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# PECULIARITIES OF MARKETING ACTIVITIES OF AGRARIAN ENTERPRISES IN THE CONDITIONS OF MARTIAL LAW

Monograph

#### **UDC 93/94**

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#### **ABSTRACT**

The agro-industrial sector is one of the locomotives of the national economy of Ukraine: the industry was growing steadily until the beginning of the full-scale war, the annual growth was 5-6%, the share of agricultural production in the GDP was 10%, and together with the processing of agricultural products – 16%. Agriculture was one of the leaders in world production of some types of food, providing trade volumes equivalent to 6% of global calorie consumption. Ukraine was the leader in international trade in sunflower oil (first place in the world), rapeseed and barley (third and fourth places, respectively) and other products. Trade in agricultural products and foodstuffs brought Ukraine about 22 billion dollars annually. USA and accounted for 41% of all exports. However, the invasion of the Russian Federation into Ukraine led to corresponding negative changes in the functioning of enterprises in the agrarian sector of the economy.

It should be noted that there have been significant changes in the economic relations between agricultural producers and processing enterprises, suppliers, and intermediaries: the system of stable relations with the processing sphere was destroyed, and the state order for agricultural products was canceled. Agricultural enterprises faced serious problems during the sale of produced products and the purchase of the necessary means of production. They were forced to independently engage in planning, pricing, study of external and internal markets, tastes and preferences of consumers, evaluation of competitors' advantages, etc. That is, there is an urgent need to introduce a new management concept that will help adapt to market conditions and ensure the competitiveness of their products on the domestic and foreign markets.

In modern enterprises, one of the most effective tools for influencing the result is the management of marketing activities. Considering the current situation in the country, it becomes necessary to improve the activities of enterprises, and in particular the marketing component to increase the competitive characteristics of their goods or services.

Despite the war and large-scale destruction, agriculture is unlikely to lose its status as one of the leading branches of the Ukrainian economy. However, today's conditions require agrarian enterprises to direct their development to the future with an orientation towards meeting the needs of consumers by more effective means than competitors. It is due to successful marketing that the necessary conditions for the sustainable development of an enterprise in the agrarian sector are created.

The results of the presented research in the monograph are made within the initiative of the Department of Agrarian Management and Marketing of Vinnytsia National Agrarian University "Development of the concept of marketing management of agricultural enterprises" state registration number: 0122U002111 for 2022–2024.

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## 1. Mechanisms of strategic management of marketing activities of agribusiness entities under martial law

In modern conditions, the situation in the economic sphere of Ukraine is characterized by a high level of informatization and globalization of business, rigidity and dynamic changes in the nature of competition in the market of agro-food products. The environment of modern agribusiness is aggressive and unstable. But Ukraine was a leader in the international trade of sunflower oil, rape and barley and other agricultural products. Trade in agricultural products and foodstuffs brought Ukraine about 22 billion dollars annually. USA and accounted for 41% of all exports. However, the invasion of the Russian Federation into Ukraine led to corresponding negative changes in the functioning of enterprises in the agrarian sector of the economy. At the same time, there were significant changes in the economic relations between agricultural producers and processing enterprises, suppliers, and intermediaries: the system of stable relations with the processing sphere was destroyed, and the state order for agricultural products was canceled. Agricultural enterprises faced serious problems during the sale of the produced products and the purchase of the necessary means of production. They were forced to independently engage in planning, pricing, study of external and internal markets, tastes and preferences of consumers, evaluation of competitors' advantages, etc. That is, there is an urgent need to introduce a new management concept that will help adapt to market conditions and ensure the competitiveness of agricultural products on the domestic and foreign markets.

Adaptation of agrarian business to this environment occurs at the expense of managerial work in various areas, such as production, marketing, finance, personnel. In this activity, a key role is played by the marketing approach to management, which is focused on managing the production process from the standpoint of meeting the needs of consumers.

The multifunctionality of market activity, the presence of peculiarities in each specific situation and at each specific agricultural enterprise led to the formation of

various approaches to the long-term management of agricultural enterprises in a dynamic and unstable market environment. Based on their own experience, the managers of agricultural enterprises, each personally, adapt the activities of their own enterprise and its management system to changing market conditions. At the same time, in the modern period, the majority of farmers have not yet decided on the strategy of their own behavior on the agri-food market, their activities are based on active measures only at the operational level. The lack of strategic management leads to the irrational use of forces and funds, to the general unmanageability of material and financial resources and their flows [1, p. 179].

The situation is emphasized by the constant strengthening of competition, primarily with foreign manufacturers. Such a situation requires a rapid and scientifically based response to changes in market conditions from domestic agribusiness entities. That is why there is a need to create and implement management mechanisms that will make it possible to perceive these changes, recognize them and ensure the appropriate adaptation of the production and commercial activities of agribusiness entities to market conditions on the basis of management, marketing and logistics.

Modern marketing is significantly related to the production activities of agribusiness entities, aimed at producing products that have a demand or bringing the entire set of resources of an agribusiness to the requirements and opportunities of the agrarian market for profit [2, p. 43].

Formation and management of the agricultural marketing system is a complex process that requires appropriate material, financial and labor costs. Agricultural marketing is characterized by systematicity, so the exclusion of at least one element can lead to inefficiency and even unprofitability of this activity. The biggest mistake in managing the marketing activities of an agribusiness entity can be the removal of its individual components from the marketing complex.

Marketing activity related to agricultural production is carried out at all stages of product creation, from the process of providing the necessary resources, direct production, to the process of procurement, storage, processing, transportation,

wholesale and retail trade. But, first of all, marketing should be directed to the realization of the main goal – meeting the solvent consumer demand of the population in agricultural products [3, p. 303].

For an individual subject of agrarian business, the effectiveness of marketing activity is manifested in the increase in the volume of production of competitive products, preservation and improvement of quality, which contributes to the sale of goods at more favorable market prices, reducing the level of production and total cost. Farmers must clearly imagine the place of their own enterprise in the market and the prospects for the development of its production and marketing activities, i.e. develop a strategy, conduct production planning and create product programs that contribute to the satisfaction of consumer demand and obtaining profit, i.e. marketing management and the use of all available resources techniques for implementing these programs.

A dual and complementary approach is fundamental in marketing activity. On the one hand, there is a comprehensive and in-depth study of the market for agricultural products, consumer demand, the orientation of the production process to them, and the targeting of manufactured products. On the other hand, there is an active influence on the agro-food market and promotion of the formation of consumer demand [4, p. 142].

The market of agro-food products is characterized by certain features that originate from the features of the production of agricultural products in general. This is, first of all, the dependence of the supply of agricultural products on the seasonality of the production of agricultural crops, which creates restrictions on the ability of the farmer to control the quantity and quality of the final product.

Secondly, a significant volume of deliveries of poorly transportable and perishable types of agricultural products increases the need, on the one hand, for storage facilities with the appropriate temperature regime, on the other hand, for the shortest possible time for the sale of products. These measures are necessary to reduce the risk of heavy losses of the grown crop, and therefore to obtain stable profitability.

Thirdly, the concentration of consumption of agro-food products in cities, especially in large ones, makes it necessary to involve intermediaries engaged in wholesale and retail trade for implementation. The consequence of this is the loss of a

certain share of farmers' income due to the transfer of part of the value of the final product to intermediaries.

Therefore, in the temporal dimension, marketing activity is a continuously renewed process of performing the same operations, which are in a strict sequence, aimed primarily at the formation of the volume and assortment of products, which affects the process of planning, organization, coordination and production management in order to meet consumer demand.

The modern level of market relations dictates the need to rebuild the management system of agribusiness entities, brings new elements into management and thus ensures systematic work with the agro-food market.

It should be noted that the adaptation of the agribusiness subject to market conditions not only improves the efficiency of its activity, but also greatly affects the development of the country's agri-food market itself, and in general, the external environment of the agribusiness.

The position of the agribusiness subject in modern market conditions depends on many uncertainties of the changing external environment, with a lack of information about it. The result of this is the need for the development of the marketing information support system, the study of the external environment.

At domestic agricultural enterprises, in most cases, there is no comprehensive system of management of market activity, and marketing is implemented partially, mainly thanks to conducting research and sales activities, there is no use of methods for evaluating the effectiveness of marketing. This affects the overall efficiency of agricultural enterprises and the entire market as a whole.

The marketing activity management mechanism is a complete set of marketing tools aimed at increasing the effectiveness of the agricultural enterprise, its stability on the agricultural market, and maximum satisfaction of society's needs [5].

The methodological basis for evaluating the effectiveness of marketing activity is a systematic approach to the activities of agribusiness entities on the market, aimed at meeting the needs of consumers, while creating favorable conditions for ensuring the efficiency of all production and economic activities of an agro-enterprise [6, p. 44].

The main elements of the market: conjuncture, competition, demand, pricing mechanism need to be studied in detail before the agribusiness enters the market, control of its positions according to the main indicators. Such indicators include sales, supplies, price, and inventory. They make it possible to determine the type (model) of the market.

When studying the market mechanism and its dynamics, it is necessary to highlight demand as an element that determines the process of changing the market situation. It is the primary indicator that causes the process of changing other elements of the market (Tab. 1) [1, p. 264].

Table 1 Market indicators

Indicator													
Supplies		Sa	ıles		Reserves		S	Prices			N 1 .		
growth	stability	decline	growth	stability	decline	growth	stability	decline	growth	stability	decline	Market	
V				V	V	V			V			Stagnant	
V			V				V			V	V	Developing	
V	V		V	V			V			V		Stable	
		V			V			V	V			Deficient	

Source: formed according to data [1, p. 264]

The key factor affecting demand is the competitiveness of the product.

When forming marketing strategies aimed at improving product competitiveness, the creation of an optimal production program and provision of services should be considered [7, p. 351].

Based on the needs of the agro-food market, a preliminary determination of the structure of the production program of product release based on the criterion of maximum profit can be found using the objective function. The objective function is the profit received by the economic entity for a certain period.

The organization of marketing activities requires various cost elements from the agribusiness subject. It should be noted that these expenditure items must be covered by the growth of sales volumes and bring additional profit.

The organization of the work of the marketing department of the agribusiness entity plays a decisive role in achieving the goals of the marketing activity of the agroenterprise. At the same time, at the moment, there is no universal scheme for the implementation of marketing. Marketing services can be formed on different bases, as a rule, they are a commercial part of the enterprise's activities. At the same time, at enterprises that create specific products, these services can be an element of the technical sphere.

It should be noted that the formation of the marketing organizational structure of the agribusiness entity has a significant dependence on the size of the resources of the agribusiness, the specifics of its production and the selected sales channels, and on the existing management structure of the enterprise.

The importance of marketing services and the process of organizing their activities in agricultural enterprises are gaining more and more importance over the years [8, p. 143]. When forming the optimal structure of the marketing department, special attention should be paid to the size of the agribusiness entity and the breadth of its product range.

In market conditions, the lack of comprehensive approaches to the management of agribusiness activities determines the goal, the achievement of which occurs due to the solution of a set of tasks and the formation of mechanisms for improving the efficiency of agribusiness management based on marketing methods.

The study of the activity of marketing services of agribusiness subjects of the Vinnytsia region provides an opportunity to assert that, despite the diversity of enterprises and their specialization, it is necessary to form a unified approach to the organization of the activities of marketing services, which will help these services in creating typical methodical approaches to the use of marketing functions.

Analysis of the functioning of the marketing services of agribusiness entities showed that the problems of assessing the economic effectiveness of marketing activities are almost unsolved. An opinion was formed that the effectiveness of rketing measures is evaluated by determining the increase in sales volumes, besides, this is not a necessary condition for the effectiveness of these measures.

As a result of research conducted on the marketing activity of the aggregate of agribusiness subjects of the Vinnytsia region, it was determined that the main reasons for the low efficiency of the marketing departments are caused by the problems of the lack of clearly formed marketing functions, the low qualification of marketers, the weak development of the marketing information subsystem, and the lack of understanding by farmers of the goals and tasks of marketing.

As criteria that reveal the potential of the marketing service of an agribusiness entity, indicators that characterize the efficiency of managerial work, the level of remuneration, personnel, the effectiveness of the information system, etc. can be singled out.

Deficiencies in the organization of activities of marketing services are to some extent caused by the low qualification of managers in the field of agricultural marketing and the unstable economic condition inherent in many enterprises of the agrarian sphere of the Odesa region. At the same time, the research provides an opportunity to state that in recent years, the marketing activity of agribusiness entities has a tendency to improve.

In the modern period, in many countries of the world, and in particular in Ukraine, along with the traditional systems of sales of agro-food products, new organizational and legal forms – vertical and horizontal marketing systems – are becoming widespread [9].

For farmers, the key point in the creation of horizontal agricultural marketing systems is that participation in them gives them the opportunity, along with the recovery of production, to navigate the production processes and have a guaranteed sale of their own products without the use of speculative intermediaries.

The formation of horizontal marketing systems in the agro-food market will provide an opportunity to maintain a favorable competitive environment, exclude unorganized intermediaries from the market, and ensure rational use of the production capacities of agribusiness entities and processing enterprises. The consolidation of production will contribute to the attraction of new investors, the growth of labor productivity and the reduction of costs, which, in combination with compliance with

the mutual benefit of the partnership, will provide an opportunity to minimize the final price of products.

The agricultural marketing system has an impact on all stages of the movement of goods, from the moment of its production to the moment of its consumption. The priority is the need to integrate producers of agricultural products and processing enterprises due to direct partnership (without the intervention of intermediaries), which, first of all, allows to weaken the additional intervention of the state in the market of agricultural products.

In the conditions of the functioning of market relations, horizontal marketing organizations of the agro-food sector should be guided by both internal resources and market needs in matters of determining production volumes. Therefore, in our opinion, they need a new production management system that orients production to the interests of the consumer – marketing, which assumes the availability of knowledge about the markets of agricultural products, drawing up sales forecasts, and therefore production volumes, competent formation of the selling price of a specific type of product on a specific market, creation of a system of distribution of manufactured products and their promotion on the market.

Therefore, agrarian organizations need to choose such an organizational structure and (or) unit that will take on the solution of these issues, determine its status and conditions of interaction with other units of the organization.

Marketing services can function in the organizational and economic mechanism of an agrarian organization both as an independent production unit and as a component of each of the production units of an integrated marketing system, obeying a single leadership. If the marketing service is formed as an independent unit, then the organization of the work of its employees will be determined on the basis of one of the four principles or a combination of their elements [1, p. 253]:

- by sales territories (geographical);
- by types of products sold (commodity), when sales are handled by the heads of branches of the agricultural organization

- chief agronomist, chief zootechnician, chief engineer, etc., and the head of the service is the head of the organization;
- by markets and groups of consumers (wholesalers, own trade network, processors, etc.) (market);
- according to the functions performed by the employees of the service (functional).

To decide what the marketing department in a horizontally integrated organization will be, you first need:

- adopt a certain concept of organization development;
- to determine the functions of the units and services included in it, including the marketing service, which will make it possible to implement the concept of agricultural marketing and eliminate the duplication of functions;
- choose a system for collecting marketing information about the state of the market, processing it to formulate goals (create your own structure or use the services of third-party organizations);
- to create a system of bringing the organization's plans to the responsible persons, providing these people with resources and powers.

The effect of applying certain elements of marketing is obvious: studying the market and drawing up sales forecasts, substantiating budgets and profits, determining financial costs will allow specialists to determine the prospects for the development of an agrarian organization: the structure and volume of production, the possibility of changing product ranges and terms of sale of products will allow improving the structure of production and management system and ultimately increase the profitability of the organization.

Constant control over the ratio of the level of costs and the volume of production of the enterprise and each individual type of product helps to find ways to reduce the cost price and increase profitability. Control over the quality of products needed by the consumer, creation of the external «image» of the product (processed products intended for the final consumer) allows to increase the sales volumes, and, therefore, the capital turnover.

Competent selection of the selling price of a specific type of product, based on knowledge of the market, allows to increase its profitability and, therefore, the profitability of the agrarian organization.

The profitability of a horizontally integrated organization in the current situation is based, first of all, on ensuring highly profitable sales of products due to the competent selection of channels for its implementation. The criteria for the effectiveness of sales channels for the organization are the speed of movement of goods, the level of circulation costs, and the volume of sales [4, p. 143]. The efficiency of the chosen channel is higher, the shorter the time spent on bringing the product to the consumer; the lower the costs for these purposes, the greater the volume of sales and the resulting net profit. Therefore, the fewer intermediaries the organization has, the more it has to bear costs, because it is forced to create the necessary product stocks, ensure its storage, processing, sale or create its own trade network.

In modern conditions of globalization, when the basis of production stability is the constant satisfaction of market needs, the agricultural organization increasingly needs a management system that ensures the constant involvement of the primary producer in market relations. Therefore, it should focus on marketing, as an enterprise management system that orients its production to the needs of the market.

The problem of the sale of agrarian products forces the development of complex inter-branch and intra-branch production connections, ensures the need to improve the economic mechanisms of managing production, processing and sale of products.

The marketing service (department) should become the key regulator of market relations in the structure of the proposed marketing system, which determines the degree of adaptation of the agrarian industry to modern business conditions.

The marketing service of the integrated system in this aspect receives a set of management functions and solves a number of issues [10, p. 49]:

- creation of key areas of production improvement based on long-term, mediumterm and special marketing and production programs; joining the implementation project of credit institutions, subjects of various forms of ownership, etc.;
  - determination and formation of consumer needs in agricultural products and

products of their processing; active advertising and creation of a positive image of agribusiness entities;

- study of trends in demand changes and provision of information on this by producers of agricultural products and processing enterprises;
- study of the expediency of using certain sales channels, identification of market quotas, certificates, licenses; control over the creation and movement of commodity stocks.

In general, the process of agrimarketing management of agribusiness entities is formed on the basis of four components: analysis of market opportunities, identification of target markets, selection of marketing measures and their implementation.

The essence of agricultural marketing management is the development of the organizational structure of the marketing service; formation and implementation of marketing programs; marketing situational analysis; strategic control of marketing activities; creation of a system for collecting and processing marketing information, which represents an integrated information process; planning the activities of agricultural enterprises in accordance with market development [11, p. 35].

Marketing strategy planning takes its final form in the form of a marketing program. Its structure in relation to agricultural production contains the following main sections: goals and objectives of the marketing program; regional and interregional market conditions; optimal business structure of the industry; effective product policy; methodology and method of product price formation; adaptive sales policy; program budget; control over the implementation of the marketing program.

Under the influence of specific external conditions (market conditions, etc.), the marketing program can be aimed at improving the final results of the production and sales activities of the agribusiness subject.

As part of the study of the sales promotion system, the effectiveness of contests, tenders, contacts with buyers, discounts and other means and techniques is studied. At the same time, the most difficult element of the analysis and development forecast is the determination of market demand for agricultural products and products of their

processing. The complexity of this process is due to the fact that, along with the assessment of demand for them, it is also necessary to determine their components (product nomenclature), segments (categories of consumers), as well as obstacles to the development of demand of an institutional and social nature and their dynamism.

The structure of agricultural marketing is a specific combination of its basic elements (agricultural machinery, goods, price, implementation, advertising) to achieve the set goals. Positions regarding appearance, quality level, and possible volumes of sale are defined in relation to the goods. Measures related to the sale of products include the selection of sales channels, the need to involve intermediaries, etc. Measures related to price formation include the study of the general level of prices on the agricultural market, the range of prices, the analysis of the relationship between the price and the quality of products, the possible conditions for the sale of products (forms of payment and terms of payment).

The basic element of marketing activity in the field of agri-food products is the study of the conjuncture of regional, interregional and international agricultural markets. We suggest that the selection of sales channels, forms and methods of implementation be carried out sequentially in four stages:

The first stage includes a preliminary investigation of the state of regional, interregional and international agricultural markets with the aim of forming goals and establishing main tasks. The second stage involves determining basic indicators, collecting and processing actual data, studying the dynamics of the market situation.

At the third stage, an assessment of the actual state of the agricultural market is carried out, which involves the identification of deterministic trends, the determination of cyclical fluctuations in demand and supply, and the identification of random factors.

The fourth stage includes forecasting the state of the agricultural market, at the same time substantiation of the offer to enter a certain market segment is carried out, recommendations are developed for adapting the production structure, comparison of the capabilities of producers of agro-food products with the existing market demand.

The pricing process should be aimed at the stabilization and growth of agricultural production at rates that are faster than similar processes in industry in order

to ensure the parity of trade relations. At the same time, it is necessary to take into account the need to implement general methodological principles of price formation: covering production costs and obtaining profit for extended reproduction; promoting the improvement of the quality of agricultural products and taking into account supply and demand factors [12, c. 170].

Representation of marketing as one of the interdependent components of the business processes of an agribusiness with the application of a process approach and the use of management techniques with a balanced system of performance indicators of business process tasks makes it possible to carry out agro-marketing activities more effectively.

Comprehensive effective management of various areas of activity is one of the main problems facing the management of powerful agricultural and processing enterprises today. One of the most relevant approaches aimed at overcoming this problem is the process approach to management. It provides for the division of agribusiness activities into processes and their management in order to achieve maximum efficiency of the agribusiness entity. When considering the process approach, the concept of «function» is usually involved, which makes it possible to consider this approach as process-functional [13, p. 74]. At the same time, due to the fact that not all functions form an output (product), in some situations it is impossible to give an assessment of the effectiveness of their implementation, in such cases, it can be argued that there are no control levers for this business process. The presented approach to the management of marketing activities of an agribusiness subject is based on the process-task technology of organization management, in which the unit of measurement of management is the «task».

Based on the principles of this approach, the business process «Management of agricultural marketing» is interpreted as a segment of activity that ensures the adaptation of an agribusiness subject to market conditions, which corresponds to the principles of separating business processes, and includes the segmentation and analysis of the agro-food market, the promotion of agrarian products [14, p. 74].

According to the principle of completeness, there is a complete set of business

processes, an integral part of which is marketing; the principle of determinism – the boundaries and content of marketing activities are clearly defined; the principle of normalization – marketing tasks exist separately from the tasks of other business processes, but are interdependent with them; the principle of connectedness – the results of solving marketing tasks are involved in solving the tasks of other business processes; the principle of resource intensity – solving marketing tasks requires material, financial, labor and other resources; the principle of autonomy – there are certain limits to the influence of the «Agrarian Marketing Management» business process; the principle of productivity – the results of solving the tasks of marketing activity are important for the enterprise and can have a dimension; the principle of dynamism is the time dependence of solving the tasks of the business process «Agrarian Marketing Management» [15, p. 14].

Many marketing tasks are solved at every enterprise, so they can be combined into sub-processes. A business task is a component of a business process, which is a set of functions, due to the implementation of which input resources are transformed into output products in accordance with a solution algorithm using mechanisms.

Tasks of the «Management of agricultural marketing» business process:

- I. Calculation of performance indicators of the «Agrarian Marketing Management» business process:
  - 1. Segmentation of the agricultural market:
  - selection of agricultural market segments;
  - selection of target segments of the agricultural market;
  - 2. Analysis of agricultural market segments:
  - analysis and forecasting of target segments of the agricultural market;
- 3. Promotion of agri-food products and services by segments of the agricultural market:
  - A) Advertising and public relations:
  - planning of advertising activities of agribusiness and public relations;
  - placing an order for an advertising or public relations campaign;
  - implementation of advertising and public relations campaigns;

- accounting for the implementation of the advertising campaign plan and the public relations campaign;
  - analysis of the effectiveness of advertising and public relations;

#### B) Dealer network:

- planning the development of the dealer network;
- organization of an optimal dealer network;
- accounting of the work of the dealer network;
- analysis of the effectiveness of the dealer network;

#### C) Adaptive methods:

- planning adaptive promotion methods;
- placing an order for the development of adaptive promotion methods;
- development of adaptive promotion methods;
- implementation of adaptive promotion methods;
- accounting for the implementation of adaptive promotion methods;
- analysis of the effectiveness of the use of adaptive promotion methods;

#### D) Interactive methods:

- planning the development of interactive technologies;
- forming and placing an order for the development of interactive technologies;
- design and development of interactive technologies;
- introduction of interactive technologies;
- accounting for the use of interactive technologies;
- analysis of the effectiveness of interactive technologies;
  - 4. Development of goods by segments of the agricultural market:
  - analysis of consumer properties of competitors' goods;
  - forecasting of design parameters of agricultural products;
  - primary design of agricultural products;
- cost analysis and economic substantiation of the production of project products in the agrarian sphere;
- drawing up a business plan for the production and sale of project products in the agrarian sphere.

According to this approach, each task should belong to one of the types (Tab. 2): analytical; technological; organizational; accounting This distribution is due to the difference in the content and methods used to solve the task of each type.

Table 2

Tasks of the business process «Management of agricultural marketing» by classes

Name of the task	Task class
Calculation of business process efficiency indicators	analytical
Allocation of market segments of agricultural products	organizational, technological
Selection of target segments of the agricultural products market	analytical
Analysis and forecasting of target segments of the agricultural products market	analytical e
Planning of advertising activities of agricultural enterprises and relations with the public	analytical
Placing an order for an advertising or public relations campaign	organizational
Implementation of advertising campaign and public relations company	organizational, technological
Accounting for the implementation of the advertising campaign plan and the company in connection with the public	accounting
Analysis of the effectiveness of advertising and public relations	analytical
Planning the development of the dealer network	analytical
Organization of the optimal dealer network	organizational
Accounting for the work of the dealer network	accounting
Analysis of the effectiveness of the dealer network	analytical
Planning adaptive promotion methods	analytical
Placing an order for the development of adaptive promotion methods	organizational
Development of adaptive promotion methods	technological
Implementation of adaptive promotion methods	technological
Accounting for the implementation of adaptive promotion methods	accounting
Analysis of the effectiveness of the use of adaptive methods of promotion	analytical
Planning the development of interactive technologies	analytical
Forming and placing an order for the development of interactive technologies	organizational
Design and development of interactive technologies	technological
Implementation of interactive technologies	technological
Accounting for the use of interactive technologies	accounting
Analysis of the effectiveness of interactive technologies	analytical
Analysis of consumer properties of competitors' products	analytical
Forecasting design parameters of agricultural products	analytical
Primary design of agricultural products	technological

Source: formed according to data [14, p. 74]

Each assigned task requires its own individual executor, acting according to the principle of normalization of the organizational structure of the agribusiness entity. That is, for the effective implementation of business tasks of agricultural marketing,

the organizational structure must be normalized, this means the allocation of one executor for each task.

Management of the marketing activity of an agribusiness entity is the management of the implementation of the tasks of the business process «Management of agricultural marketing» at various levels of operational, medium-term and strategic management. Operational management functions in the form of cycles of execution of business tasks in time and consists in the creation of operational requests and orders in case of correction of the work plan.

The beginning of the cycle is the performance of analytical tasks, as a result of which a plan is formed. Organizational tasks accompany the documentation that regulates the implementation of technological tasks. The set plans implement technological tasks and transform the obtained results into accounting tasks. The cycle of performing business process tasks includes: analytical tasks  $\rightarrow$  organizational tasks  $\rightarrow$  technological tasks  $\rightarrow$  accounting operations [14, p. 77].

The concept of medium-term management is formed in the dynamics of solving certain cycles of tasks. It involves providing management influence on the process of implementation of agricultural marketing activity or an agricultural marketing project during several cycles of implementation of tasks.

Strategic management is implemented on the basis of medium-term management cycles based on strategic target indicators. Consequently, a hierarchy of indicators and managerial influence is formed. Evaluating the results of agricultural marketing activities is a difficult task, due to the fact that it is not always possible to quantitatively reflect the effect of marketing activities.

Effectiveness and efficiency are basic indicators when evaluating the marketing activity of agribusiness entities. These concepts are often used as synonyms, but they must be separated [16, p. 17].

Within the framework of the process approach, it is advisable to consider the effectiveness and efficiency of agricultural marketing without separating from the performed marketing functions, which must be classified by groups [12, p. 19]:

- analytical: conducting marketing research, analyzing the macro-environment

and micro-environment of the economic entity, studying the product, segmenting the agricultural market, positioning goods and services on the agricultural market;

- production: organization and launch of new product production, product life cycle management, quality management. competitiveness management;
- sales: product policy, pricing, communication policy, organization of sales of goods, organization of service;
- management and control function: strategic and operational planning, formation of a marketing program, risk management, control of marketing activities, organization of communications, information support.

All functions are aimed at increasing the effectiveness of marketing, which directly determines the implementation of marketing goals, which in turn are the basis of the strategic goals of the agribusiness entity as a whole, as a result, the efficiency of the entire organization increases.

Thus, there is a direct connection between the performance of marketing functions, the effectiveness of agricultural marketing and the strategic goals of the entire organization. Marketing goals must correspond to the strategic goals of the agrarian enterprise, which are implemented through the implementation of a complex of marketing functions aimed at increasing the effectiveness and efficiency of the functioning of the agribusiness entity as a whole.

When implementing the goals and objectives of enterprises and organizations in the classic version, three business orientations are distinguished: «Production» (pushing the product to the market), «Marketing» (attracting the product to the market) and «Investment» (attracting investment) [17, p. 20]. The goals of marketing activity must necessarily be consistent with the general goals of the business entity, leading to the achievement of the effect, based on the implementation of marketing functions.

Let's examine the basic goals of the productive activity of the business entity depending on the chosen business orientation:

- 1) for the business orientation «Production»: increase in profit; increase in sales volume; increase in sales efficiency; increasing the profitability of sales activities;
  - 2) mproving promotion efficiency; market share growth; growth in the number

of indicators characterizing agreements; attraction of a new client base;

- 2) for the «Marketing» business orientation: increase in sales efficiency and profitability; achieving and maintaining the company's competitive position on the market; increasing consumer loyalty; increase in the value of an intangible asset of the enterprise;
- 3) for the «Investment» business orientation: increasing the value of the brand; increasing financial stability; growth of business value; ensuring high indicators of investment attractiveness; staff qualification growth.

For each business orientation, a system of balanced indicators is created with defined perspectives grouped based on the goals of the business orientation. Prospects for business orientation «Production» are: product; relations with consumers; sales activity; promotion [18, c. 89].

For the «Marketing» business orientation, the perspectives will be competitiveness, activity efficiency, capitalization indicators, intangible assets, and for «Investment», the main perspectives are investment attractiveness, business value, financial condition, personnel.

In order to determine the factors that reveal the need to create a methodology for managing the effectiveness of marketing, a study was conducted of 55 agricultural enterprises of the Vinnytsia region, which confirmed the assumption that the majority of enterprises (85%) belong to the business orientation «Production», 10% – to «Marketing», 5 % – to «Investment».

The distribution of indicators by level of importance (sales volume, dynamics of changes in the agricultural market share, profitability of sales, intangible assets, capitalization indicators, indicators of the efficiency of capital use, indicators of financial condition, business value and investment attractiveness) made it possible to establish that the first cluster includes sub-agribusiness entities with the business orientation «Production», to the second – «Marketing», to the third – «Investment».

After analyzing the obtained results in combination with the analysis of external open sources of information, it is possible to single out the factors that determine the need to develop a methodology for managing the effectiveness of agricultural

#### marketing activities:

- 1) underfunding of agricultural marketing;
- 2) competition from foreign campaigns, the problem of import substitution;
- 3) low level of competitiveness of domestic agricultural enterprises;
- 4) weak consideration of consumer interests, lack of a client-oriented agribusiness model;
  - 5) lack of employee motivation system;
  - 6) lack of self-determination of agribusiness;
  - 7) lack of feedback and support from the manager.

Competition, the growing dynamism and complexity of the development of the agricultural products market indicate the need for the formation of a methodology for managing the effectiveness of agricultural marketing activities.

The method of managing the effectiveness of agricultural marketing activity based on a system of balanced indicators is presented, which makes it possible to implement actions in stages, which are necessary for evaluating and increasing the effectiveness of agricultural marketing:

Stage 1. Determination of the goals of managing the effectiveness of agricultural marketing in the activity of the agribusiness subject. At the first stage, bottlenecks in management are identified, strategic goals are developed that correlate with the marketing concept of agribusiness. Such goals are realized through: improvement of the marketing system of the agribusiness entity; increasing the level of marketing investments; objective assessment of agricultural marketing activity; growth of staff involvement and motivation.

