

# Overview of World Turnover of Vegetable Oil Trade

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**Abstract.** The article provides an overview of the global turnover of trade in vegetable oils. In particular, a statistical analysis of sales volumes of soybean and vegetable oil was performed. According to the author, humanity is now able to drastically reduce pollution by producing vegetable oil and create a world free from harmful gases in the future. This requires increasing the production of vegetable oils, expanding the range of oilseed plants, increasing its productivity through innovative ways.

**Keywords:** Oil, raps, vegetable oil, export, sunflower, imports.

## I. INTRODUCTION

The rapid growth of the world's population requires that they be provided with quality vegetable oil. Vegetable oil is ranked first in the United Nations-approved human consumption basket for wheat and potatoes. All countries see the provision of high quality vegetable oil to the population at the level of economic security.

Peculiarities of formation of marketing strategy in the sphere of services of the Republic of Uzbekistan were researched by Ziyadullaev N.S. [8], Ziyaeva M.M. [9, 10] and others. But problems overview of world turnover of vegetable oil trade was not investigated yet.

## II. ANALYSIS AND RESULTS

There are several types of vegetable oils for human consumption in the world, and the most commonly used vegetable oils are soybean oil, sunflower oil, rape oil, cotton oil, olive oil, palm cocoa oil. In 2018, there are 56 million tonnes of soybean oil worldwide, 27.53 million tonnes. tonnes of rapeseed oil, 19.74 53 mill. Tons of sunflower oil and 5.16 million tonnes tons of cotton oil. Production of vegetable oils in 2018 increased by 14.6% compared to 2009. In particular, soybean oil production increased by 14.4%, rapeseed oil by 12.2%, sunflower oil production by 16.2% and cotton oil by 11.2%. Soybean is the leader in the export of vegetable oils to the world market. 11.29 million worldwide in 2018 Tons of soybean oil was exported. In second place is sunflower oil for 10.3 million tons. Captured with tons. In 2018, we will see cottonseed as the least exported oil in the world. \$ 0.11 Million in Global Vegetable Oil Market 2018 Tons were sold. We can see a trend towards increasing total exported vegetable oils in 2018 compared to 2009. In particular, we can see that soybean exports increased by 2.15 million tons, rape oil - 2.2 million tons, sunflower oil - 5.81 million tons. Exports of cotton oil remained the same. The increase in the export of sunflower oil indicates an increase in the demand for this vegetable oil [1].

Table 1: Production and distribution of vegetable oils mln. Tons

Name	2009/ 10	2010/ 11	2011 / 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19
<b>Production</b>										
Cotton oil	4,6	4,97	5,27	5,22	5,17	5,13	4,29	4,42	5,18	5,16
Rape oil	22,53	23,69	24,3 1	24,79	26,46	27,11	27,34	27,54	28,08	27,53
Soybean oil	38,82	41,29	42,4 1	43,09	45,02	48,99	51,55	53,72	55,18	56,03
sunflower oil	12,12	12,28	15,1 4	13,08	15,79	15,1	15,38	18,18	18,44	19,74
Total	78,07	82,23	87,1 3	86,18	92,44	96,33	98,56	103,8 6	106,88	108,46
<b>Import</b>										
Cotton oil	0,07	0,05	0,07	0,08	0,06	0,07	0,05	0,05	0,06	0,05
Rape oil	2,91	3,3	3,92	3,87	3,78	3,92	4,13	4,39	4,49	4,86
Soybean oil	8,62	9,24	8,17	8,49	9,27	10,04	11,64	10,84	9,79	10,91
sunflower oil	3,71	3,64	5,35	4,96	6,69	5,92	7,02	8,88	8,53	9,35

