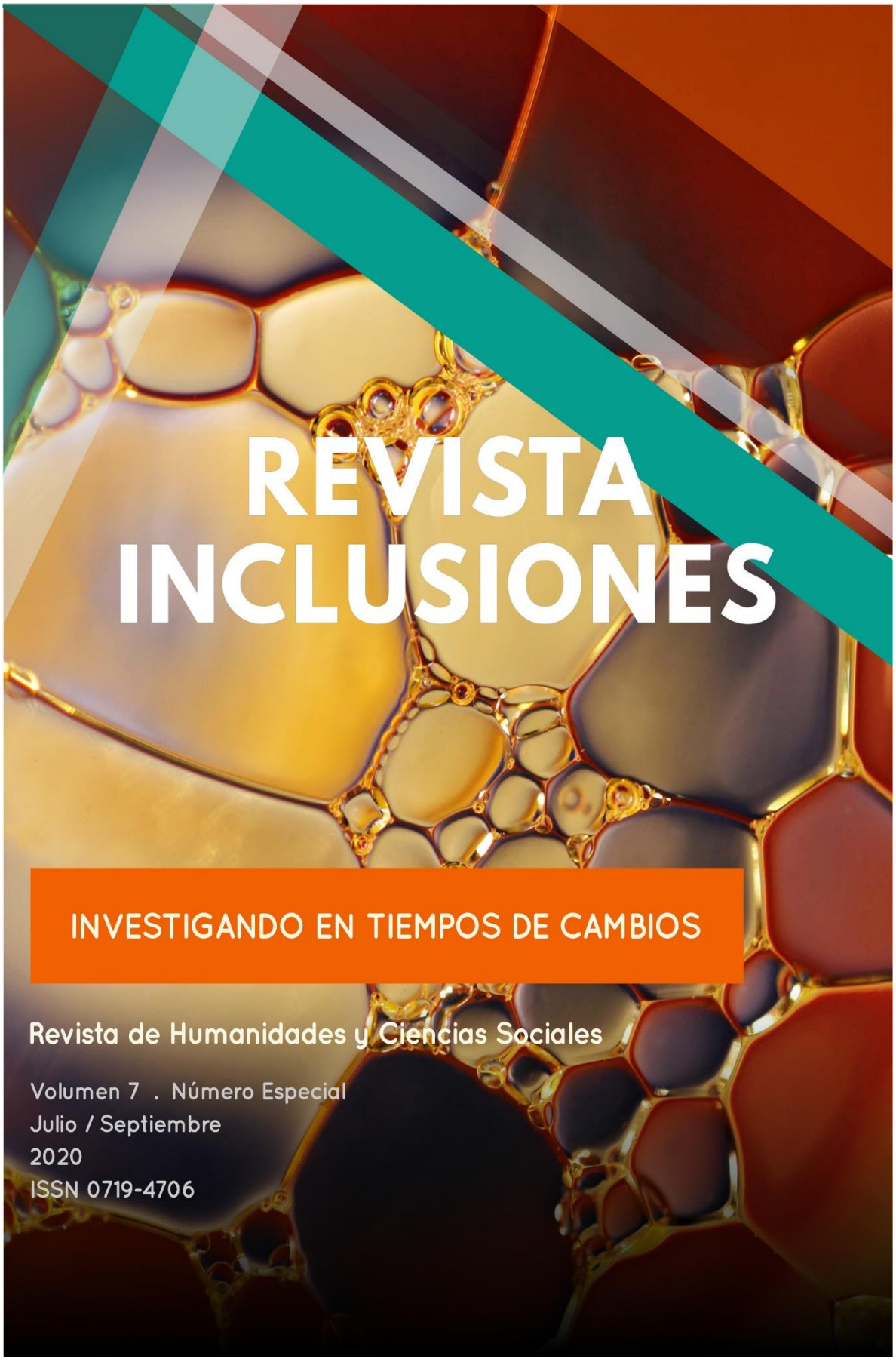

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MARKETING OF NUT-BEARING PRODUCTS: CURRENT STATUS AND DEVELOPMENT PROSPECTS

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Abstract

Nut production is one of the most profitable areas of agribusiness. In this study the current state of the Russian market of nut-bearing products has been assessed in the context of the dynamics of foreign economic relations and peculiarities of the global agro-industrial complex. The structure of various nuts import, peculiarities of forming prices and demand for nut-bearing products have been analyzed.

Keywords

Price dynamics – Nut-bearing products – Import structure – Production efficiency – Food industry

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Introduction

The global demand for nuts grows at about four per cent per year, which exceeds the natural population growth. This trend is substantiated by the increasing attention to the health benefits of nuts and the development of the retail food industry that uses nut-bearing products as ingredients. In developing countries, e.g., India, China, countries of the Eastern Europe and the Middle East, the demand for nuts is constantly growing[1].

The industries that traditionally consume various types of nut-bearing products are developing dynamically. As a result, the need for roasted and crushed nuts and nut kernels is consistently growing. In addition, nuts are a very valuable consumer product.

Literature Review

The problems associated with the development of the food processing industries and the increase in their economic efficiency have been studied by a number of national and foreign scientists, including A.G. Paptsov[2], N.D. Avarskiy[3], V.V. Taran[4], H.N. Gasanova[5] , S.M. Ryzhkova[6], A. Shakerardekani[7], M. Tleis[8], and L. Wadt[9]. Various aspects of the nut-bearing production have been covered in the works of E.V. Titov[10], T. Bertwell[11], and R.

[1] A. Esmaeilpour y A. Shakerardekani, Effects of early harvest times on nut quality and physiological characteristics of pistachio (Pistacia vera) trees (Belgium: Leuven, 2018).

