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# **Food aid to socially vulnerable segments of the population: agricultural technologies, industrial food production technologies, infrastructure in the context of overcoming the consequences of a pandemic.**

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## **Abstract.**

Food assistance to socially vulnerable segments of the population has become particularly relevant in the context of overcoming the catastrophic consequences of the 2019-2020 pandemic. Social assistance and the infrastructure created for this purpose are a system tool that allows us to respond adequately to the challenges of the time.

The aim of the work is to create theoretical foundations and proposals for a practical solution to the problem of providing unprotected segments of the population with environmentally friendly food. The article deals with the problem of providing food to socially vulnerable categories of the population, suggests measures to form the infrastructure of domestic food aid, creates a mechanism for combining the market, distribution and informal institutions to provide food to the needy segments of the population.

It is proposed to create mechanisms to motivate landowners to use soil protection technologies, to encourage the use of" abandoned " land with the help of state support tools, and to introduce degraded land into the agricultural circulation.

The main aspects of the problem: the process of providing food to the needy of the village, the use of land resources withdrawn from circulation for organic production, the system of state support, the creation of market infrastructure in this area, overcoming the consequences of the pandemic.

The model of an integrated solution to the problem is proposed by creating a state-regulated industrial-type infrastructure for creating funds and allocating resources, as well as creating a social nutrition system in the region.

**Keywords:** overcoming the consequences of the pandemic, domestic food aid to socially vulnerable segments of the population, food aid infrastructure, soil protection technologies

## **Продовольственная помощь социально уязвимым слоям населения: агротехнологии, технологии промышленного производства продуктов питания, инфраструктура в условиях преодоления последствий пандемии.**

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Продовольственная помощь социально незащищенным слоям населения стала особенно актуальной в контексте преодоления катастрофических последствий пандемии 2019-2020 годов. Социальная помощь и созданная для этого инфраструктура-это системный инструмент, позволяющий адекватно реагировать на вызовы времени.

Целью работы является создание теоретических основ и предложений по практическому решению проблемы обеспечения незащищенных слоев населения экологически чистыми продуктами питания. В статье рассматривается проблема обеспечения продовольствием социально незащищенных категорий населения, предлагаются меры по формированию инфраструктуры внутренней продовольственной помощи, создается механизм объединения рыночных, распределительных и неформальных институтов обеспечения продовольствием нуждающихся слоев населения.

Предлагается создать механизмы мотивации землевладельцев к использованию почвозащитных технологий, стимулировать использование "заброшенных" земель с помощью инструментов государственной поддержки, ввести в сельскохозяйственный оборот деградированные земли.

Основные аспекты проблемы: процесс обеспечения продовольствием нуждающихся села, использование земельных ресурсов, изъятых из оборота для органического производства, система государственной поддержки, создание рыночной инфраструктуры в этой сфере, преодоление последствий пандемии.

Предложена модель комплексного решения проблемы путем создания регулируемой государством инфраструктуры промышленного типа для создания фондов и распределения ресурсов, а также создания системы социального питания в регионе.

Ключевые слова: продовольственная помощь уязвимым слоям населения, инфраструктура продовольственной помощи, использование

деградированных земель для производства экологически чистых продуктов питания, институты развития.

## **Food aid to socially vulnerable segments of the population: agricultural technologies, industrial food production technologies, infrastructure in the context of overcoming the consequences of a pandemic.**

### **Introduction**

In 2018-2020, Omsk State Agrarian University conducted a comprehensive study of the problem of providing unprotected segments of the population with environmentally friendly food using the resource of land withdrawn from agricultural turnover. Due to the fact that gained particular importance to the issue of food aid to socially vulnerable layers of the population in the conditions of overcoming the consequences of the pandemic 2019-2020, reviewed and justified the need for domestic food assistance, based on the agricultural products of the region [1]. The paper substantiates the effectiveness of creating an integrated structure of the social nutrition industry, which allows providing kindergartens and schools, medical, social institutions, etc. With food within a centralized system, and obtaining environmentally friendly food. An industrial production and logistics center – a specific logistics infrastructure-is under development in the region [3].

The creation of a specialized complex "Social Food Industry" will take a priority place in the socio-economic development of the region, will qualitatively change the system of catering for social groups of the population, will eliminate numerous intermediaries, reduce storage costs and increase the share of agricultural producers in the final price of the consumer in the food chain. The implementation of the new direction will contribute to the achievement of food security indicators, will give an impetus to the development of agriculture. The consumer will receive high-quality proven products at affordable prices.

Appeared the possibility to form stable social order, local farmers and processors, to ensure high quality nutrition for children in preschool and educational institutions; the poor a guaranteed and high-quality food; the possibility of subsidizing part of the cost of low-income parents.

The main functions of the production and logistics center of the metropolis in the document flows are to synchronize information flows: acceptance and storage of agricultural raw materials and food products from agricultural producers; processing of agricultural raw materials and food production in organizations of their own production. The function of concluding contracts for the supply of agricultural raw materials and food products is aimed at promoting goods and services in the logistics chain; for the supply of food products of their own production with retail chains and social catering facilities; conclusion of cooperation agreements with large retail chains, with financial and credit organizations on cooperation; with municipal authorities on the release of food products under the single trademark "Omsk Product", which is an umbrella brand for large and small producers: creation of a system of full incoming and outgoing production control.

