and non-CIS countries in the geographical structure of exports increased to 25,5%, from 15% in 2013.

In 2014 export of fruit and vegetable juices was by 3% higher than in 2013 and reached 447 thousand tons. At the same time, export decreased by 17% (to 493 mln EUR). The main destination countries were EU (especially Germany, Netherland and Great Britain), to which exported 407 thousand tons of products (by 3% less than year before) worth 436 mln EUR (21% less). Export juices to CIS countries increased (by 170%, to 19,5 thousand tons and by 31%, to 33 mln EUR) and to the others (by 162%, to 20 thousand tons and by 94%, to 24 mln EUR). About 94% juices were exported to Russia (81% in 2013). The volume of export of juice to Russia in 2014 was three times greater than in 2013, the value was by 41% higher. This situation was caused by embargo. While during the first seven months of 2014 export of goods from the Polish increased by 3% to 978 thousand tons, its value by 6%, to 787 mln EUR, after the introduction of an embargo on the import of fresh and frozen vegetables (august 2014) there was a significant decrease in the volume and value of exports of these goods. In the period August – December 2014 export of vegetables and milk in relation to that recorded in the previous year decreased by 12%, to 603 thousand tons, its value decreases by 10%, to 507 mln EUR. During this period, it recorded 38% drop in volume and a 42% decrease in the value of exports of vegetables and vegetable products to CIS countries. In total in 2014. Volume of total exports of vegetables and vegetable products from Poland amounted to 1 581 thousand tons, its value – 1,3 mld EUR, respectively by 3% and 1% less than in 2013. The drop in exports was the result of a very large reduction in exports of fresh vegetables to the CIS-countries the period of the ban on imports of these products to Russia (especially tomatoes, cabbage, carrots, cucumbers and peppers). In the period from August to December export all fresh vegetables to the CIS countries in terms of volume was lower than the previous year by 55%, and in terms of value – for 64%. The increase in exports to other non-EU countries and the EU in this period did not offset the decline in exports to the CIS. In the whole of 2014. Exports of fresh vegetables was 4% higher than in the previous year and amounted to 741 thousand tons, its value increases by 0,3% and reached 592 mln EUR, which was due to an increase in exports to EU countries and the CIS before the introduction of the embargo. In 2014 export vegetable products was lower (including embargoed frozen). Volume of exports decreased by 8%, to 840 thousand tons, and its value by 2%, to 702 mln EUR. The largest decline (in volume by 10.5% in value by 3%) was recorded in exports to the EU, which still remains the main recipient of the goods (66% – share in volume). Less than in 2013 vegetable products exported to the CIS countries (respectively 3% and 1%) and to other countries (non-CIS – volume

decrease of 4%, with an increase in the value of exports 1%). Export to Russia decreased from 184 thousand tons (108 mln EUR) in 2013 to 165 thousand tons (102 mln EUR) in 2014 (volume 10%, value 6%).

Since the beginning of 2014 export demand for fruits from Poland was limited. In 2014 exports of fresh fruit was 1 334 thousand tons, its value was 597 mln EUR and it was respectively about 12% and 18% lower than in 2013. The main direction of exports of fresh fruit were the CIS countries and therefore the 16% drop in volume and a 26% decrease in revenues from exports to these countries was the main reason for the weaker results in the export of fruit total. The lower export (3% and 1%) was also to EU countries. The dominant position in the export of Polish fruit are apples. In 2014 the export of Polish apples amounted to 1 062 thousand tons, and its value – 340 mln EUR. Volume of exports of apples was 14% lower than in the previous year, and export revenues by 24% smaller. Before the embargo on the import of apples to Russia, this country was in 2014 the main receiver. In 2014 for the introduction of the embargo were exported to Russia 402 thousand tons of apples, its value was 143 mln EUR. Throughout 2014 Belarus exported 261 thousand tons apples, for 74 mln EUR, to Kazakhstan 61 thousand tons, for 18 mln EUR. To EU exported 270 thousand tons apples, of value 83 mln EUR, at most to Germany (71 thousand tons) and Romania (43 thousand tons). In the analyzed period, the export of fruit (including embargoed frozen food) amounted to about 3% higher than in 2013 and reached 416 thousand tons. The value of exports was slightly higher (by 0,4%) than in 2013 and reached 588 mln EUR. To EU exported 333 thousand tons of fruit, revenue from their sale amounted to 496 mln EUR. This was respectively 6% and 2% more than in 2013. It was significantly lower while exports to CIS countries. In 2014 Poland exported to them about 56 thousand tons of fruit, its value was 47 mln EUR, by 12% and 21% lower than in 2013. Export to Russia was 38 thousand tons and 31 mln EUR, in both cases by 30% less than in 2013. Exports to other EU countries amounted to 27 thousand tons and 46 mln EUR, in both cases by 13% higher than in 2013.