Stage 2. Analysis of the enterprise's marketing activity. A systematic approach is inherent in marketing, which consists in the fact that when analyzing the activities of agricultural enterprises, the internal and external environment should be considered in a close combination and relationship [6, p. 44].

Stage 3. Determination of the business orientation of the enterprise. At this stage, the business orientation of the agricultural enterprise is chosen («Production», «Marketing», «Investment»). The basic indicators for the «Production» business

orientation are: sales volume; amount of profit; profitability of sales; implementation efficiency; promotion efficiency; indicators characterizing concluded agreements; dynamics of change in market share, etc. For «Marketing» business orientation — sales efficiency and profitability; consumer loyalty; capitalization indicators; estimation of the value of an intangible asset of the enterprise, etc. For the business orientation «Investment» — the competitive position of the business entity on the market; dynamic indicators of changes in business value, etc. In order to study business orientation based on the presented indicators, it is necessary to apply cluster analysis.

Stage 4. Determination of strategic goals of the enterprise. The strategic goals of agricultural enterprises are characterized by: scope of activity; directions of prospective development; access to new sales markets; quality of manufactured products or services provided; consumer satisfaction; improving the level of service, etc.

Stage 5. Formation of the customer database. Based on the strategic goal of the agribusiness entity, a database of indicators is created to which the organization's activities are primarily directed. Among such indicators, the following can be distinguished: volume of profit; sales efficiency; sales volume; profitability of sales; promotion efficiency; consumer loyalty; dynamics of changes in market share; change in the degree of market risk; the value of an intangible asset; indicators of brand value; capitalization indicators; indicators of financial condition and changes in business value; indicators of investment attractiveness; indicators of the personnel level of the economic entity, etc. [19, 20, p. 83].

Stage 6. Development of a balanced system of marketing information indicators. Implementation of the methodology requires an algorithm for the development of a balanced system of indicators of marketing information and the identification of the basic stages of development and implementation of a system of balanced indicators of marketing information.

Stage 7. Calculation of the integral indicator of marketing performance management. On the basis of a balanced system of indicators of marketing activity, it is necessary to calculate an integral indicator of marketing effectiveness management, to identify the level of use of each marketing tool (prospects) and to determine the final

indicator showing the degree of effectiveness of marketing activity and the main components that require increased attention to ensure the growth of the marketing effectiveness of an agricultural enterprise [21, p. 176].

Stage 8. Evaluation of the effectiveness of marketing activities. Harrington's scale [22, p. 68], which makes it possible to determine the level of marketing effectiveness.

Stage 9. Recommendations for increasing the effectiveness of marketing activities. At the final stage, proposals are made to increase the effectiveness of marketing activities.

In order to improve the activities of enterprises in the market of agricultural products, it is advisable to distinguish between two types of marketing strategy: adaptive and innovative. Today, priority should be given to innovative strategy.

Innovative marketing strategy is an element of the company's activity strategy, which is a set of strategic decisions aimed at continuous improvement and introduction of new types of products, as well as forms and methods of their promotion and sales, which change the rules of the game on the market and generate significant value for the company.

Diversification is a way to implement an innovative marketing strategy. The relevance of diversification is due to the fact that this strategy provides the producer of agricultural products with competitive advantages in the competition with domestic and foreign producers of similar products, and also allows the enterprise to integrate into the market space. This is due to the fact that, in the conditions of competition, the company seeks to establish its position on the market and tries to respond in time to changes in the situation.

A balanced system of indicators considers the marketing strategy of an agrarian organization in the form of goals grouped by five equivalent components: financial; client; component of internal business processes; training and development component; decomposition model of the intra-economic system. With the use of a balanced system of indicators, a strategic map of the marketing activity of the agricultural enterprise was formed.

Conclusions. Management of the effectiveness of marketing activity is an integral component of the successful development of a modern agricultural enterprise, which requires constant adaptation to the changing conditions of the competitive market. Despite the war and large-scale destruction, agriculture is unlikely to lose its status as one of the leading branches of the Ukrainian economy. However, today's conditions require agrarian enterprises to direct their development to the future with an orientation towards meeting the needs of consumers by more effective means than competitors. It is due to successful marketing that the necessary conditions for the sustainable development of an enterprise in the agrarian sector are created.

The proposed system of indicators for evaluating the effectiveness of marketing activity, which takes into account the business orientation of the agricultural enterprise, according to which the complex of marketing functions, oriented towards the achievement of strategic goals, taking into account the available resources, is optimized. The latter makes it possible to expand the boundaries of the system of balanced indicators: in addition to the existing perspectives (finances, customer relations, business processes, training and growth), a set of perspectives dynamically formed on the basis of an object-oriented data model is used depending on the business orientation of the enterprise.

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ecologically clean agricultural products.

2. Development of ecological marketing in the sphere of production of

biofertilizers

Agriculture in modern conditions has demonstrated the dynamics of accelerated development in recent years. Such industries as animal husbandry and poultry are developing especially intensively. The intensification of these directions also leads to an increase in the volume of organic waste, which often accumulates near livestock and poultry farms and creates an ecological threat to the natural ecosystem. At the same time, organic waste is a valuable raw material for the production of organic fertilizers, which is of great importance in the biologization of agriculture and the production of

The introduction of high-quality organic fertilizers during the cultivation of agricultural crops in optimal doses shows high agronomic efficiency. Not only the yield of crops increases, but also their quality indicators improve.

The problematic issue in this study is the high cost of organic fertilizers, for the production of which sources of traditional electron carriers are used. These alternatives must be inexpensive, accessible, reproducible and effective in order to compete with traditional inorganic fertilizers and at the same time reduce any potential negative impact on the environment. We aim to evaluate the effectiveness of digestate application in an agricultural system over a period of time. Digestate based on livestock waste, namely pig manure digestate, chicken manure digestate and cow manure digestate, was used in the study.

Theoretical, methodological and practical aspects of the production and use of biogas plants in the cultivation of agricultural crops were studied by such domestic scientists as Kaletnik G.M., Honcharuk I.V., Lutkovska S.M., Logosha R.V. However, the analysis of scientific literature shows that today there are no unified statements regarding the use of these processes. However, the issue is relevant and needs further development.

Object of research: agricultural enterprises of Vinnytsia region.

The subject of the research is the waste of biogas plants in the form of digestate fertilizer and its effect on the fertility of agricultural lands.

The purpose of the work is to determine the theoretical and practical principles of production of organic fertilizers in the form of digestate from biogas plants.

In accordance with the set goal, the following tasks were solved:

- to determine the theoretical basis of the production and use of biogas plants for extracting organic fertilizers from them;
  - research and analyze the raw material base for the production of digestate;
  - determine the role of digestate in increasing soil fertility.

The theoretical and methodological basis of the research is generally accepted methods: observation, comparison, analysis and synthesis, modeling of economic phenomena, fundamental works of domestic and foreign scientists in the field.

The practical significance and scientific novelty of the work lies in the fact that the theoretical conclusions and developments made in it can be used in the process of development and improvement of the cultivation of agricultural crops at agricultural enterprises of the Vinnytsia region.

The agricultural market is a complex system of relations aimed at ensuring the combination of resources of the agrarian sphere, labor, and infrastructure in order to functionally support the process of production and sale of agricultural products.

Marketing research is one of the main functions of marketing, which connects marketers with markets, competitors, consumers and a set of elements of the external marketing environment, serves as systematization and analysis of data from various levels of marketing activity. Any enterprise operating on the market operates in a marketing environment, namely in a combination of forces and factors that have an impact on its management. Monitoring of the marketing micro-environment and adaptation of the macro-environment to it require a continuous study of the nature and intensity of this influence. Therefore, marketing research provides decision-making in all areas of marketing activity. With the help of marketing research, the level of uncertainty and risk regarding any product in a specific market is reduced.

The greatest influence on the level of competition in the industry is exerted by the

number and capacity of enterprises producing agricultural products. Modern agro-food markets are characterized by a situation where producers offer conventionally homogeneous products intended for a wide range of potential consumers, and therefore competition between these producers is fierce.

To increase the efficiency of the innovative activity of agricultural enterprises with the help of marketing tools, it is advisable to implement a set of measures, which are conditionally systematized into 8 groups:

- prompt response: daily statuses and monitoring of changes; regular anti-crisis
   programs; short-term planning; conducting marketing research of the agricultural
   market and consumers;
- optimization of budgets: savings and budget reduction; suspension and cancellation of innovative projects; optimization of production processes, reduction of production and logistics costs;
- remote mode and taking care of the team: remote work, changing the work schedule; strengthening the protection of employees who cannot work remotely; informing employees, strengthening employee safety; online trainings and webinars;
- assistance to agrarian business: growth of corporate social responsibility,
   implementation of social initiatives, charity; support of partners, compatible projects;
- adjustment of the marketing strategy: transition to situational marketing;
   formation of a new strategy for brands; adaptation of communication strategy; change
   of the plan of innovative activity; revision of the pricing policy;
- change of the communication mix: strengthening of digital communication
   channels; increase in the number of SMM activities;
  - transformation of the portfolio of innovative products: creation of new products.

In this regard, the management of the competitive environment in the agrarian sphere becomes important to ensure the process of extended reproduction and development of enterprises in a harmonious combination with the social needs of society.

Increasing the efficiency of the competitive environment is connected with the improvement of the functions of the competitive policy in the agrarian sphere. From

today's point of view, demonopolization of the agrarian complex of Ukraine is considered as a kind of organizational anti-innovation. Most of the developed countries of the world see the development of the economy in the creation of territorial production systems of small and medium-sized enterprises, i.e. clusters.

The marketing strategy of the industry should also be based on the study of the competitive situation in one or another market. To determine the intensity of competition, a list of indicators is used - four- and eight-part indicators of market concentration, Gini (G), Hirschman-Herfindahl (HHI) and Rosenbluth (I) indices.

One of the central links of export agricultural marketing is the system of information and analytical support for the activities of marketing services at enterprises, which covers sorting and certification of products, the field of agricultural products procurement, international advertising activities, transportation of products, standards and technical requirements. When developing a foreign economic strategy, information is considered as the most important resource of the enterprise, and information technologies as means by which strategic goals are realized.

For agro-industrial complex enterprises, it is not important to separate and isolate information flows of foreign economic activity into a separate system or software product, but their integration into the general information system of the enterprise and effective interaction with this system.

Despite the positive dynamics of foreign trade of agribusiness enterprises in 2021, the main areas of ensuring its further development remain:

- improvement of the mechanisms of customs procedures and taxation when carrying out export-import operations, as well as transit transportation through the territory of Ukraine;
- dissemination of information regarding the holding of specialized international exhibition events among enterprises engaged in foreign economic activity.

The adjustment of the functioning mechanism of marketing information systems should be carried out through a complex of state institutions - at the Ministry of Agrarian Policy and Agro-Food through the national department, in regional and district administrations of agriculture thanks to regional offices.

The domestic system of agro-industrial export marketing should cover all enterprises and organizations, that is, the subjects of marketing activity should be producers of agricultural products, procurement, transport, processing, intermediary, service and trade enterprises.

At large agro-industrial complex enterprises, it is expedient to create special management structures - export marketing services. Smaller enterprises, for example, peasant farms, including farm-type ones, intermediary and service firms can combine their financial resources and carry out relevant activities through industry marketing centers or use the services of consultants and firms that specialize in international marketing activities on a contract basis, contractual principles.

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Recently, the demand for agricultural systems has increased significantly, which is connected with the needs of a constantly growing population against the background of limited land resources. These demands precede, but are not limited to, these three challenges – food security, income for farmers and ensuring a safer environment. To meet these requirements, agricultural practices such as organic farming, agroecological practices, and green practices are used to meet and exceed these goals in the short and long term. One of the researched and encouraged methods of agricultural management is the application of digestates to agricultural soils [23].

About 180 million tons of anaerobic digestate are produced annually in the EU, most of which is used as organic fertilizer. Treated anaerobic wastes are products from

various sources of organic raw materials, which include sewage treatment, plant sludge (primary and secondary sludge), agro-industrial complex waste (part of solid household waste, including fruit and vegetable by-products, canteen waste, kitchen waste), green waste (waste from mowing grass, leaves), animal husbandry waste (pig, cow manure) and food waste (animal fats, used cooking oils, waste from restaurant degreasing tanks) [25].

Digestate is one of the products formed in biogas systems and is rich in nutrients. Digestate has the ability to compete favorably with inorganic fertilizers to increase crop productivity, yield, and improve soil health [23, 24]. One of the advantages of using digestate is that it has a higher nutrient content than any other raw material. Although the anaerobic digestion process releases a significant amount of nitrogen (N) in ammonium form from the resulting digestate, while carbon (C) is also removed in the form of methane and carbon dioxide. However, much of the nutrients such as N, phosphorus (P) and potassium (K) are retained. The content of mineral substances and the characteristics of the digestate mostly depend on the characteristics of the substrate and the method of fermentation. These determined characteristics, such as organic matter content, NH4, C/N ratio and nitrogen content, present in different substrates or feedstocks forming the digestate, will show differences in the efficiency and productivity of plants and soils, making it the main source for this study.

There are usually three types of digestate:

- whole: similar in appearance to livestock manure, with usually less than 5% dry matter.
- solution: this is a complete digestate from which most or all of the solid matter has been separated.
- fiber: similar to compost, it is a solid material separated from the whole digestate [26].

Studies have shown that digestate obtained from a biogas plant can significantly improve the yield of agricultural crops in comparison with manure - by 10-30%. The tests showed that after the introduction of digestate from the biogas plant, the production of potatoes increased by 30%, the production of perennial grasses – by

three times, cabbage and tomato seedlings - by 12-15%, and the total biomass of plants increased by 30-50%.

Digestate has several advantages over traditional chemical fertilizers. First, digestate contains a number of essential plant nutrients, including nitrogen, phosphorus and potassium, as well as trace elements such as copper, zinc and boron. These nutrients are slowly released over a long period of time, providing a constant source of nutrition for crops. Second, digestate is a renewable resource that can help reduce reliance on non-renewable fertilizers that are often derived from fossil fuels. In addition, digestate can help improve soil structure and fertility, stimulate plant growth and yield, and reduce greenhouse gas emissions [27].

Therefore, the use of digestate has several advantages for agriculture, such as improving soil quality and yield, reducing waste, and improving the environmental sustainability of the farm.

An additional advantage of using digestate is its relative availability and costeffectiveness. Compared to commercial fertilizers, which are often quite expensive, digestate can be produced on site using organic waste, which reduces the cost of its purchase and transportation.

In addition, the use of digestate can be beneficial for agricultural enterprises that raise animals. Organic waste from animals can be processed into digestate, which can be used as a fertilizer for growing plants. This helps to reduce waste and increase the efficiency of resource use.

Annually, in order to ensure intensive agricultural production and full reproduction of humus reserves in Ukraine, it is necessary to apply about 350 million tons of organic fertilizers. Previously, this balance was ensured mainly thanks to domestic animal husbandry. However, over the past 30 years, the number of cattle in Ukraine has decreased by more than 4.5 times. Under today's conditions, there are more than 10 times less cattle per hectare of arable land in Ukraine than in the countries of Western Europe. Recently, on average, 20 times less organic fertilizers are applied than is necessary to achieve high yields of agricultural and vegetable crops.

The microbiological composition of litter-free pig manure used to obtain

bioorganic fertilizer "Effluent" based on digestate [28] is given in table. 1.

Table 1

Quantitative composition of microorganisms in samples of liquid pig manure

(as of February 25, 2022)

	A type of pig manure			incl	uding		Mushrooms-		Mushrooms-		
			pathogenic		patho	pathogenic ar		antagonists		antagonists	
			spec	eies	spe	cies	Tox	in-	To	oxin-	
		In total,	saprotr	ophic	saprot	trophic	produ	_	_	ducing	
2		thousan	spec	eies	spe	cies	speci		species	s of fungi	
		d/year					fur	ngi			
			thous		thous		thousa		thous		
			and/y	%	and/y	%	nd/ye	%	and/y	%	
			ear		ear		ar		ear		
1	Unfermented	118,8	79,2	66,7	39,6	33,3	11,3	9,5	101,8	85,7	
2	Reborn	193,8	12,6	6,4	181,2	93,6	6,2	3,2	31,2	16,1	

Source: formed on the basis of research [29, c.5].

Organic fertilizers of various origins, which contain different amounts of nutrients, are used in agricultural enterprises of the Tyvriv district of the Vinnytsia region. For our research, we took organic fertilizer based on pig manure, which is produced at the Subekon LLC pig complex, where more than 12,000 pigs are kept for fattening, as well as organic fertilizer, which is made from organic residues from the cultivation of corn, carrots and table beets. in the village of Sutysky, Tyvriv district.

The passage of pig manure through a biogas plant leads to a decrease in the number of pathogenic microorganisms and an increase in the number of saprophytic organisms. This contributes to the improvement of the microbiological composition of the obtained organic fertilizer, which is called "Effluent" and is made on the basis of digestate.

When analyzing the composition of pathogenic fungi in fermented and unfermented manure (according to Table 2), it was found that in fermented manure the number of pathogenic fungi from the genus Fusarium decreased to 3.2%, while in unfermented manure it was 9.5%. In addition, no fungi of the genus Aspergillus were found in fermented manure, while their number in unfermented manure was 57.2%.

Table 2
General ratio of pathogenic mycoflora in samples of pig manure (as of February 25, 2022)

	Version		including from genera, %			
<u>%</u>		All pathog	genic fungi	rium	ıaria	ergillus
		thousand/year	%	Fusaı	Altern	Aspery
1	Unfermented	79,2	66,7	9,5	0	57,2
2	Reborn	12,6	6,4	3,2	3,2	0

Source: formed on the basis of research [29, c.5].

Production of bio-organic fertilizer "Effluent" based on pig manure digestate passed through a biogas plant leads to a decrease in the number of pathogenic microorganisms and an increase in the number of saprophytic organisms, which positively affects the microbiological composition of the obtained fertilizer.

We will present data on the agrochemical composition and value indicators of organic fertilizers obtained from different types of animals (Table 3).

Studies have shown that pig manure contains more nitrogen, phosphorus and magnesium, both in liquid and thick consistency, than cattle manure. However, cow manure has more potassium than pig manure. Therefore, to increase the yield of grain crops, it is better to use biofertilizer based on pig manure, and for root crops, it is more appropriate to use biofertilizer based on cow manure, which should be applied to the soil in the fall. In addition, Table 1 shows that biofertilizers with a thick consistency have a higher cost.

Table 3

Calculation of the cost of biofertilizer from cow and pig manure

with different contents of dry matter

Main nutrients	Main nutrients Content	The cost of nutrients in 1 ton of organic fertilizer UAH/t						
Content of	of nutrients in bio-	€/t	\$/t	UAH/t				
nutrients in	fertilizer (kg/t)							
bio-fertilizer								
(kg/t)								
	Biofertilizer from pig manure (25% dry matter)							
Nitrogen	4,5	4,73	5,16	120,06				
Phosphorus	5,6	5,21	5,67	132,33				

Continuation of table 3

Potassium	6,2	4,46	4,87	113,46					
Magnesium	1,7	0,54	0,59	13,82					
In total	18,0	24,88	16,29	379,67					
	Biofertilizer from cow manure (25% dry matter)								
Nitrogen	3,6	5,4	5,9	96,05					
Phosphorus	2,8	2,6	2,84	66,16					
Potassium	7,7	5,54	6,04	140,91					
Magnesium	Magnesium 1,4 0		0,49	11,38					
In total 15,5		13,99	15,27	314,50					
	Biofertilizer from pig manure (25% dry matter)								
Nitrogen	1,8	1,89	2,06	48,02					
Phosphorus	2,4	2,23	2,43	56,71					
Potassium	2,3	1,66	1,81	42,09					
Magnesium	0,7	0,22	0,24	5,69					
In total	7,2	6,0	6,54	152,51					
	Biofertilizer f	rom cow manure (5)	% dry matter)						
Nitrogen	0,9	0,95	1,03	24,01					
Phosphorus	1,2	1,12	1,22	28,36					
Potassium	2,5	1,80	1,96	45,75					
Magnesium	0,5	0,16	0,17	4,07					
In total	5,1	4,03	4,38	102,19					

Source: [30]

The use of organic fertilizers is an effective method of increasing the yield of corn for grain and vegetables in open ground. The most optimal economic effect was obtained when using bioorganic fertilizer "Effluent" obtained from digestate, in the amount of 55.0 tons per hectare when growing various types of grain crops.

For the effective introduction of new crops or growing technologies, it is necessary not only to evaluate their yield and product quality, but also to carry out an economic analysis. It will help determine the efficiency of resource use and the optimal technology option, which will be the most profitable from an economic point of view. This, in turn, can lead to an improvement in the quality of products, an increase in their volume, and a reduction in production costs. Evaluation of research results and analysis of technological process elements is an important stage in increasing production efficiency [30].

The effectiveness of measures aimed at increasing the yield and quality of products can be confirmed only by the results of their economic evaluation. Today, no

manufacturer will start using new technologies without analyzing energy consumption and assessing their economic feasibility [31,32].

Resource prices are constantly fluctuating due to market leverage, and therefore the economic evaluation of cultivation technologies does not always provide an objective picture of their effectiveness. The assessment needs to take into account all types of energy consumption, including gross and exchangeable energy. To determine the efficiency of cultivation technology, it is necessary to compare the energy profit accumulated in fertility with the total energy spent on cultivation and harvesting [34].

To solve the problem described in the article and to fulfill the tasks, calculations of the economic efficiency of growing corn for grain and vegetables in the open ground were carried out. These calculations were based on technological maps of cultivation of each crop. The cost of fuels and lubricants, seeds, plant protection products, mineral fertilizers and bio-organic fertilizer "Effluent" based on digestate was calculated for November 2022. At the time of the research, the selling price of 1 ton of corn at the stock market was UAH 5,000, carrots – UAH 7,000, and table beets – UAH 8,000.

The conducted economic analysis of technologies for growing corn and vegetables in the open ground (sowing carrots and table beets) showed that fertilizer significantly affects the economic efficiency of the production of marketable products – grain and root crops. When applying fertilizers, the following pattern was revealed: with an increase in nutrition rates, the amount and value of additional products increases, the conditional net profit from each hectare and the level of profitability increase accordingly (Table 4).

Table 4
Economic assessment of technologies for growing corn for grain and table roots
depending on fertilizer
(on average for 2020-2022)

Culture Fertilizer	Culture Fertilizer	Productivi ty, t/ha	Cost of productio n, hryvnias/h	Productio n costs, hryvnias/h	Condition ally net profit,	Cost of 1 ton of products,	Rate of return, %
	1*	6,78	33900	19841	14059	2930	71
Com Componi VS	2	7,65	38267	20086	18181	2620	91
Corn Camponi KS	3	9,65	48233	22969	25264	2380	110
	4	10,28	51417	24133	27284	2350	113

Continuation of table 4

	5	10,46	52318	25266	27052	2410	107
	6	11,55	57733	26459	31274	2290	118
	7	12,86	64300	33604	30696	2610	91
	8	12,06	60283	29254	31029	2430	106
	1*	28,81	201670	96665	105004	3360	109
	2	34,22	239540	97084	142456	2840	147
	3	40,85	285950	98903	187047	2420	189
Carrot seed Bolivar	4	44,24	309680	100902	208778	2280	207
F1	5	47,07	329490	102776	226714	2180	221
	6	50,82	355740	104681	251059	2060	240
	7	58,05	406350	118057	288293	2030	244
	8	51,45	360150	110138	250012	2140	227
	1*	37,12	296960	89466	207494	2410	232
	2	40,34	322720	89978	232742	2230	259
	3	45,80	366400	92669	273731	2020	295
Table beet Kestrel	4	53,22	425760	94946	330814	1780	348
F1	5	62,12	496960	97037	399923	1560	412
	6	72,52	580160	99287	480873	1370	484
	7	86,23	689840	113048	576792	1310	510
	8	73,01	584080	105869	478210	1450	452

Note\*: 1 – without fertilizers (control); 2 – application of water (45.0 m3/ha); 3 - biofertilizer "Effluent" (25.0 t/ha); 4 – "Effluent" (35.0 t/ha); 5 – "Effluent" (45.0 t/ha); 6 – "Effluent" (55.0 t/ha); 7 – "Effluent" (55.0 t/ha) + N90P90K90; 8 - N90P90K90.

Source: formed on the basis of research 7

The conducted studies showed that there was a decrease in economic efficiency indicators on the options for growing crops without applying fertilizers. More specifically, the lowest values of net profit and profitability were recorded on the control variants. For example, the costs of growing corn, carrots, and beets were UAH 19,841.0/ha, UAH 96,665.0/ha, and UAH 89,466.0/ha, respectively. At the same time, the net profit was UAH 14,059.0/ha, UAH 105,004.0/ha, and UAH 207,494.0/ha, and the profitability level was 71%, 106%, and 232%. These results suggest emphasizing the importance of applying fertilizers to achieve higher economic efficiency of growing agricultural products.

Calculations of the economic efficiency of growing seed carrots and table beets with the use of different rates of fertilizers showed that

among the studied options, the most profitable are those that use the bioorganic fertilizer "Effluent" at the rate of 55.0 t/ha and the full application of bioorganic-mineral fertilizer at the rate of 55.0 t/ha of digestate + N90P90K90.

Bioenergetic analysis is an important tool for determining the efficiency of growing corn for grain. Traditional methods of economic assessment, which are based on natural or cost indicators, do not provide sufficient information about the energy costs of mechanized work and the costs of human labor. Bioenergetic analysis allows you to determine the efficiency of energy consumption that accumulates in the crop and to reveal the level of energy intensity of the obtained products. All labor and process inputs are measured in energy units such as kilocalories or joules. This allows comparison of technologies in crop production and agriculture and provides a more complete assessment of cultivation efficiency. Bioenergy analysis does not depend on fluctuations in the prices of energy carriers, fertilizers and the cost of final products, so it provides a more accurate assessment of individual elements of cultivation technology.

The analysis of energy consumption per hectare of corn sowing for grain showed that the lowest consumption was observed in the control variant without fertilizer application – 47.3 GJ/ha. The highest consumption of total energy of 61.2 GJ/ha was noted in the variant where mineral fertilizer in the norm N90P90K90 and bio-organic fertilizer "Effluent" based on digestate (55.0 t/ha) were applied in a complex manner, which exceeded the control by 29.4% for this indicator (Table 5).

Similar results were obtained when growing vegetables. An increase in the level of fertilizers in the soil led to a proportional increase in energy consumption. For example, the energy consumption for sowing carrots was the highest in the areas where mineral fertilizers were applied at the rate of N90P90K90 (70.4 GJ/ha) and their combination with digestate (rate of 55.0 t/ha) (77.3 GJ/ha). This is 12.1-18.9 GJ/ha more than in the control plots (58.3 GJ/ha). The highest energy consumption was observed when growing table beets. On unfertilized plots, energy consumption was 75.7-78.6 GJ/ha, and increasing the level of fertilizers led to an increase in energy consumption by 9.7-32.0 GJ/ha, depending on the form and rates of fertilizers.

Table 5
Energy efficiency of growing corn for grain and table roots depending on fertilizer
(average for 2020-2022)

Culture Fertilizer	Culture Fertilizer	Received energy with harvest, GJ/ha,	Energy consumption,	Energy gain, GJ/ha, E	Coefficient of energy efficiency,
		Ev	GJ/ha, Eo	30, 114, 2	Kee
Corn Camponi KS	1*	99,12	47,29	51,83	2,10
	2	111,89	51,01	60,88	2,19
	3	146,01	54,03	91,98	2,70
	4	155,65	54,81	100,84	2,84
	5	158,37	55,12	103,25	2,87
	6	174,77	56,35	118,42	3,10
	7	188,01	61,21	126,81	3,07
	8	176,27	57,89	118,38	3,05
Carrot seed Bolivar F1	1*	70,98	58,34	12,64	1,22
	2	75,90	60,72	15,18	1,25
	3	85,63	62,48	23,15	1,37
	4	89,87	64,08	25,79	1,40
	5	92,32	65,59	26,73	1,41
	6	98,48	67,16	31,32	1,47
	7	108,59	77,27	31,32	1,41
	8	101,88	70,43	31,45	1,45
Table beet Kestrel F1	1*	125,71	75,71	49,99	1,66
	2	133,27	78,62	54,65	1,70
	3	145,30	81,60	63,70	1,78
	4	157,39	83,07	74,32	1,89
	5	165,73	85,26	80,47	1,94
	6	178,54	87,49	91,05	2,04
	7	199,43	99,96	99,47	2,00
	8	183,98	93,60	90,39	1,97

Note\*: 1 – without fertilizers (control); 2 – application of water (45.0 m3/ha); 3 - biofertilizer "Effluent" (25.0 t/ha); 4 – "Effluent" (35.0 t/ha); 5 – "Effluent" (45.0 t/ha); 6 – "Effluent" (55.0 t/ha); 7 – "Effluent" (55.0 t/ha) + N90P90K90; 8 - N90P90K90.

Source: formed on the basis of research 7

Based on the results of the analysis, it can be concluded that the use of fertilizers during the cultivation of cereals and root crops increases energy consumption. However, this agrotechnical method allows you to significantly increase the accumulation of energy in the crop, increase the gross energy and increase the energy efficiency ratio.

Therefore, the efficiency of fertilizer application from biogas plants can be determined based on several criteria. First of all, it is necessary to take into account the composition and content of nutrients in fertilizers. Next, it is important to find out exactly which crops or plants will be grown using these fertilizers and how they respond to specific nutrients. The cost of fertilizers and their transportation, storage and application in the fields for further application should also be taken into account.

Another important criterion is the environmental friendliness of fertilizers. If the fertilizers obtained from biogas plants contain harmful substances that can harm the environment or the health of people and animals, then this can negatively affect the effectiveness of their use.

The level of technical equipment of the biogas plant and the processes used to produce fertilizers should also be taken into account. If the technical equipment is not efficient or the production processes are not optimized, it can lead to the loss of nutrients and a decrease in the quality of fertilizers.

For the effective use of fertilizers from biogas plants, it is necessary to take into account the climatic conditions and the type of soil in the field where the fertilizers will be applied. For example, in an area with high humidity, certain types of fertilizers may be less effective than in an area with a drier climate.

In addition, it is necessary to take into account local legislative requirements regarding the use of fertilizers. For example, some countries may have restrictions on the amount of fertilizer that can be applied to a certain area of land.

The supply of humus plays the most important role in maintaining the ecological balance in the soil, as it is a source of nutrients for microorganisms that stimulate plant nutrition and growth. Natural humus consists of the remains of organic plant substances, which contain fractions that have decomposed the least, fractions that are still decomposing, complex substances formed during the hydrolysis and oxidation of organic substances formed as a result of the vital activity of microorganisms.

The use of humus can significantly increase the quality and quantity of the harvest. For example, the use of humus when growing wheat can increase the yield by 15-20%, corn – by 20-30%, potatoes – up to 30%, and sugar beet – up to 20%.

Since the early 1990s, several studies have been conducted in countries such as Denmark, Germany, India, and China, which have shown a significant increase in yield when using digestate as fertilizer [34].

The conducted studies show that the use of biogas technology for the processing of organic materials has several advantages. It allows you to completely eliminate the threat to the environment and ensures the annual production of an additional 95 million tons of standard fuel (about 60 billion m3 of methane or biogas, 190 billion kWh) and more than 140 million tons of highly effective fertilizers. This can significantly reduce energy costs associated with the production of mineral fertilizers, which agriculture uses in large volumes, consuming about 30% of all electricity. In addition, the use of biogas technology can help avoid secondary soil acidification, which often occurs as a result of excessive application of nitrogen and phosphorus fertilizers.

The use of different types of digestate, manure and litter in different soil and climatic conditions was studied. The objects of the study were 5 types of digestate from biogas plants operating on agricultural farms, in particular, 3 pig farms, 1 cattle complex and 1 poultry farm [35].

Studies were conducted on the use of different types of digestate, which were obtained from agricultural biogas plants of various livestock farms and poultry farms. The research involved 5 types of digestate obtained by processing different initial media (semi-liquid cattle manure, liquid pig manure, liquid bird droppings and liquid pig manure effluents) under different fermentation modes (thermophilic or mesophilic) lasting from 7 to 15 days.

In the area where biogas plants are located, various crops are usually grown using traditional local methods. Harvesting was carried out in accordance with standards and regulatory requirements for product quality.