The economic effect is that there is an opportunity to form a stable social order for local agricultural producers and processors of products. The social effect consists in providing healthy and quality food of children in preschool and educational institutions; the poor a guaranteed and high-quality food; the possibility of subsidizing part of the cost of low-income parents.

In accordance with world practice, the development of environmentally friendly agricultural production on restored lands is a priority area of development, state support for agriculture is not limited to WTO rules[2;3;4;5]. The evaluation of the efficiency and feasibility of work on the involvement of unused arable land in agricultural turnover was carried out. The research substantiates the effectiveness and expediency of work on the restoration of degraded lands that have been destroyed. The transformation of degraded land into agricultural turnover will

allow efficient use of land and generate additional income. A specialized production and logistics center will eliminate inefficient intermediaries, reduce storage costs and increase the share of agricultural producers in the final price of the consumer in the food chain. The implementation of this approach will provide an impetus to the development of agriculture. The consumer will receive high-quality proven products at affordable prices.

Thus, a consistent chain of technologically synchronized production processes, warehouse logistics facilities, transport enterprises, food, service and trade operators for food supplies is created. The central link in the supply chain is assigned to the production and logistics center, which determines the structure of the supply chain and organizes the management of relations with the supplier and the consumer.

The problem of local producers of raw materials is the sale of products and barriers to entry with their products on the shelves of stores. The reason is the lack of effective cooperation of commodity producers and the wide spread of global trade systems of the network format, access to which is limited by a number of barriers (strict requirements for product parameters, concerning excessively long storage periods and delivery volumes, cooperation fees, etc.). By purchasing food in global network structures, consumers, supported by budgets of various levels, provide them with revenue. This revenue is not included in the production turnover of local producers, but, as a rule, is withdrawn outside the region.

The creation of a production and logistics center as part of infrastructure institutions will synchronize the resource flows of goods, finance, and operations in food preparation technologies, reduce production costs, and increase the competitiveness of products.

The scale of production of food and semi-finished products will allow you to apply innovative technologies, save resources, ensure quality control of ingredients, flexibility in planning food preparation, and efficient use of production capacity.

The approaches considered by the authors are not contradictory with respect to the international norms of the functioning of food supply systems for socially vulnerable segments of the population. In particular, they are comparable with the practices recommended by the World Agricultural Organization FAO, specialized in the United States, Great Britain, and other countries[1; 6]. A step-by-step solution to the problem of providing food to socially vulnerable segments of the population is of particular interest. In particular, it is considered as the most progressive experience of rapid response to overcoming the consequences of the 2019-2020 pandemic in the US Department of Agriculture. The "Farmers to Families Food Box Program" is part of the Food Aid Program that was developed in response to the COVID pandemic. Using the authority granted by the Law, the USDA has entered into partnerships with national, regional, and local distributors. Employees of these structures were significantly affected by the closure of restaurants, hotels, and other public catering facilities intended for the purchase and distribution of agricultural products to Americans in need. " [7]

### **Conclusion.**

The significance of the results obtained in the course of the study for the region is as follows:

- the possibility of organizing a single system of suppliers that provides centralized selection, delivery, quality control and safety of products, the purchase of products directly from the manufacturer-local agricultural producers;
- strict input control of the supplied raw materials. (technologists, sanitary doctors, production control specialists; - creation of new jobs in the production and logistics system of the industrial sphere of food preparation and semi-finished products of high readiness;
- creation of a system of complete incoming and outgoing production control, including the use of laboratory and instrumental methods;

- reduction of losses at all stages of production and sale of agricultural products (through the use of high-tech equipment, the use of special systems for accounting and control of production, storage);
- providing children with food in preschool and general education institutions by subsidizing part of the costs to low-income parents;
- the formation of a sustainable social order that will increase the production of local agricultural products (including through the use of land withdrawn from agricultural turnover) and subsidizing local producers. This will ensure the flow of resources aimed at the reproduction process to local agricultural organizations and processors of agricultural raw materials.
- agricultural producers will have the opportunity to switch to "bulk" conditions in the retail network;
- large volumes of food are sent to the domestic food aid system ( 18-22% of the food consumed in the region), which will ensure guaranteed domestic demand for the products of local producers;
- the involvement in the production turnover of the regional budget funds allocated for food assistance to socially vulnerable segments of the population is ensured.

The study defines the areas of work, defines the spheres of influence:

- in the field of state support-gradual expansion of state guarantees;
- in the field of domestic food assistance to the population-the formation of public-private partnerships in the creation and organization of the functioning of enterprises of the infrastructure complex;
- coordination of the interaction of participants in the production, social, credit, financial and trade spheres, the functioning of the settlement and payment system.

In the scientific and technical sphere-the development of the infrastructure of the food industry, technological equipment of the cooking process by eliminating losses within certain limits.

The development of the food resource base involves increasing the volume of agricultural production, increasing the production capacity of processing enterprises, optimizing the flow of food in the technological cycle.



In changing the architecture of the trade process - the introduction of production and logistics centers in the food chain, which will allow local entrepreneurs, bypassing trade networks, to increase the volume of conditioned food that meets technological requirements; the use of resources of transnational trade network structures in the development of the logistics potential of the regions.

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