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FORMATION OF THE RAW MATERIAL BASE AND MEANS OF PRODUCTION FOOD INDUSTRY OF UKRAINE

ФОРМУВАННЯ СИРОВИННОЇ БАЗИ ТА ЗАСОБИ ВИРОБНИЦТВА ХАРЧОВОЇ ПРОМИСЛОВОСТІ УКРАЇНИ

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Abstract. *Agricultural raw materials are distinguished by certain features that significantly affect the activities of food industry enterprises. These resources are renewable, multi-component, interchangeable, seasonal, not very transportable, require economical use, integration with related industries, storage and creation of auxiliary industries, such as elevator-warehouse, refrigeration, etc. The food industry of Ukraine is almost completely provided with raw materials from its own sources, but in case of shortage, raw materials are imported from other countries, which creates dependence of the industry on supplies of imported raw materials. To expand the raw material base of the food industry, it is important to efficiently and rationally use the harvested raw materials that can be processed. Unfortunately, waste as a result of processing is 20-25% of the total amount of raw materials. Therefore, it is very important to introduce low-waste and zero-waste technologies into the production of food products, to increase the use of waste as secondary raw materials in the production of additional products. The principles of the market economy stimulate enterprises to introduce new equipment and technologies, expand opportunities for the use of various financial instruments and mechanisms.*

Key words: *food industry, industry, technology, raw materials, resources, products.*

Any enterprise activity requires the use of material resources (raw materials, energy, components, fuel, etc.). Material and raw materials represent a part of all working capital of the enterprise, which is fully used in the production cycle, while changing or losing its consumer properties. Most of the costs in the production of food products, as part of the cost of finished products and their price, are made up of these resources. For example, more than 80% of the cost of food industry products is spent on raw materials and materials [2, 3, 4].

The dynamic development of the food industry and the quantitative growth of production increases the importance of saving raw materials and materials, as it makes it possible to reduce production costs, sales prices and strengthen the competitiveness of domestic production. The efficiency of the use of raw and material resources by domestic enterprises of the industry is not high enough, especially in comparison with developed countries. As a result, the manufactured products are not very competitive in terms of prices, which leads to a strengthening of the economy's raw material orientation and its energy dependence. Therefore, increasing the efficiency of the use of raw, material and fuel-energy resources is economically and politically important.

The food industry [5] is one of the most material-intensive branches of industry with a specific weight of material costs of up to 95%. For the production of food products, beverages and tobacco products, the main raw materials are mainly agricultural products. Each branch of the food industry uses a certain type of raw material in the production process of specific products. Meat processing uses beef, pork, poultry and lamb.

For the enterprises of the meat industry, livestock, meat in carcasses, offal, fats, flour, starch, food additives, natural and artificial casings for meat and sausage products are considered raw materials and basic materials [1, 2, 9].

Since raw material resources are transformed into finished products in the production process, they require constant replenishment. Each enterprise independently organizes material and raw material support for production needs, depending on the need.

The supply of the necessary resources should be timely, complete, in the required quantity and with minimal costs. A processing enterprise can purchase raw material resources directly from a manufacturing enterprise or an intermediary organization. Buying from manufacturers, i.e. direct supply, has a number of advantages. For example, ensuring rapid response to product requirements [6, 14].

An important issue for enterprises is the choice of suppliers, in which it is necessary to take into account the possibility of the production capacity of the suppliers to meet the existing needs for the necessary materials, their quality and price, the reputation of the supplier company, its territorial location and promptness of deliveries, terms of payments, the possibility of delivery and delay of payment, etc. The food industry, like any industry, is significantly dependent on the supply of raw materials, which affects the efficiency and competitiveness of domestic processing enterprises. The key factors of success, which ensure the strengthening of positions on the market, are the supply of raw materials for food enterprises and the development of integration relations with its suppliers, the presence and strengthening of a trademark, as well as the development of branding. The strengthening and development of the country's agriculture is the main prerequisite for the stable development of the food industry, since a powerful raw material base makes it possible to produce products with greater added value, create new jobs, earn more profit, increase foreign exchange earnings and general economic well-being [9].