3. POTENTIAL DISTRIBUTION CANALS FOR POLISH AGRICULTURAL PRODUCTS COVERED BY THE RUSSIAN EMBARGO

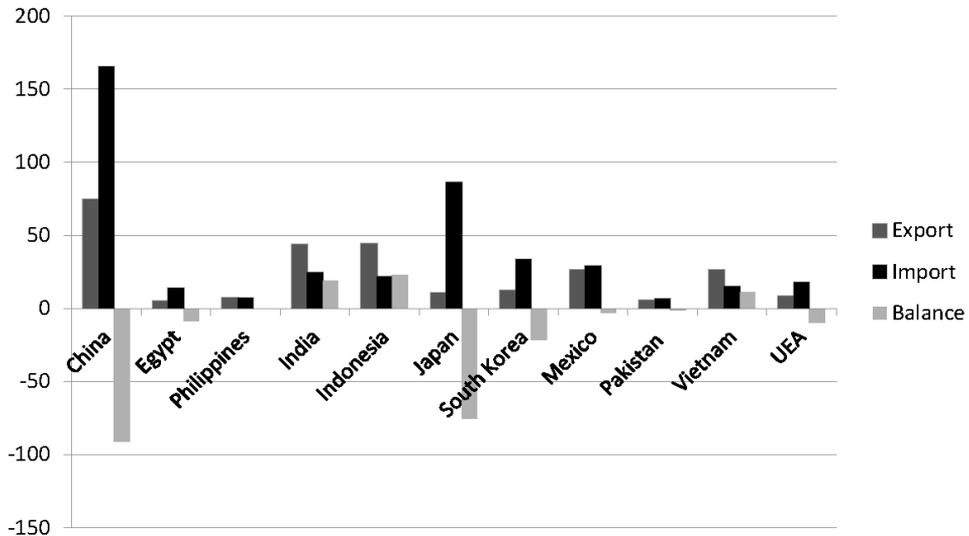
European Union countries are the largest exporter of agriculture product in the world. In 2014 from Europe left the 40,8% global export worth 719 billion dollars. The most exchange, more than 75%, is being done between European Union's countries and others European's countries. The structure of export in Poland is similar⁸. Poland should find potential purchaser of Polish agriculture product covered by the Russian embargo by analyzing structure of consumption and foreign trade of countries and with this way sell surplus of agriculture production which can't be sold to Russia. The next problem is decrease of trade with Belarus and

⁸ World Trade Organization, 2014, Exports of agricultural products of regions by destination.

Ukraine which they depend from Russia because until 1990 they had been were one country– it is The Soviet Union. This countries only 25 years function such as sovereign powers so they economic contacts are strong. Moreover political situation in Ukraine this situation deepens (annexation Crimea by Russia, war with separatists and dependence on Russian supply gas. Polish economy, especially agriculture sector, to avoid economic consequences associated with the embargo must cooperate with others countries and purchaser.

