Sunflower oilseedmarket in Volgograd region

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Abstract. The article presents an analysis of the situation of oilseed sunflower production and the market of oil seeds in the Volgograd region, its position in the Southern Federal District. The supply and demand for oilseeds and vegetable oils, their price elasticity, causes of low elasticity are analyzed. The competitiveness of oilseeds on the domestic and foreign markets has been determined using the OECD methodology, the mechanisms of interaction of actors operating on the market of butter materials, channels for the implementation of butter materials, the causes of destabilization of the mechanisms of their interaction, the reasons for entering the markets of substitutes, their usefulness as a food product for public health.

1. Introduction
In the context of globalization in the economy of the world, the current situation in the Russian economy is the integration of the domestic agro-industrial complex in the global economy, in which the Volgograd region works and contributes to ensuring domestic food security. Following the introduction of the food embargo for Russia, the policy of import substitution, the main measure to protect domestic food products from competition with foreign ones and to stimulate their production growth [1]. According to experts, food safety of vegetable oils is above the targets set in the Food Security Doctrine [2,3].

In these processes, a significant place is occupied by the Volgograd region, where one of the main places in crop production is the cultivation of several types of oilseeds, but the main share in their production is sunflower in the gross harvest structure, it is 92.2%. In terms of gross sunflower harvesting in the Southern Federal District, the Volga-Grad Region takes the third place (576.0 thousand tons in 2017) after the Krasnodar Territory - 1070 thousand tons and the Rostov Region - 1432.6 thousand tons. Currently, the region has more than 8.7% of the total Russian arable land occupied by sunflower, and more than 33.3% (2017) in the Southern Federal District, which indicates the importance of the oilseed industry in the region’s economy and district. Volgograd region ranks third in the production of sunflower in the Southern Federal District. The participation of Volgograd agrarians in foreign trade operations on the export of oilseeds and vegetable oils will contribute to the growth of the profitability of farms. All this was the reason for research and analysis of the production and sale of sunflower seeds, vegetable oils.

An important aspect of the formation of market demand for oilseeds is consumer’s expectations of future prices and revenues. Oilseeds can be stored for a long time without loss of quality. Many
commercial structures buy large amounts of oilseeds in order to make a profit with a further increase in prices. Consumer expectations in relation to vegetable oils are also dependent on prices, which from 2013 to 2017 it has increased on average from 27.7% to 28.9% [1]. The present article discusses the Volgograd oilseed market of sunflower, sunflower oil, namely, demand, supply, as well as the main channels for their implementation. The participation of Volgograd agrarians in foreign trade operations for the export of oilseeds and vegetable oils will contribute to the growth of farm profitability, one of the strategic objectives and the achievement of production goals [5,6]. All this was the reason for research and analysis of the production and sale of sunflower seeds and vegetable oils.

2. Materials and methods
In the work used economic-statistical, exponential, abstract-logical, graphical methods. We used materials from the Federal State Statistics Service of the Russian Federation. The main tool for statistical and graphical data analysis was Microsoft Excel 8.

3. Results and discussion
Russia is the world leader in the production of sunflower seeds and sunflower oil, but on the world market of vegetable oils, in general, does not hold strong positions. The reasons for this are: low productivity of this branch of agriculture, the focus of domestic production mainly on meeting domestic needs, which are satisfied at an average and acceptable level [1], insufficient development of the production of all types of oil, except sunflower.

Natural and climatic conditions are the determining factors for the cultivation of oilseeds in the country. Sunflower is grown oilseed, containing up to 57% of sunflower oil in seeds. Sunflower oil predominates in the consumption of vegetable oils in Russia, which is used as one of the main food product as well as raw materials for various food and technical products. Currently, about 82.9% of vegetable oils are produced from sunflower seeds in Russia. In the total volume of production of oilseeds, the culture takes about 65.2%. The share of domestic vegetable oils in food products in 2015 was 82.5%.

The share of sunflower oil in the production structure of all vegetable ma-villages is at the level of 81-85%. Volgograd region contributes to the production of oilseeds and vegetable oils in the all-Russian production. By the method of exponential smoothing, it was established that by 2020 in the all-Russian volume of gross harvest of sunflower oilseeds according to indicators of a sectoral program, the regional harvest of sunflower oilseeds will be about 1.3%, in 2015, the regional share of sunflower oilseeds collected was 5.28%, although by 2020 it was planned - 6.0% of the total Russian.

Thus, it can be concluded that the Volgograd region will be able not only to reach an indicative level in the production of vegetable oils of 136.0 thousand tons (for which it is necessary to obtain 272 thousand tons of oil seeds), but also to increase the share of production of raw materials in the total Russian production for food industry to 6.0% and successfully operate in food markets.

