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COOPERATION AS A BASIS FOR INCREASING THE ECONOMIC EFFICIENCY IN PROTECTED CULTIVATION OF VEGETABLES

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КООПЕРАЦИЯ КАК ОСНОВА УВЕЛИЧЕНИЯ ЭКОНОМИЧЕСКОЙ ЭФФЕКТИВНОСТИ ВОЗДЕЛЫВАНИЯ ОВОЩЕЙ В ЗАЩИЩЕННЫХ УСЛОВИЯХ

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Abstract. The main task of the greenhouse economy is to provide the population with fresh vegetables in the winter season period. Therefore, the cultivation of vegetable crops in protected soil differs significantly from the cultivation of many other crops. The content of the protected soil is justified only under conditions of high-intensity production and the costs of creating and operating a capital greenhouse facility, material costs for their heat supply, electricity. Work in greenhouses is associated with increased the need for skilled and auxiliary labour. The greenhouse production of Uzbekistan is mainly concentrated near large settlements. The industry allows you to receive from the sale of fresh vegetables at least 60% of cash proceeds, over 95% of the total profit of the economy, and the level of profitability from the sale products from year to year increased. The article draws attention to possible reserves of cost savings in the protected cultivation of vegetables.

Аннотация. Главная задача парникового хозяйства — обеспечить население свежими овощами в зимний период. Поэтому выращивание овощных культур в закрытом грунте значительно отличается от выращивания многих других культур. Содержание закрытого грунта оправдано только в условиях высокоинтенсивного производства и затрат на создание и эксплуатацию тепличного объекта в столице, материальных затрат на их теплоснабжение, электроэнергию. Работа в теплицах связана с увеличением потребности в квалифицированных и вспомогательных работах. Тепличное производство Узбекистана в основном сосредоточено вблизи крупных населенных пунктов. Промышленность позволяет получать от продажи свежих овощей не менее 60% денежных поступлений, более 95% от общей прибыли экономики, а также уровень рентабельности от продуктов продажи из года в год. В статье обращается внимание на возможные резервы экономии затрат на возделывание овощей в защищенных условиях.

Keywords: economic efficiency, sales, fresh vegetables, profitability level, realization, protected cultivation of vegetables.

Ключевые слова: экономическая эффективность, продажи, свежие овощи, уровень рентабельности, реализация, возделывание овощей в защищенных условиях.

Introduction

The agro-industrial complex and its basic branch — crop production, are the leading system-forming spheres of the economy, forming the agro-food market, food and economic security, labor,

resource and settlement potential of the territories.

Vegetable growing of protected soil is one of the most important and priority sub-sectors of plant growing. The production of vegetable products is vital and indispensable in human nutrition throughout the year, including the period when it is impossible to grow products in the open.

Over the past decade, most greenhouse enterprises in Uzbekistan have experienced positive changes, achieved predominantly through extensive development. However, extensive development measures have largely exhausted their capabilities and are not significant for ensuring sustainable and effective work on the production of vegetables of protected soil [1].

Materials and methods

The methodology of the organizational and economic mechanism for the sustainable development of the vegetable market for protected soil is based on an integrated and systematic approach. The integrated approach takes into account a combination of market factors that influence the management of sustainable development of the vegetable market for protected soil. The application of the system approach as a general methodological basis for the objective reflection of the systemic properties of the functioning of the subjects of the vegetable market of protected soil considers a set of interrelated elements, taking into account the characteristics of agriculture, the variability of the factors of the external and internal environment, the level of state support in order to meet the social needs produced by enterprises under conditions of constant changes in market elements environment [2].

The inconstancy of the external environment, the limited resources, the existence of highly profitable and unprofitable production in greenhouse farms located in the same natural and economic conditions, does not allow us to determine the single most effective methodological approach.

The general theoretical and methodological basis of the research is the work of national and foreign scientists and economists on the problems of the development of the agro-industrial complex and agriculture, in particular, the vegetable market for protected soil; analysis of intra-industry competition and increasing the competitiveness of enterprises in the current economic conditions [3].

In the process of using the methods used in economic science: general scientific (dialectical, analysis and synthesis, comparisons and analogies, tabular, graphical); special (system, comparative analysis, statistical-economic, economic-mathematical, experimental-experimental, mathematical modeling).