[2] A. G. Paptsov, “Rynok kormovogo zerna Kitaya: razvitiye i perspektivy”, Economics of Agricultural and Processing Enterprises Vol: 8 (2009): 68–69; A. G. Paptsov; G. E. Bykov y A. N. Osipov, “Transnatsionalnye kompanii v zernovom hozyaystve Rossii”, Economics of the Russian Agriculture Vol: 9 (2015): 39–44; A. G. Paptsov; R. R. Araslanov y I. P. Gotovtseva, Development of the Russian grain export capacity in conditions of world consumption growth. Proceedings of the international scientific conference of young scientists and specialists dedicated to the 150th anniversary of V.P. Goryachkina (pp. 314-316). 2018 y A. G. Paptsov; V. Nechaev y P. Mikhailushkin, “Towards to a single innovation space in the agrarian sector of the member states of the Eurasian economic union: a case study”, Entrepreneurship and Sustainability Issues Vol: 7 num 1 (2019): 637-648.

[3] N. D. Avarskiy; V. V. Taran y V. K. Devin, “Proizvodstvo i realizatsiya organicheskikh produktov pitaniya v Rossii v kontekste sovremennyh marketingovyh tendentsiy na mirovom rynke”, Economics of Agricultural and Processing Enterprises Vol: 11 (2018): 74–81.

[4] J. E. Sokolova; N. D. Avarskiy; V. V. Taran y H. N. Hasanova, “Aktualnye voprosy standartizatsii produktsii organicheskogo proizvodstva v Rossii”, Economics of Agricultural and Processing Enterprises Vol: 6 (2015): 53–58.

[5] J. E. Sokolova; N. D. Avarskiy; V. V. Taran y H. N. Hasanova, “Aktualnye voprosy standartizatsii produktsii organicheskogo proizvodstva v Rossii”, Economics of Agricultural and Processing Enterprises Vol: 6 (2015): 53–58 y A. N. Stavtsev; H. N. Gasanova y A. S. Lankin, “Otsenka perspektiv marketinga organicheskoy produktsii”, Economics of the Russian Agriculture Vol: 9 (2017): 62–68.

[6] S. M. Ryzhkova, “Tendentsii razvitiya kooperativnogo rynka plodoovoshchnoy produktsii Rossii v usloviyah sanktsiy”, Fundamental and Applied Research of the Cooperative Sector of the Economy Vol: 2 (2019): 86–96.

[7] A. Esmaeilpour y A. Shakerardekani, Effects of early harvest times on nut quality and physiological characteristics of pistachio (Pistacia vera) trees (Belgium: Leuven. 2018).

[8] M. Tleis; R. Callieris y R. Roma, Segmenting the organic food market in Lebanon: an application of k-means cluster analysis (W Yorkshire: Emerald group publishing ltd, 2017), 1423-1441.

[9] L. Wadt; K. Kainer; C. Staudhammer y R. Serrano, Sustainable forest use Brazilian extractive reserves: Natural regeneradon of Brazil nut in exploited populations (Oxon: Elsevier sci ltd, 2008).

[10] E. V. Titov, “Agrotekhnika i rentabelnost kedrovyh orekhoproduktivnyh plantatsiy”, Actual Areas of the Scientific Research of the XXI Century: Theory and Practice Vol: 6 num 7 (2018): 272–276.

[11] T. Bertwell; K. Kainer y W. Cropper, Are Brazil nut populations threatened by fruit harvest? (NJ: Wiley, 2018).

Callieris[12]. At the same time, national references almost do not contain any systematic studies on the retrospective analysis, the current state, and dynamics of the global and Russian markets of nut-bearing products.

Methods

The statistical base of the study includes materials from the Food and Agriculture Organization of the United Nations (FAO)[13], the Statistical Office of the European Union (Eurostat)[14], and the Federal State Statistics Service (the Russian Federation)[15]. The data retrospective ranges from 2013 to 2018. During the study, the following generally accepted economic methods were used: the economic-statistical ones, in particular, the calculation of average annual growth rates, the monographic method (the analysis of 19 references published by leading national and foreign researchers on the subject under study during 2007 – 2019), the analytical method, and the graphical analysis method (combined charts and histograms of the price dynamics and import structure).

Conclusion

In terms of the nutritional value, nuts differ from other fruits by their high solids content (up to 90 – 96 % of the wet weight), whose main component is fats that are rich in unsaturated fatty acids. Nut-bearing plants are also a good source of native proteins. Therefore, in terms of the energy value, nuts considerably predominate over other plant products. In terms of carbohydrates, nuts are close to juicy fruits, but unlike them, more than half of the digestible carbohydrates include starch. They also contain a lot of fiber, which reduces their digestibility. However, according to the modern theory of nutrition, fiber is necessary to remove harmful substances from the body, primarily cholesterol.

Indicators	Years					Average annual growth rate, %
	2013	2014	2015	2016	2017	
Cashew	3,806.7	3,696.3	4,430.5	4,087.7	3,971.3	1.1
Hazelnut	892.5	732.1	962.2	774.2	1,033.2	3.7
Pistachio	753.2	962.7	940.4	1,256.8	1,210.4	12.6
Walnuts	4,483.5	5,019.7	5,320.3	5,583.1	5,755.0	6.4

Source: Complied and calculated by the authors based on the FAOSTAT data[16]

Table 1

Dynamics of the Gross Nut-Bearing Production in the World, thous. t.

According to the Food and Agriculture Statistics Division of the United Nations, the world production of nut-bearing crops increases annually. For 2014 – 2017 the world production of cashew grew by 4.3 %, or 165.5 thous. t, of hazelnuts – by 15.8 %, and of pistachios – by 60.7 % with the average annual growth rate of 12.6 % (Table 1).