Agricultural raw materials are distinguished by certain features that significantly affect the activities of food industry enterprises. These resources are renewable,

multi-component, interchangeable, seasonal, not easily transportable, require economical use, integration with related industries, storage and creation of auxiliary industries, such as elevator-warehouse, refrigeration, etc [12, 13, 15].

The food industry of Ukraine is almost completely supplied with raw materials from its own sources, but in case of shortage, raw materials are imported from other countries, which creates dependence of the industry on supplies of imported raw materials.

The development of livestock industries affects the location and activity of meat processing, milk processing, butter and cheese processing, canning industries, etc. The availability of a sufficient raw material base is one of the conditions for the stable development of the food industry, but the quality of raw materials plays a major role. The quality of raw materials has a significant impact on the economic indicators of food enterprises, because with its improvement, the volume of produced food products, their quality, the price of the product increases, and losses and the amount of waste in the processing process decrease, and vice versa [10, 11, 17].

For many types of agricultural products to improve the quality of creation of special raw material zones. The raw material base is one of the key issues to which the relevant branches of the food industry must constantly pay attention. Agriculture and the food industry need clear interaction and coordination as mutually interested partners. In the conditions of growing competition, food industries must strengthen their positions in the formation and development of their own raw material bases [9, 7]. Natural-climatic and socio-economic conditions are the most important factors in the formation and development of raw material zones of all branches of the food industry. Accordingly, it is necessary to place the enterprises of processing branches of the food industry depending on the specialization of agricultural enterprises and to optimize their raw material base on this basis.

In addition to the above, the preservation of agricultural raw materials at all stages of the technological chain «field - processing enterprise» and ensuring a significant increase in the output of final products of food industry enterprises becomes important [8, 16, 19].

Equivalent to an increase in the production of final products, as more sugar, oil, starch, protein, etc. are obtained. Considering the above, it can be noted that the quality of agricultural products affects both the economy of agricultural enterprises and the financial and economic condition of processing enterprises of the food industry.

Ukraine has ample opportunities to satisfy the country’s population with food products and the corresponding development of the raw material base for the food industry. After all, Ukraine occupies one of the first places in the world in terms of the quality and quantity of land resources used in agriculture. Ukraine uses its potential in an extremely unsatisfactory way. The example of Japan is illustrative, where land resources are in particularly acute shortage, but each hectare of land here produces products worth 5.6 times more than in the European Union [18, 20].

To satisfy not only our own needs, but also to export products to 190 countries of the world, while the country has a strong potential for further growth of production. For example, if the current trend is maintained, domestic agriculture will

be able to grow more than 100 million tons of grain by 2022, fully satisfying domestic needs and. The expansion of the raw material base of the food industry as a result of their close connections and interdependence is significantly related to the development of many branches of the agricultural industry and, above all, its agrarian sphere.

Unsatisfactory conditions of storage and transportation of raw materials are the cause of its significant losses. To avoid such consequences, it is important to pay considerable attention to the selection of vehicles and used containers according to their types and condition, duration of transportation, and weather conditions. At the stage of storage, it is necessary to prepare for storage, choose storage methods and types of suitable storage, storage modes, and also organize control over the stored products. In the process of processing, it is important to strictly follow the recipe and mode of the technological process.

To expand the raw material base of the food industry, it is important to efficiently and rationally use the harvested raw materials that can be processed. Unfortunately, waste as a result of processing is 20-25% of the total amount of raw materials. Therefore, it is very important to introduce low-waste and zero-waste technologies into the production of food products, to increase the use of waste as secondary raw materials in the production of additional products [5, 9, 12].

Increasing the efficiency of the enterprise is saving resources, the most important measure of saving raw materials is high-quality preparation of its equipment and products; replacement of traditional and use of more economical types of raw materials and fuel; liquidation of the defect; ensuring the necessary conditions for storage and transportation of raw materials and materials; reduction of their excess reserves; prevention of illiquid formation; the introduction of new equipment and progressive technology, which allow to obtain as much as possible a reduction in the loss of material resources and technological waste in the process of production of products from the maximum to processing. Also, for all processing enterprises, improvements in the design of used machines, raw materials, materials and fuel are effective in this direction.