Information base of the research is made up of official state statistics; normative legal acts of federal and regional levels; data of the Ministry of Agriculture of the Republic of Uzbekistan; reference materials of specialized publications on the topic; materials received from participants of the vegetable market of protected soil, own research; Internet data (industry portals, sites of producers of protected ground products, articles and reviews).

Results

Reforming collective farms has changed not only the owner of land and material resources, but also radically changed the structure of vegetable producers. Vegetable growing is a necessary and important branch of agriculture, whose products enjoy steadily high demand. The consequence of the reorganization of specialized vegetable farms and the refusal of newly established enterprises to grow vegetables for a number of reasons, the main suppliers of fresh vegetables are the economy of the population [4]. The growing of vegetables by the population is carried out primarily on the land shares (up to 15 hectares) or on the leased ones, obtained as a result of the decommissioning. The main labor resources are family members, as well as hired seasonal workers for the period of

sowing and harvesting. Financial resources are formed mainly from own funds, as well as on the basis of short-term borrowings and deferred payments. Proceeding from this, a considerable share of expenses falls on seeds, petroleum products, plant protection products and fertilizers. The use of manual labor by family members somewhat reduces the price of the product, since the cost of its payment is not taken into account.

With this method of growing vegetables, there are also significant problems with the sale of finished products. Growing vegetables in small batches, as well as the lack of documents certifying compliance with their standards and certification conditions, makes it impossible to implement them through supermarket chains. A separate issue is the question of pricing. The prevailing way to establish the price is to focus on the average market, that is, the cost of production and the planned rate of profit remain in second place [5].

A widespread channel for realization in this situation is the sale of vegetables to bulk sellers by wholesale parties, who often take the product directly from the field, but also the price, compared to the market price, is significantly understated. This way of realization is also forced out because of a lack of storage facilities for products, besides, most producers have an acute need for repayment of debts and security in working capital. As a result of this interaction between manufacturers and intermediaries, manufacturers take on all the risks of production and have a meager profit, and sometimes a loss, at a time when intermediaries engaged only in storage and sales receive significantly greater benefits.

Analysis of the activities of households, farmers and small enterprises shows that a large number of emerging problems are related, including lack of awareness, difficulties in logistics and marketing, as well as limited access to scientific and technological developments. Of course, all these problems significantly affect the profitability and competitiveness of production. One of the possible ways out of this situation is the overall coordination of activities, as well as various options for uniting producers.

At the current stage of the development of the agricultural sector of the economy for vegetable producers, the most acceptable option for the association, actively supported by the state, is the creation of agricultural cooperatives. According to the Law of the Republic of Uzbekistan No. 295-XXI "On Agricultural Cooperation", the agricultural consumer cooperative is a ... "a cooperative established by agricultural producers and (or) leading personal subsidiary plots by citizens, provided they are obliged to participate in the economic activities of a consumer cooperative". In other words, it is a voluntary association of producers to derive benefits from joint activities. Depending on the direction of activity, consumer cooperatives are serving, processing, selling, supplying, etc [6].

The cyclical nature of the development of socioeconomic relations again manifested itself in agriculture. As in the early twentieth century, the main producers of fresh vegetables are now again the economy of the population. Thus, the ideas of service cooperatives are again becoming relevant, but taking into account modern production conditions. Of course, cooperatives are not a universal way to increase the efficiency of growing vegetables and ensuring food security, but, agreeing with the opinion of V. A. Zagotova, they are a powerful mechanism for the self-organization of rural commodity producers. In addition, the scientist considers servicing cooperatives as a mechanism to protect against "... unscrupulous intermediary structures, a variety of second-hand dealers, processing enterprises - monopolists and economic dependence on them".

At present, cooperatives combining farmers and households around a central specialized enterprise are relevant. Such an association will facilitate the receipt of all advantages of a large enterprise, to establish joint sales of products, as well as to attract government support. It becomes clear that servicing cooperation in agriculture, especially in vegetable growing, is urgent and even necessary. However, it should be noted that, like any other phenomenon, cooperation also has

negative aspects, which must be studied and taken into account. The classification of the merits and problems of agricultural servicing cooperatives is given in Table 1.

Table 1.