The demand for nut-bearing products has been quite stable around the world for many years. Besides, in many Asian countries, nut-bearing products account for up to 30 %

[12] M. Tleis; R. Callieris y R. Roma. Segmenting the organic food market in Lebanon…
[13] FAO: Food and Agriculture Organization of the United Nations. Retrieved from: http://www.fao.org
[14] Statistical office of the European Union. Retrieved from: http://ec.europa.eu/eurostat/data/database
[15] Unified Interdepartmental Information and Statistical System (EMISS State Statistics). Retrieved from: http://fedstat.ru
[16] FAO: Food and Agriculture Organization of the United Nations. Retrieved from: http://www.fao.org

of the agricultural export. After the substantial increase in nut prices in 2010 – 2012, the situation on the market had stabilized, and over the next five years the world production of all major types of products had increased. In particular, the average annual growth rate for hazelnuts was 3.7 %, and 6.4 % for walnuts. In the world agro-industrial complex, organic agriculture has the highest and sustainable development rates[17]. The nut-bearing production using organic technologies is also one of the most promising areas for the development of agribusiness.

Indicators	Years					Average annual growth rate, %
	2013	2014	2015	2016	2017	
Cashew	112.5	3.1	3.0	136.4	148.5	7.2
Hazelnut	23.7	13.0	12.5	24.7	31.5	7.3
Pistachio	0.3	0.4	4.1	6.4	14.6	1.7 times
Walnuts	53.9	26.2	25.3	58.3	15.0	-27.4

Source: Complied and calculated by the authors based on the FiBL data

Table 2

Dynamics of the Nut Gardens Cultivated Using Organic Technologies, thous. ha

According to the Research Institute of Organic Agriculture (FiBL), in 2013 – 2017 the areas of organic almonds and hazelnuts gardens increased by 32 % in the world, and the average annual growth rate was 7.3 %. The production of pistachios had the highest rates. The production area of this type of nuts increased more than five times and amounted to 14.6 thous. ha in 2017 (Table 2)[18]. The cultivation of nut gardens in agricultural organizations (AOs) and peasant farms (PFs) of Russia provides more attractive options for investment in agriculture as compared to more traditional sectors that are under the economic pressure in the context of resource intensive production and competition of widely subsidized products of foreign counterparties[19]. Walnut cultivation replaces cultivating crops with relatively low financial returns for more profitable crops that diversify the production and reduce the effect of negative factors in the food market. However, walnut cultivation requires long-term investments in capital, technological skills, and the implementation of the most promising scientific developments.

Indicators	Years					2018 in % as to 2014
	2014	2015	2016	2017	2018	
Fruit and berry plantations – in total	140.1	136.6	136.3	140.4	141.6	101.1
including nut-bearing ones in AOs	2.8	2.9	3.4	3.7	3.9	139.4
nut-bearing ones in PFs	0.6	0.9	1.2	1.3	1.3	2.2 times
nut-bearing ones in the population's households	5.3	5.5	5.6	5.4	5.4	102.0

Source: Complied and calculated by the authors based on the data from the Unified Interdepartmental Statistical Information System[20]

Table 3

Dynamics of the Russian Nut Gardens by Categories of Farms, thous. ha

[17] L. Wadt; K. Kainer; C. Staudhammer y R. Serrano, Sustainable forest use Brazilian extractive reserves: Natural regeneradon of Brazil nut in exploited populations (Oxon: Elsevier sci ltd, 2008), 332-346.

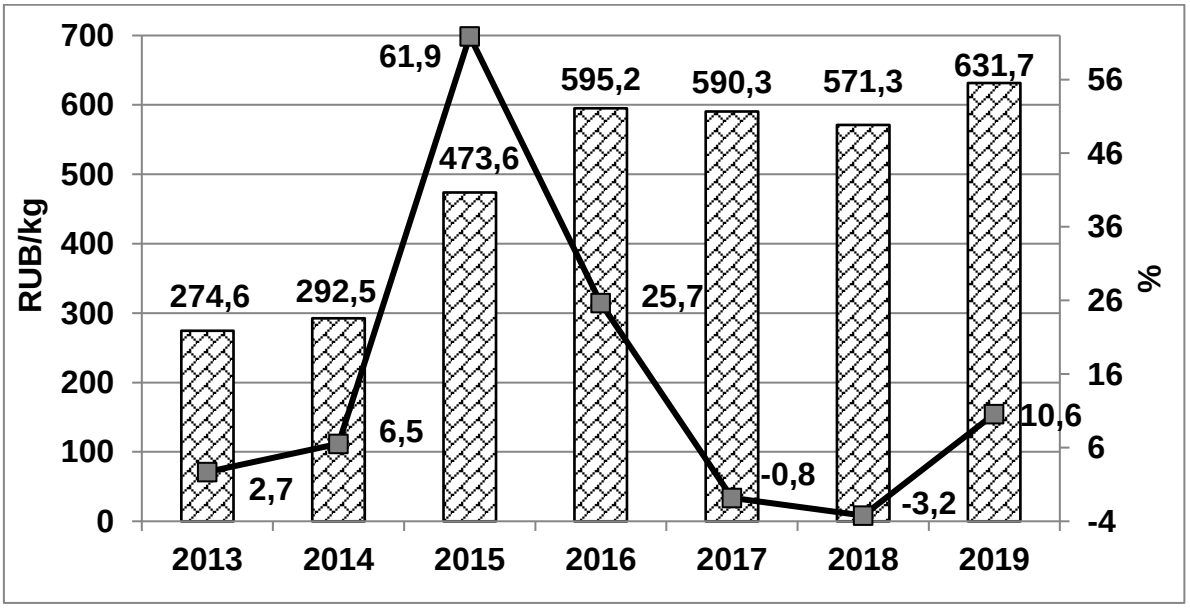
[18] N. D. Avarskiy; V. V. Taran y V. K. Devin, "Proizvodstvo i realizatsiya organicheskikh produktov pitaniya v Rossii v kontekste sovremennyh marketingovyh tendentsiy na mirovom rynke", Economics of Agricultural and Processing Enterprises Vol: 11 (2018): 74–81.