An important step for the expansion of the raw material base is the creation and implementation of various stimulating mechanisms for the effective use of raw materials and their savings. Paying for raw materials not by their weight, but by the capacity of the useful product in them is quite effective and rational not only for food industry enterprises, but also for the entire national economy.

Modernization of the food and processing industry through the use of modern technologies and their technical rearmament allows to achieve not only a direct effect, but also the preservation of agricultural products, ensuring a reliable, stable, effective domestic food base and food security of the country.

Food industry enterprises are constantly modernizing their material and technical base. The same trend was observed in the increase in the value of fixed assets that were put into operation in this period, as well as those that were decommissioned. Although the explanations may be similar to the above. The positive thing is that the cost of new fixed assets is greater than the cost of decommissioned ones, which as a result leads to an increase in their value at the end

of the year, as well as the residual value.

The use of outdated energy-intensive equipment leads to consumption by domestic enterprises of almost twice as much energy resources as similar productions abroad, as a result of which the competitiveness of Ukrainian food products in terms of price and quality decreases.

The most important and determining factors of the food industry, which affect the level and dynamics of the efficiency of the use of fixed assets, are considered to be scientific and technical progress, the trend of the development of the food industry and the indicators that testify to this level reflect the complex situation in the industry. Since this industry is leading not only for Ukraine, but also important for meeting the needs of society, it is necessary and urgent to determine the influencing factors, reserves and specific ways of increasing the efficiency of the use of fixed assets. At the same time, it is important to take into account the peculiarities of each specific branch of the food industry and to have a deep knowledge of the specifics.

The presence of a stable demand for the industry's products and raw materials for its production determines the need for the most complete loading of equipment as one of the most important ways to increase the efficiency of the use of fixed assets in food industry enterprises. As a result, an increase in the volume of production is obtained thanks to the minimization of intra-shift time losses, the elimination of «bottlenecks» in the throughput capacity of technologically interconnected groups of equipment, the extension and optimization of the processing season, overcoming seasonality, eliminating downtime, increasing the variability of work, etc. Directions for improving the efficiency of the use of fixed assets are typical for the food industry:

1. The use of high-quality raw materials, first of all, with high manufacturability, with the highest possible content of useful substances in it and the possibility of their maximum extraction.

This direction is closely related to the technologies used in agriculture in the production of raw materials for processing in food industry enterprises. For example, increasing the sugar content in sugar beets, grapes, starch in potatoes, and dry matter in tomatoes increases the yield of marketable products, which significantly increases the return on capital. The use of modern achievements of science and technology will increase the capital return by 20-25%.

2. Economy of processing raw materials in the process of industrial storage. Such losses of raw materials on average in the industry are approximately two times higher than the indicators of advanced domestic enterprises and enterprises of similar industries in developed countries.

3. Replacement of outdated equipment with new, more productive and economical.

4. Improving the extensive use of fixed assets, in particular, increasing the variability of equipment operation. It is necessary to carry out measures to improve the structure of fixed assets, namely, to reduce the number of idle equipment, to decommission redundant and inefficiently used machines and machines that are not sufficiently loaded in the production process during a shift according to their technological capabilities, to organize full-fledged two-shift work.

5. Maximum reduction of losses of raw materials and useful substances contained in them during collection, transportation, storage and processing. Losses of raw materials and their useful substances lead to a decrease in the volume of production and quality of the industry's products, and, accordingly, the return on capital of the means of labor. Capital return growth reserves reach approximately 30-35%.

6. Application of technologies to reduce losses of useful substances in waste and garbage. For example, the industrial utilization of molasses, pulp, pulp, yeast, etc. allows to increase production volumes by up to 20%, and return on capital by 10-15%. precincts; unsatisfactory organization of equipment maintenance and repair; shortage of workers in certain professions; unsatisfactory supply of materials, components, equipment, lifting vehicles, etc.