POSITIVE AND NEGATIVE ASPECTS OF SERVICING CO-OPERATION
 FOR VEGETABLE PRODUCERS

<i>Benefits</i>	<i>Disadvantages</i>
Possibility to purchase materials. Fuel and lubricants, fertilizers, plant protection products in large batches at wholesale prices	Not all participants of the cooperative need the same fertilizers and pesticides, and not all are able to simultaneously allocate money for their purchase
The ability to sell finished products wholesale lots, import, sell in the trade networks	In the absence of standardization, the products of individual producers may differ in quality, price and assortment, therefore, difficulties arise in the distribution of profits and there is the possibility of deceiving participants in the cooperative in the quality of products
Possibility to issue loans, get state aid and grants of special development funds, including foreign ones	There are obligations that restrain the freedom to choose activities, the range of crops and the distribution of profits
The possibility of sharing equipment and other means of production	There may be a situation where several technicians are needed at the same time (for example, during sowing and harvesting)
The possibility of joint planning of quantity and assortment of products to meet market needs	Arrangement on the number and range of products does not always lead to maximization of the profit of each of the participants of the cooperative
The possibility of creating a cooperative line for pre-sale preparation (packaging, sorting, cooling) and storage facilities	Long-term relations between the participants are necessary, the initial cash contributions for construction, as well as a clear delineation of the volumes and rights to use the data object
The possibility of sharing the legal, accounting and marketing services of third-party specialists	The need to pay regular membership fees
The possibility of uniting both private individuals and legal entities into cooperatives	Different in size entrance fees determine the priority of the provision of services and their scope

From the facts given in the table, the ambiguity in deciding whether to join the agricultural service cooperative becomes clear, but with a common understanding of the needs and opportunities of each other, the negative sides can be solved. The reward for risk and material contributions is the use of the advantages of a large enterprise and the effect of a scale effect. In addition, the integration and concentration of the means of production positively affects each of the participants in this process. It is also worth noting that the use of these advantages is possible only if the duties of members of the cooperative are conscientiously performed and are aimed at long-term joint development, otherwise cooperation has no meaning [7].

The proposed servicing agricultural cooperative has a complex device for ensuring the performance of its functions, the general scheme of its internal arrangement is shown in Figure 36. This scheme of the cooperative's device is recommendatory and is inherent in a larger association of producers. For relatively small cooperatives (up to 1,000 hectares of arable land), the functions of

individual services and units can be combined and reduced. A set of managers under the division is carried out as the size of the cooperative increases and the real need for carrying out managerial work.

This cooperative can be regarded as a particular example of an organizational and economic mechanism in which the managing and managed systems are presented, as well as means of influence one on another (Figure 1). The management system of the service cooperative is a general meeting of its members, as well as an executive branch in the form of management.

The general meeting of participants of the cooperative determines the strategic direction of development and makes the most important decisions (creation, reforming and liquidation of the cooperative, decisions on its property and membership), whereas the board ensures its daily functioning. Control over the activities of the administrative apparatus is exercised by the supervisory board, which consists of members of the cooperative and is responsible for the fulfillment of the rights of its functions.

