Conceptual basis for product management of product promotion in the agricultural sector

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Abstract. In Russia, there is an annual increase in demand for organic products, which sets new requirements for manufacturers of such products in terms of ensuring orientation towards “green” production in various ways. Currently, the organic food market is one of the fastest growing segments of the food industry worldwide. As part of this study, it was interesting to determine the prospects for the development of organic production in the Russian Federation, for which it was necessary to identify the main target groups of consumers capable and ready to purchase such goods. On the basis of the conducted sociological study and assessment of the level of willingness of consumers to purchase organic products on a permanent basis in the long term, it became possible to identify target groups. In addition, based on the survey, it became possible to identify the motives and values of consumers when purchasing such products, which will obviously be useful for manufacturers of organic goods to promote their products. The work also analyzed trends in the market for organic products, which made it possible to determine the emerging increase in demand for such products, but also identified the need to stimulate the sale of organic products. The result of the study was, firstly, the identified target groups of consumers, their portrait, and secondly, an economic mechanism was drawn up to increase the efficiency of the development of organic production, taking into account the proposed measures to promote goods in the agro-industrial complex.

1 Introduction

In rapidly changing conditions, uncertainty in the external environment in politics, economics, ecology and other fields, it is currently becoming important for the Russian Federation to create and strengthen its agro-industrial complex, especially in terms of the production of organic products. In 2022, there was a decrease in the profitability of agricultural production, an increase in production costs, and a lack of demand growth in conditions of limited exports. To solve these problems, a Strategy for the Development of Organic Production in the Russian Federation until 2030 was created.

Political changes in the trade relations of the countries have led to the need of the Russian Federation to maximize the production of organic products to meet the demand of the population. According to the country’s strategy, there is a need to increase product production

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by 70% by 2050. However, there are a number of constraints that prevent the easy achievement of this objective, including:

- land degradation,
- loss of soil fertility,
- unsustainable water use,
- overexploitation of fishery resources and degradation of the marine environment in general.

People's needs and ways to satisfy them are constantly changing. Companies in the struggle for competitiveness strive to best meet the modern needs of consumers, sometimes anticipating their occurrence. Modern society is characterized by an increasing need for people to lead a healthy lifestyle. This is evidenced by indicators of demand for the services of sports clubs, medical centers and an increase in demand for organic food. In this way, we can characterize the trends in the development of consumer demand of society as a whole, but for each group of consumers we can identify its own trends.

At the moment, the production of organic products is not widespread in at least 50% of the constituent entities of the Russian Federation. Number of certified producers of organic products in the constituent entities of the Russian Federation. As you can see, the leaders among them are the Voronezh region, Krasnodar region and the Moscow region. The smallest group of subjects of the Russian Federation in terms of the number of certified organic production facilities is located mainly in the north of the country, but the Rostov region is among the representatives of this group. The Rostov region is part of the Southern Federal District and is characterized by a large number of resources and benefits necessary for the development of the production of organic products, it is a promising territory for the development of this industry.

There is a growing tendency among the country's consumers to purchase food products from farms rather than in large chain stores, which is explained by a greater level of trust in farms and the desire of consumers to purchase and consume healthy natural products. Due to the limited production batch of organic products and the lack of competitors, producers of organic products can dictate prices independently and, as experience shows, prices for goods in this group are 30–50% higher than prices for conventional products.

Today, the country has all the necessary production capacities for the development of organic agriculture, which is explained by the 46 constituent entities of the Russian Federation in which organic production is carried out and the available land area of 655.5 thousand hectares occupied by certified producers of organic products.

A number of measures have been taken at the country level to maintain and develop the industry. First of all, the training of highly qualified personnel in the field of organic agriculture continues, the regulatory framework is being improved, and certification bodies for organic production are being accredited, which is necessary to increase the level of consumer confidence in organic products.

According to expert estimates, the share of domestic products in the Russian organic market in 2021 was 37%, and in some mass segments it was even less. The rest is occupied by imported products certified abroad. Despite the relatively high growth rates of the Russian organic market, Russia's share in the global organic products market is only 0.2%. However, the state’s current goal is to achieve an increase in production in the domestic consumption market with a decrease in the share of imports in the total volume of the domestic market for organic products. The development strategy for the organic market for agricultural products involves 3 scenarios: basic, conservative and positive. Thus, the basic scenario of the strategy assumes an increase in the volume of production of organic products for the domestic market by 2023 to 1040 rubles per capita compared to 147 rubles per person in 2021 prices. In this regard, the state must set itself several tasks at once. Firstly, it is necessary to create a positive image of organic products and increase the need for this type of product for the majority of
the population, and not just for a group of people who care about their health. Secondly, it is necessary to make organic products more accessible for consumers.