In modern economic conditions, the need for successful production management and product sales is becoming more and more important. Successful management is important to determine the competitive advantages, the role of which in agricultural production is the opportunities for production. This will contribute to the climatic, technical, technological, organizational conditions for the production [2] and marketing of products, the possibility of locating crops in a favorable natural and climatic zone. The situation on the Russian oil and fat market, as compared with the world market, is more favorable: a stable resource base, cheaper labor compared to the European one. As a result - lower production costs. This attracts large multinational companies to the Russian market. The increase in demand in the market for sunflower seed oil is primarily due to the fact that, together with the increase in demand for oilseed and oilseed rape, the world price for sunflower seeds increases. Domestic production of oilseeds is highly profitable – 98% in 2015.

The produced oilseeds are sold on the market of sunflower seeds, which is a complex dynamic system that has certain features. They are:
- the sunflower seed market has a clearly pronounced seasonal nature of trade, which peaks in September-January due to the traditional seasonal minimum of prices for them in September-October and when wholesale sales channels are most intensively saturated;
- the main form of selling sunflower seeds on the market is their processing on a give-and-take basis, which is associated with limited working capital of processing enterprises;
- over the past five years, the capacity of the sunflower oil market has increased by 6-7% annually due to the replacement of animal fats with sunflower oil and margarine, which can be explained. First of all, by a decrease in the incomes of a certain part of the population, as well as a high calorie content of animals fats and high levels of cholesterol in them, which forms the growing demand for vegetable oils of that part of the population that leads a healthy lifestyle against the background of active propaganda and advertising of the health benefits of vegetable oilseeds.

A specific feature of the oilseed market in the Volgograd region is the low price elasticity of demand; the relative value of which is considered according to data for 2015-2017 amounted to -0.22, which is confirmed by mathematical calculations. The demand increased from 417.3 thousand tons to 680.9 thousand tons, and the price changed from 13,925 rubles per ton to 12,716 rubles per ton. The demand for raw materials increased by 1.63 times. The price decreased by 0.9 times. Calculations show that the demand for oilseeds is price elastic, which can be explained by the purchase of a significant part of oilseeds for the production of vegetable oils by trade organizations and enterprises for the processing of oilseeds. The volume of demand for vegetable oils in 2015-2017 increased 1.05 times, with an increase in prices 1.1 times. Low price elasticity of demand for oil-seeds of sunflower is due to the fact that these agricultural products are vital. As a result, the adaptation of the proposal to market changes in a changing market environment is difficult.

The demand for raw materials will always be high, as the products of processing oilseeds are necessary to ensure the food security of the country and have a high export potential.

The proposal for vegetable oils in the study period is characterized by low price elasticity, the value of the coefficient of elasticity is -0.12. With each decrease in the price percentage, the supply decreases by -0.12%. The proposal is low elastic in price. The value of the coefficient of elasticity is -0.023, i.e. the volume of supply of oilseeds decreased by -0.023%, with a decrease in each pro-cent of the price. In the study period, the supply of butter materials decreased by 0.93 times, the price decreased by 0.913 times. The elasticity of the price proposal depends on the ability of commodity producers to quickly adapt to the production of another type of oilseeds, depending on the price change for previously manufactured products.

The main product obtained from sunflower oilseeds is vegetable oils, the demand for which is low price elasticity, the elasticity coefficient value is 0.35. This is due to the fact that vegetable oils are a product necessary in the daily consumption of the population, so changes in prices do not significantly affect demand. Today, in terms of import substitution, vegetable oils are present, the average share in the consumer basket is 8.9%, against domestic ones 91.1% [3]. In the daily consumption of domestic vegetable oils in the consumer basket occupy the main place compared to imported and have no close substitutes.

Thus, sunflower oilseeds and vegetable oils are determined in food markets with low price elasticity and have stable demand.

It should be noted that in the Volgograd oilseed market, along with supply and demand, pricing also has an impact on sales markets, forms, settlement terms, and the degree of state regulation, consumer properties of oilseeds, changes in gross fees, fluctuations in the ruble’s currency prices for manufactured goods used in production, import of vegetable oils. The arrival on the market of oilseeds of the new crop is influenced by seasonal factors, which provokes a seasonal decrease in prices for their purchases. Manufacturers of oilseeds work in conditions of perfect competition, in the long-term period they cannot have their own price policy and have a significant impact on the market price. The structure of the Volgograd oilseed market in the region can be characterized as a poly-poly. Each buyer of oilseeds can choose from any commodity producer the oil-bearing raw material, guided in their actions by their own capabilities, and each seller can make a deal, guided by his own profit. None of the actors operating in
the market of oilseeds has a market share that affects market conditions. The study shows that the main part of oilseeds is implemented under contracts and barter transactions; the market for oilseeds is not transparent. Large gross fees, the purchasing policy of the oil and fat industry, whose enterprises act as oligopolists, can destabilize the oilseeds market.