[19] A. Esmaeilpour y A. Shakerardekani, Effects of early harvest times on nut quality and physiological characteristics of pistachio (Pistacia vera) trees (Belgium: Leuven, 2018).

[20] Unified Interdepartmental Information and Statistical System (EMISS State Statistics). Retrieved from: http://fedstat.ru

The dynamics of the areas of nut gardens in Russia tend to grow annually. In total for the period under study, the area of plantations of nut-bearing crops increased by 21.9 %. In terms of the production by categories of farms, on average 50 % of all areas are the population's households. AOs account for 38 % of the area, and PFs own 12 % (Table 3).

The decrease in the gross yield of oilseeds, as well as a somewhat unfavorable situation in the oil-producing subindustry caused an increase in prices for vegetable oils, and created an unfavorable situation in the operation of oil-refining enterprises[21]. Despite the attempts of oil producers not to increase selling prices for their products by changing the range and lowering profits, consumer prices grew, and the population's demand has been steadily falling. The impact of all these factors decreased the production of vegetable oil. In order to equalize the situation and improve the competitiveness of the national production, oil refineries introduce workshops on the integrated refining and packing of vegetable oil into modern packaging materials. At the same time, the authors believe that there is a need to expand the range of products of the industry and to create workshops on producing various types of nut oil (walnut oil, hazelnut oil, peanut oil, and pistachio oil). However, today the Russian consumer buys imported products[22].



Source: Complied and calculated by the authors based on the data from the Unified Interdepartmental Statistical Information System[23]

Figure 1

Average Consumer Prices for Nuts in Russia, RUB/kg

The Russian nut market is characterized by the rapid increase in prices during 2014 – 2018, which occurred against considerable weakening of the ruble exchange rate and international sanctions against Russia. While, before the sanctions, some types of nuts had been imported from Ukraine, the USA, the EU countries, and Turkey, worsening of relations

[21] N. Avarskiy y E. Astrakhantseva, "Metodologicheskiye aspekty razvitiya organicheskogo selskogo hozyaystva v Rossii", AIC: Economics, Management Vol: 8 (2017): 38–56.

[22] A. G. Paptsov, "Rynok kormovogo zerna Kitaya: razvitiye i perspektivy", Economics of Agricultural and Processing Enterprises Vol: 8 (2009): 68–69.

[23] Unified Interdepartmental Information and Statistical System (EMISS State Statistics). Retrieved from: http://fedstat.ru

with these countries extended the supply chain. This increased retail prices for nuts. In particular, over the past seven years, the average consumer prices have increased 2.3 times from 274.6 RUB/kg up to 631.7 RUB/kg. They increased most of all in 2015, when the growth rate was 61.9 % (Figure 1)[24].

Nut production and processing in the south of Russia have a powerful potential resource base, taking into account favorable climatic conditions for the cultivation of hazelnuts, walnuts, chestnuts, and pecans. The Black Sea coast of the Krasnodar Territory and the foothill areas of the Republic of Adygeya are the oldest and the only Russian area for the industrial cultivation of hazelnuts, sweet chestnuts, as well as one of the leading areas for the cultivation of walnuts. The soil and climatic conditions of the region are favorable for the industrial cultivation of walnut gardens. This provides great opportunities for the development of capacities for nut production and processing. At the same time, the lack of the unified industrial policy aimed at stimulating the development of tahe entire technological chain of cultivation, production, processing, and marketing of nuts restrains the economic growth in this area of activity and the improvement of its budget activity.

For three years, in agricultural organizations of the Krasnodar Territory, the area of nut gardens had decreased by almost 25 %, and in 2017 it was 1,334.6 ha. However, there is a growth reserve because new gardens enter the fruiting age, including 92 ha planted in 2017 (Table 4).

Indicators	Years			2017 in % as to 2015
	2015	2016	2017	
New plants in the reporting year, ha	-	-	92	-
Planted area at the end of the year, ha	1,768.0	1,551.3	1,334.6	75.5
including the area of fruiting plants	1,645.0	1,440.7	1,236.3	75.2
area of new gardens with no fruiting plants	97.0	97.7	98.3	101.3
Yield of products, dt	467.0	421.5	376.0	80.5
including from 1 ha	0.284	0.293	0.304	107.0

Source: Compiled and calculated by the authors based on the data from the consolidated annual reports of AOs of the Krasnodar Territory

Table 4

Dynamics of Nut Gardens in the Krasnodar Territory
(Walnut, Hazelnuts, Almonds, and Pistachios)

The industrial policy on supporting the industries that correspond to the specialization of the region, as well as on creating the favorable climate for the development of entrepreneurship is of great importance. The regional industrial policy can be defined as a system of relations between state authorities of the regions and business entities in order to ensure the efficient operation of regional enterprises and the formation of a competitive industrial complex.