Total	15,31	16,23	17,5 1	17,4	19,8	19,95	22,84	24,16	22,87	25,17
<b>Export</b>										
Cotton oil	0,11	0,14	0,19	0,16	0,14	0,12	0,06	0,07	0,1	0,11
Rape oil	2,75	3,45	3,95	3,94	3,82	4	4,17	4,52	4,6	4,95
Soybean oil	9,14	9,53	8,51	9,33	9,42	11,02	11,77	11,25	10,5	11,29
sunflower oil	4,49	4,58	6,41	5,56	7,78	7,37	8,1	10,41	9,73	10,3
Total	57,91	60,23	63,3 3	68,33	70	75,51	73,62	81,29	79,65	85,2
<b>Consumption</b>										
Cotton oil	4,6	4,77	5,15	5,22	5,07	5,08	4,4	4,39	5,12	5,08
Rape oil	22,6	23,56	23,7 6	23,59	25,35	26,9	28,18	28,9	29,01	28,1
Soybean oil	38,13	40,76	41,7 7	42,61	45,17	47,98	52,13	53,42	54,71	55,42
sunflower oil	11,56	11,54	12,9 6	13,01	14,28	14,22	15,22	16,58	17,2	18,73
Total	76,89	80,63	83,6 4	84,43	89,87	94,18	99,93	103,2 9	106,04	107,33
<b>Reserve</b>										
Cotton oil	0,16	0,27	0,26	0,18	0,2	0,2	0,1	0,11	0,13	0,15
Rape oil	1,24	1,23	1,74	2,93	4	4,13	5,64	4,15	3,13	2,46
Soybean oil	3,27	3,52	3,82	3,85	3,54	3,57	3,76	3,66	3,56	3,78
sunflower oil	1,49	1,29	2,4	1,62	2,05	1,48	1,68	1,75	1,78	1,85
Total	6,16	6,31	8,22	8,58	9,79	9,38	11,18	9,67	8,6	8,24

Acceleration in the production of vegetable oils results in an increase in the area under cultivation. The total area planted with oilseeds in 2009 was 188.33 million. Per hectare, and by 2017 this figure will reach 220.13 million. hectares. In 2017, the total area under oilseeds was \$ 31.8 million. This is an increase of 16.8%. We can see that oil-producing countries are constantly increasing their cropland to meet the demand for vegetable oils and enter new markets. In 2017, sunflower sown area was 3.13 million more than in 2009. The area under cotton is 3.65 million hectares, rapeseed area is 2.6 million hectares and sowing area of 22.42 million hectares.

Table 2: Land area of oilseeds cultivated in the world (hectare)

Name	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
sunflower	22,8	23,2	25,56	23,77	24,13	23,28	23,29	25,42	25,93
cotton	29,45	32,63	34,68	33,46	31,9	33,08	29,98	29,07	33,1
Raps	33,91	34,14	36,3	36,24	35,52	33,63	34,08	36,5	36,51
Shadow	102,17	103	102,93	109,42	113,08	118,31	120,43	119	124,59
Total	188,33	192,97	199,47	202,89	204,63	208,3	207,78	209,99	220,13

The demand for vegetable oil in the global market can also be determined by their price. Because soybean oil is cheaper than other vegetable oils and the supply of this vegetable oil grows year after year, its price remains lower than that of other vegetable oils. Diagram 00 shows that in 2018, soybean oil was sold globally for \$ 604 per ton. In 2010, we will see an increase in the price of vegetable oil in the world. In particular, the price of one ton of sunflower oil is \$ 1899. We can see the decline in vegetable oils since 2011. One of the reasons for this is an increase in the worldwide production of vegetable oils. We can also explain that the world's population has switched from eating sunflower oil to cheaper soy oil. Because soybeans are more profitable than sunflower seeds. In addition, several developed countries use biofuels as rape oil and palm oil. In particular, the first biofuel flight was launched in 2012. Then on November 22, 2017, China's Hainan Airlines made its first flight from Beijing to Okhara International Airport in Chicago, USA, on Boeing 787. [2] In this way, China Hainan Airlines has shown the world the ability to fly international biofuel. Earlier, on March 22, 2015, Boeing 787

operated a biofuel flight from Shanghai to Beijing. This biofuel uses 50/50 of kerosene and sunflower oil. For this reason, vegetable oil is widely used not only in food consumption, but also in industry and aviation. This increases the demand for vegetable oil. [3]