The coefficient of variability in industrial enterprises of Ukraine is low, which indicates the presence of sufficient reserves for more efficient use of labor resources. For food industry enterprises, an excessive increase in their size without taking into account the possibilities of providing raw materials will lead to underloading of fixed assets, their downtime with all the negative consequences, including in terms of the return on capital.

7. Optimization of the level of specialization and production cooperation. Subject specialization, i.e. the production of certain types of final products, is typical for sugar, confectionery, fruit and vegetable canning, bakery, starch-molasses and some other industries. Technological specialization, first of all, is characteristic of.

8. Implementation of modern achievements of scientific and technical progress and, first of all, zero-waste, low-waste, resource-saving technologies and techniques for their implementation in the production of food products. This direction allows you to increase the output of finished products from an unchanged volume of processed raw materials, and, accordingly, the return on capital.

9. Optimization of the size and level of production concentration. According to the law of concentration of production with a doubling of production volumes, the value of fixed assets increases only one and a half times due to an increase in the specific weight of the active part of fixed assets, the effect of aggregate concentration and an increase in the scale of production, as well as reaching its optimal size. Moreover, the economic efficiency of the concentration of production in general is conditioned by the reduction of capital intensity. In this case, the effect of centralization and softening of seasonality is also observed.

10. Diversification and cross-industry concentration of production. Productions with the necessary primary processing of raw materials that are perishable and poorly transported. As a result of the allocation of such processing in enterprises, the loss of raw materials is minimized and its quality is preserved.

In the case of cooperative construction of enterprises of the processing and food industries, which are related by the nature of the location, the return on capital increases by 20-25% due to the rational, more efficient use of auxiliary production facilities and service farms. Possible forms of cooperation can be, for example, sugar sand enterprises - confectionery enterprises or wineries; oil extraction factories - margarine factories; bread factories - mills; canning enterprises - glass container

enterprises; ervine winemaking enterprises - secondary winemaking enterprises; distilleries - distilleries, etc.

Diversification should also include deepening the range of products. For example, for sugar producers, the expansion of the product range is possible with such types as sucrose, powdered sugar, «coca-cola» sugar, lollipop sugar, liquid sugar, «mint sugar», «ginger sugar», yellow sugar, jelly sugar, sugar with food additives, as well as biofuel production.

11. Rationalization of the location of the industry. Locating food industry enterprises in areas with better supply of raw materials makes it possible to increase capital return. For example, sugar factories located in Vinnytsia, Cherkasy, Khmelnytskyi, Kyiv, Sumy, and Poltava regions have a higher return on capital than similar enterprises in other regions due to higher beet quality and maximum utilization of factory capacities.

Diversification should also include deepening the range of products. Mostly, modern food industry enterprises function on the basis of private ownership, accordingly, sufficient objective conditions have been created for the rational and effective use of fixed assets. A real owner will always look for ways and means so that machinery, buildings, transport, equipment are used rationally and productively.

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Анотація. *Сільськогосподарська сировина вирізняється певними особливостями, які суттєво впливають на діяльність підприємств харчової промисловості. Ці ресурси є поновлюваними, багатокомпонентними, взаємозамінюваними, сезонними, малотранспортабельними, вимагають економного використання, інтеграції з суміжними галузями, зберігання та створення допоміжних виробництв, таких як елеваторно-складське, холодильне тощо. Харчова промисловість України майже повністю забезпечується сировиною з власних джерел, але при нестачі сировину імпортують з інших країн, що створює залежність галузі від поставок імпортованої сировини. Для розширення сировинної бази харчової промисловості важливим є ефективне та раціональне використання заготовленої сировини, яка піддається переробці. На жаль, відходи в результаті переробки становлять 20 – 25 % від загальної кількості вихідної сировини. Тому дуже важливим є впровадження у виробництво харчових продуктів маловідходних і безвідходних технологій, збільшення використання відходів як вторинної сировини при виробництві додаткової продукції. Принципи ринкової економіки стимулюють підприємства впроваджувати нові техніку та технології, розширюють можливості щодо використання різноманітних фінансових інструментів та механізмів.*

Ключові слова: *харчова промисловість, галузь, технологія, сировина, ресурси, продукція.*

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