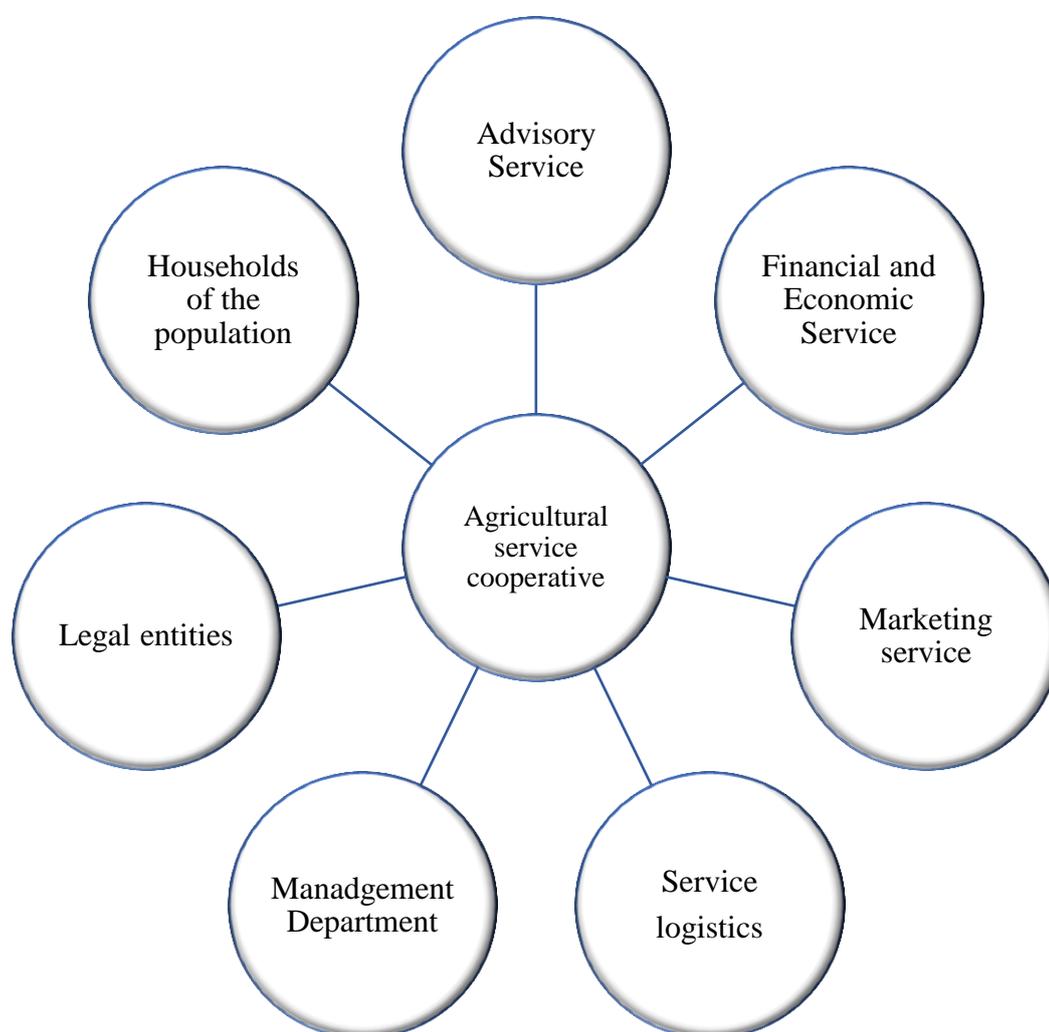


Figure 1. Organizational chart of the internal composition agricultural cooperative (compiled by the author).

The main purpose of the serving cooperative is to provide services to the participants, as well as to assist them in obtaining the best labor results. This goal of the cooperative is realized through the work of the board, as well as specialized services or individual specialists. Economic calculations, planning and analysis, the organization of accounting, financial and credit operations,

as well as interaction with government agencies is carried out by the financial and economic service. In addition, its competence includes consultation of participants in the cooperative on economic issues, and the development of joint development plans.

Proceeding from the constant development of science, technology, technology of growing vegetables, as well as with the introduction of changes in legislation, it becomes necessary to obtain qualified information and advice on its application in practice. It is for this purpose that the service cooperative needs a separate advisory service, or individual specialists in these areas. It's not even necessary that they are regular, the main requirement for them is competence.

The system of consultation is relevant and necessary for the development of the agrarian business and vegetable production itself. Small enterprises do not have their own funds to improve the skills of employees, participate in conferences and seminars. It is for this purpose that the state program for the association of scientific institutions with producers of agricultural products should work. However, a separate citizen who grows vegetables in the subsidiary farm has difficult access to these services, so it is the servicing cooperative that can provide it with new opportunities.

The formation of wholesale lots of products, their sorting, packaging and delivery significantly accelerates turnover and expands the possible channels for marketing vegetables and the target audience. In addition, the prompt delivery of means of production and materials ensures a timely and uninterrupted process of performing technological operations for growing vegetables is reflected in the level of yield and profitability of activities.

We consider it necessary to allocate a marketing service for a separate subdivision in the servicing cooperative.

Firstly, this is due to the specific nature of marketing research, calculations and plans, and secondly, to the need for a comprehensive study of the vegetable market and the search for the best balance of price, quality, quantity and range of products.

The most common and systematic approach to the development of marketing policies based on the marketing mix "Mix 4R".

At present, various modifications of this complex have been developed, revealing in more detail one of the elements.

Depending on this, the complex "Mix 5R", "Mix 7R" and even "Mix 12R" is singled out.

Taking into account the specifics of agricultural production, as well as the extreme importance of manual labor and the qualification of personnel in the cultivation of vegetable crops, we consider the most optimal application of the marketing mix "Mix 5R": commodity policy, price, personnel, distribution and promotion policy.