[24] A. N. Stavtsev; A. S. Lankin y D. S. Natarov, “Indeksny analiz tendentsiy na yevropeyskom rynke organicheskoy produktsii i perspektivy yego razvitiya v Rossii”, Economics of the Russian Agriculture 7 (2018): 93–97; A. N. Stavtsev; A. A. Khashir; Yu. M. Koroleva; D. S. Natarov y R. G. Romanenko, “Metodicheskie podkhody k otsenke konkurentosposobnosti na rynke agroprodovolstvennoy produktsii”, Economics, Labor, Management in Agriculture Vol: 1 num 46 (2019): 4–14 y A. N. Stavtsev; H. N. Gasanova y A. A. Khashir, “Razvitiye rynka orekhoplodnoy produktsii v kontekste energoeffektivnosti proizvodstva”, Economics, Labor, Management in Agriculture Vol: 8 num 53 (2019): 37–45.

It is important to emphasize that walnut cultivation as a secondary subindustry in the organizations that specialize in other areas of agribusiness can be marginally profitable and even unprofitable as a result of the noncompliance with agro-technical deadlines, technologies for cultivation, and caring for walnut gardens.

Indicators	Years			2017 in % as to 2015
	2015	2016	2017	
Volume of sales, dt	865	540	215	24.9
Revenues from sales, thous. RUB	8,296	5,665.5	3,035	36.6
Total cost of the products sold, thous. RUB	11,043	9,787.5	8,532	77.3
Profit (+) loss (-) from the sales, thous. RUB	-2,747	-4,122	-5,497	×
Level of profitability %	-24.9	-42.1	-64.4	×

Source: Compiled and calculated by the authors based on the data from the consolidated annual reports of AOs of the Krasnodar Territory

Table 5. Economic Efficiency of Nut Production in Agricultural Organizations of the Krasnodar Territory

This thesis is confirmed by the authors' assessment of the economic efficiency of nut production in AOs of the Krasnodar Territory. It showed that over three years, nut cultivation had been a loss-making area of activity (Table 5). At the same time, most of the nut gardens belong to the population's households, and are often the main source of income for households. Therefore, it is obvious that nut production in compliance with all aspects of the cultivation and care technologies allows earning a sustainable profit[25].

In the domestic market of nut products, there is a high proportion of relatively cheap imported goods, including packaged nuts, nut paste, whose quality does not always meet the necessary requirements[26]. The solution to this problem requires systematic state regulation of the commodity circulation and quality control. At the present time, measures on protecting national producers are applied more widely and actively by introducing the relevant duties on imported food and raw materials used by national enterprises for food production. In order to improve the competitiveness of Russian producers, it is crucial to solve the problem on introducing resource-saving technologies for processing nuts because some part of the raw materials goes to waste. Nowadays, most national food enterprises can be referred to organizations of a sequential type with a single-product scheme for processing raw materials. They are the most vulnerable to changing environmental conditions. Due to this, the implementation of a multiproduct scheme for processing raw materials into several types of final products allows using several cost-effective technologies.

Indicators	Years					Average annual growth rate, %	2018 in % as to 2014
	2014	2015	2016	2017	2018		
By volume, thous. t							
Inshell hazelnuts	0.65	0.11	0.03	0.06	0.22	-23.7	33.8
Peeled hazelnut	11.04	7.31	7.99	9.84	14.21	6.5	128.7
Inshell almonds	0.57	0.19	0.06	0.13	0.02	-55.9	3.8
Peeled almonds	12.43	4.38	3.40	5.92	8.36	-9.4	67.3

[25] A. G. Paptsov y L. G. Akhmetshina, "Uchastiye Rossii v reshenii globalnoy prodovolstvennoy problem", Economics, Labor, Management in Agriculture Vol: 10 num 43 (2018): 2–6.

[26] A. G. Paptsov; V. Nechaev y P. Mikhailushkin, "Towards to a single innovation space in the agrarian sector of the member states of the Eurasian economic union: a case study", Entrepreneurship and Sustainability Issues Vol: 7 num 1 (2019): 637-648.

Inshell walnuts	0.071	0.027	0.057	0.468	2.026	131.1	28.5 times
Peeled walnuts	1.35	0.84	0.76	1.79	2.44	15.9	1.8 times
Inshell pistachios	10.59	2.19	2.21	3.24	4.26	-20.4	40.2
Peeled pistachios	0.098	0.076	0.043	0.033	0.048	-16.5	48.6
Peeled cashew nuts	11.36	4.64	5.13	5.91	7.84	-8.9	69.0
Peeled brazil nuts	0.54	0.51	0.16	0.30	0.45	-4.4	83.7
By value, mln USD							
Inshell hazelnuts	0.84	0.10	0.06	0.13	0.47	-13.5	56.1
Peeled hazelnut	54.2	52.4	52.3	50.3	72.2	7.4	133.2
Inshell almonds	3.37	1.77	0.30	1.58	0.19	-51.1	5.7
Peeled almonds	85.2	49.6	35.5	66.4	71.3	-4.4	83.6
Inshell walnuts	0.19	0.05	0.19	1.08	4.32	117.2	22.2 times
Peeled walnuts	10.2	9.0	5.9	13.0	15.8	11.4	1.5 times
Inshell pistachios	79.8	22.7	18.1	30.8	43.7	-14.0	54.7
Peeled pistachios	2.28	1.28	0.56	0.54	0.70	-25.7	30.5
Peeled cashew nuts	68.1	35.5	26.5	48.0	68.9	0.3	101.2
Peeled brazil nuts	3.93	4.15	1.16	4.25	2.67	-9.2	67.8

Source: Complied and calculated by the authors based on the data of the Federal Customs Service of Russia[27]