The effectiveness of the use of digestate depends on its effect on the microbial composition of the soil, in particular, an increase in the specific weight of bacteria that promote plant growth and a decrease in the share of fungal microflora and actinomycetes. Studies of plant production products grown on soils treated with digestate have shown an increase in the content of nutrients, elements, proteins, fiber, fats and vitamins. In different countries of the world, biofertilizers are used in both solid and liquid form. The solid form is obtained by drying the liquid fraction, while the liquid form is obtained directly from bioreactors [36].

Applying liquid biofertilizers to the soil requires a different approach compared to solid forms. Before field application, liquid biofertilizers are usually diluted with water in a 1:1 ratio, as high concentrations of ammonia and phosphorus can adversely affect plant cover.

To ensure basal and foliar nutrition of plants, the liquid fraction is dispersed on the fields with the help of special agricultural equipment. However, this method of introduction can create problems with parallel soil cultivation.

Undiluted digestate has high electrical conductivity and cannot be applied directly, as it can cause negative consequences for the soil. To avoid these problems, the solid fraction should be diluted in water in a ratio of 1:4 to 1:8 (digestate to water ratio).

Therefore, the use of biofertilizers leads to the improvement of the biological, physical and chemical properties of the soil, as well as to the improvement of the water and air regime. The peculiarity of the digestate is that it enriches the soil with organic substances, which can later turn into humus, which increases the absorbing complex of the soil. This ensures greater stability of crops during adverse weather conditions.

1. The study studied the theoretical foundations for the development of the use of biogas waste in the form of digestate and analyzed the possibility of application for various processes of fertilization of agricultural land.

The results showed that this approach can ensure the high quality of agricultural and vegetable crops, as well as increase productivity due to the effective use of bio-

organic fertilizers, which is especially important in modern conditions, when mineral fertilizers have become significantly more expensive.

2. The evaluation of technologies for growing different types of crops depending on the fertilization system made it possible to find out the energy efficiency of growing crops in the absence of an increase in fertilizer costs.

The main feature of digestate is its ability to enrich the soil with organic substances. Undecomposed organic substances of the digestate can turn into humus in the soil, which contributes to the increase of the absorbing complex. This ensures greater stability of crops in adverse weather conditions.

Natural biofertilizers have many beneficial properties, one of which is their ability to balance the acid-base balance of the soil, which helps prevent soil depletion. In addition, they do not harm soil microorganisms, which is of great importance for soil health, do not contain pathogens, so they are safe for use in agriculture.

Biological fertilizers have an important advantage over mineral fertilizers - they are absorbed by almost 100%, compared to mineral fertilizers, which are absorbed by only 35-50%. Biofertilizers do not increase the amount of nitrates in products and soil, which allows for high yields.

3. The role of increasing soil fertility with the help of digestate was determined and it was proven that natural biofertilizers have many useful properties, one of which is their ability to balance the acid-alkaline balance of the soil, which helps prevent its depletion. In addition, they do not harm soil microorganisms, which is of great importance for soil health, do not contain pathogens, so they are safe for use in agriculture.

Biological fertilizers have an important advantage over mineral fertilizers - they are absorbed by almost 100%, compared to mineral fertilizers, which are absorbed by only 35-50%. Biofertilizers do not increase the amount of nitrates in products and soil, which allows for high yields.

In addition, the use of biological fertilizers helps to increase the biological activity of the soil and improve its structure. Biofertilizers provide plants not only with

nutrients, but also with useful microorganisms that contribute to increasing soil fertility and provide protection against diseases and pests.

Biofertilizers are also a more environmentally friendly option, compared to mineral fertilizers, because they do not contain harmful substances and do not harm the environment. The use of biofertilizers allows you to reduce the amount of chemicals that enter the environment and pollute the soil, air and water.

The development of ecological marketing in biotechnological production depends on consciousness at all levels: state, production, consumer. The main problem in the development of ecological marketing is unscrupulous producers and weak legal control by the state. Governmental institutions need to prioritize the issues of resource conservation, public health, and comprehensive development of ecologically oriented business. In turn, there will be an increase in consumer demand and the creation of added value for producers, because the consumer will have confidence in the quality of the products he uses, which meets his own ecological needs, on the one hand, and on the other — the producer of food products. It should also be emphasized that the most relevant marketing model for the functioning of environmental marketing in biotechnological production is the "5P" model, since an important element of successful economic activity is people, namely the target audience, which has a clear awareness of their own and collective environmental needs and an understanding of how biotechnological production can solve the issue of safe nutrition and improve the quality and general condition of natural resources of agriculture.

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# 3. Prospects and assessment of the development of marketing activity of agricultural enterprises of Ukraine

As you know, Ukraine is an agrarian country that provides the lion's share of the export of agricultural products. The armed invasion of the Russian Federation on the territory of Ukraine led to a significant decrease in the export of agricultural products, which in turn affected not only the Ukrainian agrarian business, but also threatened a global food crisis. The consequences of armed aggression on the territory of our country were felt to a great extent not only by the EU countries, but also by all other importers of Ukrainian agricultural products, both finished products and raw materials for their production, which in turn provoked a rapid increase in prices and the need to find an alternative to such goods on world market.

It is important to emphasize that, despite the war, our entrepreneurs, including agrarians, confidently and actively maintain "their front", ensuring the production of agricultural products for domestic and foreign consumers, as well as filling the country's budget, and as a result, they support the stability of the economy. It is worth realizing that after Ukraine's victory in the war, it will be necessary to actively rebuild our country, raise the economy, and one of the important factors that will contribute to this is the effective activity of business, including agricultural business. For the sake of the competitive development of entrepreneurship in general and the competitiveness of products in particular, in our opinion, it is important to focus business attention on active marketing activities [38].

When carrying out marketing activities in the market of goods and services, it is necessary to understand that people still have basic needs that need to be satisfied even during the war. Consumers still need products, goods and services while the country is at war. It's important that companies don't abandon their plan to grow profits while the soldiers are on the front lines. Of course, in the early stages of a military crisis, it is difficult to understand what actions a company should take. And in the face of human tragedies due to the Russian invasion of Ukraine, companies may be tempted and

dominated by the desire to act now and think later. We consider these very false imperatives. The war of the Russian Federation against Ukraine exacerbated the problems and the need to mobilize all resources and methods of activity to increase the effectiveness of resistance to Russian aggression and the post-war recovery of the country and its economy on an innovative and marketing basis [39].

In the extremely difficult conditions of the martial law, the problem of providing the population with food products (the main of which are products of the agricultural industry) is the most important, and the expansion of agricultural business and the improvement of the effectiveness of the sale of agricultural products, which is supported by the agricultural marketing system, is of key importance. It is agricultural marketing that is a component of the internal management system, the activity of which is related to research, analysis of the market situation, study of the relationship between demand and supply, development of measures for marketing orientation of the sales activities of enterprises, development of an assortment policy for the production of competitive products to meet the needs and requirements of consumers [40, p. 98].

Marketing is an integral part of the successful activity of any enterprise, including an agricultural one. It refers to the activity of studying groups of potential consumers and conquering the market. Since the relations between the subjects of market relations are changing and becoming more complicated, the importance of marketing is constantly growing.

It is obvious to us that the success of any agricultural enterprise depends not only on financial results, but also on the proper organization of marketing activities and a flexible sales management system.

Currently, farmers face the problem of the competitiveness of their activities, but even this does not sufficiently encourage them to implement marketing management technologies in their activities. They are forced to work in an uncontrolled, volatile environment with a high degree of risk. In these conditions, an important task is to adapt the internal conditions of the enterprise to the changes that are constantly occurring in the external environment, and this, in turn, will significantly improve the

effectiveness of the enterprises. The very creation and implementation of agricultural marketing levers is an urgent goal for agriculture in general.

A condition for the successful development of marketing of an agricultural enterprise is its flexible reorientation to ensure a competitive environment. The process of creating a modern management system, organizing the production process, and selling high-quality agricultural products is due, first of all, to the transition of agricultural enterprises to fundamentally new economic market relations, which have developed in the context of increased competition between agricultural producers both within the country and on the world market. These relations imply not only the direct production of products, but also the study of issues related to the organization of sales, the search for new distribution channels for products, the search for new sales markets, positioning in the existing markets, the implementation of a balanced price policy, the implementation of certain advertising activities, that is, there is a process of concentration of attention on marketing activities. The concept of marketing changes and adapts according to the process of development and implementation of marketing activities.

Without a well-planned marketing activity, in modern market conditions, it is quite difficult to understand exactly what products to produce or what services to provide, in what quantities and who will act as a consumer. It is quite important for agricultural enterprises to increase their competitiveness, which directly depends on the quality and speed of decisions made in marketing management.

Incorrect or ill-conceived marketing decisions can negatively affect the company's reputation and affect customer loyalty, which can subsequently lead to serious losses for the company. The marketing activity of the enterprise is aimed at setting current and long-term goals fairly reasonably, taking into account market demands, finding ways to achieve these goals, as well as determining the range and quality of products, the optimal production structure, and the desired profit. The business needs to produce such products that will interest the consumer and provoke him to want to receive this product and, as a result, will bring profit to the company.

And for this, it is necessary to take into account social and individual needs, market requests.

In our opinion, the main problems faced by farmers in their work are as follows:

- 1. conducting one's activities in conditions of uncertainty and risk, which is primarily related to the military operations in Ukraine;
- 2. low level of material and technical support, raw materials and financial resources;
  - 3. insufficient level of state support for agricultural producers;
- 4. the low level of well-being and income of the population, which undoubtedly affects demand, and especially affects the elasticity of demand between food and non-food products;
  - 5. shortage of qualified personnel and population outflow from rural areas;
- 6. underdevelopment of the infrastructure for the sale of agricultural products [41].

The marketing activity of the enterprise is a creative managerial activity, the task of which is to develop the market of goods, services and labor force by assessing the needs of customers, as well as to carry out practical measures to meet these needs. This activity coordinates the production and distribution capabilities of goods and services, and determines what steps need to be taken to sell the product or service to the end consumer.

The essence and content of marketing activities reflect the objective conditions of market development, which to a certain extent loses its chaotic nature and falls under the regulatory influence of pre-established business relationships, where a special role is assigned to the consumer. The consumer presents his requirements for the product, its technical and economic characteristics, quantity, terms of delivery and thus creates the prerequisites for market distribution between producers, the importance of competition and the struggle for the consumer increases. This forces manufacturers to carefully and deeply study specific potential consumers and the demands of the market, which makes high demands on the quality and competitiveness of products.

Marketing management, according to F. Kotler, involves planning, organization and control over the implementation of activities designed to establish, strengthen and maintain profitable contacts with target consumers in order to achieve certain company objectives, such as making a profit, increasing sales volume, increasing market share, etc. [42].

It is worth noting that the change in indicators of the competitiveness of agricultural enterprises will largely depend on the indicators of effective sales and promotion of products, which, in turn, will determine the development and stability of the Ukrainian domestic agricultural market. Optimizing the balance of food resources, studying the laws regulating demand and supply are the basis of the economic directions of regulating the agricultural market, the components of which are reserve, intervention, collateral and regional purchases, as well as the ability to ensure the sale of products through the "transparent" system and conduct transparent procedures for purchasing products on the market of agricultural products, considerable attention is paid to export and import operations for the purchase of products [43].

To ensure the company's competitive position on the market, it is necessary to use all the variety of strategic and tactical marketing methods. Effective market activity, purposeful competition requires producers to possess the skills of effective marketing management.

Marketing activity is a complex of activities focused on the study of such issues as:

- analysis of the external (in relation to the enterprise) environment, which includes markets, sources of supply and much more. Analysis allows you to identify factors that contribute to commercial success or create an obstacle to it. As a result of the analysis, a data bank is formed for making informed marketing decisions;
- analysis of consumers, both current (current ones who buy the company's products) and potential (who still need to be convinced to become relevant). This analysis consists in the study of demographic, economic, geographic and other characteristics of people who have the right to make purchasing decisions, as well as their needs for a broad understanding of this concept and the processes of acquiring

both our and competing goods;

- study of existing and planning of future products, i.e. development of concepts for creating new products or modernization of old ones, including their assortment and parametric series, packaging, etc. obsolete goods that do not give a specified profit are removed from production and export;

-planning of goods traffic and sales, including the creation, if necessary, of appropriate sales networks with warehouses and stores, as well as agency networks; through a combination of advertising, personal selling, prestigious non-commercial events ("public relations") and various economic incentives aimed at buyers, agents and direct sellers;

- ensuring price policy, which consists in planning systems and price levels for exported goods, determining the "technology" of using prices, credit terms, discounts, etc.;

-satisfaction with the technical and social standards of the country that imports the company's goods, which means the obligation to ensure appropriate levels of product safety and environmental protection; compliance with moral and ethical rules; appropriate level of consumer properties of the product;

- management of marketing activity (marketing) as a system, i.e. planning, implementation and control of the marketing program and individual duties of each participant in the enterprise's work, assessment of risks and profits, effectiveness of marketing decisions.

To carry out the above measures, it is necessary to take into account the great role of those on whom, in fact, the effectiveness of the marketing strategy depends, namely marketing subjects, which include manufacturers and service organizations, wholesale and retail trade organizations, marketing specialists and various consumers . It is important that although the responsibility for the performance of marketing functions can be delegated and distributed in various ways, they cannot be neglected at all, they must be performed by someone.

A marketing management entity is a legal or physical person that performs any marketing functions. In practice, such subjects are most often suppliers, manufacturers, intermediaries, competitors, consumers.

The object of marketing management is what the marketing management subject's efforts related to sales, propaganda, popularization, etc., are aimed at. It can be the company's choice of its position on the market, definition of product promotion strategies, definition of advertising and pricing policy, etc. taking into account the factors of both the external and internal environment [44].

The goal of managing the marketing activities of an agricultural enterprise is to identify and satisfy the needs of target markets in better ways than those of competitors and, thanks to this, to obtain maximum profit. In its expanded form, the goal is:

- search for opportunities for the enterprise on the market and in the external environment;
  - avoiding dangers;
- optimal adaptation of the company's resources to the available opportunities and dangers;
  - supporting the competitiveness of goods and the enterprise as a whole;
  - formation of a positive image and business reputation of the enterprise;
- ensuring the profitable operation of the enterprise due to the best adaptation of its resources to market conditions;
  - implementation of the mission of the enterprise.

The main tasks of managing the marketing activities of agricultural enterprises are:

- determination of the company's goals and the ways to achieve them in terms of returning investments, making a profit, entering new markets, increasing the company's market share;
  - introduction of new and/or modified products to the market;
  - organizing and conducting marketing research;

- formation of a marketing strategy: segmentation of the market, selection of target markets, product positioning on them, identification of competitive advantages of the enterprise;
- creation and improvement of the functioning mechanism of marketing activity for the enterprise;
  - development and implementation of the marketing plan.

The implementation and application of marketing at Ukrainian agro-industrial enterprises can take three forms:

- 1. Episodic use of marketing tools by company managers, temporarily involving marketing specialists or consulting services. This form is suitable only for a small business.
- 2. Periodic application of marketing measures, distributed according to responsibilities to the structural divisions of the enterprise. The existence of this form is due to the fact that, in any case, every enterprise uses certain marketing measures, but they are not carried out systematically and have a spontaneous nature. In this case, it is recommended to improve management activities by introducing measures to control the use and performance of marketing functions.
- 3. Marketing as a component of enterprise management, using all components of the marketing system and introducing the marketing department into the organizational structure of the enterprise [45].

The marketing activity of agricultural enterprises is significantly different from the marketing activity of other industries, which is due to the specifics of agricultural products and the features of agricultural production. A subjective feature of marketing activity at domestic agricultural enterprises is that its functions are often performed not by specialists trained for this, but by the entrepreneurs themselves. Therefore, for effective marketing activities, agricultural enterprises should create marketing departments that will function in accordance with the set goals and defined tasks of the business entity. The marketing department at the enterprise will ensure more effective myrketing activity due to a comprehensive approach to the performance of functions and tasks of the enterprise, than the separate implementation of these procedures.

Types of marketing management functions:

- analytical (receiving information necessary for marketing): scientific research, market research, analysis of the external and internal environment of the enterprise;
- product and production (formation of the company's offer based on information from conducted research): development of recommendations for product creation, packaging, assortment formation;
- sales functions (ensuring access of buyers to the product): selection of sales channels and counterparties, implementation of price policy, establishment of marketing communications with consumers;
- organizational functions (organization of marketing at the enterprise): development of marketing strategy, methods of its implementation, marketing budget planning, formation of marketing programs, marketing control.

It is also possible to distinguish such types of marketing management functions as:

- 1) marketing planning;
- 2) organization of implementation of marketing strategies and marketing programs;
  - 3) accounting and control of marketing activities;
- 4) expert monitoring and regulation of the firm's positional and active behavior on the market [46].

It is common knowledge that marketing activity is a basic component that must be used by enterprises that are oriented towards market relations. However, the vast majority of agricultural enterprises do not use marketing tools in the organization of their production and sale of finished products.

The system of marketing management principles is a set of rules for developing a product niche, finding profitable sources of financing, forming customer needs and determining the potential of unsatisfied demand.

The system of marketing management principles should be considered in more detail (Fig. 1.).

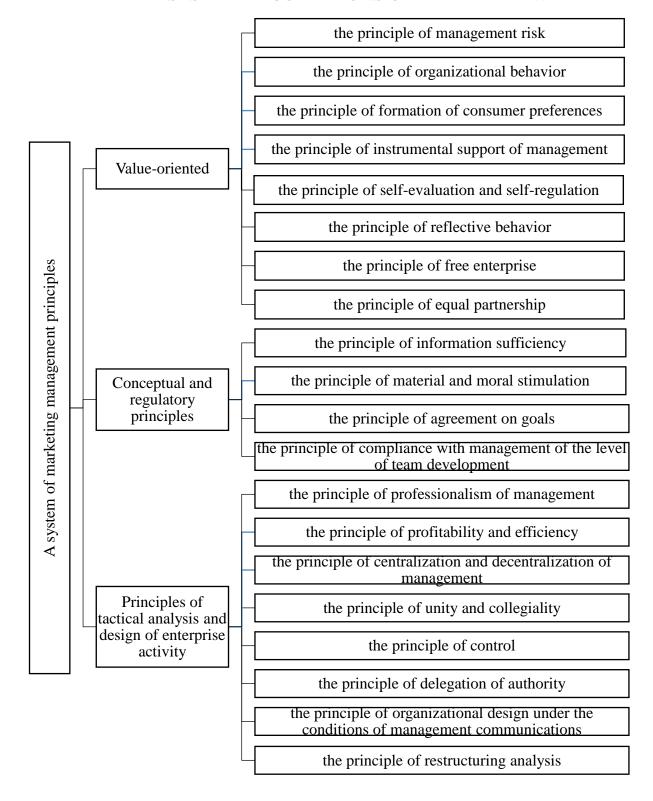


Fig. 1. System of marketing management principles

Source: generated by the authors

The system of marketing management principles can be presented in the form of three groups:

1. Value-oriented: related to strategic decisions, for example, analysis of competitiveness, market segmentation [47].

This group includes the following principles:

- a) the principle of managerial risk: the manager's ability to assess the weaknesses and strengths of competitors in order to strengthen the position of his firm on the market. The head of marketing management must not only see and assess the risk situation, but also be able to accept responsibility for the decision made. Risks must be justified and balanced, and calculations are carried out analytically;
- b) the principle of organizational behavior: determination of goals and the organizational structure of management. The choice of a certain organizational management structure is determined by the organization's need for an effective decision-making process by forming services that allow obtaining the necessary information about the external and internal environment and responding to changes in a timely manner. The best structure allows you to determine the resource base in advance, showing flexibility in making competitive management decisions;
- c) the principle of formation of consumer preferences: situational regulation of the company's behavior on the market under the influence of economic changes, fashion, seasonality and technological development. The company needs to protect the rights and interests of the consumer in order to motivate him to continue cooperation, form and stimulate his preferences;
- d) the principle of instrumental provision of management: the availability of a documentation system and software, information, and technological means serving the system;
- e) the principle of self-assessment and self-regulation: the presence of regular interaction with the external environment, tracking its changes. The organization must provide the consumer with the product or service with the best quality or the best support. The firm must be able to form competitive advantages, focusing on the spectrum of client needs;
- g) the principle of reflective behavior: assessment of the chosen strategy and the optimality of the decision taken, taking into account the level of risk and the

competitor's strategy. The definition of self-regulation rules for employees and the manager is assumed;

- h) the principle of free enterprise: the search for non-standard solutions to problems within the limits of fierce competition and the legal field. The strategy should take into account the company's strengths and weaknesses and competitive abilities;
- i) the principle of equal partnership: defining the rules of business relations. The consequences of violations of established norms can dramatically affect the image of the company. This principle is one of the value principles on which entrepreneurship is based.
- 2. Conceptual and regulatory principles: the firm's strategic behavior in conditions of risk and an uncertain external environment [47, c. 1]:
- a) the principle of information sufficiency: in the field of marketing management, a large part of the information about consumer preferences is evaluated with the help of surveys, interviews, etc.;
- b) the principle of material and moral stimulation: establishing relationships in the types of personnel stimulation;
- c) the principle of agreement on goals: systematization of resource capabilities of the organization in order to achieve the set goal. It is necessary to determine the best directions of the organization's activities, based on the market situation and internal structure;
- d) the principle of matching the management of the level of development of the team: ensuring the purposefulness of the firm's strategic behavior through a system of calculation and internal indicators in conditions of risk and uncertainty. It is necessary to harmonize the internal structure of the company in order to adequately respond to market changes. In marketing management, this is manifested in the formation of one's competitive position and the construction of relations with consumers.
- 3. Principles of tactical analysis and design of the firm's activities. Formation of rules for the most efficient use of enterprise resources [47]:
- a) the principle of management professionalism: the manager's professionalism presupposes the availability of knowledge and the ability to manage in market

conditions, logical and analytical abilities, etc.;

- b) the principle of profitability and efficiency: forecast and assessment of the behavior and results of the firm's activities. As you know, prices for products, goods or services are set by the interaction of supply and demand. The marketing department forecasts the results of the company's activities;
- c) the principle of centralization and decentralization of management: excessive centralization can prevent the adoption of operational decisions, the implementation of relevant advertising campaigns, changes in the company's assortment;
- d) the principle of unity of leadership and collegiality: collegial generation of ideas, development of the company's future steps regarding new markets, technologies, advertising campaigns, etc., with one-time responsibility of the manager for jointly adopted decisions;
- e) the principle of control: establishment of feedback and analysis in specific conditions of risk and uncertainty;
- f) the principle of delegation of powers: establishing rules for the distribution of responsibility depending on the level of risk of decision-making and the ability of the management system to self-assess and self-regulate;
- g) the principle of organizational design under the conditions of management communications: the sequence of organizational changes in the company's structure depending on the influence of external and internal environmental factors;
- h) the principle of restructuring analysis: the reaction of the system to the influence of the environment. This principle applies to all directions of the company's marketing activities: budget, assortment, technologies, etc.

Management of marketing activities at the enterprise is carried out in accordance with the following basic principles:

- orientation to consumers, dynamic reaction of production and sales to changes in the external environment;
- constant market research (capacity, demand, consumer preferences, best distribution channels, etc.);
  - market segmentation: selection of groups of consumers, the satisfaction of

whose needs should direct the company's activities;

- focus on long-term results thanks to innovative activities in the production and sales spheres.

The specifics of production, promotion and sale of agricultural products determine the existing features of the functioning mechanism of agromarketing. The main principles on the basis of which the agricultural marketing functioning mechanism is developed are:

- making and implementing management decisions based on the analysis of the market situation;
- increasing the efficiency of agricultural enterprises based on the orientation of the production program to market requirements;
  - use of profit as an effective indicator of financial and economic activity;
- stimulation of consumer demand with the help of marketing communication tools, including such as advertising.

The market factors of the economy have given rise to a number of problems in the country related to the instability of the external environment, changes in the market situation, fierce competition, the unpreparedness of management for changes in management technology, the lack of highly qualified specialists in the management of marketing activities of enterprises, and others [48]. However, to date, the biggest problem, both for our country as a whole and for agricultural enterprises, has become the full-scale armed invasion of the Russian Federation on the territory of Ukraine. The application of marketing at domestic enterprises is hindered by a number of problems that make up several main groups, which are shown in fig. 2 [49, c. 13].

The implementation of marketing activities is an objective necessity of the orientation of scientific and technical, production and sales activities of any company, agricultural enterprises are no exception, to account for market demand, needs and demands of the consumer. This reflects and constantly strengthens the trend towards systematic organization of production in order to increase the efficiency of the functioning of the company as a whole and its business divisions.

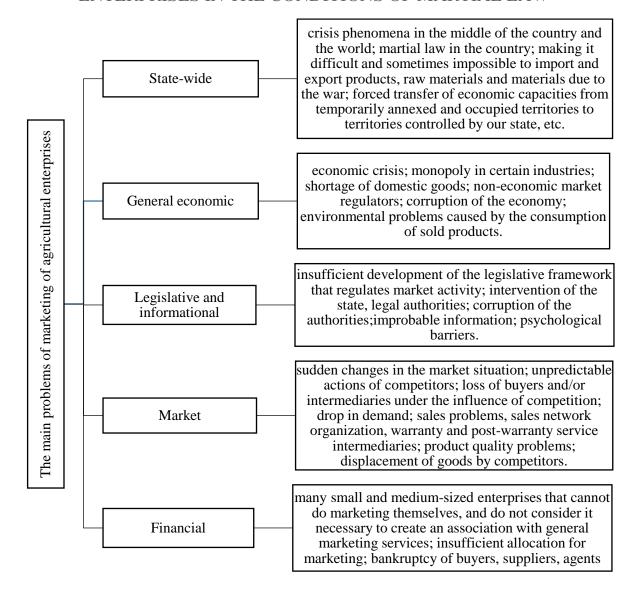


Fig. 2. Typical problems in the application of marketing by agricultural enterprises in Ukraine.

*Source: generated by the authors according to [49, c.13].* 

The process of implementing marketing activities at agro-industrial enterprises should be gradual and it is recommended to carry it out according to the following stages (stages):

- the first stage measures for advertising and sales promotion (especially through the use of Internet marketing tools, as the most expedient direction of communication policy in wartime conditions);
- the second stage is the formation of a broader approach to marketing activities,
   taking into account the needs and requests of consumers during production and sales,

promoting their implementation and satisfaction;

- the third stage renewal of production and improvement of product quality
   according to research and conclusions made in the second stage;
- the fourth stage the study of the company's opportunities on the market and
   determination of its position (product positioning strategy) taking into account the
   orientation to the potential consumer (enterprises manufacturing food products from agricultural raw materials);
- the fifth stage is the implementation of all marketing functions from analysis,
   planning, regulation and control and evaluation of results.

However, it is worth noting that the proposed stages of implementation of marketing activities at agro-industrial enterprises are the most effective at the maximum settlement of the situation in the country [45].

It is worth considering the dynamics of the number of agricultural enterprises in Ukraine (Fig. 3.) [51].

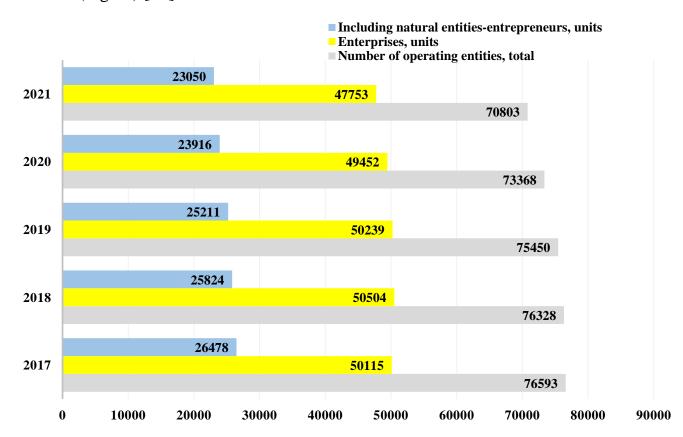


Fig. 3. Dynamics of the number of agricultural, forestry and fishing enterprises in Ukraine, 2017–2021.

Source: calculated by the authors according to [51].

Based on the results of the study of the dynamics of changes in the number of active entities of agriculture, forestry and fisheries in Ukraine, we can note that since 2017 there has been a significant decrease in the number of these enterprises by 5,790 units. in 2021, respectively. In particular, the most negative trend is observed in the number of individual entrepreneurs, as of 2021, their number decreased by 3,428 compared to 2017. As for the number of active agricultural, forestry and fishing enterprises, their dynamics did not change clearly, in particular, during 2017–2018 inclusive, we recorded an increase of 389 units, but starting from 2019, their trend was already negative and in 2021 it was equal to a decrease quantity for 2362 units. compared to 2017 and – 2751 units. from 2018, respectively.

One of the factors in the decrease in the number of enterprises, including agricultural ones, both in Ukraine and in the world as a whole, was the COVID-19 pandemic. The main challenges in this period were: a general decrease in the purchasing power of the population; quarantine restrictions regarding the simultaneous stay of a certain number of workers in commercial premises; quarantine restrictions on the functioning of agricultural markets; complication of the logistics of agro-industrial complex products; lack of adequate support from the state; quarantine restrictions and the inability to fully carry out one's economic activities provoked an increase in the financial burden on enterprises (payment of taxes, utility bills, repayment of credit obligations, etc.); rising prices for raw materials, materials and basic types of products; a decrease in the profits of enterprises and, as a result, a reduction in jobs; etc. A significant number of enterprises that did not have sufficient financial reserves were forced to stop their economic activities, while other enterprises were forced to be in a constant struggle for the opportunity to "survive" and minimize the loss of their competitive advantages in the target markets.

The military aggression of the Russian Federation against Ukraine became even more destructive for Ukrainian enterprises of all sectors, the final consequences of which are still too early to summarize. However, the consequences that have already been officially recorded indicate that a large number of enterprises have lost, partially or completely, their capacities and resources due to armed aggression and the occupation of some territories of our country, some entrepreneurs are forced to move their businesses to

more or less safe regions of Ukraine. Special challenges faced agrarian business in the conditions of war, because those regions in which active hostilities are taking place are not able to fully carry out their economic activities, in particular, to carry out sowing and other agricultural work, the situation is a little better in those areas that have been liberated from the invaders, but also in active activities are prevented by landmines that remained as a result of the occupying actions of the invaders [38, c. 11]. Another, no less devastating consequence of the war for Ukrainian agricultural enterprises was the reduction, and in some cases, the indefinite suspension of the export of agricultural products, which led to an increase in the risk of a global food crisis. The situation with the import of products, raw materials, materials and components is no better, which in turn provokes the need to find analogues (not always of the proper quality and rational price) and, as a result, the increase in the final cost of the product.

Therefore, marketing activity is not the imposition and "pushing" of a product, but a scientifically developed concept of analysis and accounting of consumer (buyer) requirements, requirements of a specific market segment, development of a new product in accordance with the identified requirements. It is a system of organizing its sales, including promotion and advertising activities. It is also a system of product movement channels (intermediaries, wholesale and retail trade firms, branches, exchanges, etc.). sales in kind and monetary terms. However, depending on the specific situation in a specific company, the goals of marketing activities may be different. The content of marketing activities consists in finding a mutually beneficial compromise between the needs of potential consumers and the production capabilities (as well as key competencies) of the company, taking into account the possible actions of competitors. Traditionally, in marketing, it is believed that in marketing activities it is necessary to start from the needs of the market, but this is not always true [49].

Marketing activity can be aimed both at changing the goods and business processes of the enterprise to meet existing demand (increasing the final consumer value), and at creating, developing or changing market demand (needs of potential consumers). But since direct demand management, in contrast to direct management of products and business processes, is often technically impossible, as it involves manipulation of the

consciousness and motivation of end consumers, it is considered wiser to focus on the existing demand (needs) and adapt the company's offers to it. On the other hand, it is almost impossible to create an innovative and successful product for the industry, focusing on the existing market demand. At the same time, it is obvious that even the development of an innovative product must begin with an answer to the question: which consumers will buy it and why will they do it?