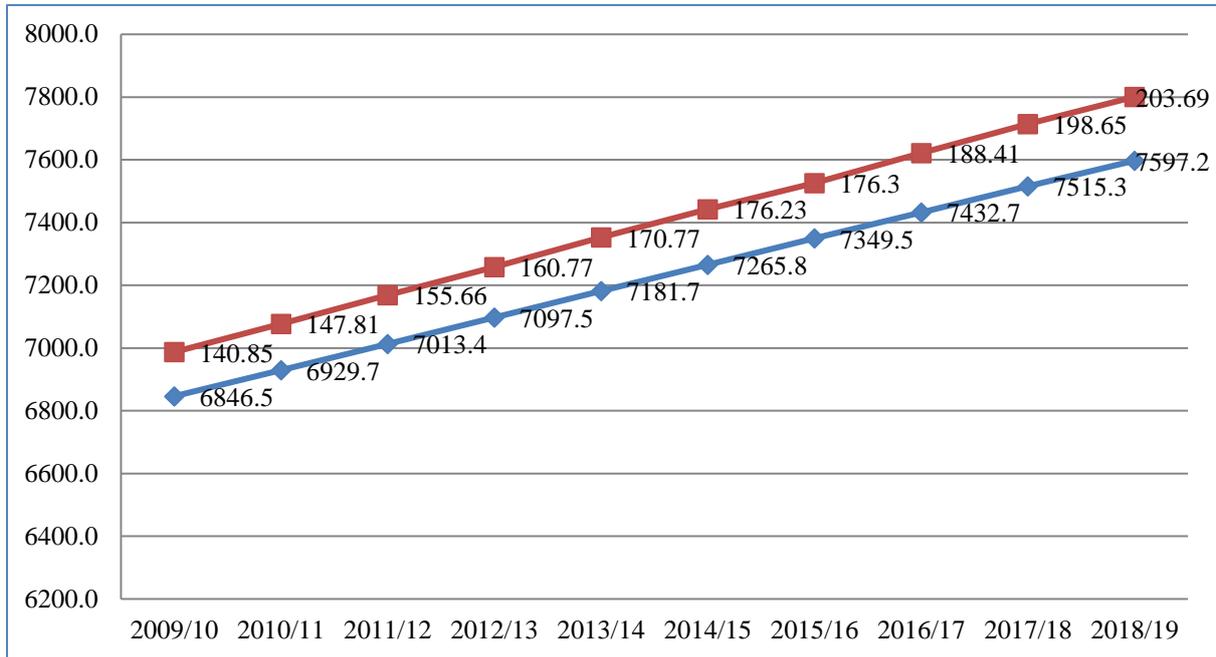


Fig.1: World population and vegetable oil



We can see the increase in the production of vegetable oil along with the increase in the world's population. World population is expected to reach 7597.2 million by 2018. We can see that it has reached its peak. In 2018, we can see global population growth of 11.1 percent compared to 2009. Given that the World Health Organization's annual per capita consumption of oil is 13.2 liters, we can see that the production of vegetable oils has more than doubled the global consumption. However, given that rape oil is used primarily as biofuels, and only oil, sunflower oil and soybean oil account for 80.93 million tonnes of total oils. tons. If 80.93 million. If tons of vegetable oil are calculated on the basis of world production, then we can see that the oil produced does not meet the needs of the world population. It is also remarkable that greasy herbs are the best food for corn. Therefore, many countries in the world buy oilseeds not only for oil, but also for animal feed. [4]