Table 6

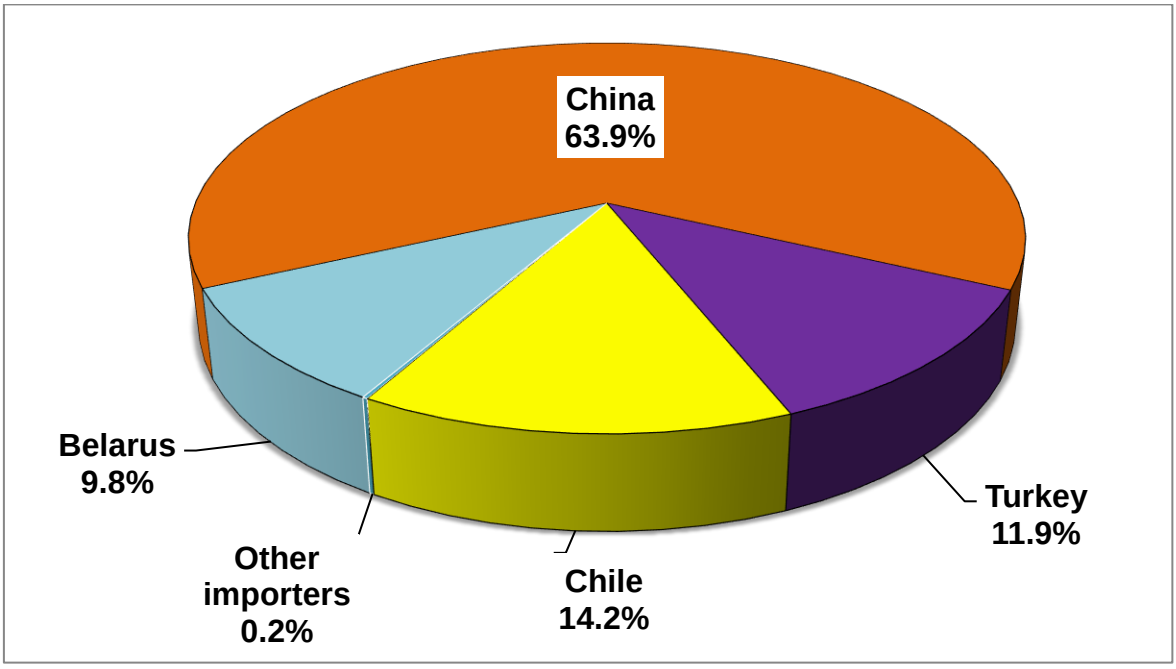
Import of Nut-Bearing Products in 2014 – 2018

According to statistics from the Federal Customs Service of Russia, in 2018, the import of inshell almonds decreased almost down to 20 tons and made up USD 0.19 mln in value terms. Over the five years the average annual rate of decline in unpeeled almonds import had been almost 56 % (Table 6). This is against the fact that almonds are becoming an increasingly popular product for Russian consumers because a mass buyer gets more and more information about the health benefits of its consumption. According to the US Department of Agriculture (USDA), the demand from the retail and food industries is forecasted to more than double in the near future. Almonds in Russia are mainly bought by catering and food industry enterprises, which account for about 75 % of the total consumption. The food industry uses almonds as ingredients in the production of confectionery, dairy products, bakery products, cereals, and ice cream[28].

The import of peeled almonds also tends to decline. In 2018, the import volume of this type of product was 8.36 thous. tons (-32.7 % as compared to 2014) for the amount of USD 71.3 mln. In general, for 2014 – 2018 the import of goods from the “peeled almonds” group to Russia amounted to USD 308 mln, with the total weight of 34.5 thous. tons.

[27] Unified Interdepartmental Information and Statistical System (EMISS State Statistics). Retrieved from: http://fedstat.ru

[28] S. M. Ryzhkova, “Tendentsii razvitiya kooperativnogo rynka plodoovoshchnoy produktsii Rossii v usloviyah sanktsiy”, Fundamental and Applied Research of the Cooperative Sector of the Economy Vol: 2 (2019): 86–96.



Source: Compiled and calculated by the authors based on the data of the Federal Customs Service of Russia[29]

Figure 2

Structure of Peeled Almonds Import

In the structure of import by countries (goods from the "inshell almond" group), the leader is China (94.7 %). In the structure of import by countries (goods from the "peeled almonds" group), China (63.9 %) also tops, while Chile (14.2 %) holds the second position, Turkey (11.9 %) is the third. Belarus supplies almost 10 % of all import (Figure 2)[30].