The selected countries have been chosen such as potential purchaser after preliminary analysis of different macroeconomics values, e.g consumption and production of products with Russian embargo and the trade balance of all and embargoed agriculture product. At the beginning we look at general balance of trade agriculture products in this countries. It shows that in the country is self-sufficiency feeding or they there is a need import food from abroad.

Graph 4. The balance of trade in agricultural products in 2013 in million \$



Source: own study based on data from OECD and FAOStat.

In the picture 4 we see that China and Japan have the most negative balance. China in 2013 paid for agriculture product 90 billion dollars more than them revenues from sells this product. The reason for this may be the population, people in China are 1,3 billion⁹. Domestic production is not able to provide food security. Japan also have a negative balance of 75 billion dollars. It is a small country located on the islands and about 3/4 of the country cover mountains. From here a small number of lands are practiced agriculture and they must bring food. Negative balance have Egypt, South Korea and United Arab Emirates too.

⁹ <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html>

Table 1. Meat's consumption and production in 2013 in thousand of ton

Country	Poultry		Pork		Beef	
	Consumption	Production	Consumption	Production	Consumption	Production
China	17946,4	13371,8	55437,8	53752	6981,3	6408,2
Philippines	1120,7	1046,9	1749	1681,1		
India	2448	2328			1104,3	966,6
Indonesia	1792,3	1837,9				
Japan	1891	1450	2382,8	1309,1		
South Korea			1513,9	1007		
Mexico	3461,3	2808	1773,5	1283,7	1794,6	1806,8
Pakistan					1606,5	813
Vietnam	1277,7	530,5	3311,7	3217,9	1127,6	285,4
Saudi Arabia	2562,7	2055,6	1272	605,5	4059,9	2021,1

Source: own study based on data from the WTO.

In most countries meat production can't satisfy consumption (Table 1.). China, the most populous country in the world, don't satisfy all meat consumption. The biggest imbalance is in poultry meat, production ensure only 75% annual consumption. In others South Asian countries differences between production and consumption is visible. Japan produces half consumed porky meat, Vietnam only 25% annual consumed beef meet and 40% annual poultry meat.

Only Indonesia have positive balance in this statement. Their production of poultry meat is able to satisfy annual consumption. A second example is Mexico and their production of beef meat which can satisfy domestic consumption. It is worth mentioning about Sub-Saharan countries. Their production is based on the production plants and their meat production provides 50% – 80% annual demand. The most losses of Russian embargo touched pork producers. Before the embargo Poland export to Commonwealth of Independent States 100 thousand tons pork. After the ban which from 2014 Polish export decrease of 88 thousand tons. To this situation contributed African swine fever detected in feral pigs near the border with Belarus. The export crisis increased after move in ban on Polish pork meat by countries of the Far East. when the ban will be revoked Poland must sell about 100 thousand tons of pork meat exported to Russia, Ukraine and Belarus. Producer can increased sales to Japan and South Korea. This countries satisfy

only 55% – 60% annual consumption¹⁰. Japan spends 85 billion US dollars and South Korea spends 33 billion US dollars on imports because their countries are limited surface and it is not possible to increase production but only import. Sub-Saharan countries are good potential direction to export Polish pork meat. Their production doesn't provide to self-sufficiency feeding. Nutritional deficiencies in this region increased in second half of twentieth century when more countries regained independence. Then big farm plantation conducted by colonists are converted to national farm, introduced official price and the government conducted a protectionist economy policy. Also Sub – Saharan countries have been covered by embargo from colonial countries. Big farms export-oriented are destroyed and dominated small farm produced for their owns needs. In the same time in developed countries adjusted to technological development in agriculture and improved the efficiency and effectiveness. African countries in the XXI century introduce technological facilities which improve production, however is need to involve expenditures in technical and organizational progress, research and development programs or opening agriculture school¹¹. The next big market to export pork meat is Mexico. It is country where lives 118 million people, the birth rate is on the level 1,18%. It is a fifteenth economy in the world in terms of nominal GDP and twelfth economy in terms of purchasing power parity. Forecasted that Mexico will be sixth economy in the world in 2050. 85% of production satisfy pork demand¹².