As part of the study of this issue, it becomes interesting to conduct a sociological survey and investigate consumer demand for organic products, the motives for their consumption when choosing products, on the basis of which it will be possible to identify the prospects for the development of this market. In addition, an important point is to find out the attitude of consumers towards the properties of organic products based on the level of trust in them.

2 Materials and Methods

In addition to conducting statistical research using a survey method to obtain quantitative data, it is important to understand consumer attitudes towards the properties of organic products based on the level of trust in them. It is important to understand the portrait of the target audience and the motives of behavior of their representatives in order to increase demand for organic products. According to V. Pareto’s principle, 20% of all consumers of organic products can bring 80% of the income to the industry, which is determined by their needs, income level, interest, and lifestyle, that is, approximately 20% of all consumers are “ideal” consumers who are willing, ready and able to purchase these products. However, management sciences, including marketing, recommend a number of tools that allow you to increase the size of your target audience by 2–3 times. To accurately determine the target audience and form a portrait of consumers in this segment, it is proposed to determine the attitude of consumers towards the properties of organic products by the level of trust in them using the Fishbein method.

Fishbein’s model can reveal the attitude of consumers towards a particular brand, or it can determine the consumer's attitude towards goods or services according to some other parameter. Fishbein's multifactorial model allows companies to gain insight into whether consumers are positive or negative about their products or services, and most importantly, understand the reasons for such attitudes. Product attributes that are mentioned most frequently or that are considered to be the most significant are considered significant indicators.

According to Fishbein’s multi-factor model, the ratio to goods or services is the sum of the product of opinions on the performance of a good or service and estimated values of those indicators. The Fishbein formula is presented below:

\[ A_o = \sum_{i=1}^{n} b_i e_i; \]

- \( A_o \) – the consumer’s attitude towards the object;
- \( b_i \) – the strength of the opinion that the object may have the \( i \) indicator;
- \( e_i \) – significance (weight) of the \( i \) indicator for the consumer;
- \( n \) – number of significant indicators.

To assess consumer attitudes towards organic products, it is necessary to:
- Determine the most significant product indicators for representatives of the target audience;
- Conduct a survey of respondents to determine the reasons for purchasing a product/service.

The values of \( b_i \) and \( e_i \) are determined as follows:
- The value of \( e_i \), which is an assessment of the corresponding characteristic of a product or service, is usually determined on a bipolar 7-point scale with values from “very good” to “very bad”.
The value of $b_i$ shows how confident consumers are that a given brand of product or service has a certain property. Opinions are also measured on a 7-point scale ranging from “very likely” to “unlikely.”

Next, it is important to evaluate consumer opinions on each identified indicator for each brand (product group). We will include questions to identify consumer attitudes towards organic products in the general survey.

Product attributes that are mentioned most frequently or that are considered to be the most significant are considered significant indicators.

Let's assume that the following product characteristics (organic products) have been defined:

- Shelf life from date of production;
- Cost of organic products compared to conventional ones;
- Product quality, amount of impurities and pesticides;
- Variety of brands and retail stores;
- Availability of identification marks and markings on the packaging;
- Public awareness and desire to purchase it.

To assess consumer attitudes towards organic products, it is necessary to determine the values of $b_i$ and $e_i$, while $e_i$ will be a quantitative interpretation of the corresponding characteristic. Traditionally, $e_i$ is determined on a seven-point scale with values ranging from “Very good” to “very bad.”

It is also important to determine consumer attitudes regarding whether organic products will cost more than conventional products.

Fig. 1. Gradation of values of the indicator $e_i$

All selected indicators characterizing the product are assessed on this scale. The value $b_i$ reflects the degree of importance of each product parameter for the consumer. The indicator values are measured similarly to the $e_i$ indicator, except that the range of values varies from “Strong” to “Weak” or “acceptable”/“unacceptable”.

Opinions are also measured on a 7-point scale ranging from “very likely” to “unlikely.” For example, is it possible that the presence of impurities in organic products will quantitatively exceed their presence in factory-made products?

Fig. 2. Gradation of $b_i$ indicator values

Let's assess consumer attitudes towards organic products in accordance with the proposed model (Table 1). To do this, we will evaluate consumer opinions on each important indicator for organic and inorganic products.