The marketing activity of agricultural enterprises can be conditionally divided into 4 areas:

- collection of marketing information about the external and internal environment of the enterprise, marketing research, competitive intelligence, etc.;
- analysis of marketing information and making marketing decisions (segmentation and selection of target segments, assessment of competitiveness, positioning, etc.);
- planning of marketing activities (development of a marketing strategy of a marketing plan);
  - formation and implementation of the marketing complex.

These are not consecutive stages of marketing activity, as it seems at first glance, but rather complementary directions. For example, in the process of developing a marketing strategy or analyzing marketing information, it may be necessary to conduct additional research, and based on the results of marketing research, adjustments can be made directly to the elements of the marketing complex without reviewing the marketing strategy and marketing plan.

The marketing complex considers issues related to the product itself, its price and reasonable pricing, the geographic location of the product's production and sale, and a well-organized communication policy for product promotion. For agricultural producers working on the market of agricultural products, regardless of the form of ownership, the question of forming a price policy, finding the optimal distribution channels for products, and choosing an effective product promotion channel plays a key role. For effective and sustainable functioning, an agricultural enterprise must have a marketing toolkit designed to ensure its market orientation [43].

Let's consider each of the directions in more detail. Competition is only one of the forces in the environment where market entities operate. The general marketing environment consists of a micro-environment and a macro-environment.

The micro-environment (work environment) includes direct actors involved in the process of production, distribution and promotion of the market offer (the company itself, its suppliers, distributors, dealers and target consumers). The group of suppliers includes producers of raw materials and services, such as marketing research agencies, advertising agencies, web site developers, banks and insurance companies, transport and telecommunications companies, and the group of distributors and dealers – sales agents, brokers, organizers of presentations and all other market subjects that facilitate delivery of the final product to consumers [52].

The macro-environment consists of six components: demographic, economic, natural, technological, political-legal and socio-cultural environment. All of them contain forces that can have a great impact on the subjects operating in the working environment, so company managers pay close attention to the trends in the development of the macro environment and the changes occurring in it.

The following indicators are used to analyze the marketing environment of the enterprise and the market as a whole (table 1).

Table 1. Indicators used for market analysis

Index	Characteristics					
Quantitative indicators	Market capacity, market development dynamics, market share of firms,					
	market potential, etc.					
Qualitative indicators	Structure of needs, purchase motives, their dynamics, purchase process,					
	needs stabilization, informatization.					
Competitive environment	The volume of product sales by competing firms, the marketing					
	strategies used, the possibility of financial support.					
Buyer structure	Number of buyers, types of buyers, dynamics of the number of buyers,					
	regional characteristics of buyers.					
Industry structure	The number of sellers offering a similar product, the type of sellers, the					
	level of organization of their production. capacity utilization, potential					
	opportunities in competition.					
Distribution structure	Geographical features, remoteness from large residential areas, features					
	of the distribution network, transport load.					

Source: generated by the authors

Marketing research is the collection, processing and analysis of data for the purpose of reducing the uncertainty accompanying marketing decision-making. Based on general scientific and analytical and prognostic methods, the market, competitors, consumers, prices, as well as the internal potential of enterprises are studied. Information support consists of office and external research, as well as from various sources of information. The specific result of marketing research is the development used in the selection and implementation of the strategy and tactics of the enterprise's marketing activity.

Market research is the most common direction in marketing research. It is conducted in order to obtain data on the market conditions for determining the enterprise's activities. As experts emphasize, without market research it is impossible to systematically collect, analyze and compare all the information necessary for making important decisions related to market selection, determination of sales volume, forecasting and planning of market activity.

The marketing research procedure consists of a set of sequential actions (stages):

- 1. development of the research concept (statement of the problem, definition of tasks and goals);
- 2. obtaining and analyzing empirical data (development of working tools, the process of obtaining data, their processing and analysis);
  - 3. formation of main conclusions and design of research results [53].

The environment in which an agricultural enterprise operates is constantly changing, for example, over time, the profitable production of certain goods in the past loses its relevance and becomes unprofitable, while at the same time new opportunities for the production of highly profitable products appear. Therefore, the main task of the company's top management is to identify the available opportunities to ensure effective business activity in the future, which is reflected in the business development strategy.

When developing such a strategy, it is necessary to determine:

- what types of production activity should be developed in the future;
- what and when investments are needed and what exactly will need to be invested;

- what types of production activity should be reduced or stopped altogether;
- what new types of production activity should be developed;
- whether the enterprise should independently carry out production activities in the future or whether it is necessary to involve its strategic partners in this;
- how and with whom the distribution policy should be carried out in the future, etc.

The answers to these and a number of other questions should be substantiated in the company's development strategy, which covers various aspects of its activities in the future. It is especially important to identify and substantiate new opportunities for business development and to evaluate the proposed recommendations for the development of the firm by its various structural divisions.

In identifying new opportunities for the development of agrarian business, the marketing management service must play a decisive role and bear direct responsibility for lost opportunities to ensure effective business activity. The employees of this service are obliged to collect all the necessary information about the new opportunities of the enterprise and make reasonable recommendations to the top management regarding their practical implementation. The marketing management service should also act as an expert and consultant on existing business development proposals made by other structural divisions of the enterprise. Issues such as strategic partnership, joint efforts and establishment of control in the field of production and distribution of goods and others are directly related to marketing.

Entering the market, the seller can consider that his product is acceptable to all consumers. In this case, the seller is said to be implementing mass marketing. The seller may consider that the product is intended only for a certain group of consumers. Then establishing such groups of consumers is called market segmentation.

Market segmentation refers to the selection of certain groups of consumers who have the same or similar requests and needs for a given product. The specified groups of consumers form segments that are identified using the appropriate features. The main task of segmentation is to determine the target segments of the selected market.

The target segments of the market are those of them that the company has

decided to enter with the corresponding products. Each of these segments must be both identified and described in sufficient detail. The latter is necessary in order to develop appropriate marketing strategies.

Let's move on to the consideration of the next direction - planning. Planning involves the development of production and sales marketing programs based on the construction of market and economic forecasts, forecasts of the development of the scientific and technical process at the enterprise, which are based on the interaction of all strategic resources. Marketing programs reflect specific strategies and measures aimed at the implementation and realization of the company's intended goals. They attract entrepreneurs from the point of view of forming a new method of economic management, which reduces guarantees of product sales. Marketing programs are developed based on the results of comprehensive market research and analysis of own production and sales capabilities, which ultimately allows the enterprise to determine the most optimal and economically profitable target sales markets for its work. The marketing program represents a kind of peak (crown) of the work of the marketing service of the enterprise.

The development of strategic plans for the development of the enterprise on the basis of marketing research (planned programs) has the following advantages:

- allows timely coordination of the efforts of a large number of structural services, divisions and persons whose activities are connected in the production and sales cycle, both in time and in space; ensures clear interaction between performers in order to solve priority tasks of the enterprise in general;
- minimizes conflicts arising at the enterprise as a result of different approaches in understanding and interpreting the enterprise's goals;
- allows you to determine possible changes in the development of the market situation and the external environment of the enterprise and ensures the readiness of the team for the corresponding optimal reaction of the enterprise to these changes.

Marketing planning is a continuous, cyclical process. Marketing research and marketing programs are carried out and developed constantly, permanently. Only in this case can their efficiency, effectiveness, optimality and expediency be achieved.

The enterprise's marketing services develop strategic and tactical plans for the enterprise's production and sales activities, which include forecasts of the development of the market situation, its products, price policy, sales policy, including advertising measures, sales promotion, service or communication policy. Therefore, it is very important to create such services not only in large agricultural enterprises, such as agricultural holdings, but also in all other enterprises of the agrarian sphere, including farms.

In our opinion, precisely because of the adaptation of the main tools of the marketing complex from a theoretical basis to practical actions, the agrarian sphere may not only be able to increase the level of competitiveness of enterprises, but also generally improve the results of their production and economic activity in the long term [54].

Marketing strategy is the basis of the company's actions in the specific conditions of market development and its demand in order to realize the company's goals.

The main (global) directions (types) of the strategy of entrepreneurial, production and sales, scientific research, marketing, etc. activities of the enterprise are:

- the strategy of internationalization forms the development of new domestic and foreign markets by expanding not only the export of goods, but also the export of capital, that is, when new enterprises are created abroad that produce goods locally (in former importing countries);
- diversification strategy forms the mastery of the production of new goods, product markets and types of services, including not just the differentiation of product groups, but the spread of entrepreneurial activity to completely new and unrelated to the main types of enterprise activity;
- segmentation strategy reflects the deepening of the degree of saturation with the offered goods and services of all groups of consumers, the choice of the maximum depth of market demand.

The model of marketing reflections, which is built on the basis of two main concepts of planning marketing activities, follows: when choosing a target market (within the industry or individual segments) and a strategic advantage (uniqueness of

the product or its price), the following main strategies of the enterprise can be distinguished:

- a strategy of concentrated, targeted marketing, in which the enterprise-manufacturer (seller) of the goods concentrates its efforts on one or several few market segments, develops marketing approaches, develops and produces goods to fully satisfy the needs of these groups of buyers (consumers);
- the strategy of mass, undifferentiated, standardized marketing or the strategy of advantage in terms of production costs, in which the company-manufacturer of goods (seller) addresses the entire market simultaneously with the same product, that is, engages in mass production and sale of the same product for all buyers simultaneously;
- the strategy of differentiated marketing by products, when the enterprise produces different types (models) of the same product, differing in consumer properties, quality, design, packaging, etc. and intended for different groups of consumers in the market, that is, for a large number (many) market segments [38].

Depending on the market share, there are three types of marketing strategy:

- an offensive, creative strategy or an entry strategy, which involves an active, aggressive position of the manufacturer over the market and aims to expand its share over the market;
- a retaining or defensive strategy, which provides for the preservation of the existing (conquered) share of the market by the company producing goods and the maintenance of positions on it;
- a withdrawal strategy, which involves the gradual curtailment of operations and the liquidation of business by type of product being produced.

Depending on the state of market demand, product marketing strategies have the following types:

- conversion marketing strategy – it is assumed in case of negative, negative demand for the product. This marketing strategy should turn negative demand into positive (positive) by developing and applying measures designed to change the negative attitude of the consumer (market) towards this product;

- a creative strategy that develops marketing demand for the product is absent or potentially present, it must be developed and actually created;
- the strategy of stimulating marketing the demand for the product is insignificant (low) and it should be revived, sharply increased;
- remarketing strategy product demand tends to decrease, measures should be taken to revive and restore it;
- the strategy of synchromarketing or stabilizing marketing the demand for the product is subject to sharp fluctuations in the market and measures designed to stabilize and level it should be taken;
- the strategy of supporting marketing the demand for the product is at the optimal level for the company, and the task of the marketing strategy is to maintain this level with appropriate measures throughout the planned period;
- demarketing strategy product demand is excessive, to a large extent (degree) covering supply. The task of marketing is to achieve its reduction, why, in particular, are used: increasing prices, reducing the level of service, etc.;
- the strategy of countervailing marketing the demand for the product is irrational from a social, legal, health or other point of view, and marketing aims to eliminate such demand [48].

Marketing strategies may also differ in relation to the products produced by the company. Based on the task of optimizing the product range, the marketing service should consider and take into account the following areas of marketing strategy: differentiation, vertical integration, differentiation, narrow product specialization. At the same time, marketing strategies for the product may differ based on the task of optimizing the export assortment of goods:

- horizontal marketing strategy the new product is a "continuation" and is serially produced; it is designed for a formed circle of consumers and its production is carried out without major changes in technology at the enterprise;
- conglomerate marketing strategy the release of a new product is being organized, and therefore, the development and implementation of new technologies, development of new markets and new service points are required [38].

Depending on the market situation and the developed marketing strategy, strategic decisions regarding the improvement of all spheres of the enterprise are developed and substantiated. The marketing of the enterprise changes its strategy if the external factors regarding its activity have changed; prospects for taking measures that can significantly increase the company's profits have opened up; new advantages of the enterprise have changed or appeared (customer relations with the enterprise) or tendencies toward possible changes in this field have emerged; the tasks set in the strategy have already been solved and it is necessary to set new tasks and new solutions in the reorientation of the market, in the creation of new products and the application of new methods in the competition of the enterprise.

The marketing activity of agricultural enterprises is based on the analysis, forecast and implementation of business activities at the stages of production, storage, processing, transportation and distribution of agricultural products in order to maximize the profit of agricultural producers and satisfy consumer demand.

The main ways of improving the company's marketing activities can be divided into strategic and tactical. Strategic is a change in the management approach, and tactical is a redistribution of functions and a change in the structure of the marketing department. Making a strategic decision is based on a comprehensive analysis of the degree of the most significant goals.

The main tasks of tactical planning are:

- taking specific actions to achieve strategic goals;
- development of an operational plan with specification of responsibility, time and place of implementation of the operational plan;
  - specific implementation of the operational plan.

The development of tactical action plans offers for each action (event) a review and justification for their implementation of the relevant resources and technical and economic characteristics, which, by means of ensuring the set goals, realize the maximum amount of profit with the minimum expenditure of resources.

The process of marketing management can be considered as a decision-making process in marketing. Marketing decisions are defined as actions to achieve marketing

goals. The implementation of marketing decisions consists in planning, organization, control, motivation of their implementation. In order to meet the needs of consumers, organizations must create products, set accurate prices for them, deliver products to the right places (that is, where there is a demand for them), spread information about the existence of this product using promotion methods.

To achieve the desired response from target consumers, manufacturing companies use a variety of means and tools, which form the marketing mix (marketing complex). Marketing mix is a set of marketing tools used by the company to solve marketing tasks in the target market, proposed by Jeremy McCarthy (Table 2). The marketing complex is a set of managed properties of marketing activity, manipulating which the management of the organization tries to best satisfy the needs of market segments.

Table 2.

#### Marketing-mix

Marketing element	Characteristic
Product	Product (development, prototype production, quality assurance)
Price	Price (determination of cost, pricing)
Place	Distribution (market research, distribution network, sales organization)
Promotion	Promotion (non-physical promotion of products on the market, advertising)
Personal	Personnel (work with personnel)

Source: generated by the authors according to [41]

The given structuring of the marketing complex fits into the "4R" concept: product, price, place, promotion.

Traditional integrated marketing based on the product (4P), with the development of the market, it has shifted to the buyer, then focuses on its values, and finally, marketing interaction comes first. It can take a variety of forms depending on the industry and the problems of companies – cooperation, feedback, digitalization [41, p. 290].

The effective operation of an agricultural enterprise depends on a synergistic combination of marketing tools, taking into account the characteristics of products, the

market, the behavior and needs of consumers, with a marketing management system. It is this combination that will make up his comprehensive marketing system.

The development of the marketing complex for each agricultural enterprise is carried out individually and has its own specific characteristics. The most important components of the marketing complex and the most effective, in our opinion, directions for the formation of each of them are listed in table 3 [43].

Table 3

Marketing complex of an agricultural enterprise

Goods	The products that are presented for sale in the agricultural enterprise should be characterized by fairly high indicators of competitiveness due to the environmental friendliness of the products and their high quality.  The main directions of product diversification:
	- creation of new types of agricultural products;
	- cultivation and sale of ecologically safe agricultural products;
	- expansion of the assortment due to the inclusion of a product with various
	properties (strawberries, raspberries, etc.);
	<ul> <li>cultivation and sale of vegetable products of early varieties (in greenhouses)</li> </ul>
Price	The range of sold products should be distinguished by a fairly flexible pricing policy,
	which is aimed at buyers with different types of income (low, medium and high).
	The main directions of price diversification:
	- ensuring quality conditions of product storage, with the aim of seasonal expansion
	of product sales;
	- due to sorting and finishing of own products (increase the price by 20-30%);
	- discounts (up to 10%) for a large batch of products;
	- discounts (by 10%) for self-export of a large batch of products;
	- discounts for additionally purchased lots of goods in large quantities (up to 5%).
	The main directions of sales diversification:
	- ensuring active sales of products from July to October through various distribution
Sales	channels;
system	- ensuring sales through the search for the most profitable distribution channels; -
	provision of active direct sales to consumers in large batches (grain, vegetables);
	- provision of active indirect sales to wholesalers and other intermediaries in large
	batches at moderate prices.
Methods of	For effective promotion, the enterprise should use, first of all, the Internet resource,
promoting	use mass media, publications in specialized agribusiness magazines, take an active
goods on the	part in exhibitions and fairs.
market	

Source: generated by the authors according to [43]

Decisions about the activities of the marketing complex should be influenced by both distribution channels and end consumers. As a rule, a company can change

product prices, supply volumes, and advertising costs fairly quickly, but developing new products and transforming distribution channels take considerable time. Therefore, in the short term, a company is able to make far fewer changes to its marketing mix than might be expected based on the number of tools included in it. The function of the marketing mix is to create a set (mix) that would not only satisfy the needs of potential customers within the target markets, but also maximize the effectiveness of the organization. In the competition, companies that satisfy the needs of buyers, providing them with cost savings, convenience of purchasing goods and effective communications, win.

The specifics of agriculture require agricultural producers to constantly search for ways to sell their products on favorable terms for the economy. At the same time, it should be taken into account that among the variety of methods of stimulating the sale of products, it is necessary to choose the most effective under modern conditions. Marketing approaches to the selection of agricultural product distribution channels must meet the following requirements:

- distribution channels should be chosen in such a way that they fully provide access to certain market segments;
  - it is necessary to ensure the flexibility of distribution;
- the use of one channel should not imply the possibility of distributing products to another;
  - the possibility of weak links in the installed distribution chain must be excluded.
    Opportunities to improve marketing channels by:
- strengthening of supporting organizational structures (for example, financial institutions, insurance agencies and rural transport companies); improvement of physical infrastructure (eg roads, electrification and communication services);
- the use of horizontal marketing systems based on cooperation between farmers [55].

It should be noted that it is impossible to ask questions about any marketing program at all, if the marketer does not have a product at his disposal that can be offered to the market (consumer). Moreover, this offer should represent a certain value for the

consumer. If there are at least two parties, each interested in exchanging with the other party, they must have some means to interact. The offered product must be available to the consumer interested in it, so the next function of the marketing mix must solve this task. The consumer always evaluates the product, both based on a set of its consumer qualities, but also in the sum of the costs associated with its acquisition. Here we are talking about the well-known marketing ratio "price-quality". Specialists more clearly define this relationship as "utility-quality": the consumer analyzes the utility of the product offered to him and the price acceptable to him for this utility. From this follows such a component of the marketing complex-price policy. Potential participants in the deal will never be able to learn about each other if there is no communication between them — accordingly, the last element of the marketing complex is the communication policy. The parties to the transaction must be sufficiently informed about the essence of the available offers, each of the parties must, using means of communication, convince the opposite party of the attractiveness of its own offer.

Thus, the main goals of the enterprise's marketing activities are the study of the following issues:

- study of the consumer and the motives of his market behavior;
- enterprise market analysis;
- analysis of sales channels;
- research of activities in the field of advertising;
- analysis of the volume of sales;
- competitor research;
- study of the manufactured product;
- determination of the most effective methods of product promotion.

The main task of the enterprise's marketing activity is to reflect and strengthen all trends in improving the production of goods and services to increase the efficiency of the company's work.

Additional tasks of the enterprise's marketing activity should include:

- studying the market of goods and services;

- observation of the competitive environment and determination of the firm's position on the market;
  - development of recommendations for improving activities [54].

Agricultural marketing includes such components as production of agricultural products, agricultural machinery, fertilizers, means for chemical protection, fodder, etc. The marketing component includes all areas that ensure the movement of agricultural products from the producer to the final consumer, i.e. the process of collection, storage, processing and sale of products.

The peculiarities of the marketing activity of agricultural enterprises are determined, first of all, by the peculiarities of the markets of agricultural products and the peculiarities of the price policy, demand and supply for these products (Fig. 4).

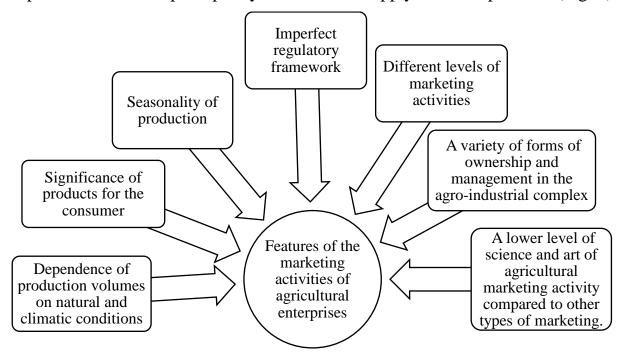


Fig. 4. Features of the marketing activities of agricultural enterprises *Source: generated by the authors* 

Consider those shown in fig. 4 features of marketing activity of agricultural enterprises in more detail.

The first feature shows a direct relationship between financial and economic results and natural and climatic conditions. The production of agricultural products depends on the fertility, quality and intensity of land use.

The main means of production is land. The work process and the production of products in agricultural enterprises are directly related to the land, its quality, fertility and nature of use. The elasticity of the supply of agricultural products is low, and the further increase of the cultivated area is impractical [56].

Rational use of land resources, application of ecological technologies allows obtaining agricultural products of the required quality and quantity. At the same time, there is also an inverse relationship - with irrational use of land, its fertility decreases and further degradation occurs. A similar relationship can be traced to the use of land resources in the field of animal husbandry. This relationship determines the quality, quantity and range of products.

The second feature of agricultural marketing is that agricultural products are of particular importance to the population and food security of the country in general. When satisfying the demand for agricultural products, the age, gender, national preferences, health status of the population, as well as their provision in sufficient quantity and quality are taken into account. If these are perishable goods, it is necessary to promptly organize the delivery of the goods, ensure safe packaging. Specialists or marketing services of agricultural enterprises deal with basic necessities. Therefore, they should satisfy their needs and requests in a timely manner and in the necessary quantity and assortment, taking into account the age, national traditions, and state of health of consumers. The product, as a rule, has a short shelf life, therefore speed of delivery, safe packaging, and service provision are necessary [57].

The third feature of agricultural marketing is related to the seasonality of agricultural production. Crop products are usually obtained 1–2 times a year, while the production process is calculated throughout the year. In this regard, marketers must respond to market conditions, flexibly respond to changing trends in population demand. The peculiarity of the marketing study of sales markets and the promotion of agricultural products is related to the seasonality of production and production.

Agricultural enterprises work under conditions of risk and uncertainty, since the results of production are strongly influenced by natural conditions. And, as a result, the final results largely depend not only on the quantity and quality of the used resources,

but also on the specific conditions in which production is carried out [58]. Therefore, the producer of agricultural products should foresee three models of his behavior in production and sales activities:

- the first model should determine the producer's actions in case of favorable weather conditions and the associated increase in the gross production of crop and livestock products;
- the second model should be built on the assumption of adverse weather conditions;
- the third model of the producer's actions should be based on the premise of possible natural disasters [59].

The seasonality of production and production determines the specifics of marketing support for the study of the sales market and product promotion. In connection with the fact that the consumer may be the last, there is an expediency of marketing activity on the processing of products directly by the producer in the economy [60].

The fourth feature of agricultural marketing is manifested in the existence of various forms of ownership and management in the agricultural sector. The variety of marketing technologies, market strategies, forms and methods of agricultural marketing is determined by the enterprise's affiliation to one or another form of business. Each form of business has its own characteristics of management, organization and functioning of the marketing system, which also determines the multifaceted nature of competition in agriculture.

The variety of organizational and economic forms, which determines the multifaceted nature of competition, which is governed only by consumer demand and its satisfaction. Hence the variety of strategies and tactics, the desire to improve the forms and methods of agricultural marketing, to adapt them to the needs and interests of consumers [61].

In many countries, the production of agricultural products is mainly carried out by farms, which, although they can be quite large enterprises, are, as a rule, unable to monopolize a separate sector. There are always many sellers on the market of

agricultural products, which hinders the ability of individual producers to influence the price. Thus, two main conditions of perfect competition are manifested in the agricultural sector: the presence of a large number of sellers on the market, each of whom does not have a sufficient number of product offers to influence the price; the ability of manufacturers to freely enter and leave the market.

The fifth feature of the agricultural marketing system is its extensive and multilevel nature, as it includes production, processing and sale of products. At the same time, the multi-level nature of the agricultural marketing system implies that the shortcomings and errors of one level lead to a decrease in the effectiveness of the marketing system in general.

In agriculture, the working period does not coincide with the production period: in this regard, marketers must be well aware of the dialectics of consumer demand, be able to predict the trend of its satisfaction, competition, market conditions, i.e. what depends on the effectiveness of marketing activities of agricultural enterprises [62].

Combination of specialization and diversification of production. For example, a commodity producer specializing in the production of grain products has the opportunity to grow livestock products (cattle, pigs). The production and sale of these types of products are based on fundamentally different approaches, but, on the other hand, with such a combination of production, the producer is largely insured against large losses, since in the event of a grain failure, he will receive additional profit from animal husbandry products, using purchased fodder.

The sixth feature of agricultural marketing is related to the imperfection of the legal framework of the country in the field of regulation of marketing activities, which negatively affects the development of agricultural marketing in general. Uncertainty, constant changes, amendments at the state level make it impossible to develop the marketing of agricultural enterprises.

The seventh feature of agricultural marketing is the lower level of science and art of agricultural marketing activity compared to other types of marketing. This is due, first of all, to the fact that producers are dealing with products of daily demand, and also in a scarce market, so managers of agricultural enterprises do not pay enough

attention to marketing, as a result of which they do not have experience in this activity. Until now, a comprehensive science of agricultural marketing has not been formed and, therefore, there are no scientifically based recommendations for its implementation.

Thus, it can be noted that the marketing of agricultural products is a complex system that requires constant regulation and management. There is a constant exchange of information and resources between an agricultural enterprise and its surrounding marketing environment. An enterprise can exist and develop only by harmoniously interacting with the surrounding marketing environment. He needs to adapt to changes in the external marketing environment, while not excluding the possibility of influencing it.

For the successful operation of the enterprise, it is necessary to manage many interdependent and interacting processes. The open system of the enterprise must interact with the environment and provide its resources to the environment for its survival. This system cannot be clearly delimited. It must constantly change, adapt to the environment. The enterprise in general is a system, that is, a set of interacting elements that receive some input data from the environment, transform them and release some output data to the environment. This interaction of elements means that people and units depend on each other and must work together. Usually, the "output" of one process is the "input" for the next one, that is, the advantage of the process approach to marketing management is a program for performing certain management procedures combined in several stages. The result of the process of performing certain management procedures of marketing activities is the development of marketing decisions.

The following measures are necessary to improve the efficiency of the enterprise as a whole and improve marketing activities:

- correct construction (improvement) of the organizational structure of marketing management;
- selection of marketing specialists (marketers) with the required high qualification;

- creation of conditions for effective work of employees of the enterprise's marketing department;
- clear distribution of tasks, rights, duties and responsibilities in the marketing management system;
- organization of effective interaction of marketing services with other services of the enterprise.

Today's conditions require agrarian enterprises to direct their development to the future, with an orientation towards satisfying the needs of consumers by more effective means than competitors, because it is due to successful marketing that the necessary conditions for the sustainable development of an enterprise in the agrarian sector are created.

To ensure the stable development of agricultural enterprises in modern conditions, it is necessary to develop a strategic plan based on marketing research and taking into account all the peculiarities of marketing activities of agricultural enterprises.

The need to introduce marketing technologies into agricultural activity is conditioned by the current state of the country's economy. Marketing activity can be aimed at achieving certain results (increase in production, sales volumes, improvement of the enterprise management system, etc.) only under the condition of flexible response to market changes.

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#### 4. Marketing activities of Ukrainian companies in today's conditions

In the modern conditions of market development, planning methods continue to occupy more and more relevant positions in the creation, future prospects and everyday work of the enterprise. Speaking today about planning in general, we want to note that marketing offers a considerable number of varieties of its alternatives and varieties. And today we want to dwell on such a type of planning as "marketing planning" at the enterprises of our state. We state with confidence that strategic planning positions itself as almost the only way to achieve the specific goals of the enterprise, contributes to the stability of its activity, ensures the construction of forecasts, alternatives and perspectives of its functioning in the future.

The world crisis, which was created by the pandemic in 2019 and Russia's military attack on Ukraine on February 24, 2022, created tough conditions for business operations. Entrepreneurs need to be ready to respond quickly to the needs and behavior of consumers in order to continue running their business. The marketing activity of enterprises at this time in the conditions of the country's martial law is an extremely important problem, since the previous crisis related to COVID-19 has already made certain adjustments to the work of enterprises and the life of society. Due to the military actions, there is a significant reduction in commercial activity and consumer interest in shopping. In view of this, today, in order to preserve and develop business as a strong pillar of the Ukrainian economy, questions are raised regarding the implementation of transformations in the marketing activities of enterprises in crisis conditions, the development of effective marketing solutions that will attract attention and expand the circle of potential consumers, and increase sales volumes.

Under the conditions of the modern market economy, each company today chooses its own tactics of behavior on the market, and no one can prohibit such an approach. Everyone decides for himself which steps to take to get the desired result. From yes, it follows that today's strategies do not have clear patterns. But let's note that today's market leaders are primarily those enterprises that strategically plan and

develop. Otherwise, it is simply impossible to imagine an enterprise with an active competitive advantage [74 p. 130].

Today, marketing is one of the main business philosophies that allows enterprises to survive, actively develop and compete in the market. Marketing creates conditions that contribute to the adaptation of enterprises to the market situation, that is, it releases the initiative from below, stimulates the conscious application of risk. After all, the consumer also benefits from the development of marketing due to the reduction of risk from the purchase of goods, flexible pricing, expansion of the range of goods and services, and improvement of the quality of service [73, p.8].

Many works of both foreign and domestic scientists are devoted to the development of marketing activities at the enterprise: F. Kotler, R. Assel, T. Primak, D. Trout, E. Rice, D. Evans, B. Berman, A. O. Starostina, S.S. Garkavenko, L.V. Balabanova, I.V. Balabanova, R.A. Mucha, V. Rudelius, O. Azaryan, O. Vinogradov and others. However, it should be noted that there is no unified understanding of the essence of the subject concept and today there is a real need to develop the marketing activities of the enterprise in the conditions of martial law.

Marketing is a planned process. All activities of marketing services are carried out in accordance with planned tasks developed on the basis of the principles of scientific planning and appropriate analysis of the state and development of the market. Marketing planning is based on the firm's strategy, which is based on the results of marketing research and the need to achieve the set goals. Planning should be understood as a process aimed at creating one or more desired future states that contain two components: optimistic and pessimistic. Pessimism is based on the belief that the desired state will not appear if the necessary actions are not taken. Optimism is rooted in the confidence that something specific needs to be done to increase the probability of the desired state appearing [74].

Marketing planning is the fundamental basis of entrepreneurial and managerial activity in any field when performing any of the inherent functions. It allows you to ensure the constant efficiency of the enterprise and reduce the risk of approved decisions. The goal of marketing planning is the ideal result of activity in the future.

The marketing plan is an organizational management document that allows you to combine all types of marketing activities in accordance with the goals of the company, its resources, and the organization.

An analysis of the world practice of planning shows that two approaches are needed to reflect the diversity of the company's prospective activities — planning from the past to the future (long-term, or extrapolation) and from the future to the present (interpolation, or strategic). The first approach is typical for planning the production of products that are in the stage of development or saturation and the stability of technological processes and characteristics, which is different. The second approach is effective for planning the processes of product renewal, creation of new factories and reorganization of existing ones, and the like. These processes differ in the degree of uncertainty and a large volume of organizational work [73].

It is important that the heads of enterprises realize the special importance of marketing functions for the organization, understand the expediency of classifying the functions of the marketing service, otherwise, in modern market conditions of business, the enterprise risks encountering a whole system of problems and errors in managing its activities.

Performance of the main marketing functions is of great importance for increasing the level of competitiveness of the enterprise. After all, it is the decisive factor in the commercial success of the company in the conditions of the market economy.

Thus, marketing represents for entrepreneurs a set of activities that contains unlimited opportunities for successful commercial activity to increase sales volumes and obtain maximum, long-term profit, i.e. increase the efficiency of the enterprise, as a whole, its competitiveness.

Currently in Ukraine, the situation, planning of marketing activity corresponds to the approaches used in anti-crisis management, and is carried out in conditions of lack of time and resources (especially financial), deterioration of the factors of the internal and external environment of the enterprise, changes in its position on the market [76]. Accordingly, the goal of such planning is the financial recovery of the

enterprise, i.e. solving problems of a financial nature, underutilization of available resources, poor management, lag in technologies, and so on. Marketing planning is directed either to the prevention of the coming crisis, or to its limitation (mitigation), or to the exit from the crisis.