Soybeans account for 60% of the world's oilseeds. Soybean oil is mainly consumed by people in South, South-East and Southeast Asia. Increasing the population of these regions means that soybeans are affected. The main consumer of the soybean market is the People's Republic of China. China's annual soybean consumption is \$ 100 million tons. The main countries producing soybeans are the United States, Brazil, Argentina and Paraguay. The US and Brazil share 70% of the soybean crop grown in the Danube. The main importer of these two countries is China. As can be seen from the diagram, the 0000 chart shows that these two countries have been increasing their soybean production year by year. It should be noted that to obtain 1 ton of soybean oil it is necessary to grow 5.6 tons of soybeans. The average yield of soy grains is 0.35-0.4 tonnes per 1 ha. Another advantage of soybeans is that it can be grown up to 3 times a year. In addition, soybean is the best feed for poultry and livestock. In countries with a warmer climate, soybeans are more abundant. Therefore, soybean production in hot climates such as Brazil, US warm climates, Argentina and Paraguay provides high returns. Today we can see an increasing number of soybeans and soybeans growing each year. Originally cultivated in the United States, Brazil, Argentina, Paraguay and China, countries such as Russia, Ukraine, Kazakhstan, Uruguay and India are now showing significant results. The main supplier of Ukrainian soybeans is soybeans that are grown in the European Union, Kazakhstan and Russia. The fact that wheat fields in Kazakhstan are being cut down and sown in its place proves this. Demand in the market economy has changed depending on supply. Today, the demand for shade is reducing the area of managed cropland. [5]

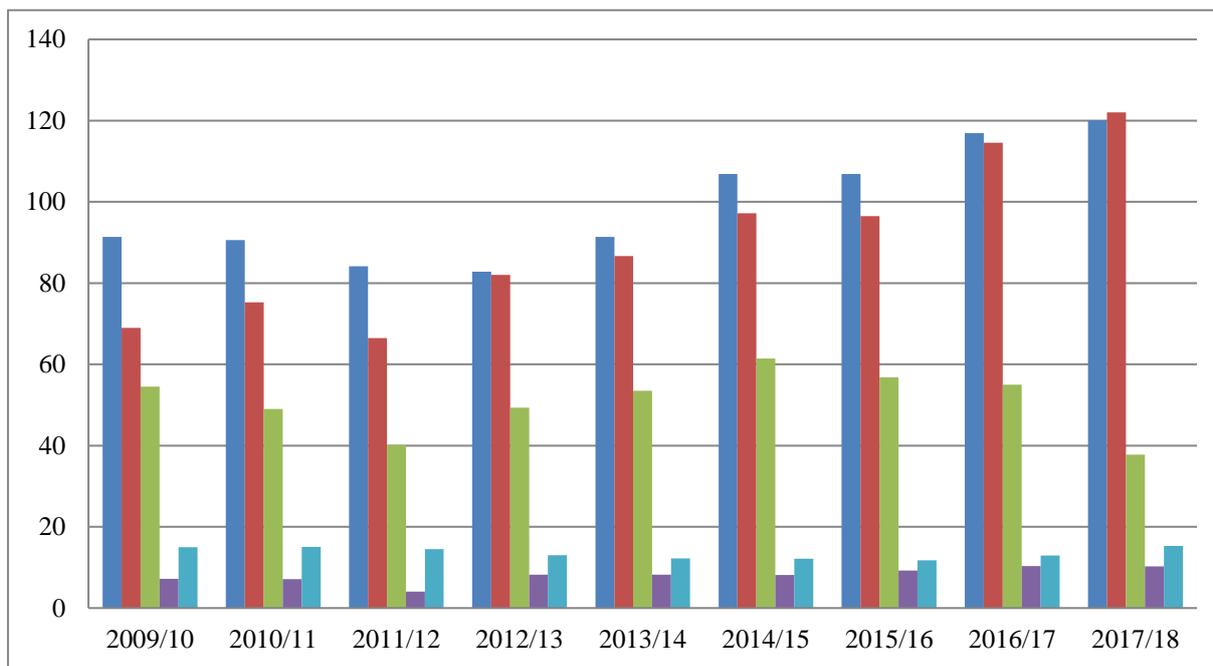


Fig.2. Main soybean production countries (million tons)