Table 1. Hypothesized results for Fishbein's multivariate model.

<table>
<thead>
<tr>
<th>Index</th>
<th>Score ($e_i$)</th>
<th>Opinions ($b_i$)</th>
<th>Resulting indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Organic products</td>
<td>$b_i$, $e_i$</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Criteria</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf life from date of production;</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cost of organic products compared to conventional ones</td>
<td>-2</td>
<td>-3</td>
<td>-5</td>
</tr>
<tr>
<td>Product quality, amount of impurities and pesticides</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Variety of brands and retail stores;</td>
<td>-2</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td>Availability of identification marks and markings on packaging;</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Public awareness and desire to purchase it.</td>
<td>-1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total: [ \sum_{i=1}^{n} b_{i} ]</td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

In our example, the shelf life from the date of production, product quality, the amount of impurities and pesticides, the presence of identification marks and markings on packaging were identified as the most significant criteria for “green” products. At the moment, the cost of organic goods is higher than conventional ones, but the study showed that despite the fact that the price factor is important when choosing goods, it is not a priority and respondents are ready to purchase organic products, even if they cost more than conventional ones.

To conduct the study, the team of authors collected data based on a sociological study. As part of the study, 5,150 respondents from among residents of the Southern Federal District of different ages, gender and status were interviewed. The method of data collection was a survey. A survey is a sociological method of obtaining information in which respondents (people being surveyed) are asked, in written or oral form, specially selected questions and asked to answer them. As part of the study, two types of sociological surveys were used, namely questionnaires and interviews.

Survey is the most common type of sociological research and at the same time the most widely used method of collecting primary information. With its help, from 70% to 90% of all sociological data are collected.

Due to the fact that the issue of environmental consumption of goods and the development of healthy lifestyle habits is a task for most people in developed countries, many surveys
have been conducted to identify the assessments and motives of various characteristics of consumers in relation to organic products. Among the motives that drive consumers purchasing organic products are concerns about their own health, the well-being of the environment and appearance. Speaking about the average consumer of organic products, we understand that most likely this is a young working population, usually under the age of 45.

As part of the sociological study conducted by the authors, the consumer preferences of people buying organic products in the southern federal district of the Russian Federation were determined.

The sociological survey was conducted in the following cities of the Southern Federal District of the Russian Federation: Rostov-on-Don, Taganrog, Shakhty, Novocherkassk, Aksai, Bataysk.

The survey results made it possible to identify the proportion of consumers who do not trust labeling on organic products. A low level of trust in manufacturers may lead to a low level of demand for products in this category. This situation may be caused by the inappropriate use of non-organic labels on various products. Often, product manufacturers, who want to increase demand for it, mislead their consumers by placing deliberately false information on the packaging.

Based on the analysis of the data obtained from the results of a sociological survey, it becomes possible to identify consumer motives and values for purchasing organic products according to the degree of their importance (Figure 3).

![Figure 3](image_url)

**Fig. 3.** Motives and values of consumers of organic products according to their degree of weight

Based on the data in the figure, we can conclude that citizens of the Southern Federal District of the Russian Federation show an active interest in purchasing organic goods in the presence of a slight price difference, guided, first of all, by the desire to maintain the level of their health and the health of their loved ones. In addition, as it was revealed, an important motive for purchasing such goods is self-actualization, that is compliance with the trends of society, identifying oneself with it through the consumption of such products.
3 Results

Data from the study indicate an increase in the country's demand for organic products. However, the growth rate of demand for such products is lower than necessary to achieve the goals of the organic industry development strategy.

During the study, another problem was identified, which is the low level of satisfaction of consumer needs with organic products, that is, they are not sufficiently accessible in some regions of our country physically or financially. The third problem of industry development is expressed in the high price difference between organic and inorganic goods. To solve these problems, “green” marketing tools can be used and a mechanism to resist global challenges and threats to the industry can be drawn up.

Skeptical consumers are the least susceptible to organic consumption trends. Many skeptical consumers are long-term skeptics who rarely switch to organic products.