The effectiveness of management is currently determined by the ability of marketing to quickly adapt to the changing business environment and create new opportunities for the enterprise. The high adaptability of marketing in anti-crisis management is explained by the fact that marketing activity reflects the most popular market trends, forecasts the market situation, and rearranges the goals and objectives of the enterprise's operation in accordance with changes in the business environment. In addition, marketing is able to reduce costs for sales and promotion of the company's products while maintaining the effect of income generation (reduction of the marketing budget while maintaining the effectiveness of marketing activities).

First of all, marketing tools within the framework of planning should be directed to the development of strong and sustainable competitive advantages of the enterprise, as well as the formulation of a marketing strategy in a crisis situation. The most typical marketing tools include the following:

- strategic plans aimed at preventing or exiting the enterprise from the crisis;
- advertising campaigns (in times of crisis, low-budget advertising media with significant coverage of the target audience become relevant);
  - effective sales promotion programs;
  - diagnosis of external and internal risk factors for the enterprise;
  - programs to minimize marketing costs;
  - search for new market opportunities.

Among the existing marketing tools relevant for modern business in crisis situations, those that are more suitable for its product are selected.

At the same time, the tools are described by quantitative and qualitative characteristics. At the stage of planning marketing activities, criteria are developed, according to which, in the future, after the end of a certain period, the effectiveness of the use of selected strategies in general and marketing tools in particular will be

evaluated. The choice of performance assessment criteria will depend on the company's field of activity, on the specifics of the offered goods and services, as well as on the specific marketing communication tools selected as part of the developed strategy. Possible criteria may include the following: change in market share in percent; the number of signed contracts with clients; profit; sales volume; number of returning customers; the number of requests for consultations.

The marketing plan should have justified tasks for all elements of the marketing complex. The marketing plan should contain complete information about the forms and methods of product positioning on the market, pricing and sales corporate strategy in each market segment.

Most foreign companies adhere to a high degree of decentralization of management, in particular, planning of marketing activities. A company with a high degree of centralization of management, as a rule, creates a strong planning group at the center.

As a rule, the responsibility for the development of the marketing plan is borne by the key management figures in the marketing management system. The lower level of such managers are managers of individual products or managers of divisional units.

Given the importance of the marketing plan, it is approved even at a higher level of management compared to its development. In most cases, the marketing plan is approved either by the president, or the chairman of the board, or the chief executive officer of the company, i.e. managers who are directly responsible for the success of its activities.

Marketing plans, as a rule, are developed in separate divisions of the company, whose managers must be responsible for the implementation of their sections of the plans.

The employees of the marketing planning departments perform only consulting and coordinating functions, helping the relevant managers in the development of individual positions of the marketing plan and monitoring its implementation as a whole.

The company's business planning department also influences the marketing planning process, but in a more strategic way. So, employees of this department must:

- develop a planning system and its structure;
- initiate the development of new planning tasks upon receiving relevant proposals from operational divisions;
- ensure the connection of various planning links in the company, for example, production and marketing;
  - monitor the implementation of approved plans.

Marketing in our country has great prospects, but its development is hampered by the fact that this field of activity requires significant investments in training, research, reorganization of production activities and sales functions. However, in the conditions of intensifying competition, it will be mastered, it will be engaged in by everyone who seeks to ensure the company's long-term success. Consumer behavior is changing: the influence of marketers on the consumer is weakening, the consumer is becoming more informed and demanding. Accordingly, marketers' actions based on demand forecasts should precede those of consumers. This modifies the theory of strategic marketing [78, p. 70]. According to F. Kotler, the evolution of the modern market under the influence of globalization takes place in the following directions.

These directions of market evolution require additional research when defining marketing concepts, as well as consideration when choosing and building marketing strategies. Thus, the growth of competition on a global scale makes it difficult for young companies to enter the market due to fairly high entry barriers. Companies can largely lose their "national" flavor, thereby becoming impersonal and indistinct.

Summing up a conditional summary of the consideration of certain issues of planning marketing activities in management, we will highlight a number of requirements for a modern marketing plan. It should:

be specific, contain clear and measurable goals, as well as actions and
 measures, deadlines for each type of activity and specific persons;

- be realistic, otherwise there is no point in developing it. The plan will change taking into account the changing market situation and demand, but to understand how good and effective the plan is, it needs to be prepared;
- to be simple and understandable to each member of the team, which will allow
   it to act and work as a whole to achieve the intended goals;
  - assume remuneration of employees;
- provide for the restructuring of the functional duties of the marketing department with an emphasis on market monitoring and analysis, benchmarking with the main competitors;
- optimize the development of management decisions in marketing (if the size of the company allows, create a special group);
- form the choice of pricing strategy in accordance with real threats to the financial and market situation of the enterprise;
- include marketing measures in modern conditions, covering all stages and zones of the company's functioning;
- provide a system of indicators for evaluating the implementation of the components of the marketing plan and monitoring the effectiveness of the implementation of the planned measures.

In general, a modern marketing plan is designed to direct the company to effective actions focused on long-term and currently useful goals. In this case, tools and measures that give the enterprise only a medium-term effect should become the key areas of savings.

Marketing planning is a step-by-step process of research and analysis of a specific market situation, development of goals, strategies and marketing plans that correspond to the resources and capabilities of the enterprise. It is supplemented by practical implementation, evaluation and control of actions aimed at achieving the set goals. Such a systematic approach at enterprises of the processing industry allows to identify and evaluate any marketing opportunities that can become means to achieve the goals of enterprises, or potential threats that can block these ways.

In the practical activity of processing enterprises, the marketing environment is often variable, some opportunities open immediately, while others may disappear from the researcher's field of view or be blocked. Thus, marketing planning should be treated as an adaptive, fine-tuning process. The result of such a consistent process is a document that summarizes the results of the research, captures the marketing strategies of the processing company and reflects the actions that must be taken to achieve its marketing goals, as well as determine the methods by which the degree of progress towards the goals can be measured.

Despite the fact that the marketing plan becomes an official document after its approval by the company's management, in our opinion, it should be constantly revised in accordance with changes in the product policy and the competitive environment.

The marketing plan becomes a practical program for managing the company's activities only after the strategic directions of development, as well as the long- and short-term goals of the company, are reflected in the appropriate tactics and tools of the marketing complex, which, in turn, need to be reflected in the programs of daily marketing activities.

The strategy of internal marketing is one of the effective ways to orient all enterprises that are participants in the distribution channels of the products of processing enterprises to meet the needs of consumers and thereby ensure the support of the marketing plan. A properly developed internal marketing strategy guarantees high-quality work of personnel and improvement of the organizational structure, establishing cooperation between the marketing department and other departments.

Internal marketing plans should motivate employees of processing enterprises, intermediaries to a higher level of participation in the affairs of the enterprise and care for its interests, that is, this is a necessary condition for ensuring profitable and effective management of relations with consumers.

So, if when creating marketing plans, marketers make decisions on each element of the marketing mix, then with the help of coordinated strategies related to customer service and internal marketing, they support decisions about product, place, price and means of promotion that affect the practical implementation of the marketing plan.

In modern economic conditions, domestic enterprises should develop external strategies for the supply of raw materials and distribution channels, which would allow forming favorable relations with suppliers, partners in the technological process and distribution channels. In addition, an internal marketing strategy is important to ensure the support of the workers and management of the enterprise, for the appropriate staffing, which will allow the implementation of the adopted marketing programs in the future.

The most difficult task of the enterprise is the search for methods of determining the effectiveness of its activities, mechanisms and indicators that will be used to assess the degree of progress towards the set goals. By comparing the actual results achieved with the forecasts, the management of the processing plant must determine: where things are going well, and where intervention is needed to correct the situation. An important method of analysis is the comparison of the results of the company's activity with the results of competitors and the timely identification of emerging problems.

As the experience of Ukrainian enterprises shows, even the most ideal marketing plan turns out to be unreliable if its effective practical implementation is not organized. To do this, it is necessary to establish standards for assessing the degree of progress towards the set goals, determine the reality of marketing programs, conduct diagnostics of the results and make corrections if the achieved results do not meet expectations.

In our opinion, enterprise marketers need to evaluate such indicators as market share, sales volume, sales profitability and production productivity. Enterprises in this industry cannot do without a deep understanding of what their consumers need. In practical terms, this means that marketers must use advanced technologies, forming an individual approach to each target audience, in order to adjust their marketing plans if necessary.

Marketing planning is done differently in different organizations. This concerns the content of the plan, the duration of the planning horizon, the sequence of development, and the organization of planning. Yes, the range of content of the marketing plan for different companies is different: sometimes it is only a little wider than the plan of the sales department. At the second pole, the marketing plan, based on

consideration of the business strategy, results in the development of an integrated plan that covers all markets and products. Individual organizations, especially small businesses, may not have a marketing plan as a single document that includes several types of marketing plans. The only planning document for such organizations can be a business plan drawn up either for the organization as a whole or for individual areas of its development. This plan provides information on market segments and their capacity, market share; characteristics of consumers and competitors are given, barriers to market penetration are described; marketing strategies are formulated; forecast estimates of sales volumes for several years (perhaps for 5 years) with distribution by year are given.

At least three main principles are important for internal system planning, which should become the main part of the practical activity of Ukrainian enterprises in the conditions of market relations: first of all, the one who will later implement these plans should develop plans; the level of competence in planning must correspond to the level of competence in managing the company's resources; it is necessary to ensure flexibility and adaptability of planning in accordance with changes in the external and internal environments of the enterprise.

Planning in marketing solves the following main tasks:

- determines the goals, main principles and evaluation criteria of the planning process itself (for example, differentiation of goods depending on the selected market segments, comprehensive planning of the market strategy, determination of financing volumes and terms depending on marketing goals); sets the structure and reserves of plans, their interrelationship (for example, connects plans for the sale of goods by separate market segments, implements a comprehensive market strategy, sales and production activities of regional offices and branches);
- establishes initial data for planning (state and prospects of market development, existing and future needs of end users of the company's products, forecast of changes in the product structure of markets, etc.);
  - determines the general organization of the process and planning boundaries.

The described approach to marketing planning, which combines the solution of its strategic and tactical tasks, makes it possible to overcome the contradictions that arise when trying to divide marketing into strategic and operational. This means that strategic marketing, in fact, is a constant and systematic analysis of market needs, which leads to the development of effective products intended for specific groups of consumers that have special properties, and this, in turn, distinguishes them from products -competitors and, thus, creates a sustainable competitive advantage for the manufacturer.

The purpose of the business plan is to establish rather extensive goals of business activity strategies for the SHP for a period of up to five years. In this aspect, a business plan is similar to a strategic plan, which is also focused on a fairly long time interval. Another common boundary of these two plans is the strategic consideration of developing or acquiring new products, developing new markets in order to achieve the desired financial goals. A business plan, like a marketing plan, is based on in-depth marketing research. However, the first does not contain action programs, which is a characteristic feature of marketing plans, but outlines only the main directions of action in a generalized form. For example, if one of the selected strategies includes a new product development strategy, the business plan also provides generalized data on supporting the implementation of this decision, but the statement of such a strategy is not accompanied by a new product development plan.

In most organizations, regardless of the type of marketing activity plan used, its development is preceded by the development of the company's activity plan as a whole. Marketing is only a branch, albeit a very important one, on the company's plan tree. Other branches are plans for production, research and development, finance, personnel activities, etc. The effectiveness of marketing planning is significantly increased when the employees of the marketing departments understand the planning process in the company as a whole. When it comes to setting and solving promising marketing tasks, the marketing activity plan is developed as part of the company's strategic plan.

The extreme variant of a flexible planning system is a complete rejection of the periodization of marketing decision-making stages, putting forward planning settings

in accordance with the emergence of new problems and, finally, solving financing, sales and other issues based on personal contacts of the organization's management with the management of divisions. However, this option is of little use in large organizations, where the complex of marketing issues is very diverse, the number of divisions is large, and the management system is complex. The choice of the planning horizon when developing marketing plans is determined both by the characteristics of the organization's activities and by the traditions and "tastes" of managers.

Human resources are people who possess the necessary professional skills, motivational and personal characteristics sufficient to effectively perform marketing functions, and are an important source of competitive advantage.

Marketing plans are developed, as a rule, in the line divisions of the company, whose managers must be responsible for the implementation of the plans. Employees of the marketing planning departments perform only consulting and coordination functions, helping line managers in developing a marketing plan.

Marketing activity is one of the main factors that ensure the successful existence of the enterprise, especially in times of crisis. It plays a significant role in the efficiency of the enterprise and the level of its development. At the same time, it should be noted that the concept of marketing activity is a debate for many scientists. This is the reason for the lack of a single approach to defining the essence of the concept of "marketing activity" in crisis conditions.

Thus, it can be concluded that the mentioned scientists in their works consider the development of marketing activities in different ways, which makes it possible to highlight the main directions. Yes, F. Kotler, T. Primak, S.Z. Moshenskyi., O.V.Oliynyk study the marketing activity of the enterprise - as a management activity, D. Traut, E. Rice consider it - as a competitive struggle, M.O. Turchenyuk, V. Rudelius, O. Azaryan, O. Vinogradov, A. AT. Starostina - as a process, S.S. Garkavenko, L.V. Balabanova, I.V., Balabanova - as a strategy and tactics, as well as the development of activities. So, the semantic analysis of the concept of "enterprise marketing activity" makes it possible to offer an author's interpretation. Thus, in crisis conditions, the marketing activity of an enterprise should be understood as a set of

measures that ensures the promotion of goods and services through the study of consumers' attitudes and needs, as well as the regular use of this data for the effective functioning of the enterprise in difficult conditions.

The marketing activity of the enterprise involves the use of various approaches to the development of the business entity's activities, which are based on the principles, functions, elements and methods of marketing, oriented to the needs of consumers. A feature of the marketing activity of any enterprise is the need for financial investments, because the successful use of various marketing tools is the key to the successful promotion of goods or services on the market. According to the actual results of conducting business, the enterprise needs to evaluate the effectiveness of marketing activities, which is based on the calculation of various indicators reflecting the profitability of commercial activities. In connection with the crises that have affected not only our country, but also the whole world, entrepreneurs have recently reduced their marketing expenses and are using marketing methods aimed at promoting goods or services via the Internet, developing online retail skills. Such sales have their own specifics and are significantly different from trading in a regular store.

On the other hand, major environmental, raw material, and energy problems, which are being solved by society today, have significantly changed the views on the consumer concept of marketing, strengthening the focus on public needs and economic resources. The concept of socio-ethical (public) marketing is being formed. This concept defines the task of the firm as establishing the needs, interests of the target markets and satisfying needs more effectively than those of competitors, in ways that preserve or strengthen the well-being of the consumer and society in general. This concept requires a balance of three factors, namely the firm's profits, purchasing needs, and society's inter.

Next, let's focus on the components of the company's marketing strategy.

1. Setting the goal (goals). It is no secret that this is a rather deep and time-consuming process. This is a combination of analysis and synthesis. Ideas and realities. Why is this business needed in the economy? How will it differ from others? What will the method of competitive advantages be based on? What will be the principles of

interaction with the state? These are the questions that should be asked at the beginning. At this stage, a typical mistake is the ability to leave questions unanswered in the hope that later, when the time comes, it will be possible to "reboot", refine, catch up. The competition does not forgive such steps and there are a large number of examples that testify to this.

The action plan should be quite clear and specific. Consistent and practical. In other cases, it is an inevitable risk of "going off track". Orienting yourself according to the situation, being "flexible" is also not a feature of setting a specific goal.

At this stage, the approach regarding one's own capabilities and real results is of considerable importance. Overestimating them, as well as underestimating them, will inevitably lead to exit from the market [73. p. 201].

- 2. Planning. In fact, we will include the scenario itself, that is, a specific plan of action, to this stage. Everyone knows that any strategy has its points. It is on the basis of these points that the planning process should be developed. What is interesting at this stage is that, unlike the previous one, a creative and flexible approach can be used here. Especially when it comes to short- and medium-term planning. At this stage, you can use various techniques, checking their effectiveness. Explore and experiment. However, let's note one more time. There should be no deviations from the specific strategy of the enterprise.
- 3. Actually, the business process itself. We will not make any cardinal emphasis at this stage. The key strategic models have already been mentioned in the points above. Let's just note that this is a real process of implementing everything planned. And if the general concept was developed perfectly, the results will not make themselves wait. The effectiveness of the work strategy in Leo is formed at the beginning. There are no good strategies that are poorly executed. This is an interconnected mechanism of the market.

Being a communication between the firm and the environment, marketing has evolved, is developing and will develop under the influence of changes occurring in the conditions of reproduction, realization of the social product and functioning of capital.

Today, the statement about the marketing crisis caused by globalization processes, increased competition, acceleration of scientific and technical progress, changes in the consumer, his behavior and lifestyle, a decrease in the effectiveness of traditional marketing communications, etc. is spreading. And this statement has its own support. The world has changed, the conditions and possibilities of marketing activity have changed. Now the marketing system should become more flexible and dynamic [80, p. 202].

Today's marketing is more complex than ever before. This doesn't mean that there weren't problems before, it's just that the problems today are completely different. Today, the problems are to fight against excessive fragmentation, saturation of products that appear on the markets every day.

Recently, marketing in Ukraine is gaining momentum in its development, and is becoming a source that provides a basis for creating and maintaining the country's living standards. The level of effectiveness of marketing activities is not necessarily determined by the results of current activities. High efficiency, first of all, should be determined by the fact that the company carefully conducts marketing policy on a strategic scale. Hence the need to pay close attention to the problems of business growth. In today's market conditions, growing is less risky than not growing. But not every growth is justified. It needs to bring good results, to be balanced. The balance should be based on the growth of the market value of the enterprise, the availability of free funds, the acceptable risk of running this business and effective "marketing management" [74, p.56].

An important condition for enterprises to maintain long-term competitive advantages due to innovative products is the justified application of theoretical models and business technologies of modern marketing, the problems of which are associated with such reasons as:

- increasing the number of brands;
- increasing the speed with which new brands and technologies appear, reducing the life time of new products on the market;

- fastidiousness of consumers, who began to ignore commercial communications more and more often.

As for the increase in the types of brands, this fact is explained by three such factors as:

- the need to adapt goods to the specific needs of specific consumers;
- a large number of trademarks in the company, which prevents new competitors from entering the market;
- strengthening the position of the manufacturer in negotiations with the distributor due to a large portfolio of brands (a high discount on one brand can be compensated by a low discount on another).

Under such conditions, innovations help those companies that are stronger and have greater influence on the market to win, and challenger companies to win their niche in the market and their customers.

Today, the speed at which new brands and technologies appear is increasing, but the life cycle of products in the market is significantly shortened, because it becomes more expensive to repair a product than to replace it. The introduction of digital technologies makes it possible to increase the pace of innovation and the number of new products. Internet marketing promotes, on the one hand, the emergence of new brands and forms of business, and on the other hand, it opens up new opportunities for promoting goods to consumers.

When discussing the content of the subject of our research, it is also worth mentioning such a concept as "Internet marketing". Internet marketing means a new type of marketing that involves the use of traditional and innovative tools and technologies on the Internet to determine and satisfy the needs and requests of consumers (buyers) through exchange for the purpose of obtaining profit or other benefits by the producer or seller. That is, this is another convenient, but not entirely easy way to satisfy consumer needs and win a larger share of the market. The main advantages of Internet marketing are interactivity, the possibility of the most accurate targeting and post-click analysis. In this case, it is marketing that is the process that stands above innovation and the variability of technologies [80, p. 65].

The use of Internet marketing tools makes it possible to save money, as well as to expand the activities of enterprises, primarily due to the transition from the local market to national, international and global. At the same time, regardless of size, enterprises have almost equal chances in the fight for the market. Entering the market via the Internet is not too expensive. An important point is that, unlike traditional marketing methods of promotion, Internet marketing allows you to get a clear statistical version of the effectiveness of the marketing strategy.

Today, the globalization of the economy has led not only to the popularization of the Internet in all functional areas of enterprise activity and the emergence of modern software communication systems, but also to the fact that the Internet has become an integral part of successful business. Thus, one can trace the modern trend, when the staff of enterprises is increasingly replenished with specialists hired exclusively to solve certain marketing tasks with the use of electronic technologies.

It should be noted that the effective satisfaction of customer needs is possible not only through their identification, but primarily through the establishment and development of partnership relations with customers, as well as with any counterparties both in the business space and within the organization. The current principle of marketing, which consists in the fact that the world is considered as a place of supply, production and trade common to all, stimulates enterprises to activate activities in the direction of forming a customer-oriented system as a key characteristic of business, since this is the competitive advantage that is based on specific, original capabilities and resources of the enterprise, which are practically impossible to imitate by competitors.

It is becoming increasingly difficult for manufacturers to achieve a clear differentiation of a certain product, and therefore its emotional appeal comes to the fore. Companies increasingly pay attention not to consumer properties of goods, but to their emotional impact on consumers.

Therefore, modern marketing should be based on fast, flexible implementation of innovations, the center of which should be the consumer. Innovative products create new markets, and in existing markets they help fight against competitors. Previously,

priorities were set taking into account the minimization of the risk of entering the market with an innovative product, and today they are changing towards a faster entry into the market, the desire to become a challenger leader on it, which, as a rule, has a larger market share. The costs of late entry to the market may exceed the costs of the insignificant effectiveness of new products [75, p. 203].

Enterprise marketers emphasize the importance of forming the most accurate information about the needs of their consumers [80, p. 203]. In addition, marketing at the enterprise involves the use of various channels of interaction, which include: - customer relationship management (CRM); — managing relations with partners (Partner Relationship Management - PRM); — management of relations with own employees (Human Resources Management — HRM); - management of relations with shareholders — (Stakeholder Relationship Management - SRM). The level of effectiveness of marketing activities is determined not only by the results of current activities, but also by how reasonably the company conducts marketing policy at the strategic level and how much attention is paid to the problems of business growth [81, p. 117].

Today, the emphasis in the activities of enterprises is shifting from the production and sale of products to the selection of values, their creation and transmission to consumers, and the transition to consumer-driven interaction mar.

If the product is created for a large group of consumers, then a mass marketing strategy is implemented. In this case, marketing activities are focused on attracting new customers, not on retaining existing ones. But it is much easier to interest a consumer who is loyal to a certain enterprise in a new product than to attract new consumers.

In consumer-driven marketing, the main principle of enterprise activity is consumer segmentation. All of the above makes it possible to conclude that in the practice of Ukrainian enterprises there are a number of negative actions that affect the effectiveness of marketing implementation:

- chaotic use of individual marketing components;
- association of marketing only with advertising;
- unjustified use of Western tools and methods;

- non-creative approach to marketing activities;
- short-term orientation;
- lack of client-oriented programs as one of the business values;
- low level of service;
- lack of flexibility and ignorance of own consumers.

In general, the list of these errors creates the impression that the activities of enterprises are aimed only at obtaining the maximum level of profit, regardless of consumer satisfaction and further interest in their products. Therefore, all efforts should be aimed at eliminating these mistakes by attracting new young specialists in this field with creative potential and fresh ideas, in-depth study of consumer needs, promoting the expansion of research works, strengthening control over marketing activities, etc.

Marketing activity includes planning of product range; pricing, i.e. determining the price that the buyer will have to pay to get this product; transportation, i.e. optimal ways of delivering goods to the consumer; storage and warehousing of products; wholesale trade - sale of goods to anyone, except end consumers; retail trade - sale to end consumers themselves; serving potential buyers in the sales hall, i.e. providing them with assistance in choosing a product or service and corresponding "processing" of buyers; crediting - giving buyers the opportunity to pay for the purchase within a certain period after purchasing the product or service; advertising - an impersonal form of communication with consumers through mass media, including television, radio, newspapers, magazines, mail, the Internet, transit vehicles and billboards; marketing research - systematic collection and analysis of data for making marketing decisions [75].

The main negative trend in the development of marketing at Ukrainian enterprises is its short-term planning. Managers of enterprises should develop long-term strategies that would allow them to quickly respond to changing market conditions in the future [76, p. 44].

Domestic enterprises need to produce products that will first satisfy their own needs, the needs of consumers, and later it will be necessary to make a lot of effort to meet the needs of the entire society. Therefore, so far, enterprises are not able to

produce products that will be useful for members of the entire society, and at the same time, that these products bring the expected profit.

The most urgent issue for Ukrainian enterprises remains the need to intensify marketing activities. The transition to an innovative type of economic growth is a necessary condition for it to enter the world economic system. And this involves the purposeful efforts of the state with the aim of forming an economic system receptive to innovations, creating such a mechanism of economic interaction of enterprises, under which competitive advantages would be obtained only thanks to active innovative activities and effective innovative solutions [77].

Today, entrepreneurs face new challenges caused by war every day. Adapting to them on the basis of marketing is the only, sometimes difficult, way to continue your business.

Thus, marketing should be aimed at ensuring the effective operation of enterprises during the crisis that is currently occurring in our country. The above allows us to conclude that only those enterprises that are active and apply a set of measures to manage the enterprise on the basis of marketing, using possible marketing tools, survive and function in the crisis.

The process of managing material and human resources, ensuring their integration and the most effective use to achieve the set goals, is known as management (from the English management – management). On the basis of the above, marketing management or marketing management in an enterprise is the process of analysis, development and implementation of means designed to establish, strengthen and support profitable exchanges with customers to achieve the enterprise's goal - profit, growth in sales, increase in share market, etc.

Marketing management is the process of planning and implementation of pricing policy, promotion and development of ideas, products and services, aimed at carrying out an exchange that satisfies both individuals and the firm. It also aims to solve the problems of the firm's influence on the level and structure of demand in a certain period of time, to determine the optimal ratio of supply and demand, so that the firm achieves its goal [78]. In essence, marketing management is the management of supply and

demand and is carried out when one of the parties to a potential exchange develops and uses means of achieving the desired action (feedback) of other parties.

However, the issues of directions of development of marketing management in the economic sector, taking into account the changes that occurred in the process of its globalization, remain insufficiently studied. After the collapse of the administrative planning system, social and production conditions radically changed, the goals of production changed radically (from the implementation of directive plans to obtaining maximum profit), the forms of ownership changed (from unitary state to its various forms), enterprises gained complete independence in decision-making, appeared new forms of goods (capital, labor, natural resources, means of production), a free market was organized. At the same time, the market factors of the economy have created a number of problems in the country related to the instability of the external environment, changes in the market situation, fierce competition, management's unpreparedness for changes in management technology, the lack of highly qualified specialists in the management of marketing activities of enterprises, and others.

The purpose of marketing is, on the one hand, to create conditions for adapting production to public demand, market needs; development of a system of organizational and technical measures for studying the market, intensification of sales, increasing the competitiveness of goods in order to obtain maximum profit, and on the other hand, through the use of means, techniques, the entire marketing system, influence on the sphere of implementation: demand, supply, prices, conditions sales, distribution channels. Marketing involves the widest and most complete use of market conditions, all factors of commercial success in the name of achieving the main goal - making a profit.

Specific features of marketing in Ukraine: 1. Low level of solvency and awareness of the domestic consumer. 2. The low level of domestic production competition, which makes it unnecessary to use the concept of marketing. 3. Strong pressure from distribution structures, which leads to unjustified price increases. 4. Formation of a layer of professional marketers is in the nascent stage. 5. The mentality of the domestic consumer gives rise to mistrust of advertising campaigns, sales

promotion, etc. 6. Irregularity of the legislative framework on the protection of consumer rights, advertising, unfair competition, registration of patents and inventions, registration and protection of rights to signs for goods and services.

In the literature, the wording of the term "marketing activity management" is often found as a simplification of this concept - "marketing management". In fact, these two terms mean the same thing, having a single meaning. In our opinion, it is more correct to use the term "management of marketing activities", because it more accurately reflects the essence of this process. But there are both types of wording, and when "marketing management" is written, it means "marketing management."

"Marketing management" (marketing management) and "marketing service management" are different concepts. As you know, the marketing service of the enterprise is a special unit that carries out its activities based on the principles and methods of marketing in order to comprehensively study the market, ensure sustainable product sales, market orientation of production and design and construction works. And the management of the marketing service is a clearly defined program developed on the basis of decisions made and strategic directions of development. Therefore, marketing management (management of marketing activities) in the enterprise is a wide complex of measures of a strategic and tactical nature, aimed at the effective implementation of the market activity of the enterprise and the achievement of its main goal - meeting the needs of consumers of goods and services and obtaining the greatest profit on this basis.

An enterprise that implements management of marketing activities in its activities provides for itself:

- target orientation of the enterprise's market activity, which is related to meeting the needs of society and individuals;
- the effectiveness of marketing activity, which is manifested in the organization of the technological process from the design of the product to its consumption;
- analysis of the market, i.e. its potential, capacity, situation, demand, consumer behavior, company capabilities, competition, etc.;

- motivation: creation of appropriate material and moral incentives for employees in order to ensure that they fulfill their duties;
  - control and analysis of marketing activities.

Identifying, on the basis of various analysis, those types of products that can provide the organization with the highest level of profit, and the orientation of activities through the planning and sale of these types of products is the most important task of the enterprise's marketing activity.

Having analyzed the concepts of marketing activity management given in literary sources, we offer the following improved and developed definition of it, which is considered from the standpoint of its purpose, essence and systematicity.

Management of marketing activities in Ukrainian enterprises is a system of various types of activities, which is a wide complex of measures of a strategic and tactical nature, interconnected and aimed at the effective implementation of the market activity of the enterprise and the achievement of its main goal - meeting the needs of consumers of goods and services and obtaining on this basis of greatest profit. This concept, in our opinion, takes into account the complexity of the marketing management process, its purpose and essence, it emphasizes the systematic nature of this process, because marketing management should be carried out systematically and comprehensively.

Marketing management can be carried out from the positions of five approaches: improvement of production, goods; intensification of commercial efforts; marketing; social and ethical marketing.

The concept of production improvement states that consumers will favor products that are widely distributed and affordable, and as a result, the company should focus its efforts on improving production and increasing the efficiency of the distribution system. The application of this concept is possible in two situations: when the demand for the product exceeds the supply and when the cost of the product is very high and it is necessary to reduce it, for which it is necessary to increase productivity.

The main idea of the concept of product improvement is the statement that consumers will favor products of the highest quality, with the best operational

characteristics and properties, so the company should focus its efforts on continuous product improvement. The negative point of this concept is that consumers actually satisfy not the need for a specific product, but their needs.

The concept of intensification of commercial efforts states that consumers will not buy a company's products in sufficient quantities if the company does not make sufficient sales and promotion efforts. The field of application of the mentioned concept is the promotion of products of the so-called passive demand (insurance, encyclopedic dictionaries, etc.) to the market.

The essence of the marketing concept is that the key to achieving the organization's goal is to determine the needs of target markets and ensure the desired satisfaction in more efficient and productive ways than competitors. Orientation in this concept goes to the needs of customers.

According to the concept of socio-ethical marketing, the company's task is to establish the needs and interests of the target markets and ensure the desired satisfaction in more efficient and productive ways while simultaneously strengthening the well-being of the consumer and society as a whole. This concept tries to resolve the contradiction between meeting the true needs of customers and their long-term well-being.

The general functions of marketing management in the enterprise are analysis, planning, organization of execution, control. The specific functions are the development of the goals and tasks of the enterprise, the main strategic principles of its activity; development of enterprise strategy, definition of markets; product planning; preparation of procurement plans for material and technical resources; formation of a production plan; planning and implementation of a complex of marketing communications; formation of distribution channels; formation and implementation of price policy; financial support planning; selection of employees; formation of the marketing activity management structure; formation and implementation of the system of managerial influences; organization of collection and processing of marketing information.

Functional support of marketing activity, that is, creation of a marketing service, functioning of a marketing information system, definition of marketing strategy and planning, marketing control begins with market research (including consumer behavior, competitor analysis, marketing capabilities of the enterprise, market segmentation and product positioning). Then the development of the enterprise's marketing complex, that is, the product, pricing, sales methods and channels, methods of promoting the product on the market, is carried out.