Analysis of the table data showed that marketing activities in the service cooperative are not only related to sales, but cover almost all aspects of the enterprise's activities. The modern concept of vegetable development assumes orientation to the market, to a specific consumer, therefore marketing is an extremely important element at each stage of production and sales. Given the availability of resources and qualified personnel, we consider it necessary to organize a separate marketing service in the cooperative, but the actual situation of the development of enterprises engaged in growing vegetables allows creating only a separate post of marketer. In our opinion, the introduction of even one marketing specialist will ensure the implementation of basic marketing operations: the study of the vegetable market, the establishment of the sales price, the selection of the distribution channel, and the creation of advertising and interaction with customers. With the development of the cooperative and the understanding of the need for marketing activities, the number of marketers should grow, providing each of them with specialization and expanding the scope of work for each of the elements of the "Mix 5R" complex [8].

The directions of work for each of these elements are presented in Table 2.

Table 2.

THE DIRECTIONS OF WORK FOR EACH ELEMENTS

<i>Directions of marketing policy</i>	<i>Subject of impact</i>
Product	<ol style="list-style-type: none"> 1. Selection of crops and volumes of cultivation and their distribution among participants in cooperation 2. Development of unified technological maps for unification of cultivated vegetables 3. Use of post-harvest processing and packaging of vegetables 4. Obtaining of quality certificates for products for expansion of directions of realization 5. Creating your own brand 6. Introduction of the principles of organic farming
price	<ol style="list-style-type: none"> 1. Choosing a price strategy for different vegetables 2. Setting and adjusting the price of vegetables 3. Use of the system of discounts, deferred payments and payment methods 4. Analysis and forecasting of the selling price
place	<ol style="list-style-type: none"> 1. The choice of the direction of realization of vegetables (trade networks, own points, market, export, intermediary structures) 2. Using different ways of delivering vegetables to consumers 3. Conclusion of forward contracts for the supply of vegetables
promotion	<ol style="list-style-type: none"> 1. Creation and placement of advertising, including on the Internet 2. Work on the image of the trademark, its recognizability 3. Communication with consumers and maintenance of social initiatives. 4. Organization of exhibitions, presentations, excursions to production 5. The election of forms of sale of goods and promotion of sales 6. Creation, promotion and updating of the site of the cooperative
people	<ol style="list-style-type: none"> 1. Election and monitoring of the activities of specialists co-operative 2. Increase the level of qualifications of participants in cooperation, the introduction of training and consultation 3. Work with consumers and intermediary structures

Marketing specialists are the connecting link between the internal environment of the cooperative and the external. One of the main tasks facing them is the harmonization of these relations, as well as the adaptation of production to new conditions and the needs of the external environment. The activity of the agricultural service cooperative, in one way or another, is influenced by a significant number of entities that make up the external environment. The main ones are: government agencies, consumers, suppliers, competitors, partners, various organizations and institutions (Figure 2).

Interaction with diverse organizations and institutions, in our opinion, contributes to the diversified development of the cooperative. The organizational mechanism shown in Figure 36 shows that the agricultural cooperative on this scale is a manageable system influenced by environmental factors, without which the implementation of activities would be impossible. So, the orientation to the market and the consumer regulates the prices and the number of vegetables grown; research organizations optimize production and create new varieties and hybrids; suppliers provide consumables; advisory services carry out consultations and spread new ideas; greenhouse combines supply seedlings and maintain the saturation of the market with vegetables in the off-season; State bodies create conditions for doing business [9].