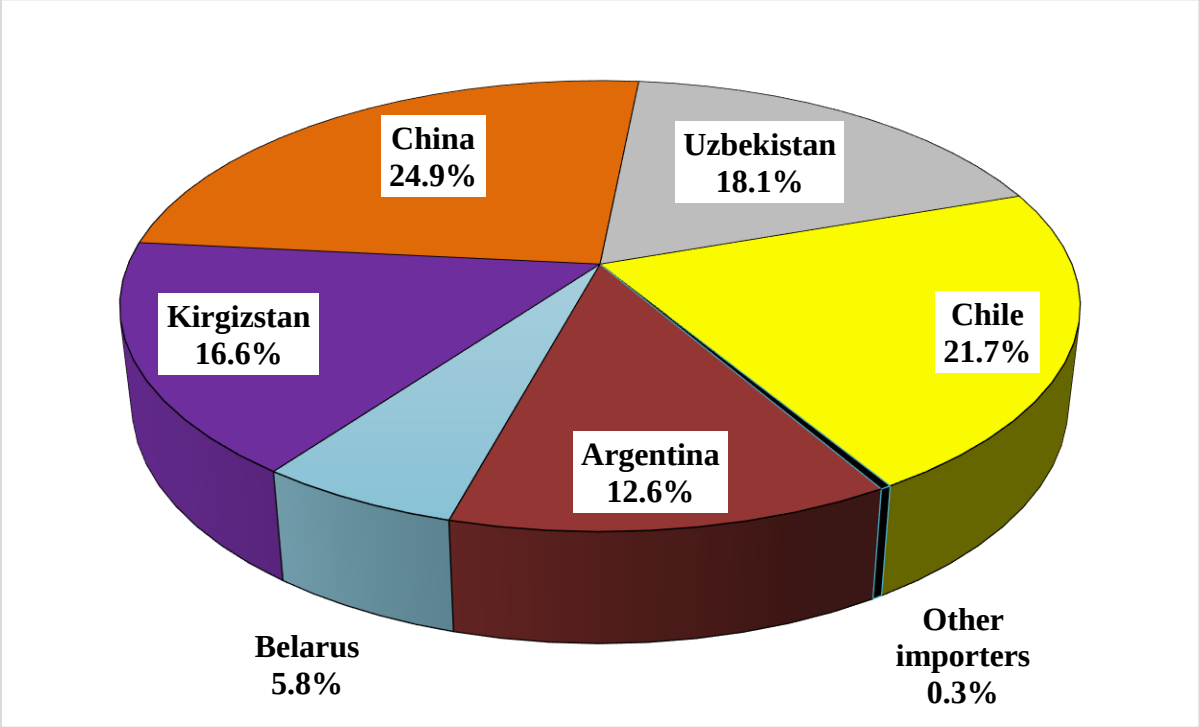
In 2018, the import of inshell hazelnuts was 220 tons (USD 470 thous.), which was almost 1/3 of the supplies from the 2014 level. In total, in 2014 – 2018, 1.1 thous. tons of inshell hazelnuts for the amount of USD 1.6 mln were imported to Russia. In 2018, the import of unshelled hazelnuts amounted to 14.2 thous. tons (USD 72.2 mln), which was almost 28.7 % more than in 2014. For the period of 2014 – 2018 the import of nut kernels into Russia amounted to USD 281.4 mln, with the total weight of 50.4 thous. tons[31].

In the structure of import by countries (goods from the group "unpeeled hazelnuts"), Azerbaijan is the first (68.2 %), Turkey is the second (22.4 %), and Georgia (7.0 %) is the third. Azerbaijan is the first in the structure of import by countries (goods from the group "inshell hazelnuts") (80.6 %). The share of Georgia and Abkhazia is about 10 %.

[29] A. N. Stavtsev; H. N. Gasanova y A. S. Lankin, "Otsenka perspektiv marketinga organicheskoy produktsii", Economics of the Russian Agriculture Vol: 9 (2017): 62–68.

[30] A. G. Paptsov y L. G. Akhmetshina, "Uchastiye Rossii v reshenii globalnoy prodovolstvennoy problem", Economics, Labor, Management in Agriculture Vol: 10 num 43 (2018): 2–6.

[31] A. G. Paptsov; V. Nechaev y P. Mikhailushkin, "Towards to a single innovation space in the agrarian sector of the member states of the Eurasian economic union: a case study", Entrepreneurship and Sustainability Issues Vol: 7 num 1 (2019): 637-648.



Source: Compiled and calculated by the authors based on the data of the Federal Customs Service of Russia[32]

Figure 3

Structure of Peeled Walnuts Import

The import of inshell walnut increased 28 times up to 2.03 thous. tons for the amount of USD 4.32 mln. In total, in 2014 – 2018 the import was USD 5.8 mln, with the weight of 2.6 thous. tons. The supplies of peeled walnuts had grown by 80.4 % since 2014 and amounted to 2.44 thous. tons (USD 15.8 mln) in 2018. For 2014 – 2018 the import of peeled walnuts amounted to USD 53.9 mln, with the total weight of 7.2 thous. tons[33].

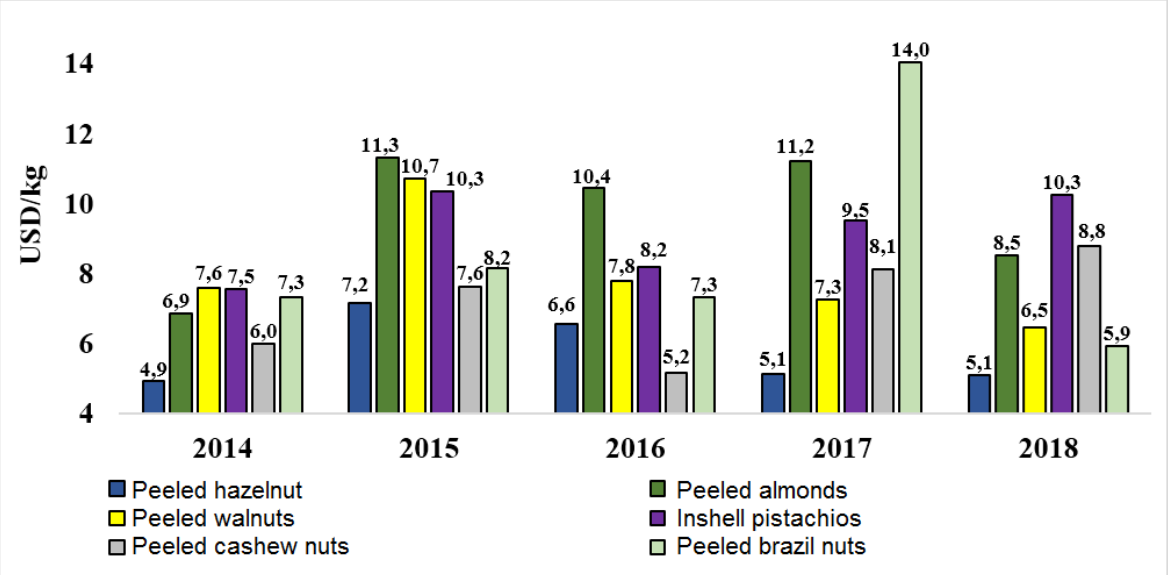
The main exporters of inshell walnuts for the period of 2014 – 2018 are Chile (43.3 %), Belarus (39.6 %), and Argentina (13.7 %). Chile and China are leaders in the export of unshelled walnuts (21.7 % and 24.9 %, respectively). Another important supplier is Kyrgyzstan – 16.6 % (Figure 3).