Market research also involves studying and forecasting the demand for the product, analyzing the prices and products of competitors, determining the market capacity and the company's share in it. Such an analysis helps to assess market opportunities and determine an attractive direction of marketing activity, in which the company can gain competitive advantages.

At the same time, the company is looking for its potential customers, whose needs the company seeks to satisfy. At the same time, they use a very important marketing technique - market segmentation, that is, the division of consumers into groups based on the difference in their needs, characteristics and behavior. If the company has correctly chosen the market segment for further cooperation, it means that it has found its "niche" in the market.

Then it is necessary to position the product on the market, that is, to clearly define how the product of this company will differ from the products of competitors, thanks to which characteristics it is possible to gain competitive advantages in the minds of potential consumers. Having made a decision on product positioning, the company can start developing a marketing mix.

This is one of the fundamental categories of modern marketing, the most important elements of which are the marketing complex - the so-called "4Rs": product, price, place, distribution or delivery, promotion. These four elements together create a marketing mix that is developed for a specific market situation. The ability to correctly "mix" marketing elements to solve a practical problem is the basis of marketing. Marketing elements are:

- 1. Product (quality, assortment, service). Each product has properties that are of interest to the consumer design, durability, reliability, functions, capabilities, that is, it has a certain quality (the entire set of product properties, based on which the consumer makes a conclusion about its advantages). More often, the assortment, its breadth (the number of product names) and depth (the number of types of products per one product name) become a tool that promotes the sale of goods on the market.
- 2. Price (discounts, mark-ups, term of payments). Determining the price is considered one of the most difficult tasks of the marketing complex. It should be attractive for a potential buyer and at the same time beneficial for a trading company and provide the latter with a profit.
- 3. Product delivery to consumers includes the choice of the optimal scheme of product delivery from the manufacturer to the consumer (direct method, through wholesale trade, agents), its physical embodiment (transportation, storage, cargo handling), as well as after-sales (service) service to consumers. Today, the winner on the market is not even the one who wins new customers, but the one who manages to keep the old ones, so service comes to the fore in the competition. Among the elements of service, such as instruction and recommendations before and after purchase, delivery and installation of goods, training of personnel, handling customer complaints, provision of documentation, provision of component parts, high-quality telephone communication and prompt response, technical maintenance (repair and prevention), guarantee.
- 4. Promotion on the market involves effective contacts with buyers and is carried out in the following forms: creating a positive image of the company and its products; advertising, exhibitions, fairs, providing discounts, transferring goods for temporary use, trading on credit; personal selling and others.

The company's possibilities here are inexhaustible - from advertising through mass media (television, radio, newspapers) to effective actions of the public relations service [79, p. 15-18.].

In general, the competitive advantages of an enterprise should be considered as a manifestation of advantages over other enterprises that are competitors in all spheres

of activity. That is, it is ahead of the specified competitors, first of all, due to the effective implementation of market factors of success, both external and internal, or key competencies. From the point of view of the main sources of competitive advantages in agricultural enterprises, they can be divided into competitive advantages of low and high levels. At the same time, low-level advantages for enterprises are created, for example, through the use of cheap labor resources, available cheap sources of raw materials, which, today, are unstable when used. Therefore, these advantages can be quickly lost. The competitive advantages of high-level enterprises are already formed by the presence of qualified personnel, the use of the latest technological innovations, etc.

In theory, the competitive advantages of an enterprise are a concentrated manifestation of advantages over competitors from the point of view of economic, technical-technological, organizational, managerial and other types of enterprise activity. At the same time, they can be measured by general economic indicators, such as reducing production costs, obtaining additional profit, increasing the level of profitability, increasing the market share of enterprises or product sales, etc.

Effective development of marketing is facilitated by the constant emergence of new ideas and trends in this field. Although countries with a developed market economy have accumulated rich experience in the practice of using marketing in the activities of enterprises, it should be taken into account that it is one of the most dynamic branches of economic activity. Trends in the development of the modern market are of particular importance for the evolution of marketing, this is the growing importance of the following areas:

- quality, prices and consumer satisfaction;
- building relationships with consumers and maintaining them;
- management of business processes and integration of management functions;
- global thinking and planning of local markets;
- strategic alliances and networks;
- industries with high technologies;
- marketing services; direct and online marketing;

- ethics of marketing behavior.

To successfully master marketing, you must adhere to the following conditions:

- organization of training of managers and specialists in basic methods and tools;
- training of relevant personnel;
- creation of personnel potential of marketing professionals;
- building the necessary organizational structure (special marketing services); creation of scientific and material support for marketing research;
  - high level of implementation of marketing elements;
  - an incentive mechanism for reorientation to marketing.

The application of marketing largely depends on the form of ownership and the specifics of the management organization of a specific enterprise. Private, leased, and joint-stock organizations respond more quickly to market requirements, have great opportunities for independent decision-making on interrelated elements of the marketing complex: product range, volume of output, price, product distribution channels, sales promotion, etc., which is organically necessary for the development and implementation of policy in the field of marketing.

In our country, the application of marketing as an integral concept of market management is not very widespread. The use of groups of interconnected methods and means of marketing activity, as well as individual elements of the marketing complex, is widely used.

Organizations producing products or providing services intended for the mass consumer operate in conditions of competition in markets dominated by consumers and where there are conditions for making independent, coordinated decisions on all elements of the marketing mix. Such organizations include, first of all, private and joint-stock enterprises of small and medium sizes, which are faster to adapt to the market economy.

In particular, I would like to note that at every enterprise, including in the agricultural sector, there is a product policy, and pricing, and communication or promotion, and, of course, a product distribution or sales policy. All mentioned marketing tools function properly, but only as separate elements. We believe that the

effectiveness of their use will be much greater when the specified policies are applied in a comprehensive manner, as a single whole. And if we add to this the analysis of a separate object market, at least some of its main indicators, then all this will systematically constitute marketing and marketing activity. Only then will agricultural enterprises be able to assert the marketing innovativeness of their operation.

The following methods are used to analyze the company's marketing activities:

- 1. Analysis of absolute indicators, which is based on the analysis of data presented in marketing reports. This includes the structure of financial investments, the amount of borrowed funds, revenue from the sale of products, the size of the company's products, etc.
- 2. Horizontal analysis consists in comparing each component of reporting for the year with the previous period. This method helps to identify changing trends in balance sheet items and financial statements.
- 3. Vertical analysis is used to identify the impact of each reporting item on the overall result, that is, to determine the structure of the final financial indicators. 4. Dynamic analysis is used to compare each position from the reporting for several years, and based on this, the main trend of the indicator's dynamics is determined without taking into account random influences and individual characteristics of individual periods. Creating a trend helps to carry out predictive analysis [80, c. 76].

The evaluation of the enterprise's marketing activity is primarily evaluated based on a set of criteria such as the volume of turnover, the size of inventories and turnover costs. However, for a more accurate assessment, such indicators as the breadth of the product range and the satisfaction ratio of the purchasing demand are used [81]. Continuous information about the state of circulation of goods at the enterprise is necessary for the assessment, since without such accounting it is impossible to calculate how many goods with slow turnover have settled in stocks. The increase in the dynamics of the circulation of goods should be considered as a result of the improvement of the enterprise's marketing activities.

Also, in the analysis of the enterprise's marketing activity, indicators of demand for the products of the trading enterprise and the amount of its actual shipment during

a certain period of time help. Since such indicators make it possible to determine the ability of a business entity to fully satisfy consumer demand, which in market conditions also becomes one of the main goals.

To assess the adequacy of the funds spent, it is necessary to compare the indicators given above with the analysis of losses of the marketing service. Determination of the coefficient of competitiveness will help in the estimated profitability of the commercial activity of the enterprise.

So, as we can see, in the activities of modern organizations, marketing and in particular marketing activities play a very important role. Every year, consumers become more demanding, which stimulates enterprises to constantly improve their products and ways of promoting them to the market. In addition, the modern market economy is characterized by a high degree of competition, so those enterprises that are able to flexibly respond to rapid changes in the competitive environment survive on the market [82].

Planning of marketing activity is quite important in the enterprise, because it is marketing activity that will allow the head of the enterprise to make management decisions based on the implementation of marketing activity, the sales market and obtaining competitive advantages, and with the help of this we will be able to learn how to survive in a fierce competition and achieve new level in their activities.

The marketing management of the enterprise is based on the marketing concept of a new method of action and communicative connections of the enterprise with the market, which is manifested at the level of the entire enterprise and in almost all management decisions in accordance with market requirements. The marketing function of management is based on the formation of the marketing system of the enterprise, because it is closely related to the production, financial and administrative functions of the enterprise, which perform the coordinating role of all divisions in relation to the goals of the enterprise. From this we can come to the conclusion that marketing is an important component of the enterprise, which functions in the sphere of the enterprise, the task of which is all the processes of the enterprise and consumers in order to satisfy needs and obtain profit.

Modern marketing in the field of entrepreneurial activity is in the process of formation. There are many problems that partially slow down the work in the marketing system, which causes low efficiency. However, despite the existing problems, it is difficult to imagine an enterprise that would develop without marketing principles.

The marketing enterprise is based on a number of the following principles:

- focus on meeting needs, which will lead the enterprise to the sales links of the enterprise. The main objects are consumers, competitors and the characteristics and structure of the market;
- making strategic decisions not within the set schedule, but as potential sales problems are identified. Continuous collection and processing of information regarding market situations and the management situation.
  - focus on achieving long-term and effective success.

Having read briefly about marketing in the enterprise, we can conclude that it plays a significant role and affects a number of certain factors that interact with each other.

In the conditions of modern marketing, it is possible to highlight new prospects for the development of marketing, namely:

- "over-marketing" concentration of efforts on creating a comprehensive offer, which contributes to solving several consumer problems at the same time, and not just satisfying one need;
  - "multi-marketing" multi-channel merchandise movement;
- "turbomarketing" reduction of time for the creation of a new product, for the corresponding reaction of the company to the identified demand.

Unfortunately, the market economy of Ukraine is focused on profit, and not on satisfying human needs, the dynamic development of modern marketing takes place precisely in these conditions. The most important problematic issues (problems) of marketing is the problem (more precisely, the goal) of marketing and marketing activities, which is to sell, sell, sell goods in any way and of any quality. Such an economy will never work for the needs of people, its task is to stimulate people's demand for goods with the help of advertising and fashion, so that their implementation

brings maximum profit. Therefore, marketers represent the interests of the producer (entrepreneur) and not the consumer.

Modern marketing should be based on fast, flexible planning of innovations, in the center of which should always be the consumer. New products can create new markets, and in existing markets help to displace competitors. If most often priorities were given to minimizing the risk of entering the market with a new product, today priorities are shifting towards accelerating market entry, striving to become a pioneer in it, which, as a rule, has a larger market share. Losses from late entry to the market can significantly exceed losses from insufficient efficiency of new products [80, p. 203].

#### **CONCLUSIONS**

Therefore, the success of any company depends not only on the financial results of its activities, but also on the correct organization of marketing activities and on the flexibility of the management system, since under market conditions of management, the management of the company needs market reviews, research on purchasing advantages, forecasting sales volumes , calculations of product advertising effectiveness.

Management that does not keep up with dynamic changes within the enterprise and in the external environment leads to the "death of ideas" and makes the enterprise incapable of adaptation and further development, and marketing activity is an integral sphere of the enterprise's functioning, often determining for other areas of the organization's activity.

Marketing activity helps to solve and study the following types of issues: determination of factors of the external environment that are obstacles and opportunities for the company; analysis of consumers, their characteristics, which help them make decisions regarding the purchase of this or that product; development of the concept of creating new products and improving old ones; sales planning; formation of demand using a set of marketing tools; management of price policy; etc.

As a result of the conducted research, it is possible to conclude that there are a number of shortcomings in the practice of domestic enterprises that reduce the

effectiveness of marketing activities. These include: chaotic use of individual elements of marketing, reduction of marketing functions only to sales promotion, orientation to the short-term perspective, lack of flexibility and ignorance of one's own consumers.

Marketing planning in different companies is carried out in different ways. This applies to the retention of the plan, the duration of the planning horizon, the sequence of development, the planning organization. So, the range of maintenance of the marketing plan for different companies is different: sometimes it is only a little wider than the activity plan of the sales department; at the other extreme is a marketing plan based on the broadest consideration of business strategy, resulting in the development of an integrated plan covering all markets and products. Individual organizations, especially small businesses, may not have a marketing plan as a single document that includes several types of marketing plan. The only planning document for such organizations can be a business plan drawn up either for the organization as a whole or for individual areas of its development. This plan provides information on market segments and their capacity, market share; characteristics of consumers and competitors are given, barriers to market penetration are described; marketing strategies are formulated; forecast estimates of sales volumes for several years are given, broken down by year.

The analysis shows that many companies conduct their activities without any plans. Moreover, in small firms there is an opinion that only large companies need formal planning, and therefore there is no need to spend additional time, which is constantly lacking, on drawing up plans that will not be needed anyway. And large enterprises consider this activity a waste of time, because rapid changes in the market make any attempts to draw up plans no more than a formal procedure [78, p. 22]. For the most part, marketing plans are prepared separately for each main product. Thus, among firms that produce consumer goods, almost half turn to the development of such plans, and among firms that specialize in the production of technical goods - 34%. Planning horizons are also different. About 2/3 of the companies for which there is data develop only an annual plan, which is sometimes supplemented with instructions for

the following years. But the most accurate and most effective are the plans for two years and more.

It is important to carry out such marketing planning, which helps to coordinate the trade policy, correctly implement sales tactics and make a profit. It is also necessary to improve marketing services, expand and stimulate their activities. The company's marketing activity plan should be complete, differentiated and detailed. It should clearly coincide with all other measures and actions of the enterprise. This makes it possible to constantly monitor the situation and adjust the current goals. Marketing planning plays a very important role in shaping the success of the company, so marketing techniques should be actively used. Ignoring this important structural element in modern conditions can lead to bankruptcy or takeover of the company.

It is worth noting that there is no unified marketing plan suitable for all types of enterprises. Marketing planning is carried out differently in different enterprises. This applies to both the content of the plan and the planning horizon, the sequence of development, and the organization of planning. So, sometimes the marketing plan is a slightly expanded plan of the sales department, in other situations it can be based on a broad consideration of the business strategy, which entails the development of an integrated plan that includes all markets and products of the enterprise. As for small businesses, they may not have a marketing plan at all. The only planning document for such enterprises is a business plan, which will include in detail individual areas of their development, including a marketing plan. In this plan, information is given about market segments, their capacity, market share, characteristics of consumers and competitors are given, "barriers" to entering the market are described, marketing strategies are formed, sales volumes are forecasted, etc.

Most manufacturing companies develop separate planning documents for each main product (or group of homogeneous products - product line). This is especially true of consumer goods. Thus, several marketing plans can be implemented simultaneously. Although these plans can be purely mechanically combined into one book of planning documents. Some companies develop a single integrated marketing plan that includes all products.

In some companies, a three- or five-year planning cycle is used, in others it is equal to six months. The following scheme is most often used: planning is carried out annually, but with a focus on the next three years. At the same time, the marketing plan consists of detailed recommendations for the next two years with extrapolation for the third. Further, the analysis and plans are supplemented with updated information and corrected every year. Key recommendations, consolidated into a plan, are then presented to the organization's top management.

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# 5. Features of organizational support of management of competitiveness of an enterprise

The Law of Ukraine No. 2102-IX dated February 24, 2022 approved the Decree of the President of Ukraine "On the introduction of martial law in Ukraine", which introduced martial law from 05:30 on February 24, 2022. This date forever turned the usual rhythm of life and forced citizens and businesses to adapt to new realities in the conditions of war.

Recently, the problems that arise in the analysis of alternative solutions in the process of managing complex production facilities are especially relevant. Practice shows that the costs of management activities are constantly increasing, and the consequences of unsuccessful decisions are becoming more tangible. Modern market relations and the conditions of war, affecting the economic activity of enterprises, necessitate solving problems related to improving the quality of management of the competitiveness of an enterprise.

In the market conditions of war, for the organization of effective management of competitiveness, it is no longer enough just common sense and experience of managers, it is necessary to use modern tools for analyzing large amounts of information, modeling and computerization of management processes on a large scale. The organization of competitiveness management should not only contribute to the growth of the financial and economic activities of the enterprise and stimulate the saving of all types of resources based on their efficient use, but also to increasingly meet the growing needs of product buyers.

As you know, the task of managing competitiveness is one of the main tasks of marketing research in an enterprise. In this regard, the information support of competitiveness management must meet the general requirements for information support of marketing research and the general principles of designing an enterprise information system.

Decision making in marketing is based on management processes, which are, in fact, information processes. Therefore, the correctness and value of management

decisions largely depend on information support. In [97 p.137] the main stages of the control process are given. In a dynamically changing market environment, decision-making processes must have adaptive capabilities. In view of this remark, the following wording of the last stage of management is proposed - "Control over execution, evaluation of activities, adjustment of the parameters of the control object." The stages of the management process are shown in Figure 1.

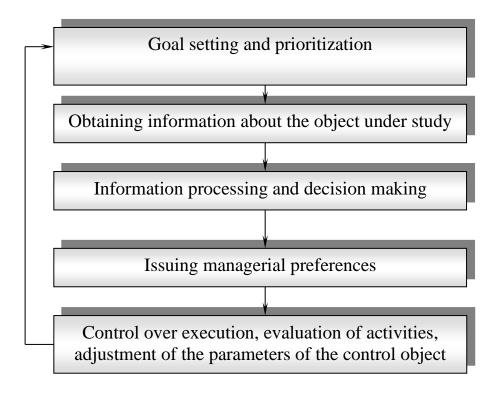


Fig. 1 Stages of management in marketing

The implementation of the study is impossible without the accumulation and study of a significant amount of relevant information. It is believed that the recipe for a good decision is 90% information and 10% inspiration [101]. In this regard, it should be noted that at present in Ukraine the work on research, evaluation and forecasting of the competitiveness of enterprises has not been properly established, since marketing research is almost not carried out on many of them. The marketing services formed at the enterprises are far from optimal in their composition, construction, interaction with other departments and the external environment, as well as in terms of the functions performed. They cannot carry out such work at the proper level due to the unpreparedness of the relevant specialists and the lack of the necessary information,

methodological and technical support.

The primary task of marketing research is the creation of a marketing information system (MIS), which allows: quickly and efficiently processing, filtering and compacting information; correctly direct it in the right amount, to the right point and at the right time; clearly define the sources of information and the rights of users at each level. The problems of studying MIS are widely considered in the works [107, 98, 96, p. 116-121]. Given the high degree of globalization and integration of the world economy, we propose to characterize the impact of the external marketing environment by the factor "Critical events at the global, macro and micro levels". The MIS scheme is shown in Figure 2.

Any research begins, first of all, with the determination of the necessary information. Various classifications are used to systematize it [97, p. 122]. However, the content of the study requires its specification in accordance with the subject, object, staffing, availability of financial resources, technical capabilities, time of project implementation, etc. High-quality performance of management functions is possible if there is: information about the managed object and its external environment; means of displaying information; links between the user's actions and the object's response to these actions; the possibility of unambiguous implementation of the control action; feedback and control objectives. The fulfillment of these conditions in the development of MIS predetermines the design of a high-quality human-machine interface. An important condition for determining the elements of the MIS is the need to fully meet the information needs of the user in order to make rational decisions. From the standpoint of data processing technology, the purpose of an information system is defined as a set of processes for the formation of primary messages (collection, registration, data transmission), their transformation, selection and delivery of information to users of all levels of management.

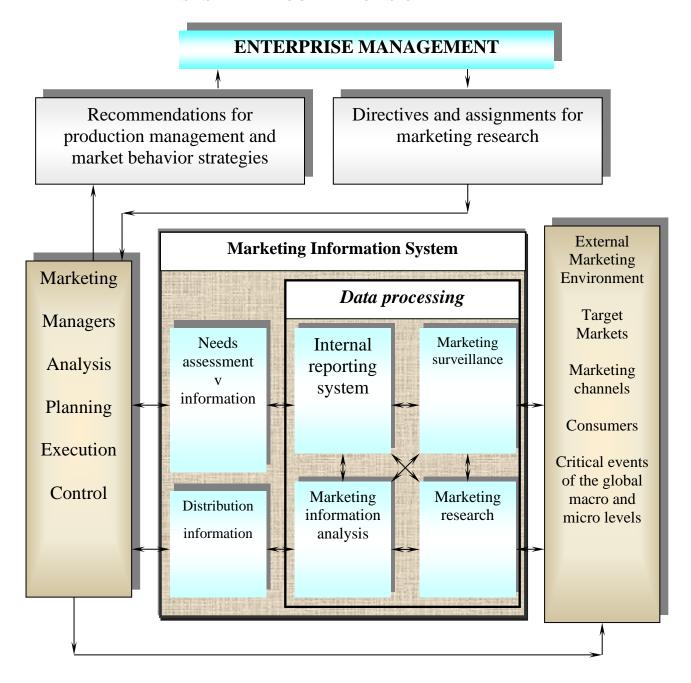
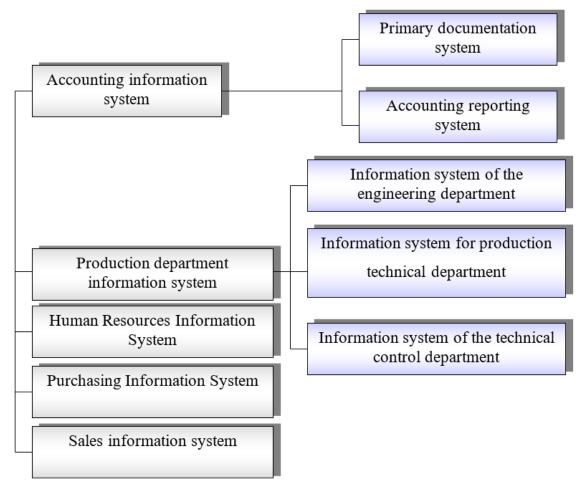


Fig. 2 Marketing information system

The development of a marketing information system includes three stages: development of a methodology for collecting the necessary information about the object or process under study; creation of an information array; transformation of the data contained in it in accordance with the research program.

The internal reporting system includes data that arises at the enterprise in the form of accounting and statistical reporting, operational production and scientific and technical information (see Fig. 3).



The marketing surveillance system combines information about the state of the external environment of the enterprise: about the market and its infrastructure; about the behavior of buyers, suppliers and competitors; about measures of state regulation of market mechanisms; about the exchange rate; about the market shares of the enterprise and its competitors, etc. These data are concentrated in published periodicals and special editions, statistical collections, market reviews of commercial research organizations. They are also collected by marketing specialists on the basis of visiting exhibitions and conferences, holding negotiations and business meetings. The external environment of marketing is divided into the environment of direct and indirect influences. The work [99, p.258] shows the structure of the marketing environment. Instead of the "International Events" factor of the indirect marketing environment, we propose a broader "Events of global, macro and micro levels" factor. The scheme of the marketing environment of the enterprise is shown in Figure 4.

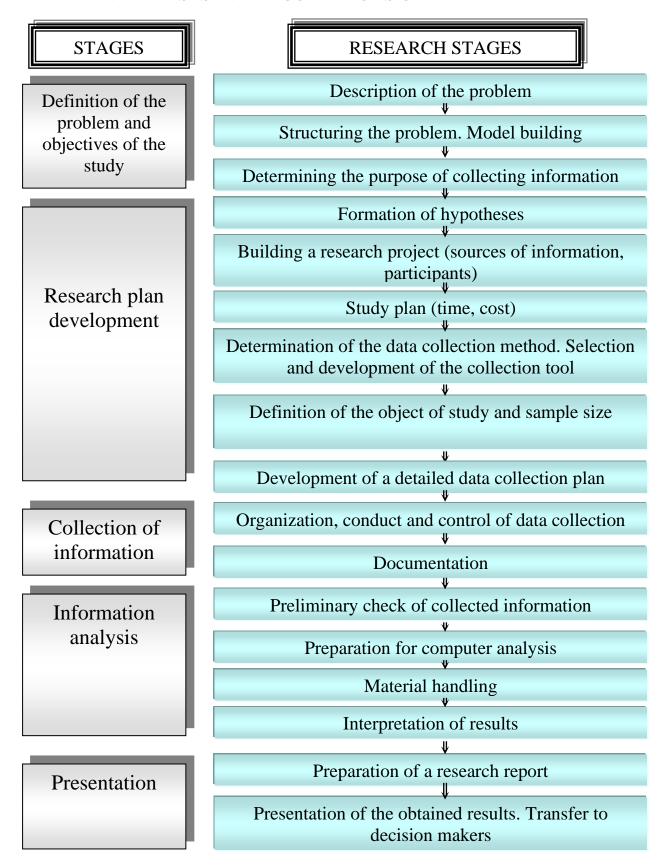


Fig. 5 Marketing research process

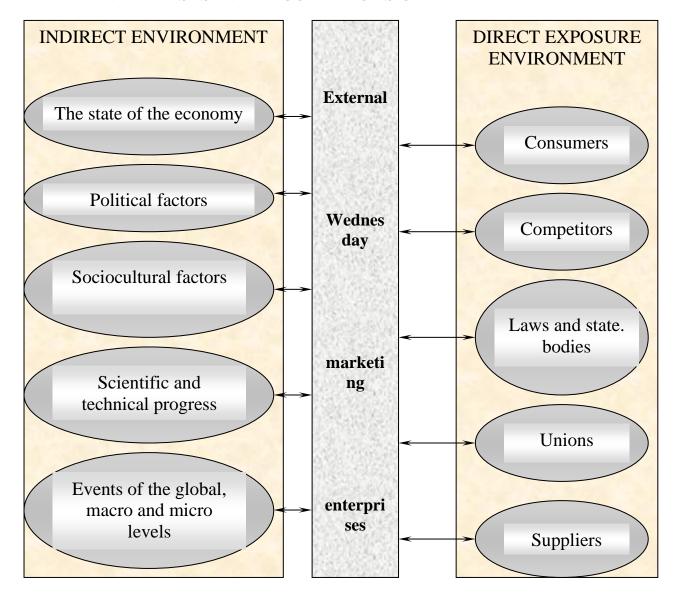


Fig. 4 Enterprise marketing environment

The marketing research system is a systematic conduct of various surveys, analysis of the data obtained and presentation of the results in a form corresponding to the specific marketing task facing the enterprise (see Fig. 5).

The process of defining the problem is based on the expert method, which includes: choosing the form of interviewing experts, determining the structure and size of the expert group, developing a survey methodology, conducting a survey, compiling a list of problems, examining problems. The goals of marketing research should follow from the identified problems.

The central link in the development of a research plan is the development and

testing of theoretical hypotheses in practice, the identification and justification of their cause-and-effect relationships [98, 102]. Hypotheses and models describing the situation predetermine the possible sources of information, however, in order to obtain sufficiently complete and reliable information, it is necessary to have a well-thought-out concept and a detailed data collection plan.

In the course of developing a data collection plan, it is necessary to decide on many questions that have alternative answers: full or selective, single or multiple, single-purpose or multi-purpose research; what are the forms and tools of data collection. In addition, it is necessary to decide what can serve as a source of information - already existing material or new data collection [97, 107, 98, 101, 103]. At this stage of the study, it is also necessary to indicate the required time and cost of the proposed study, which is necessary for the manager to make a decision on conducting a marketing study and solving organizational issues of its conduct. It should not be allowed that the change in quantitative and qualitative relationships between individual phenomena of the activity of a production facility, necessary for managing this activity, is more expensive than the effect obtained from taking these relationships into account in management [97, 98, 101, 102].

To obtain information in marketing, the following methods are used: survey, expert method, observation, panel, experiment, trial marketing, automatic data registration and other methods [107]. A closed system for obtaining information, called marketing intelligence, is not excluded. At the same time, it is important not to allow violations of the law and commercial ethics.

At the stage of data analysis, it is necessary to reduce them to a compressed form that is convenient for analysis and has information content. In this case, the following data transformation functions can be used: generalization, conceptualization, communication and extrapolation [107]. Next, a statistical analysis of the data is carried out using descriptive, inferential, predictive analyzes, as well as analysis of differences and relationships [107, 98, 102].

At the presentation stage, a research report is prepared and handed over to decision makers. The structure of the research report must meet the requirements of the

customer.

Systems internal reporting and marketing surveillance are implemented through databases covering all available current information, and the marketing research system through banks of models and banks of methods [97, 100]. Thus, the basic components of MIS are databases, banks of models, banks of methods and a system of technical means of communication linking them together.

As mentioned above, the design of information support for marketing research at an enterprise should be carried out on the basis of the general principles of designing its information system based on a business model, i.e., a schematic description of the enterprise's activities freed from secondary details, allowing: to formalize business functions and regulate the structure business processes occurring at the enterprise; determine the permissible and invalid sequences of actions of performers working with the information system; fix the logical relationships of data, according to which a change in any information causes a sequence of coordinated changes.

The enterprise information system as a business model exists in two forms. When creating and verifying it, it is convenient to present it in the form of schemes and verbal descriptions, and in practical use - in the form of a semantically equivalent set of program modules. The equivalence of both forms guarantees the use of modeling tools that allow, relying on proven model building methodologies, to reflect the logic of the problem in a graphical form and obtain ready-made database schemas and program code corresponding to the model as an output. Discrepancies in model representations are not allowed either when creating an information system or when making changes to it. Therefore, it is necessary that the modeling tool be the only tool for influencing the program code throughout the entire life cycle of the information system.

Personal information systems serve as the basis for automation of management functions based on: initial information about the object; methods of preparation and adoption of optimal decisions; employee experience. At the same time, the user is an element of the information system due to the developed means of interaction and support of intellectual functions. Working in the management system, the user plays

the role of a subject of conscious activity, combining the functioning of the elements of the information system in order to manage the economic object. Therefore, the fundamental approach to interaction design is an approach in which a person becomes the main one both in terms of the goals and purpose of the management system, and from the standpoint of human activity in the management system. It is necessary to take into account, first of all, the leading, creative role of a person in the labor process, and, in particular, in the processes of formation and adoption of managerial decisions. A person processes information, makes decisions, manipulates the controls, while showing his personal properties (experience, intuition, qualifications).

A special place in the design of an enterprise management information system should be given to software, on the basis of which an interface for interaction between a person and a PC is developed. The software should expand the capabilities of the technical means of the system being designed and eliminate their shortcomings. Therefore, when developing it, it is necessary to take into account the role of the human factor in the management system.

When creating workstations, the task should be to develop such a personal system in which the user performs only the work that cannot be performed by the system itself (data entry, analysis, decision making). The designed system should provide user support, expressed in the fact that the latter, when receiving the final information, should not order it, interpret it or select the data he needs.

The creation of an information system that implements a set of tasks for managing an industrial enterprise involves the following steps [106]:

determination of future users of information and their rank in the management system;

research and analysis of information needs of users in order to allocate the necessary and sufficient amount of information to manage the enterprise and its resources;

the choice of methods for meeting the information needs of users, i.e. determination of the contours of the information system, taking into account the timing of the issuance of information to users;

determination of the composition and structure of the database for solving the problems of enterprise management, the study of the relationship of individual arrays, the frequency of their formation and updating;

designing a data processing process that provides the necessary information at the right time by a specific user in the appropriate mode;

development of materials (instructions, guidelines, dictionaries, catalogs, etc.) that regulate the work of users when they interact with the information management system.

An information system requires accurate measurements of parameters and high reliability of data processing. Relatively strict restrictions are imposed on it, dictated by the nature of technological processes, legislative provisions, established forms of documentation and workflow at the enterprise.

The creation of information support for managing the competitiveness of an enterprise should be addressed in a comprehensive manner, taking into account the following aspects: organizational (principles of organizing an information system and the interaction of its elements); technological (methods of information processing and technology for implementing these methods); technical (capabilities of computing facilities and organizational technology).

An important task for users of all levels is to perform work on the management of enterprise resources aimed at increasing its competitiveness and their regulation in case of deviations from the planned parameters. Therefore, the optimal organization of information support is one of the main factors determining the effectiveness of competitiveness management in general. The amount of information required by the user to implement the specified work and make management decisions is his information need.