Almost 90% beef meat were exported to European Union's countries so declined in the value and quantity of export are small. Export to Commonwealth of Independent States or countries of Western Union little fallen but to others countries are increased, for example Bosnia and Herzegovina, Kosovo, Hong Kong. This countries don't spend so much money on products like as countries of Western Union. That were more greater decrease in value than the amount. Volume of beef meat production in Poland is smaller than productions of poultry or pork meat so nominal value of export is the smallest of all kinds of meat. Problems with sold 300 thousand tons beef meat are not as serious as pork meat. But if sales to Russia or European countries will fall that possible are sales to non-European markets. Generally they will be developing countries where are positive birth rate. Standard of living in this countries is grows and there are changes eating habits and more often people eat meat. These are mainly Sub – Saharan countries where production satisfy only a half annual consumption of beef meat and countries of south-east Asia which produce from 25% to 75% of consumption. Poland never isn't a tycoon of beef meat production in the world but if in Poland is stable situation in export that Polish producers gain a few new market.

¹⁰ FAOStat.

¹¹ M. Wague, *Problemy rozwoju gospodarki rolnej w Afryce i czynniki ją ograniczające*, „Zeszyty Naukowe SGGW – Ekonomia i Organizacja Gospodarki Żywnościowej” 2010, nr 85, s. 135–137.

¹² http://www.informatorekonomiczny.msz.gov.pl/pl/ameryka_polnocna_i_srodkowa/meksyk/

Producers of poultry meat didn't feel the effects of Russian embargo. In 2014 export to Commonwealth of Independent States was a 5% of all export poultry meat and mainly was a Ukraine. But all export this meat increased by 20% so poultry meat industry have a stable position. European Union's countries buy the most of all poultry from Poland, but they can raise Sub – Saharan countries or China's market where are sold 10% of all exported poultry meat. In this countries production not keep up to consumption and they are forced to import. China produce 75% annual consumption of poultry meat and considering the growing population, percentage this may decrease. African countries located in the south of Sahara produce 80% of consumption. Also Poland can export poultry meat to Mexico which becomes one of the biggest economies in the world. But trade exchange with Mexico may be difficult through the use of economic and customs procedures. They lower customs value of agriculture products, but a large part of this products was not covered by the full liberalization of trade. Sanitary standards are designed so as to make it difficult to import agriculture products from European Union¹³.

Decrease of fresh and frozen vegetables export value noticeable was in July 2014 when Russia introduced embargo. There has been a decrease of 12% compared to the same period in the previous year. Vegetables in which the most hit Russian embargo were tomatoes, cucumbers, peppers, carrots and cabbages. Tomatoes are the most consumed vegetables in the world according FAOStat. The biggest consumer of tomatoes in the world are United States of America and Canada. One resident in the USA consumes 40 kg of tomatoes and 120 kg of all vegetables. Theirs industrial agriculture don't allow edible vegetables so they import 3 billion tons edible vegetables every year. The second big outlet may be countries of south-east Asia, mainly China and India. This countries are leaders of production vegetables in the world, but growing population will increases the demand for all products. China supply 85% national demand without food processing and theirs volume of demand is 600 million tons. In India is consumed 110 million tons vegetables annual and these values are increasing from year to year, but national production can supply local market. Countries of south-east Asia can import annual 1 billion tons vegetables.