As the established practice shows, the sales of products is of great importance for the effective work of agricultural producers and producers in the industry of oilseeds, and the choice of sales channels takes a leading place. Each type of product sold corresponds to its own specific markets and organizational forms of wholesale trade. The region has developed its own multi-channel oilseed sales system, which largely influenced the performance of oilseeds. In accordance with their interests, commodity producers independently choose the direction of realization of oilseeds based on the maximum profit for their economy. The full economic responsibility of each commodity producer for the results of his business activity stimulates him to search for the most profitable sales markets, the best combination of various forms of sale of marketable products. This to a certain extent depends on the development of services for the procurement, storage and transportation of grown products. The choice of implementation channels is associated with transaction costs, which include the cost of finding information about emerging prices for products, selecting partners, concluding contracts, protecting property rights. Analysis of the structure of sales of oilseeds showed that the market for oilseeds is active and dynamic. Agricultural organizations sell most of the harvest to processing enterprises and wholesale trade organizations that are not endowed with the functions of suppliers in the market through their own trade enterprises to 97.4%, and the remaining 2.6% is sold to the population and goes to on-farm use.

The international trade in sunflower seeds is also developed, which is due to population growth in some countries that export raw materials, for example, in Turkey (72.6 million people - 2010, 78.6 million people - 2016.), Italy (60.3 million people - 2010, 2016 - 60.7 million people), Egypt (2011 - 78.7 million people, 2016 –91.0 million people), Spain (46.1 million people - 2011-2016 –46.4 million people). The population of some countries has a tendency to increase; therefore, the consumption of products of processing oilseeds is growing.

To determine the competitiveness of oilseeds on the internal and external markets, we apply the OECD methodology, which consists in comparing the national and world prices at which agricultural producers sell products. If the coefficient is greater than 1, then the domestic price is higher than the price of a possible importer. In the open market, the domestic producer will be noncompetitive to foreign countries, its products at the farm stage are already less profitable than imported ones. Comparing the prices of the beginning of 2018 in Russia for oilseeds of sunflower seeds, 27875 rubles, the world price as of January 25, 201 is 0.69, in the Volgograd Oblast — 0.62. Thus, the production of domestic oilseeds is not competitive in foreign food markets, so there are threats of the appearance of cheap by-products in domestic food markets, replacing butter and raw materials. In this case, there is competition with the substitute product - oils of tropical origin. Substitute products limit the potential profit for agricultural organizations in the domestic market of butter materials for the food industry, and for enterprises processing oil materials for the production capacity. The cheaper the price of a substitute product, the stronger the substitute product creates a barrier to obtain higher industry profits.

In the production of products containing vegetable and animal oils, they can be replaced by a cheaper substitute product - palm oil, which is 10 more efficient than sunflower[4], and according to scientists, has anti-oxidant activity and does not have a negative impact on human health [5]. The main consumers of imported oils are the confectionery, food and cosmetic industries. Due to its chemical and physical properties, palm oil is the most common type of vegetable oil in the world. This is also due to the fact that it is easily accessible and is very cheap. It is clear that if there is a cheaper substitute product that serves as raw materials for the food, confectionery and cosmetic industries is cheaper, then enterprises will use it, and this will help reduce the cost of food products that include vegetable oils, and vegetable oils of tropical origin. It is competed with the domestic butter stock due to low cost, which are cheaper than sunflower oil seeds by 12.7 times, animal fat is 6.5 times less and their scale is used. This is connected with the possibilities of food and other industries to reduce the cost of production, and thus
ensure the utilization of production capacity, and the population - with cheaper foodstuffs, more close to its purchasing power.

4. Conclusion

Thus, sunflower oilseeds and vegetable oils are determined in the domestic food market with low price elasticity and have stable demand. Volgograd oilseed and vegetable oil producers will be able not only to reach an indicative level for the production of vegetable oils of 136.0 thousand tons (for which it is necessary to obtain 272 thousand tons of oilseeds), and increase the share of the production of raw materials in the total Russian production for food industry. Industry is to 6.0% and successfully operates in food markets.

Large gross fees, the purchasing policy of the fat-and-oil industry, which enterprises act as oligopolists, can destabilize the market of oilseeds.

It has been determined that the production of domestic oilseeds is not competitive in foreign food markets; therefore, there are threats of the emergence of cheap by-products in the domestic food markets that substitute for raw materials. In this case, there is competition with a substitute product - oils of tropical origin. Substitute products limit the potential profit for agricultural organizations in the domestic market of butter materials for the food industry, and for enterprises processing oil materials for the production capacity. The cheaper the price of a substitute product, the stronger the substitute product creates a barrier to obtain higher industry profits.

Summarizing arguments above, we can conclude that the Volgograd region has its particular competitive advantages within the SFD of the Russian Federation, makes a significant contribution to the production of butter materials for the food security of the region and country, as well as to the export potential of the region.

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