In the competitiveness management system at different levels of managerial decision-making, different information is required, both in terms of volume and content. The most difficult stage in the design of information support is the stage of determining the information needs of each user involved in the development and adoption of management decisions. To implement it, it is necessary to carry out:

detailing the process of using enterprise resources; definition of market segments, range of competitors and their capabilities; assessment of the level of competitiveness of the enterprise and products; determination of the circle of users involved in planning, evaluation and analysis of competitiveness, their rights, duties and responsibilities; determination of the information needs of each user for the implementation of specific tasks, i.e. development of forms of documents and determination of the timing of their submission to a specific user; determination of the totality of information, the receipt of which is provided by the user upon request.

Determining the information needs of the user about the state of competitiveness should be based on: a deep study of the external and internal marketing environment of the enterprise and the processes of using enterprise resources directed to its increase; taking into account the features of managing these processes. From the correctness of the definition of information needs to the full depends: the design of the workstation; technological process of information transformation; formation of final information; methods and terms of its use; design of mathematical and software for each workstation and information support in general.

The process of designing an information system can be carried out in three stages. At the first stage, it is necessary to study the processes of formation of primary data, describe the characteristics of their movement, form quantitative estimates of the flow of documents, determine the possibilities for automating the processes of registration, collection and transmission of data. All divisions of the enterprise are subject to consideration, where information is formed or used to assess, analyze, predict the level of competitiveness of the enterprise and use the resources allocated to increase it. The purpose of this stage is to identify sufficient sets of primary data necessary to implement the task of managing the competitiveness of an enterprise.

At the second stage: technological processes of data transformation are designed based on the database and messages of the base level; algorithms for solving problems of assessing and predicting the competitiveness of an enterprise, optimal distribution of funds allocated for its increase are developed; corresponding databases are formed; the modes of presenting information to users are determined. This stage

characterizes the procedural level of the information system, which is directly related to the base level and the complex of technical means.

At the third stage, methods for presenting the results of the converted data to the functional divisions of the enterprise are considered, and the possibility of satisfying the needs of users of all levels with the following information is examined: assessment of the level of competitiveness of the enterprise, reflecting quantitative and qualitative comparative characteristics in relation to competing enterprises; forecasting standards of competitiveness; optimal distribution of enterprise funds; determination of a set of organizational and economic measures and preparation of managerial decisions on managing competitiveness in order to increase it.

Based on the considered requirements for information by MIS and the principles of designing information systems, information support for managing the competitiveness of an enterprise has been developed (see Fig. 6), the main task of which is to create conditions that ensure rational processing and rapid provision of information to the user at the right time with the definition his rights to use it. As can be seen from fig. 6 to solve the problems of managing the competitiveness of an enterprise, a set of methods for processing external and internal information is needed.

External information enters the information database of the enterprise from various sources: periodicals; statistical collections; presentations; information databases; product brochures; Internet networks; Email; government laws and regulations; questionnaires of experts, etc., and internal information is the result of the functioning of automated workplaces that provide solutions to the problems of accounting, marketing research, technical preparation of production, main production management, logistics management, finance, sales, etc.

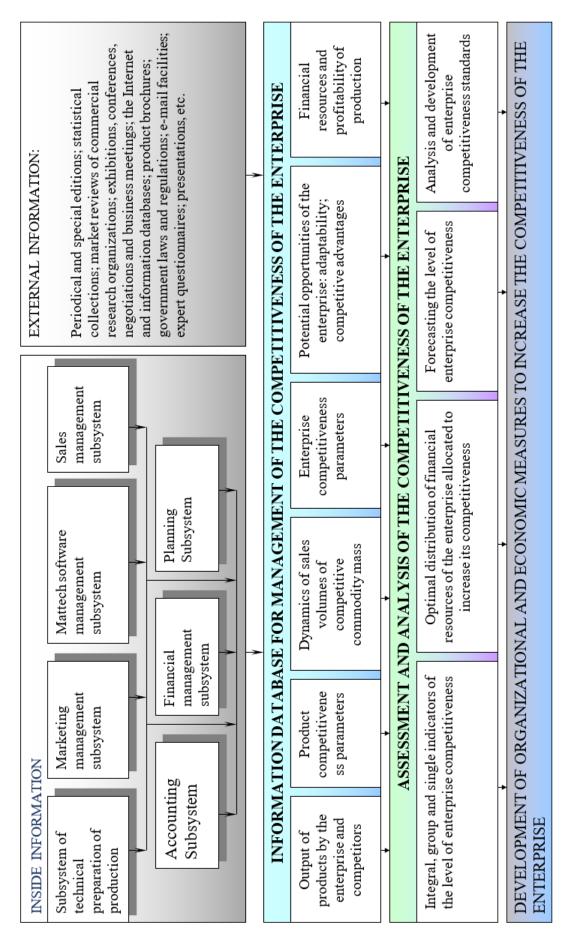


Fig. 6 Information support for enterprise competitiveness management

Since the process of automating the preparation and adoption of managerial decisions cannot be fully assigned to computer technology, therefore, in this paper, human-machine technologies for information support of managerial decision-making processes are considered. The proposed technology provides a combination of human and computer capabilities for information processing.

In other words, computer technology provides the management, expert experts of the enterprise with high information processing performance, reliable storage of the necessary volumes, quick access to it, various ways of displaying information and a convenient interface for human communication with a PC, and all intelligent information processing operations are performed by experts. and decision makers.

The technical side of information support is implemented in the form of a local area network of workstations of various targeted directions, providing information support for the work of the enterprise's management and experts, including their interaction with each other, which makes it possible to achieve a high quality of information support for enterprise competitiveness management. The software that supports this technology has a high degree of adaptability, allowing it to be configured for use by any manufacturing enterprise in a fairly short time.

With AWS, a specialist can perform the following operations: enter and correct information; evaluate the quality of incoming information; decide on obtaining additional information; receive the results of calculations of the levels of competitiveness of the enterprise and its factors; make forecasts and identify trends in the behavior of the competitiveness of the enterprise and its factors; draw conclusions and make decisions based on the information at its disposal.

Preliminary analysis of information allows experts or the management of the enterprise to identify its incompleteness or inconsistency and make decisions on their compensation. The process of preparing decisions to eliminate inconsistency, incompleteness and unreliability of information requires the organization of feedback from information sources. In the process of merging the accumulated information, redundancy is eliminated, and at the stage of generalization, when analyzing and comparing it, the expert makes a decision about its sufficiency for the further

functioning of the system.

The stages of designing a database of information support for managing the competitiveness of an enterprise are as follows: defining the subject area of the problem; creation of a conceptual model of the subject area of the task; creating a logical database model; designing a physical database model. At the first stage, the boundaries of the problem under study, objects, information flows between them, and the structure of information support output reports are determined. As a result of the analysis of the subject area of the task, a number of basic objects are distinguished, characterized by certain quantitative properties.

As part of the stage of creating a conceptual model, all objects of the subject area, their attributes and the relationships between them are determined. Data elements, their relationships and key elements are defined based on conceptual requirements.

The next stage of database design is the creation of a logical model, in which case the conceptual model is mapped to one of the logical data models: relational, network, hierarchical, or combined. When developing it, it is necessary to decide which model is most suitable for displaying a particular conceptual domain model. To design a logical database model for the problem under study, a relational data model was chosen, which consists of a number of relations (tables). The choice in its favor was made due to the fact that mapping from a conceptual data model to a relational one is relatively simple.

The final stage of database design is the creation of a physical model, which is its "skeleton" and is to be stored on physical devices [94]. At this stage, the physical parameters of the database are determined: the distribution of records on the information storage device, the sizes of information blocks, input-output characteristics, etc. The main criteria of the physical model are the size of the memory required to store information and the access time to the database records.

The process of forming generalized analytical materials is intended to inform decision makers about the state of the enterprise's competitiveness in the form of special forms, which are the main information product of the task.

The stage of information support for the analysis and assessment of the

situation is designed to identify correlations between the initial information and the generalized analytical material. At this stage, the dynamics of the main indicators of the competitiveness of the enterprise is studied, and recommendations are made for the implementation of the current situations.

The process of forming a statistical knowledge base is designed to accumulate the results of each stage of solving the problem. After analyzing the current situation, the marketing department, from the entire set of initial information, selects those data that will be suitable for further identification of the dynamics and obtaining predictive levels of competitiveness of the enterprise. The process of obtaining predictive levels of enterprise competitiveness based on all accumulated retrospective data is intended for their operational use in the analysis and assessment of the current situation in order to determine ways to improve the management of enterprise competitiveness.

All of the above processes are carried out by experts from the marketing department and other services according to Fig. 7 and allow you to build a general scheme of the subject area of information support that characterizes information flows in the preparation of management decisions to determine the competitiveness and sustainability of an enterprise. Based on the processes described above, the system organizes continuous monitoring of incoming initial information, in which information is analyzed, summarized and evaluated at various stages of its life cycle.

The use of the methods for assessing, analyzing and forecasting the competitiveness of an enterprise described in the paper in the information support allows you to quickly receive qualitatively new information that characterizes the real situation of the enterprise and its competitors in the conditions of market relations in the transition economy.

The problem of finding ways to improve the strategy for managing the competitiveness of an enterprise in economic science and practice is multifaceted, requiring a system-targeted approach and concentrating, in particular, on the development of analytical methods for studying competitiveness and organizational and economic methods that make up a single organizational and economic mechanism (OEM) to support competitiveness management enterprise, which combines

managerial, technical and technological measures to improve it.

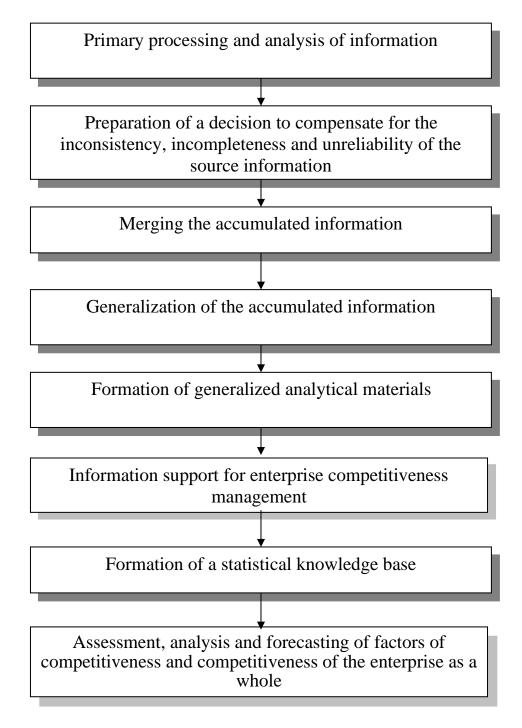


Fig. 7 Scheme for generating information for managing the competitiveness of an enterprise

In the scientific literature, a system is understood as a complex of interrelated elements that have common properties and are united to achieve a specific goal [90, p.105]. Systematic is the approach in which all connections, elements, functions and problems of management are considered as a single whole. The selection of systems is

carried out on the basis of five main factors, according to which the system: has a common goal; consists of interconnected elements that form its internal structure; has, along with internal elements, an external environment that forms its limitations; has certain resources to ensure its functioning; is headed by the control center, which ensures its movement towards the intended goal [104, p. 107-112].

Thus, the OEM for managing the competitiveness of an enterprise, and, consequently, the complexes of relevant technical, managerial and technological measures should be developed based on the target setting on the basis of a holistic system of principles, for which it is advisable to use the following seven groups of principles [93, p . 66].

- 1. System-wide principles: complexity individual parts of the OEM competitiveness management should be built into all functional divisions of the enterprise; consistency the process of developing and implementing the OEM of competitiveness management should be based on the methodology of system analysis of developing systems; dynamism the strategic decisions made on the management of competitiveness should be based on the time series of assessments of the strategic opportunities and competitive positions of the enterprise; continuity work on a competitiveness management strategy should be carried out constantly, with tracking of abrupt changes in its constituent factors; optimality managerial choice is based on the use of a criterion basis that reflects the principle of optimality, which follows from the value system adopted at the enterprise; constructiveness the OEM must formulate strategies and tactics for managing competitiveness, justify their choice and develop ways to implement them.
- 2. Principles of development management: principles of systems development; modeling principles; principles of making managerial decisions; the principle of self-organization; principle of synergy. For an adequate description of the OEM of competitiveness management, it is necessary to use an approach based on self-organization and focus on the implementation of the basic principles of synergetics as the basic theory of self-organization.
  - 3. Strategic principles (concentration of efforts, balance of risks, cooperation).

- 4. The principle of awareness and sufficiency of participants in the management process.
- 5. The principle of using continuous monitoring, which provides for constant monitoring and control over the implementation and dynamics of the life cycle of the enterprise competitiveness management process.
- 6. The principle of ensuring and maintaining the diversification of enterprise competitiveness management strategies, constantly monitoring and preparing alternative management strategies.
- 7. The feedback principle, which makes it possible to make the OEM of competitiveness management adaptive in relation to the transforming market environment. Taking this principle into account makes it possible to carry out the necessary structural, organizational and resource changes in the enterprise, which ultimately may affect its interests and capabilities.

When developing the OEM of competitiveness management, it is necessary to approach it as a multidimensional social system. It should be developed as a heterogeneous mechanism that ensures the interaction of the enterprise through management strategies with a heterogeneous environment, which includes market, environmental and social components.

Developed on the basis of the system-wide principles discussed above, the OEM of enterprise competitiveness management can be effective if it takes into account and provides [95, p. 102]: optimal combination of centralized and decentralized initiatives; unity of goals and actions of the entire enterprise and its individual links; a motivation system that creates the interest of all performers in increasing the competitiveness of the enterprise; the use of modern technological and technical management bases, allowing with minimal resources in real time to solve the issues of ensuring the competitiveness of the enterprise.

The success of OEM management of the competitiveness of an enterprise depends on its initial state, its functional and structural organization. The proposed OEM should function as a program-target management structure, acting on the type of project management, i.e. have the authority to control and ensure implementation, have

resource support for the implementation of their actions - financial, material and technical and human production resources. The OEM should have such powers that would allow him to effectively influence the organization of all material and financial flows within the enterprise, to assess the feasibility of their use from the standpoint of competitiveness [95, p.103].

On the basis of the requirements of the system-targeted approach considered above and the principles of constructing the OEM of management, the OEM of managing the competitiveness of an industrial enterprise was developed, the schematic block diagram of which is shown in Figure 8. The proposed OEM is a specific multifunctional and multicomponent system consisting of a complex of interconnected blocks that are subject to the influence of external and internal factors and forming a certain integrity.

As can be seen from Figure 8, the structure of the main elements of the competitiveness management developed by the OEM is formed by program-target blocks that reflect the necessary actions, specific organizational, economic, technical and technological measures in their interdependence, the implementation of which contributes to the effective implementation of management decisions in this field of activity. The proposed OEM includes the following blocks: selection of competitive development strategies; reforming the system of personnel management and labor motivation; improving the quality and competitiveness of products and enterprises; introducing quality management systems and their certification; a systematic approach to diversification and production planning; achievement of unity of actions of all links and management processes in the external and internal policy of the enterprise; reorganization of the accounting and analysis system; improving marketing orientation, strengthening marketing service; activation of investment and innovation activities, attraction of external investment; improvement of information support for competitiveness management; improvement of financial management; development of measures aimed at the efficient use of production and financial resources; technical and technological re-equipment and modernization of the enterprise, the introduction of progressive technological processes.

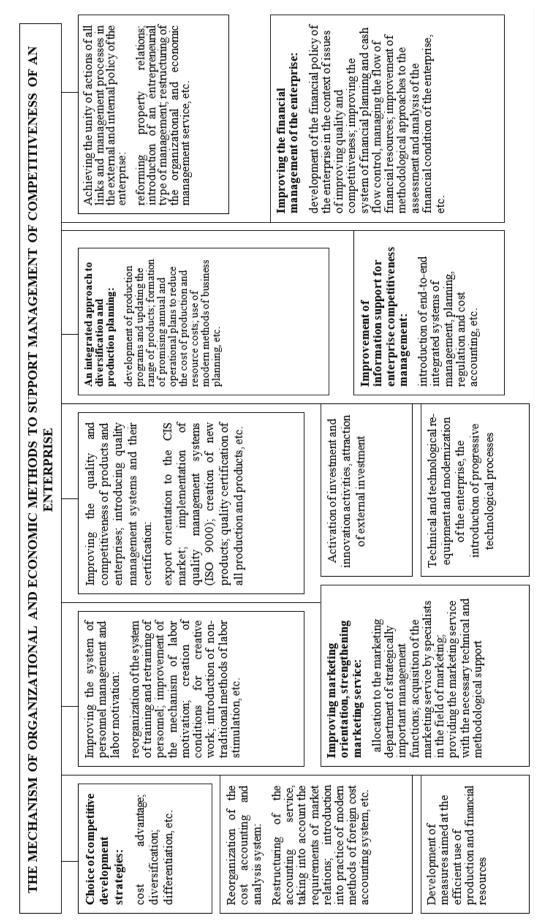


Fig. 8 Organizational and economic methods to support enterprise competitiveness management

All of the named blocks of OEM competitiveness management being interconnected and, thus, forming a certain integrity, are united by a single principle - each of them provides a solution to the problem of increasing the competitiveness and sustainability of an enterprise in the domestic and foreign markets by creating and maintaining competitive advantages and highly adapting to a dynamic changing external market environment.

Each of the blocks, in turn, is considered as a system that includes diverse backbone components. Let us consider in more detail the main components of each block of the proposed OEM competitiveness management, as well as the logic and structure of their formation.

1. Choice of competitive development strategies. A correctly chosen competitive strategy for the development of an enterprise, based on a strategic analysis of its competitive positions and potential capabilities, makes it possible to more clearly define the range of measures that increase the adequacy, dynamism and susceptibility of the on-farm mechanism to changes in the market environment and enhance the scientific, technical and production potential of the enterprise. In the management literature, various classifications of enterprise strategies are given, the most common and verified by practice in a highly competitive environment. It is the possibility of a wide maneuver strategies in a market economy that is the driving force of business [92, p. 37-42].

In the monograph "International Competition" M. Porter identified three strategies that, in his opinion, are universal and applicable to any competitive force - cost advantage, differentiation and focus. Describing the concept of competitiveness, he emphasizes that enterprises outperform their rivals if they have a strong competitive advantage in lower costs and product differentiation. Low costs, in his opinion, reflect the ability of an enterprise to sell goods at a lower cost than competitors. Selling goods at the same price as competitors, the company in this case receives a large profit. Differentiation is the ability to provide the customer with unique value in the form of a product, feature, or after-sales service. Any strategy must pay attention to competitive advantages. In addition, there is another important factor that determines the position of competitiveness - segmentation. Different market sectors require different strategies and

capabilities, and therefore the sources of competitive advantage in different market sectors are also different.

2. Achieving the unity of action of all links and management processes in the foreign and domestic policy of the enterprise. Due to the specifics of enterprises, the reorganization of intra-company management at them cannot be of a unified nature and implies the need for a differentiated approach to the choice of directions for structural transformations at each of them. However, common to them is the need to ensure a systematic approach in the process of serious structural changes of a qualitative nature in the management sphere itself. Only on this basis is it possible to practically implement the unity of actions of all links and management processes in the external and internal policies of the enterprise, that is, to achieve managerial synergy in the management system and, thereby, ensure a greater effect from the summation of the forces of all personnel, eliminate gaps in strategy and potential capabilities of the management system and create the necessary prerequisites for vigorous entrepreneurial activity.

With this in mind, the following areas of activity are proposed as components of this block: the optimal solution to the problem of reforming property relations; introduction of an entrepreneurial type of intra-company management; cardinal restructuring of the organizational and economic structure of management; creation of product centers of profit and responsibility for self-supporting results of activity; providing an integrated approach to the reorganization of the system and structure of enterprise management. It should be noted that the task of reforming property relations is essential for achieving managerial synergy, because the positive effect of privatization can only be achieved when the transformation of property relations is organically associated with the process of creating enterprise management, including the decentralization of the management system, increasing the independence and responsibility of structural subdivisions, that is, when not the problem of changing the form of ownership, but the problem of management, is put at the forefront.

The experience of functioning of domestic enterprises convinces us that the most expedient from the point of view of the formation of an effective owner is the preservation of the principles of collective management in the process of privatization,

that is, the transition to collective ownership. As world practice shows, the transfer of enterprises to the ownership of their employees is supported at the state level in many countries, regulated by legislative acts, encouraged by soft loans and, as noted by foreign experts, is an effective form of private ownership for medium and large enterprises [105, p.53].

Different development strategies require significantly different management systems and structures, the formation of which, in turn, is predetermined by the corresponding organizational style of the enterprise's behavior. The management literature describes incremental and entrepreneurial styles of organizational behavior. Incremental style behavior of the organization is aimed at minimizing deviations from traditional behavior both within the organization and in relations with the external environment. Changes are not welcome, they are limited or minimized. Entrepreneurial style entails a different attitude towards change. Enterprises of this style advocate continuous change in the achieved state and conduct an entrepreneurial search for opportunities for growth through change [91, p. 237-238].

The objective need for a transition to an entrepreneurial type of management requires a restructuring of the organizational structure of management. The management structure that has developed and is widespread at domestic engineering plants, built on a functional basis, is not adapted to market conditions, it is focused only on execution, and not on creative search. The purpose of the organizational structure is to support the enterprise, to promote the strengthening of the role of management in the implementation of its strategic goals and mission, to provide opportunities for rapid response to a changing external environment and market conditions.

3. Improving the system of personnel management and labor motivation. By introducing the OEM of competitiveness management, it is necessary to ensure that the labor collective realizes and perceives the urgent need for fundamental changes in the management system and functioning of the enterprise in the conditions of market relations. In this regard, the task of radical reorganization of the system of training and training of personnel in new methods of management and labor should be put as a priority in the basis of a competitive management strategy. A "critical mass" of

employees of the enterprise who know market relations in key positions and in decisive levels of management, who are able to work professionally in the consumer market, must be achieved. Only in this case, a qualitative shift in improving the efficiency of management and the implementation of the entrepreneurial type of management in practice are possible.

Based on this, it is proposed to form the structure of the third block of the competitiveness management OEM as follows: reorganization of the system of training and retraining of personnel, taking into account the requirements of management and marketing; improving the mechanism of labor motivation and responsibility for ensuring the competitiveness of products and enterprises; increasing objectivity, taking into account the assessment of the quality and results of work in the system of payment and incentives; creation of conditions for the development of creative and initiative work; development of an effective system of recognition of labor merits, the introduction of non-traditional methods of stimulation and remuneration; development of industrial democracy, ensuring the participation of employees in making managerial decisions; ensuring social protection of employees of the enterprise; creation of a system of various forms of production and economic training of workers and employees of the enterprise.

4. Improving the quality and competitiveness of products and enterprises, the introduction of quality management systems and their certification. The OEM for managing the competitiveness of an enterprise should form a fundamentally new strategy for managing product quality, which allows, on the basis of an integrated approach to solving this problem, to find priority ways to achieve competitive advantages in the sales markets.

The strategically important aspects of ensuring the competitiveness of products in modern conditions are: a clear focus on the creation and production of new products that meet the needs of practice and the increased demands of consumers; improvement through the development and implementation of new technical solutions for previously mastered products to increase the duration of its life cycle; development of cooperation on mutually beneficial terms with leading enterprises for the manufacture and sale of high-quality products in foreign and domestic markets.

Modern market conditions dictate the need to bring the regulatory and technical base for the preparation of production and the manufacture of products at all stages of the technological cycle in accordance with international quality standards. This is one of the most important factors in maintaining the competitiveness of the enterprise at the proper level.

the following components are included in this block of OEM competitiveness management: development of an effective strategy for foreign economic activity; development and implementation of an integrated product quality management system ( ISO 9000); certification of the entire production for compliance with the requirements of European and international quality standards; creation and development of fundamentally new competitive products; ensuring the duration of the life cycle of previously mastered types of products; development on a mutually beneficial basis of cooperation with leading enterprises for the manufacture of high-quality products; certification of the quality of all production and products for compliance with the requirements of international standards ISO 9000.

The next three blocks - the reorganization of the accounting and analysis system, the improvement of financial management, a systematic approach to diversification and production planning determine the effectiveness of the economic support of OEM competitiveness management.

5. An integrated approach to diversification and production planning. The structuring of this block identifies those areas of activity of the economic and other divisions of the enterprise, which in their totality purposefully contribute to solving the problems of increasing the competitive advantages of the enterprise and actively promoting the export of manufactured products. Among them, a systematic approach to the diversification of production, taking into account the constantly changing market conditions: development of production programs and updating the product range; formation of long-term, annual and operational plans for reducing the cost of production, spending money, material, fuel and energy and labor resources; active use in economic practice of modern methods of business planning, cost accounting, functional cost analysis and other tools for improving planning and analytical work that contribute to

solving problems of increasing the competitiveness of an enterprise and ensuring its break-even and sustainable activities.

The effective functioning of the management system is largely determined by the effectiveness of its organizational support. This fact, as applied to this block of OEM management, necessitates the development of targeted programs for the implementation of a set of organizational, economic and technical and technological measures that ensure: achievement of planned targets to reduce costs and reduce production costs as important criteria for the successful operation of an enterprise; improvement of the technical level and consumer properties of products; increase in production and sales volumes; Receiving a profit; receipt of funds, etc. Target programs are proposed to be issued in the form of program orders for the enterprise, containing planned targets and fixing the responsibility of services for their implementation. The development of such programs should be an iterative process carried out in stages (in the context of annual or other planning cycles), each of which further deploys program positions and determines planned targets with an established system of control and responsibility for their implementation.

The practical implementation of this approach will make it possible to systematically diversify the main production in a short time and, on this basis, update the range of products.

6. Reorganization of the system of accounting and cost analysis. The structure of this block of OEM competitiveness management is predetermined by the objective need to improve the accounting policy of the enterprise in the changed business conditions in connection with: timely fulfillment of obligations to the state budget; with the increased need to promptly provide the management of the enterprise and departments with complete and reliable information for making quality decisions; with the need to reorganize the scheme of accounting work, due to an integrated approach to the integration of accounting, management and tax accounting.

An important direction in the reorganization of the system of accounting and analysis of the enterprise is the restructuring of the accounting service, taking into account the requirements of market relations and the transition to entrepreneurial

management and based on the introduction of modern methodological and methodological provisions of the foreign cost accounting system into the practice of the accounting apparatus. The implementation of this will provide a qualitatively new level of production cost management and the formation of prices for manufactured products and thereby enhance the positive impact of the accounting and analysis system on increasing the competitive capabilities of the enterprise and increasing its sales volumes.

7. Improving the financial management of the enterprise. The key objectives of the financial management system are: ensuring the financial stability of the enterprise in a competitive environment; prompt assessment of the risk and benefits of various ways of investing money in increasing the competitive advantages of products; making strategic decisions on the choice of sources of financing that ensure the effective financial and economic activities of the enterprise; strengthening export potential.

The enlarged components of this block of OEM competitiveness management are as follows: development and implementation of the financial policy of the enterprise in the context of problems of improving the quality and competitiveness of products; improving the system of financial planning and cash flow control, managing the flow of financial resources; improvement of methodological approaches to the assessment and analysis of the financial condition of the enterprise; management of current (current) assets of the enterprise, the formation of an investment portfolio; information support of the management of the enterprise with financial statements for internal control and making informed management decisions.

8. Activation of investment and innovation activities, attraction of external investment.

In modern market conditions, without the implementation of this block of competitiveness management, it is not possible to solve the problems of large-scale diversification of production, technical and technological re-equipment and modernization of the enterprise, the introduction of progressive technological processes, the creation and development of fundamentally new competitive products, etc. This circumstance, as applied to the considered block of OEM competitiveness management, necessitates: development of investment and innovation policy of the enterprise;

formation and selection of priority areas for the use of financial resources of the enterprise for the implementation of research and development work; activation of internal and attraction of external investment in the development of production.

9. Improve marketing orientation, strengthen marketing service. The main organizational measures for managing competitiveness in an enterprise are: in allocating strategically important management functions to the marketing department; in the acquisition of the marketing service by specialists in the field of marketing; providing the marketing service with the necessary technical and methodological support. The primary tasks of this department are the following:

improvement of organizational forms and methods of marketing research;

study of needs and market conditions, market segmentation, expansion of strategic management zones;

studying the activities of competitors to improve similar products and increase adaptation and competitive advantages;

development of standards for the competitiveness of products and enterprises, as well as methods for quantifying and forecasting its level;

assessment and analysis of the strategic potential, strategic resources, competitiveness of the enterprise and products, as well as coordination of work on the formation and implementation of organizational and economic measures to increase competitiveness;

real-time monitoring of external and internal factors of competitiveness, the formation of rational enterprise management strategies based on forecasting scenarios for the development of the internal and external environment of the enterprise;

analysis and forecasting of the market price, implementation of effective advertising activities of the enterprise.

Improving the marketing orientation in the enterprise management system implies the reorganization of the organizational management structure, which consists in the redistribution of managerial functions between the company's services and in the allocation of strategically important management functions to the marketing department. In this case, all the resources of the enterprise should be considered from the standpoint

of ensuring the implementation of the marketing plan. Work on the formation of a production plan, personnel management, financial analysis, etc. should be carried out in order to ensure and control the implementation of the marketing plan of the enterprise. The marketing department must not only use information from other departments, but also provide information support to the latter in drawing up their own plans.

10. Improvement of information support for enterprise competitiveness management. The implementation of a strategy to ensure the competitiveness of an enterprise requires fundamental changes associated with the introduction of information technology. In relation to the conditions of the enterprise, this block of OEM competitiveness management is represented by the following components: development of an end-to-end integrated management system for solving management, design and production problems; creation of a unified integrated system of planning, regulation and cost accounting; development of a unified information model for accounting, management and tax accounting; development of an automated system "Cost management"; creation of information systems "Fast Marketing" and "Finance Management"; development of a computer system for product quality management; introduction of advanced information technologies and modern means of communication; creation of an automated workplace in the engineering and economic services of the enterprise and its production divisions; technical support of information support for intracompany competitiveness management.

Ultimately, we are talking about the transition to computer technology, which makes it possible to combine the main services of the enterprise into a single information field, with further connection to the network of almost all of its divisions, i.e. about creating an information model of an enterprise that comprehensively reflects all business operations and objects involved in them, as well as the whole variety of their relationships.

11. Technical and technological re-equipment and modernization of the enterprise, the introduction of progressive technological processes.

The introduction of quality management systems and the production of competitive products is not possible without solving the problems of technical and

technological re-equipment and modernization of the enterprise, without the introduction of new progressive technological processes. In this situation, this block of competitiveness management is represented by the following components: development of a comprehensive plan for the phased technical and technological re-equipment of production; activation of internal and attraction of external investment in order to solve this problem.

12. Development of measures aimed at the efficient use of production and financial resources. At present, the reduction of production costs and the efficient use of the production and financial resources of the enterprise is a strategic direction for the development of the enterprise. The main elements of this control block are: the formation of plans to reduce the cost of production and the expenditure of production assets with the consolidation of the responsibility of the enterprise services for their implementation; introduction of a system of planning, rationing and cost accounting for the entire production cycle; implementation of a product quality management system, etc.

Thus, the above schematic block diagram of the OEM for supporting the management of the competitiveness of an enterprise is a set of complex actions that allow: to rebuild the entire management system; use the internal resources of the enterprise; to create in the structural divisions a constant desire to increase competitiveness; increase the competitiveness of the enterprise and strengthen its position in the market. Of course, this scheme, taking into account the complexity and multidimensional nature of the problem of enterprise competitiveness, does not reflect with a high degree of detail the whole range of organizational, economic and other methods for solving this problem. However, such structuring allows for a systematic and targeted search for ways to interface all components of the organizational and economic support of the enterprise management in order to concentrate efforts and control the factors that determine the enterprise's potential, which can increase its competitiveness and stability in the market environment.