Export of fruits decreased by 12% because much of fruits were sell to countries of Eastern Europe. This countries are the main recipients of Polish fruits. Producers of apple were suffered the most because 80% of all export to Russia, Ukraine and Belarus are apple. In 2013 Russian export of Polish apples constituted 55%, in first half of 2014 Russia buy 402 thousand tons apples, what are 40% all annual sales. Non other purchaser not bought as many apples as Russia in first half of 2014. Others countries of Commonwealth of Independent States import more apples from Poland than European Union's countries. Difficulty in trade of apples is negatively on farmers' income. It is worth noting that Poland is fourth producer

¹³ http://www.informatorekonomiczny.msz.gov.pl/pl/ameryka_polnocna_i_srodkowa/meksyk/

of apple in the world and the first exporter. Therefore this problem are seriously and Poland must find a solution, it means potential purchaser. Association of Polish Horticulture can see the potential in north Africa and countries of the Middle East. National production supply maximally 80% local consumption. Algeria buy 124 thousand tons, Egypt – 221 thousand tons, Saudi Arabia – 187 thousand tons, United Arab Emirates – 156 thousand tons. There are a big demand for apple so there is a chance for Polish apple¹⁴. In 2015 Poland sold apple to India and Polish fruit growers want start to sell apple to China. Furthermore Polish society responded to Russian embargo and they eat more apple. In 2013 it was a 13–14 kg for one person and in 2014 it was a 17–18 kg for one person. The reason for this growth were lower price and reaction to Russian embargo. But then increased volume of fruit's juice and conserve. It were 900 thousand tons in 2014 and primary purchaser were European Union's countries. Export of fruit's conserve to Russia it fell but increased export of fruit's juice. To European Union's countries this export was at the same level – it were 700 thousand tons annual.

Ban on export of milk and dairy products and limit export to Ukraine caused a drop of all export this product by 3%, but it were 22 million of liters. And although tendency of export Polish milk and dairy products are growing, they must find new merchant. In 2014 noticeable was increased of export milk products to non-European countries, primarily African and Asian countries. China and others Asian countries bought in 2014 from Poland 50% more milk and dairy products than a year before. It shows that this good sales direction this product and Polish producer should decide to sell there. According to data FAOStat China spends dairy products 5 billion US dollars, Japan spends 1,5 billion US dollars, Indonesia spends 1,1 billion US dollars, Malaysia and Philippines one billion US dollars each. The second way of Polish dairy products may be north Africa and countries of the Arabian peninsula. Algeria and Egypt produce 60% of annual demand and spend on this product 1 billion US dollars on import. Demand in Saudi Arabia is similarly satisfied and they spend 2 billion US dollars on import dairy products. The third way for Polish dairy products will be Sub – Saharan Africa which develops and wants take dietary trends from developed countries.

4. CONCLUSIONS

The first main potential directions where Poland can export agricultural products are countries of south-east Asia and China. These countries have a nearly half of the world's population. Japan, South Korea or Vietnam are smaller countries, they produce high technology products, but don't have many agricultural areas. China, India and Indonesia are big countries with cheap workforce. Agriculture production do not cover national demand. Japan and South

¹⁴ B. Drewnowska, *Rośnie spożycie jabłek*, „Rzeczpospolita Polska” 2015.04.12.