The results of the study conducted by the authors are confirmed by a 2020-2021 study by the Nielsen group which indicate that most often women who have a family, children, who care about them, and their health purchase organic products. For 2021, the share of representatives of this category was 40%. People with health limitations and representatives of the premium segment with a high level of income can also become consumers of organic products. In total, the listed two categories make up 20% of the total target audience. In addition, a healthy lifestyle and healthy eating are becoming trends among modern young people, which are actively promoted on social networks, and the share in the total volume of consumers is only 5%. It can be assumed that over the next few years the trend towards consuming organic products will only increase. This is evidenced by the forecast for the average annual growth in consumption of organic products, according to the strategy for the development of organic production in the Russian Federation.

![Fig. 4. Forecast of average annual growth in consumption of organic products until 2030, %](image)

As mentioned earlier, the markup on organic products in retail chains, which ranges from 30 to 100% depending on the type of product, frequency of its consumption, food fashion, and trading platform, can hinder the growth of demand for such products.

In addition to price barriers, the industry is hampered by a number of so-called challenges and threats, which we list below (table 2).
Table 2 - Challenges and threats to the development of organic production in the Russian Federation

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Content</th>
</tr>
</thead>
</table>
| Environmental    | - the likelihood of the impact of agricultural activities on the environment and the need to minimize negative environmental consequences;  
                  | - exploring innovative solutions to reduce the carbon footprint and rationally optimize the use of natural resources |
| Climatic         | - climate changes affecting the production of organic products;  
                  | - study of possible strategies for adapting agricultural enterprises to changing climatic conditions |
| Economic         | - high production costs of organic products, rising prices for them;  
                  | - weak government support, uncertainty of the external environment |
| Sociocultural    | - poor awareness and understanding by consumers of the qualities and benefits of organic products;  
                  | - lack of a developed culture of consumption in the Russian Federation of organic products in comparison with other products. |
| Technological    | - poor technological equipment of production;  
                  | - lack of innovation in the field of organic production. |
| Political        | - the absence until now of clear laws and regulations governing the certification of organic production; |
| Behavioral       | - insufficient level of demand for organic products due to consumer stereotypes;  
                  | - lack of motivation among producers of organic products. |
| Reputational     | - the likelihood of negative perception of organic products by consumers due to the possibility of a situation of deception or non-compliance with standards;  
                  | - the likelihood of a decrease in product quality. |

Despite the existing challenges and risks affecting the development of organic production, scientists also see opportunities to overcome negative situations, primarily through the use of green marketing tools. These tables indicate the need to create economic motivation for producers of organic products and reduce the overall level of costs for them, as well as increasing consumer awareness about the properties and benefits of certified organic products, building effective communication channels with consumers and sales channels.

4 Discussion

We see one of the ways to overcome the current challenges and threats to the production of organic products in the Russian Federation as the creation of a mechanism for managing this process. In order to overcome the challenges, it is necessary to understand the factors influencing organic production at both the meso and macro levels. Understanding the challenges in the current external environment will allow us to identify industry tendencies and trends, as well as identify private green marketing tools that can influence the efficiency of development of the business sector of the agro-industrial complex producing organic products.
In addition to traditional marketing methods and tools, we will highlight its modern directions such as eco-sponsoring, eco-timent and eco-leasing. By eco-sponsoring we mean a direction that is used to create a company’s positive image in the eyes of consumers through projects to overcome and finance certain environmental problems. By eco-timent we mean the direction of development of communication with the consumer through strengthening environmental responsibility by strengthening its emotional relationship with the desired lifestyle, in this case correct or healthy. And by eco-leasing we mean a type of rental of investment properties on environmentally responsible terms. That is, it is envisaged to reuse the same fixed asset, and then dispose of it in an environmentally friendly manner.
5 Conclusions

The organic food market is one of the fastest growing segments of the food industry worldwide. In Russia, there is an annual increase in demand for organic food, which determines new requirements for food manufacturers in terms of ensuring orientation towards “green” production in various ways. As part of this study, prospects for the development of organic production in the Russian Federation were identified, for which the authors identified the main target groups of consumers capable and ready to purchase such goods. Identification of target groups became possible on the basis of a sociological study and assessment of the level of consumer readiness to purchase organic products on an ongoing basis in the long term. Also, based on the survey, the motives and values of consumers when purchasing such products were identified, which will obviously be useful for manufacturers of organic goods to promote their products. The work analyzed the trends in the market for organic products, this made it possible to determine the emerging increase in demand for such products, however, the need to stimulate the sale of organic products was also identified. The result of the study was, firstly, the identified target groups of consumers, their portrait, and secondly, an economic mechanism for increasing the efficiency of organic production was drawn up, taking into account the proposed measures to promote organic goods in the agro-industrial complex.

References