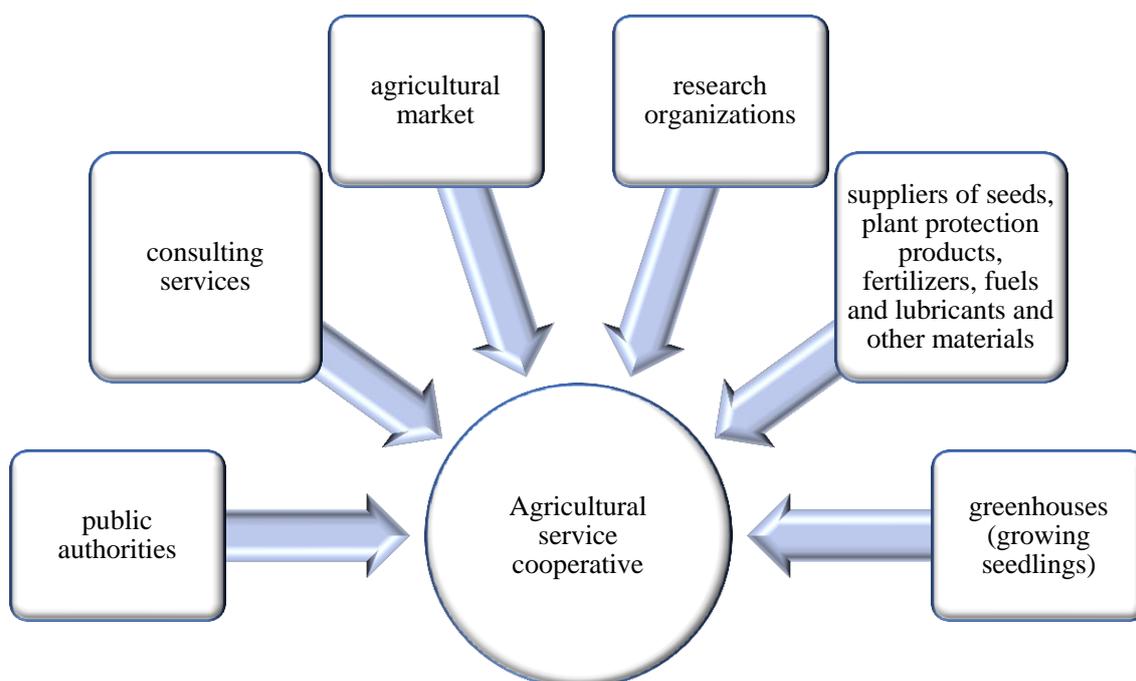


Figure 2. External organizational mechanism of activities agricultural cooperative cooperative (compiled by the author).

Based on the uneven demand for vegetables in different periods of the year, taking into account the demand from the local population and holidaymakers, there is a need to plan the timeframes for products to enter the market. The conducted researches showed that the mass flow of tourists to the territory of the Republic of Uzbekistan starts from May and ends in September. The peak of the number of vacationers falls on July-August. Proceeding from this, as well as the needs of the local population for fresh produce, we consider it necessary to develop early vegetable growing. We consider the application of hibernating hybrids of onions, carrots and cabbage in the autumn terms of sowing to be the top priority for providing the population and holiday-makers with early products [5].

Taking into account the structure of demand and the possible terms for obtaining marketable products, the required number of vegetables was calculated using the mathematical equations, using onions, carrots and cabbages as the basis for the “borscht set”. As a limitation, the amount of irrigated arable land, the volume of water resources, and the limited manpower that manually performed a large part of the operations in vegetable production were selected.

Conclusions

Problems of sustainable functioning and development of agro-food markets and the organizational and economic mechanism in the agro-industrial complex have always been in the center of attention of domestic and foreign economists and specialists in the agro-industrial complex.

The performed research allowed obtaining the following theoretical and practical conclusions and proposals.

The study of the organizational and economic mechanism of sustainable development of the vegetable market for protected soil made it possible to identify the main factors that affect the efficiency of its functioning. Generalization of theoretical and methodological aspects, regularities and features of a comprehensive study of the organizational and economic mechanism shows that the necessary condition for the development of the vegetable market for protected soil is the use of

instruments of state and regulatory regulation, organizational, production, marketing and socio-economic activities [3].

The revealed trends and developed forecasts of the development of the national vegetable market for protected soil, depending on the different level of implementation of the scenario (basic, compromise, intensive) have shown that, in the base scenario, an increase in the general level of consumption will lead to substitution by imports, and then by domestic production and gradual displacement of imports due to its slow growth. In the case of a compromise scenario, initially domestic production is growing and by the end of the forecast, domestic production indicators are higher than imports. With an intensive scenario, there is a significant growth in domestic production and a gradual replacement of imports.

The implementation of the proposed model of the organizational and economic mechanism for the sustainable development of the vegetable market of protected soil, consisting of methods of state regulation, interaction and coordination of market participants, the mechanism of pricing, innovative approach in managing technological processes on the basis of interaction between scientific, educational organizations and the production sector makes it possible to improve the functioning of the analyzed agro-food market and its economic entities.

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