The exchange rate fluctuations and changes in the foreign policy relations have a considerable impact on pricing of imported nut products. Figure 4 shows the effect of the sanctions imposed on Russia on the prices of the main types of imported nuts. In addition, long-term partnership relations with the USA, Turkey, and many EU countries in this area are violated[34].

[32] A. N. Stavtsev; H. N. Gasanova y A. S. Lankin, “Otsenka perspektiv marketinga organicheskoy produktsii”, Economics of the Russian Agriculture Vol: 9 (2017): 62–68.

[33] A. G. Paptsov; V. Nechaev y P. Mikhailushkin, “Towards to a single innovation space in the agrarian sector of the member states of the Eurasian economic union: a case study”, Entrepreneurship and Sustainability Issues Vol: 7 num 1 (2019): 637-648.

[34] A. G. Paptsov y L. G. Akhmetshina, “Uchastiye Rossii v reshenii globalnoy prodovolstvennoy problem”, Economics, Labor, Management in Agriculture Vol: 10 num 43 (2018): 2–6.



Source: Compiled and calculated by the authors based on the data of the Federal Customs Service of Russia[35]

Figure 4

Wholesale Prices of Imported Nut-Bearing Products

The state and development prospects of the food industry have direct impact on the development of nut production because such industries as the confectionery and baking industries, and the production of vegetable oil are the main consumers of nuts. The formation of the needs of the national market for nut-bearing products will depend on the development of these sectors, as well as on changes in the production structure because they form the demand.

Indicators	Years					Average annual growth rate, %	2018 in % as to 2014
	2014	2015	2016	2017	2018		
Confectionery	3,450.7	3,495.4	3,568.9	3,771.0	3,913.8	3.2	113.4
including caramel with milk and nutty fillings	27.4	26.7	27.8	27.7	27.8	0.4	101.7
Turkish delights and confectionery with nuts	1.8	2.4	3.2	3.9	4.6	26.4	2.5 times
Bread and bakery	6,816.1	6,833.3	6,685.7	5,924.5	5,769.9	-4.1	84.7

Source: Complied and calculated by the authors based on the data from the Unified Interdepartmental Statistical Information System[36]

Table 7

Production of Main Types of Food, thous. t

[35] A. N. Stavtsev; H. N. Gasanova y A. S. Lankin, “Otsenka perspektiv marketinga organicheskoy produktsii”, Economics of the Russian Agriculture Vol: 9 (2017): 62–68.

[36] A.N. Stavtsev, H.N. Gasanova, A.S. Lankin. Otsenka perspektiv marketinga…

According to the Federal State Statistics Service, the production of confectionery products had increased by 13.4 % over the five years. This naturally increased the demand for nuts. In particular, the output of such product as Turkish delight and confectionery with nuts added increased 2.5 times (Table 7). In addition, the expansion of the range and the introduction of completely new types of confectionery products, for example, caramel based on fruit juice, chocolate bars stuffed with nuts and sunflower seeds, etc., caused the demand for them as for cheaper and better products. In case of the lack of raw materials for industrial processing, it is necessary to provide in-depth processing, to develop the production of goods that are as ready-to-use as possible, packed and packaged, and having good external design[37]. The current production potential makes it possible to sustainably meet the population's need in flour, cereals, bakery, and pasta, and satisfy a variety of tastes, taking into account national traditions. Despite the difficult situation in the baking industry, enterprises continue working at the problems related to increasing the output of medical, dietary, and gourmet bakery products (rolls and cookies with nuts, rolls with nuts, etc.).

Conclusion

The Russian market of nuts is far from its full saturation and has great potential for the further expansion. The consumption of nuts per capita is only about 0.73 kg, which is much lower than in the European Union, the USA, Japan, and China. The current trends in the agrifood market stimulate the consumption and sale of nuts. The food industry uses more than 65 % of all nut-bearing products as ingredients for the confectionery and bakery production. Moreover, depending on changes of market prices, in its production the confectionery industry switched to almonds, hazelnuts, and cashews.

The interest in nut-bearing crops and the need in a considerable increase in their production are caused by the steady growth trends in the world consumption of nuts and products of their processing, as well as the changes in the world food culture towards organic products. In order to develop the nut market in Russia, it is necessary to form and modernize the infrastructure that will improve its efficiency. When solving these problems, the mechanisms of state regulation are crucial. Above all, they must aim at changing the ratio of export and import of nuts towards increasing the production in Russia, intensifying the investment activity related to the use of nuts as raw materials and food. According to the authors, the delay in solving the problem on modernizing and developing nut production, as well as organizing the industrial processing of nuts makes obvious the real threat from the importing countries that dominate on the Russian market. This can affect the Russian food security.

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[37] A. A. Khashir, Organizatsionno-ekonomicheskiy mekhanizm povysheniya effektivnosti promyshlennoy pererabotki orekhov v Rossii (Moscow: SNU VNIIESH of the Russian Agricultural Academy, 2007).

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