	USA
	Brazilia
	Argentina
	Paragvay
	China

Rape is the second largest soybean crop to be cultivated and consumed in the world. It accounts for 12% of the world's oilseeds. Leaders of the European Union for the cultivation of raspberry plants are Canada, China. Due to the high demand for rapeseeds, other countries also began to produce it. In particular, Russia and Ukraine, a leader in the production of sunflower seeds, are constantly expanding their cultivation areas. Originally used as a lubricant for steam machines, rapeseed oil was created in the 1970s by a number of Canadian scientists, creating new varieties for food consumption. Rapeseed oil is almost identical to the composition of olive oil, which is a type of dietary fat. Therefore, the consumption of this oil for food has increased. Most imports of rapeseed oil come from the European Union and China. [6]

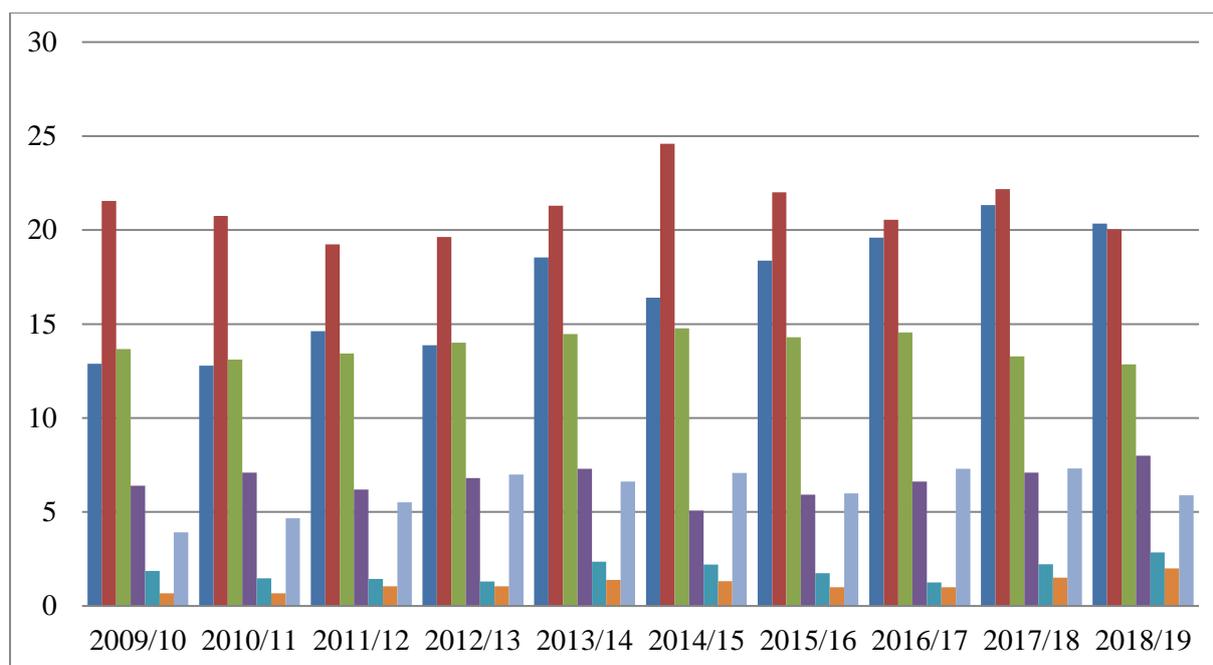


Fig.3. Key countries producing rapeseed tons

	Canada
	Europe
	China
	India
	Ukraine
	Russia
	Other countries

Due to the dietary properties of rapeseed oil the demand for it is increasing. Rape plant production in 2018 is up 13.96 million yuan compared to 2009. As you can see from the 3-diagrams, tonnes, that is 18%, In 2018, 1 ton of rape oil was sold at \$ 836 per ton, which means that the price is lower than just sunflower oil. It ranks second in the world in the production of rape oil, following palm oil and soybean oil. The dehydration resistance of the raspberry plant makes it possible to plant it on dry ground. In addition, there is growing interest in the cultivation of this species by the fact that rapeseed is resistant to insects and that it does not need insect repellent. This can be seen in the case of Russia and Ukraine. However, studies have shown that yields are higher in countries with more dense climates and more rainy regions. These climatic indicators are in the foothills of Canada, the countries of the north of the European Union, Russia, Ukraine, China and India.