Korea import Polish pork, but Poland can increase export volume of this meat because their production do not cover consumption. Polish producers can export beef to India, Vietnam or Pakistan because they never reach the full coverage of consumption. To China can man export poultry. Chinese people eat a lot of chicken meat, but their production that only 75% annual consumption. There is also lack of dairy products in this region. In 2014 producers of dairy products in Poland saw it as a good way to market this product. Therefore, Polish export of dairy products to this countries increased by 50%. China spends on dairy products 5 billion US dollars per year, others countries in south Asia spend about 1–1,5 billion dollars together. If in 2014 Polish export to Asia increased that in next year will increase more dynamically. Also south – east Asia is tycoon in production of vegetables, but countries from this region import about 1 billion tons of vegetables every year, for example potatoes, cabbages, tomatoes, carrots, peppers. All these products have been covered by Russian embargo so purpose of Polish export can become South – East Asia¹⁵. The next direction of Polish products can be North African countries and countries of the Middle East. Their main wealth are crude oil and natural gas or tourist services. In countries aimed at tourism, Egypt or Morocco, food must be sourced for tourists. Also Egypt is the most populous Arabian country, where 90 million people lives ¹⁶. Next to the Nile river agricultural production is possible, but it is insufficient. In this countries the most areas are covered by deserts. Saudi Arabia, Qatar, Kuwait, United Arab Emirates persist through mines¹⁷, they are rich and can afford to buy agricultural products. There is potential to send apples and potatoes in this countries. Moreover, these countries not sufficiently produce dairy products. It is only 60% of consumption. In addition they spend on dairy products about 1–2 billion US dollars per year so access to this market may be easy. Another direction is Sub – Saharan Africa, which occupies a large area of the continent in the south of Sahara. It is the next big outlet with the fastest population growth. The majority of countries have birth rate at level 1–4%¹⁸. Moreover this countries are the poorest, but they want to download behaviour and nutrition patterns from West Europe or the USA. Therefore these countries can become a major shareholder in Polish exports, while some products are already being sold there. Agricultural production do not cover consumption, agriculture is usually backward without modern technologies¹⁹. There is a chance for Polish exports of meat. National production satisfy only 50–80% of consumption. Now about 5% of poultry meat is sent to South and Central Africa so this direction is able to absorb more exports. Poland can also find consumers of dairy products,

¹⁵ FAOStat

¹⁶ <http://www.informatorekonomiczny.msz.gov.pl/pl/afryka/egipt/>

¹⁷ <http://www.informatorekonomiczny.msz.gov.pl/pl/azja/zea/>

¹⁸ <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2002rank.html>

¹⁹ J. Falkowski, J. Kostrowicki, *Geografia rolnictwa świata*, PWN, Warszawa 2001, s. 481.

because production is insufficient. Lack of animal farms causes lack of meat and dairy products. The last directions to import Polish food in our opinion is Mexico, one of the fastest growing countries in the world. Poland can export to Mexico poultry and pork or vegetables. Their agriculture production could provide food security, but in the North there are the USA and Canada which import cheaper products from Mexico, not only food. Share of the USA and Canada in exports of Mexico is 83%²⁰. Mexico may sell agriculture products to the North America and export them from Europe, region with the largest agricultural production. And this is chance for Polish unused products, mainly meat, which Poland could sell to this region of the world.

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KONSEKWENCJE ROSYJSKIEGO EMBARGA NA POLSKIM RYNKU ROLNYM I POTENCJALNYCH KANAŁÓW DYSTRYBUCJI POLSKICH PRODUKTÓW SPOŻYWCZYCH OBJĘTYCH ROSYJSKIM EMBARGO

Streszczenie: W artykule starano się określić wpływ rosyjskiego embarga na polski handel zagraniczny produktami rolno-żywnościowymi oraz zidentyfikować możliwe kanały zbytu produktów objętych rosyjskim embargo. Szukanie potencjalnych odbiorców polskich produktów

²⁰ http://www.informatorekonomiczny.msz.gov.pl/pl/ameryka_polnocna_i_srodkowa/meksyk/

żywnościowych było oparte na analizie salda handlu zagranicznego i samowystarczalności krajów azjatyckich, afrykańskich i amerykańskich. Analiza ta pozwoliła na określenie potencjalnych obszarów, gdzie Polska mogłaby eksportować swoje produkty. Kraje poddane badaniu zostały podzielone na grupy ze względu na analizę poszczególnych produktów rolno-żywnościowych. Analiza została przeprowadzona w 2015 roku – tylko rok po wprowadzeniu embarga, a jej celem głównym było ukazanie polskim producentom, gdzie mogliby eksportować swoje produkty. W badaniu nie brano pod uwagę cen oraz kosztów transportu.

Słowa kluczowe: embargo, Unia Europejska, Federacja Rosyjska, import, eksport.

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