Sunflower oil is consumed all over the world. Sunflower oil is used as the main vegetable oil used in every household. That is why the production of sunflower oil is steadily growing. Sunflower oil has retained its profitability in the production of vegetable oil for years. The demand for sunflower oil is still high. In 2018, it will invest \$ 19.74 million. tons of sunflower oil. This is 7.62 million more than in 2009. tons per year. The growth rate was 16.3%. Sunflower oil is the leader in the production of vegetable oil worldwide. The main producers of sunflower are Ukraine, Russia, China, and Argentina. Russia and Ukraine account for 50% of the sunflower grain grown in the Danube.[7]

Both countries have extensive experience in the production of sunflower seeds and sunflower oil. Even in the former Soviet Union, the two countries supplied the sunflower with sunflower oil. Today these countries export their products to Europe, Africa and Asia. In 2018, the Republic of Uzbekistan accounts for 95% of the sunflower grain exported in Kazakhstan. Diagram 00 shows that sunflower seed production is increasing year by year. It should be noted that to produce 1 ton of sunflower oil, it is necessary to grow 2.5 tons of sunflower seeds. The average yield of sunflower grain is 0.25-0.3 tons per 1 ha. As the demand for sunflower oil in the vegetable oil market grows year after year, its price can be seen.

Today, the demand for cotton production can be explained by the high demand for cotton fiber. Because of the fact that cotton oil is a technical oil, its consumption of oil declines from year to year. Cotton oil has been widely used in the United States for food consumption until the 1940s. After 40 years, the population of the country began to consume sunflower oil, soybean oil and other vegetable oils. Since then food consumption in

the US has declined. To date, 36 percent of US cotton oil is used in food, 56 percent in industry, and 8 percent in personal margarine and other products. The following countries are leaders in the production of cotton seeds worldwide. They are: China 3.18 million. tons, Brazil 2.57 million tons. Ton, Turkey 2.77 million. Ton, Australia 2.72 million. Ton, India 0.98 million. Ton, Pakistan 0.98 million. Tons, Turkmenistan 0.96 million tonnes Tons, Kazakhstan 0.94 million tons Growing tons. China accounts for about 65% of the world's cotton fiber produced in India and Pakistan. These countries lead not only in cotton production but also in consumption. However, the low demand for cotton oil contributes to its increase in prices by 2-3% per year. Although demand for cotton oil is declining, the area under cotton in 2018 will be 3.65 million tonnes more than in 2009. We can see an increase in hectare. This trend can be explained by the demand for cotton fiber. After all, the primary product of cotton is cotton fiber. Nevertheless, the demand for cotton oil has not disappeared.

### **III. CONCLUSIONS**

Sales of vegetable oils account for 40% of total agricultural products sales. There is an upward trend in the production of vegetable oils. This increase is explained by the population growth and the acceleration of the use of vegetable oil as a biofuel by developed countries. Biofuel is regarded as the main renewable energy in the European Union. That is why its production is developing at a rapid pace. 1.2 million tonnes of bio-fuel was produced in 2002, compared to 14 million tonnes in 2010. Tons were produced. If the growth rate of biofuel production continues at this rate, by 2020, biofuel production will reach 100 million tons. Biofuel is mainly produced from rapeseed oil. Germany is the European Union for the production of biofuels. In 2012, biofuel production in the country totaled \$ 3 million. Per ton. Germany's capacity to produce biofuels is \$ 5 million a year Tons. The biofuel produced from vegetable oils is less expensive than oil and less harmful for the environment. In Germany, biofuels are derived from rape oil. Brazil receives \$ 50 billion from biofuel production Imports of US dollar oil products are limited. Today, vegetable oils have been discovered to be widely used as biofuels for lubrication of foodstuffs and equipment.

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