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# 6. Management of the processing and sale of solid household waste as a direction of ensuring ecologically effective development of territorial communities

Increasing energy efficiency is an important prerequisite for reducing the manmade burden and import dependence of the country in the energy sector. Achieving this goal requires the application of the principles of the circular economy, which is based on renewable resources, circular material flows, and taxes used to balance demand. Organization of the full cycle of resource turnover in a sustainable and ecologically safe way is a possible direction of regeneration of natural capital. An economy based not on fossil, but on renewable biological resources, capable of transforming them into food, feed, chemicals, materials, fuel and energy, returning nutrients and carbon to the soil, is seen as a way to meet the needs of society, while at the same time forming cyclical processes in agriculture. The agricultural sector occupies a central place in the production of an alternative source of energy - biomass for its further transformation into commercial products, including bioenergy resources, and the task of local authorities is to create favorable conditions for conducting relevant activities. Biomass is considered the energy source of the future, and its global potential can meet almost one-third of the projected demand for energy resources by 2050. In addition, biomass provides lower energy consumption and CO2 emissions compared to fossil fuels

Natural resources are an important component of full-fledged human activity, but among them there are those without which the existence of society is impossible. Biological resources, which form the biological cycle of matter and energy in nature, are basic for its life. Natural resource potential includes renewable and partially renewable resources. Among the renewable ones, energy carriers of biological origin or biofuels (biodiesel, bioetalon, biogas) are becoming more and more developed as energy sources, the main raw material for the production of which is agricultural products.

The implementation of measures for the effective (optimal) use of renewable energy sources remains a strategic issue for the development of the agricultural sector.

This is due to a number of objective factors: ensuring energy security and reducing dependence on energy imports; development and efficiency of the work of enterprises; creation of new jobs and increase in revenues to budgets of all levels; improvement of the ecological situation.

The works of such domestic specialists as: H. Kaletnik, I. Honcharuk, V. Bondarenko, R. Logoshi, I. Furman, O. Dmytryka, K. Mazur are devoted to the problems of organizing the processing of solid household waste (hereinafter referred to as solid waste) and the sale of relevant products., D. Tokarchuk and others.

Despite the significant scientific contribution of domestic and foreign authors to the solution of the mentioned problems, questions remain open regarding the definition of the essence, formation and implementation of the bioenergy potential of territorial communities, that is, the transformation of external and internal possibilities aimed at the production of alternative energy sources. Therefore, we consider it necessary to reconsider the existing developments and developments, as well as to offer our vision of solving the above problems.

The scientists made a significant contribution to the theoretical and methodological perspective of the research of the mentioned problem, many of its methodological and applied aspects were solved. However, individual issues of this multifaceted problem have not been sufficiently investigated. In particular, the issues of developing the bioenergy potential of rural areas and the production of biofuels from alternative energy sources remain debatable.

The purpose of the work is to determine the theoretical and practical principles and problematic aspects of the organization of solid household waste management and the sale of products made from them.

Along with the annual increase in the volume of waste accumulated in Ukraine for all classes of danger, which reached almost 12 million tons [108] last year, there are many natural landfills of household waste that have already become part of urban and suburban areas. Today, there are tens of thousands of unauthorized landfills where not only household, but also construction and other hazardous waste are stored without control [109]. Such landfills are a serious source of pollution not only of thousands of

hectares of land, but also of the air and water environment. That is why special attention needs to be paid to the issues of proper accounting of stray waste, their timely detection, establishment of the causes of their formation, development of measures to prevent their further formation and processing, disposal of such accumulated waste [110].

Stray waste is subject to separate state accounting. According to Art. 12 of the Law of Ukraine "On Waste", waste that has no owner or the owner of which is unknown is considered to be ownerless. If the owner of the waste is determined in accordance with the provisions specified in the Procedure for identifying and accounting for stray waste, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 03.08.1998 No. 1217 [111], he bears full responsibility for observing the conditions of their handling and preventing the negative impact of waste on the surrounding natural environment environment. If the ownerless waste is not accounted for, then the local self-government body is considered to be its owner, and a "spontaneous" landfill was created on the territory. At the same time, it should be noted that the status "owner not established" is the result of certain procedures for its determination. Currently, this is the function of local commissions for identifying and accounting for stray waste. At the same time, at the legislative level, a specific algorithm of actions to establish the owner, certain powers of the commission are not fixed, which in practice leads to the limitation of the commission's actions only to the detection and accounting of stray waste without establishing its owner. This creates additional financial problems for local self-government bodies during the practical implementation of this provision and does not contribute to solving the issue of handling stray waste.

Thus, it is proposed to understand waste as materials, objects, substances, the creation of which must be avoided, but objectively formed as a result of any human activity, the functioning of other living organisms, natural and man-made situations, which do not have their further use at the place of their formation, have lost their consumer properties, have an owner who must prevent their formation by all legal means, or get rid of them in accordance with the procedure established by law by disposal, removal or processing, in order to ensure the protection of the natural

environment, the protection of life and health of people and the economic benefits The system of legislation of Ukraine on waste consists of a large number of legislative acts. The legislative system of Ukraine on waste includes such legislative acts as the Laws of Ukraine "On Ensuring Sanitary and Epidemic Welfare of the Population" [112], "On Handling Radioactive Waste" [113], "On Scrap Metal" [114], "On Housing communal services" [115], "On chemical current sources" [116], "On veterinary medicine" [117], "On removal from circulation, processing, disposal, destruction or further use of low-quality and dangerous products" [118], Code of Ukraine on subsoil [119], other normative legal acts.

Pursuant to Article 28 of the Law of Ukraine "On Waste" with the aim of strengthening control over the ecological state of waste disposal sites, assessing their impact on the natural environment and human health, Resolution of the Cabinet of Ministers of Ukraine dated August 3, 1998 No. 1216 approved the Procedure for Keeping a Register of Sites waste removal. The register is created and maintained on the basis of passports of waste disposal sites, reporting data submitted by waste producers, information of specially authorized executive bodies in the field of waste management. Based on these passports, state administrations prepare conclusions on the level of environmental safety of waste disposal sites, determine the category of their level of environmental safety for the environment and human health. The registry is maintained by local state administrations [120].

Natural landfills in accordance with the decision of the National Security and Defense Council of Ukraine "On challenges and threats to the national security of Ukraine in the environmental sphere and priority measures for their neutralization", implemented by the Decree of the President of Ukraine dated 03.23.2021 No. 111/2021, are assigned to territories, which have a high level of risks for natural ecosystems and public health [121].

One of the ways to ensure the efficiency of household waste processing is to overcome the common practice of using plastic for packaging consumer goods. In accordance with European waste management standards, the Law of Ukraine "On Limiting the Circulation of Plastic Bags in the Territory of Ukraine" was adopted on

June 1, 2021. This Law is aimed at reducing the volume of use of plastic bags in Ukraine, limiting their distribution in order to improve the state of the environment and beautify the territories. The adopted act prohibits retail, public catering and service facilities from distributing plastic bags of the following types: ultra-thin, thin, oxodegradable. The exception is biodegradable and size-limited bags (size 225×345×450 mm), which are used for meat, fish and their products, as well as for the primary packaging of loose products (valid until January 1, 2023). All other plastic packages that do not meet the established requirements are subject to withdrawal from circulation. The law also prohibits their free distribution. Plastic bags should only be provided for cash. At the same time, retail prices for such packages cannot be lower than the minimum prices set by the Cabinet of Ministers of Ukraine. Mandatory labeling of biodegradable plastic bags is also provided, and fines are established for violations of these norms [122].

By signing the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their member states, on the other hand, Ukraine undertook to implement the provisions of (Framework) Directive No. 2008/98/EC of the European of the Parliament and the Council of November 19, 2008 "On waste and repeal of some directives" to the national legislation [123].

The Law of Ukraine "On Waste Management" provides for the creation of a National List of Waste, which will serve as the basis for waste accounting and reporting on the results of waste management, filing declarations and implementing permit procedures in the field of waste management. The information contained in the National List of Waste has the character of public information, which creates opportunities for increasing the effectiveness of public control over the use of stray waste [124].

In accordance with the Law of Ukraine "On Waste Management" of June 20, 2022 No. 2320-IX (coming into force on July 9, 2023), the hierarchy of waste management is implemented by central and local executive bodies, local self-government bodies, enterprises, institutions and organizations with the aim of (in order

#### of priority):

- 1) prevention of waste generation;
- 2) waste preparation for reuse;
- 3) recycling;
- 4) recovery of waste (including energy production);
- 5) waste removal.

Enterprises, institutions and organizations whose activities lead to the generation of waste ensure compliance with the waste management hierarchy by:

- 1) planning and carrying out its activities in such a way as to prevent the generation of waste, reduce its generation, prevent its negative impact on human health and the surrounding natural environment during the design of products, their production, during and after the use of products;
- 2) carrying out the recovery of waste, the formation of which could not be prevented, ensuring the preparation of waste for reuse, recycling or carrying out other recovery operations, including energy production;
- 3) removal of only those wastes that are unsuitable for technological or economic reasons for recycling or other waste recovery operations [124].

In accordance with this law, the following terms are used in the following sense:

- 1) bio-waste waste that is subject to anaerobic or aerobic decomposition, such as food waste or food industry waste at all stages of production and consumption, waste from green areas;
- 2) bulky waste household waste that cannot be placed in containers up to 1.1 cubic meters in size;
- 3) waste removal an operation that is not waste recovery, even if one of the consequences of such an operation is the use of substances or energy [124].

In accordance with the Law of Ukraine "On Waste Management", 15 waste disposal operations are defined, which include from their collection and storage to their processing and incineration for the purpose of obtaining energy or their disposal (Table 1).

Table 1

#### List of waste removal operations

Conventional	Operations on the issue of waste
designation D1	Placement on the surface or in the ground, including burial, etc
D2	Soil treatment, including biological decomposition of liquid or sludge waste in the soil, etc
D3	Deep injection, including injection of waste of appropriate consistency into wells, salt domes or natural reservoirs, etc.
D4	Discharge to the surface of liquid and sludge (sludge) waste, including discharge of liquid or sludge waste into pits, ponds or settling tanks, etc.
D5	Disposal at specially equipped landfills, including disposal in separate sections, closed and isolated from each other and from the natural environment, etc.
D6	Discharge into bodies of water other than seas/oceans
D7	Discharge into seas/oceans, including on the seabed
D8	Biological treatment, not specified in other headings of this annex, resulting in the formation of final compounds or mixtures, which are removed by carrying out the operations defined in headings D1-D12
D9	Physico-chemical treatment, not specified in other headings of this annex, resulting in the formation of final compounds or mixtures, which are removed by carrying out operations defined in headings D1-D12, including evaporation, drying, calcination, etc.
D10	Burning on land
D11	Incineration at sea (prohibited by the legislation of the European Union and international conventions)
D12	Permanent storage, including in special containers in the mine, etc
D13	Preliminary waste operations prior to disposal operations specified in items D1-D12, including sorting, crushing, compaction, granulation, drying, grinding, conditioning or separation
D14	Repacking before carrying out the operations specified in items D1-D13
D15	Storage before carrying out operations defined in items D1-D14

Source: systematized based on data [108]

In accordance with this law, there are also provisions for waste recovery operations of 13 types (Table 2).

Special attention should be paid to the use mainly as fuel or in another way for energy production (R1), which also includes installations for thermal treatment of household waste, if their energy efficiency is at least:

- 0.60 for installations, the operation of which began before the entry into force of this Law;
- 0.65 for installations, the operation of which began after the entry into force of this Law.

Table 2

#### List of waste recovery operations

Conventional	Waste recovery operations
designation	
R1	Use mainly as a fuel or in another way to produce energy
R2	Recovery/regeneration of solvents
R3	Recycling/recovery of organics not used as solvents, including composting and
	other biological transformation processes, as well as preparation for reuse,
	gasification and pyrolysis when components are used as chemicals, and recovery
	of organic materials in the form of backfill
R4	Recycling/recovery of metals and their compounds (including preparation for
	reuse)
R5	Recycling/recovery of other inorganic materials (including preparation for reuse,
	recycling of inorganic construction materials, recovery of inorganic materials as
	backfill and soil treatment leading to soil restoration)
R6	Regeneration of acids or bases
R7	Recovery of components is used to reduce pollution
R8	Recovery of components from catalysts
R9	Refinement of oil products or other types of their reuse
R10	Tillage that promotes agriculture or improves the state of the natural environment
R11	Use of waste generated during the operations defined in positions R1-R10
R12	Preliminary operations with waste for carrying out operations defined in positions
	R1-R11. If another R-code is not appropriate, this may include operations prior to
	recovery, including pre-treatment, including dismantling, sorting, crushing,
	compacting, granulating, drying, grinding, conditioning, repacking, separating,
	mixing or mixing before being fed to any which operations are defined in positions
	R1-R11
R13	Storage of waste before carrying out the operations defined in positions R1-R12
	(except for the collection operation)

Source: systematized based on data [108]

The formula is used to determine energy efficiency:

$$EE = [(Ep - (Ef + Ei)) / (0.97 \times (Ew + Ef))] \times KKK$$
, where:

EE - energy efficiency;

Ep is the annual production volume of electric and thermal energy (GJ/year), which is calculated according to the formula:

$$Er = 2.6 \times Ee + 1.1 \times Et$$
, where

Ee - annual volume of electric energy production;

Et – annual amount of thermal energy production;

Ef is the annual amount of energy used for the production of steam (thermal energy) (GJ/year);

Ew is the potential annual amount of energy that can be obtained from waste processing (GJ/year), based on the calculation of their minimum calorific value (calorific value);

Ei is the annual amount of additional energy supplied to the technological process, except for Ew and Ef (GJ/year);

0.97 is a coefficient that takes into account energy losses caused by slag formation and radiation.

During the calculation of the energy efficiency index of thermal treatment facilities for household waste, the climatic conditions at the location of the facility are taken into account, which depend on the assessment of the need for heating the specified area (PGD – degree-day indicator).

KKK is the climate correction coefficient.

KKK for installations, the operation of which began before the entry into force of this Law:

KKK = 1 - if PGD is at least 3350;

KKK = 1.25 - if PGD is no more than 2150;

 $KKK = -(0.25 / 1200) \times PGD + 1.698 - \text{for other values of PGD}.$ 

CCC for installations, the operation of which began after the entry into force of this Law:

KKK = 1 - if PGD is at least 3350;

KKK = 1.12 - if PGD is no more than 2150;

 $KKK = -(0.12 / 1200) \times PGD + 1.335 - for other values of PGD.$ 

The resulting KKK value is rounded to three decimal places.

PGD - degree-day indicator (estimation of the need for heating) is calculated as the annual sum of the differences between the temperature of 18°C and the average daily temperature (only for those days when the temperature does not exceed 15°C). At the same time, average daily temperatures are defined as averages between the maximum and minimum daily temperatures.

The planned indicator for a certain year for each installation of thermal treatment of household waste is calculated as the average over the last 20 years for the settlement

in which the installation is located.

Waste is any substances, materials and objects that were formed in the process of production or consumption, as well as products that have completely or partially lost their consumer properties and have no further use at the place of their formation or detection and which their owner disposes of. intends or must get rid of by disposal or disposal [125]. Household waste is waste generated in the process of human activity in residential and non-residential buildings (solid, large-sized, repair, liquid, except for waste related to the production activities of enterprises) and is not used at the place of their accumulation. Solid waste is the remains of substances, materials, objects, products, goods, products that cannot be used for their intended purpose in the future [126]. In our opinion, solid household waste can be interpreted as a part of municipal solid waste, which contains the most valuable components for use in the economy, as well as hazardous waste generated by individuals.

Management of this activity implies the organization of collection, removal, disposal and processing of solid household waste in a specially designated area in accordance with current legislation and is under the management of local selfgovernment bodies. Management at the local level of activities related to the management of solid household waste is carried out on the basis of the following principles: protection and rational use of natural resources, as necessary conditions for ensuring a favorable environment and ecological safety of the population of the territories; a combination of ecological, economic, social and other interests in this field of solid household waste management based on long-term programs and plans for the development of solid household waste management; the use of methods of economic regulation of activity in the region with the aim of reducing the total amount of waste, its degree of danger and involvement in economic activity; preventing the formation of unauthorized waste dumps and preventing cluttering of territories; compensation for damage caused to the environment and citizens' health as a result of violation of requirements, norms and rules regarding solid household waste management; ensuring the availability of information in a certain area.

In Ukraine, there are officially 5,455 landfills and landfills with a total area of

more than 8.5 thousand hectares. Research by Honcharuk I.V. testify that, despite a number of adopted strategies and program documents on environmental protection in Ukraine, the sphere of waste management was not properly reflected in them, although such waste harms human health and the environment [127, p. 30].

Today, there is a trend of increasing waste generation in Ukraine. During the period of 2015-2021, this indicator increased by more than 30% and in 2020 it amounted to more than 462 million tons (Table 3). In 2020, more than 11 million tons were household waste and more than 435 million tons of waste from economic activities. Only 25 percent of this volume was disposed of.

Table 3

The main indicators of waste generation and management

	2010	2018	2019	2020	2021	Deviation,
						+, -
Formed, thousand tons	425914,2	312267,6	352333,9	441516,5	462373,5	36459,3
including from economic activity	419191,8	306214,3	346790,4	435619,8	456423,8	37232
Waste generated per person, kg	9285	7288	8335	10505	11074	1789
Collected and received household and similar waste, thousand tons	9765,5	11491,8	11857,2	11792,7	12634,9	2869,4
Imported, thousand tons	4,1	3,4	89,4	22,0	2,7	-1,4
Total burned, thousand tons	1058,6	1134,7	1028,6	1059,0	1008,0	-50,6
including for the purpose of obtaining energy	840,3	1086,3	951,2	960,1	902,2	61,9
Recycled, thousand tons	145710,7	92463,7	103658,1	108024,1	100524,6	-45186,1
Prepared for disposal, thousand tons		1940,5	3193,6	2810,4	2641,3	-

Source: formed on the basis of [128]

The total volume of waste disposal in 2021 was 100.5 million tons, mainly this volume accounted for recycling or disposal of inorganic materials (Table 4).

Table 4
Waste from economic activity and in households was disposed of, thousand tons

	2010	2018	2019	2020	2021	Deviation, +, -
Everything is disposed of	145710,7	92463,7	103658,1	108024,1	100524,6	-45186,1
Utilization/generation of solvents	330,6	65,3	103,9	137,1	111,2	-219,4
Recirculation	2773,2	443,2	397,6	474,8	320,0	-2453,2
Composting of organic waste	147,4	651,1	671,6	619,8	549,8	402,4
Fermentation of organic waste	295,8	86,7	88,5	77,7	63,5	-232,3
Recycling / utilization of metals and their compounds	9564,4	6515,8	5798,9	5592,7	5356,2	-4208,2
Recycling / utilization of other inorganic materials	110658,2	58958,1	55930,2	58763,3	43068,9	-67589,3
Recovery of components used to reduce pollution	6125,2	13718,7	26649,4	27348,7	36553,7	30428,5
Re-distillation of used petroleum products	99,3	29,0	12,5	14,7	13,5	-85,8
Soil treatment that has a positive effect on agriculture or improves the ecological situation	9244,5	10763,3	12320,3	13263,0	13501,3	4256,8
Use of waste obtained from any of the above operations	6438,5	1208,1	1684,1	1731,0	984,1	-5454,4
Everything is prepared for disposal	•••	1940,5	3193,6	2810,4	2641,3	-
Waste exchange for further disposal	•••	34,9	14,2	17,1	2578,4	-
Waste sorting		163,1	28,2	28,3	32,3	-
Mechanical and biological processing of waste at MBP installations		57,6	65,6	38,1	15,3	-

Source: formed on the basis of [128]

Unfortunately, composting of organic waste, primarily from household landfills, was practically not used. In 2021, more than 15,000 tons were subjected to mechanical and biological processing of waste at the facilities, which, unfortunately, is almost 4 times less than in 2015.

Summarizing the above, it can be concluded that the effective management of solid household waste is the basis for the sustainable development of the state. The level of Ukrainian legislation in the field of waste management is quite high. The state policy of waste management in Ukraine, as well as the main principles and priorities, correspond to European ones. However, the mechanisms of their implementation in practice are implemented very slowly. Therefore, they need to be accelerated, because by taking these basic steps in solid waste management, you can get closer to solving the problem of exiting a large-scale environmental disaster in the near future. The adoption of such norms, rules and requirements and their application in economic activity will make it possible to achieve optimal costs, means and resources for solving problems with solid household waste. It is also advisable to develop solid waste management strategies and plans at the regional level. This will provide an opportunity to build a proper system that will be economically efficient and will have a significant impact on the development of communities and the country in general.

In Ukraine, unfortunately, waste management according to this principle is more the exception for communities than the rule. However, there are communities that pay due attention to effective waste management, and their activities can become a successful example for others. We are talking about the Illinetska urban territorial community of the Vinnytsia region, which has started a number of waste management projects since 2016 and is successfully implementing them [129].

An important step for the community was the implementation in 2017 of the project "Construction of a waste sorting complex on the territory of the solid household waste landfill" in the city of Illintsy, Illinetsky district of the Vinnytsia region, and the creation of the communal enterprise "Dobrobut".

The structure of the enterprise, in addition to the direct waste sorting complex, also includes a contact zoo, a landscape nursery and a material and technical base focused on the provision of services for the improvement of the territory of the community and the contact zoo. The contact zoo is mostly used for the social tasks of the Illinets City Council - conducting excursions, maintaining the image of an ecologically oriented community and forming eco-awareness among young people.

The complex of measures to create a positive image by the enterprise "Dobrobut" involves the constant provision of services of the Illinets TG in the field of community improvement under the brand "Illinets - everything happens here" and the implementation of educational activities in the field of ecologically safe development of the relevant territories.

The key to rational use of the community's waste is its high-quality sorting. The morphology of solid waste entering the waste sorting complex of KP "Dobrobut" is represented, in the vast majority, by organic waste - 28% (leaves, tree chips, organic household waste, etc.), 18% - unclaimed solid waste that cannot be sold and can be burned to ensure heating of the enterprise itself and, in the future, to heat the petting zoo in winter. More than 40% of sorted waste is sold for processing. During 2020, KP "Dobrobut" sorted 20,500 m3 of solid waste, of which 40% was sold, 14% was sent for processing, and 46% was sent to a landfill [129].

About 14% of solid waste is used for recycling within the community - as a component for the production of paving slabs. In the tile production workshop, sand and plastic agglomerate are combined into a mixture: 30% plastic waste, 70% sand (the technology requires the use of river sand) [129].

The appropriate mixture enters a special machine, which heats it up to 180 0C and turns it into a hot mass. This mass is weighed in portions and placed in a press, where the final formation of the tile is carried out. The tile is produced in the basic size of 17X12X3cm (0.02 m2) with an average weight of 1.15 kg. Paving tiles of this type are cheaper and of better quality than concrete counterparts. Corresponding products are practically not affected by salt solutions or temperature changes, and their service life is unlimited, and what is important - they are subject to repeated processing. During an 8-hour shift, KP "Dobrobut" produces up to 250 m2 of tiles. Today, the entire volume of production is used for the needs of the city and the community - it was also used for the improvement of the waste sorting complex, namely the area around the utility company and more than 10,000 m2 of pavement in the city of Illinka.

On average, one ton of waste can produce 350 kg (35%) of RDF fuel, which will have a moisture content of 12-14%.

The priority measures for the implementation of such a project in the Illinets community are:

- 1) familiarization with advanced European experience in the production and use of RDF fuel by communities;
- 2) assessment of the community's solid waste potential for the production of RDF fuel;
- 3) retrofitting of the waste processing plant of the Illinetsk urban territorial community with a line for the production of RDF fuel.

In order to use the energy potential of organic waste, which makes up 28% of the solid waste structure of the Illinets community and is currently sent to the landfill, bioenergy recycling is proposed - the organization of biogas production at the solid waste landfill.

Utilization of biogas from landfills allows not only to improve the environmental situation, but also to produce electricity and heat, partially replacing minerals. In world practice, the following methods of waste disposal are known:

- flaring, which ensures the utilization of greenhouse gases, the elimination of unpleasant odors and the reduction of fire hazards on the territory of the MSW landfill, while the energy potential of the landfill is not used for economic purposes;
  - direct combustion of BGZ for the production of thermal energy;
  - use of BGZ as fuel for gas-piston engines in order to obtain electricity and heat;
- use of BGZ as fuel for gas turbines for the purpose of obtaining electrical and thermal energy;
- bringing the methane content in BGZ (enrichment) to 94-97% with its further use in general purpose gas networks and as motor fuel;
  - production of commercial carbon dioxide [131-133].

Research, Hryschenko A.V. show that the intensity of biogas formation at a solid waste landfill depends on the composition of waste, its mass, the order of storage, the density of waste per square kilometer, the access of oxygen and water to landfill waste, air and soil temperature. In view of this, it is necessary to first of all assess the composition of solid waste at the landfill. As a rule, the basis of MSW of Ukraine is

organic matter (paper, food waste, plant remains, etc.), which is 70-80% capable of biological decomposition in aerobic and anaerobic conditions [134, p. 39].

It is also appropriate to partially use agricultural products for processing into alternative energy sources [135].

The priority areas for the long-term perspective should be: the introduction of waste-free production, biotechnology as the main condition for the production of products with high-quality consumer properties; expansion of the range of ecologically clean and dietary dairy products; increasing the level of competitiveness of dairy products both on the domestic and foreign markets, creating waste processing plants [136, p. 37].

According to Furman I.V. in the future, it is expedient to consider the possibilities of implementing technologies for the processing of waste into biogas, focused on the internal needs of the enterprise through the implementation of the experience of the leading countries of the world, which will make it possible to obtain not only biofertilizers, but also energy resources [130].

It should be noted that for agricultural formations, in addition to the financial effect of saving money on the purchase of mineral fertilizers, the use of such organic fertilizers for the needs of farms will allow to obtain a positive agrotechnical effect caused by their advantages, namely: maximum storage and accumulation of nitrogen, a high level of assimilation of organic substances, absence of weed seeds and pathogenic microflora, resistance to soil leaching, etc. Thus, their use will allow not only to improve the physical and mechanical properties of the soil, to increase the yield of agricultural crops, but in the future to help produce competitive environmentally friendly products for sale on domestic and foreign markets.

Therefore, the implementation of the corresponding model in practice will make it possible to partially reduce the energy independence of the state from energy carriers, increase the efficiency of agricultural enterprises, providing the crop production industry with organic fertilizers, and give an impetus to the development of the production of equipment for biogas production at solid waste landfills.

Development and improvement of technologies for the production of biogas

from the waste of enterprises and households of the development of Ukraine. The proposed measures within the Illinets TG will make it possible to:

- achieve an increase in the volume of waste processing at solid waste landfills;
- to improve methods of waste management of enterprises and households;
- to increase the indicator of the gross regional product and the profitability of communal enterprises focused on the improvement of communities.

At the same time, the production of biogas at solid household waste landfills can have the following effect on the economy:

- to increase the energy independence of the state;
- to reduce utility companies' expenses on energy carriers;
- to improve the ecological condition of territorial communities;
- reduce the volume of greenhouse gas emissions;
- to provide agricultural producers with organic fertilizers.

The choice of waste processing technology should be part of the development of a regional solid waste management plan. One of the first priorities of the plan is to determine the location of the regional landfill for solid waste disposal using the principles of interregional cooperation. In most cases, waste processing enterprises will be territorially bound to the regional landfill. The choice of a specific processing technology depends on many factors, some of which are discussed below (Table 3.5). One of the determining factors at the moment is the cost of processing a ton of solid waste.

The choice of energy utilization is usually determined by the following considerations:

- 1. the desire to increase the depth of waste processing, especially in the case of thermal processing methods in order to minimize landfilling;
- 2. the possibility of obtaining an own source of energy that replaces fossil fuels, such as natural gas or coal:
- 3. the possibility of obtaining additional income through the sale of electricity and heat, and in some cases also KOR/BYU7;

It should be noted that obtaining additional income through the sale of electricity

and heat obtained from solid waste does not in most cases mean achieving the economic parameters of the project that are attractive to the investor. In most cases, the implementation of projects requires a significant increase in the tariff for waste processing, especially significant for thermal processing methods. An exception to this rule are projects for the collection and utilization of biogas at waste disposal sites.

From a technological point of view, biogas collection and utilization projects are the simplest, followed by manual and automatic sorting lines, solid waste conditioning, aerobic and anaerobic processing methods, and thermal utilization of prepared and mixed solid waste.

As the complexity of the technology increases, specific capital costs increase. At the current level of Ukraine's economy, only relatively simple projects can be developed, in most cases the choice of technology will be determined by the principle of "reasonable sufficiency". In accordance with this principle, projects for the collection and utilization of biogas at landfills and landfills, the use of sorting lines, and the first MBO projects with a capacity of at least 80,000 tons per year are already being implemented. The latter circumstance is helped by the fact that the legislation of Ukraine provides for the use of a stimulating "green" tariff for electricity from biogas collected at landfills or obtained as a result of MBO.

For the implementation of thermal projects using equipment from European suppliers, there are no economic conditions in Ukraine yet. Similar projects can be implemented only in case of significant reduction of capital costs without loss of flue gas cleaning quality. An exception is the incineration of MZR/BRR by cement plants.

Solid fuel from solid waste can be used in specialized thermal power plants/boiler plants that supply heat to the central heating system/DHW system, as well as - if it is a thermal power plant - electricity in the network or for the needs of the utility industry. Implementation of such a project is possible in two variants - a CHP with a turbine operating in heating and condensing modes and a boiler room (without a turbine). The first option (REC) ensures a constant load of raw materials, in summer, excess heat can be used in cooling towers (up to 30% of fuel energy). The second option (boiler plant) allows you to reduce capital costs, increase the efficiency of fuel

use, but does not ensure a constant load of raw materials throughout the year. In the summer, the remaining fuel must be stored and used in the autumn-winter period. For projects of thermal utilization, the proximity of production facilities and heat networks is of fundamental importance.

The use of a stimulating "green" tariff for electricity obtained as a result of heat treatment is not provided for. Moreover, the hypothetical use of an electricity tariff at the level of the existing tariff for biomass and biogas does not create the necessary financial flows to increase the economic attractiveness of thermal treatment projects to the level required by the investor. At the specific costs of incineration of solid waste

100-150 EUR/t potential profit from the sale of electricity under the "green" tariff is 60 EUR/t for MSW with a lower calorific value of MSW 8.0 MJ/kg and 75 EUR/t for the case of 10 MJ/kg.

When burning MSW, electrical efficiency is quite low, in cogeneration schemes, a larger amount of energy from solid waste can be obtained in the form of heat. Therefore, the main income can be related to the sale of heat, and not electricity. For example, in the EU, waste incineration is particularly developed in countries that practice centralized heat supply (Denmark, Sweden). Despite the fact that there are negative trends in the development of DH in Ukraine, the potential for using heat from solid waste in DH/DHW systems is quite large.

In the absence of a CHP / boiler house for the production of RDF/RSF, the distance to the nearest cement plant, which is interested in using alternative fuel and has a full clinker firing cycle, is of great importance.

The risks of the projects are related to the dependence on the supply of waste/raw materials, dependence on the energy consumer, the need to allocate additional land in the immediate vicinity of the CH systems, as well as insufficient heat consumption in the summer. Risk reduction can be achieved by increasing the amount of raw materials and guarantees for their supply, determining the conditions for the transfer / sale of fuel to cement plants, creating conditions for the full use of heat.

The new Ukrainian waste management strategy until 2030 envisages a transition from disposal of waste to landfills and landfills to a system of integrated solid waste

management. In practice, this means achieving in 2030 the rate of recycling 50% of household waste from the total volume of its generation, putting into operation additional waste sorting lines and waste processing plants, creating within the framework of pilot projects facilities for the production of fuel from household waste on the basis of mechanical facilities -biological processing, provided they are located close to cement plants, introduction of a number of pilot projects on biological stabilization of mixed household waste in Ukraine.

In our opinion, an information model of the interaction of waste processing enterprises focused on the production of biogas is necessary, which should include interaction on the basis of public-private partnership of research institutions and relevant enterprises focused on the production of biofuel (Fig. 1).

The appropriate model should include the following measures for the production and promotion of biogas to the energy market:

- public-private financing of scientific research in scientific institutions in accordance with the needs of the enterprise (design of biogas plants, production at solid waste landfills);
- training of employees who will be involved in the production of biogas at the landfill in the scientific institution;
- conclusion of contracts with enterprises focused on the production of equipment developed by scientific institutions for the production of biogas at solid waste landfills;
- compensation of interest by the state budget for the purchase of equipment for the production of biogas to communal enterprises;
  - establishment of the biomethane market in Ukraine;
- transfer of by-products from biogas production (digestate) for use as organic fertilizer for agricultural crops;
- establishment of cooperation with buyers of biogas (industrial enterprises biogas).

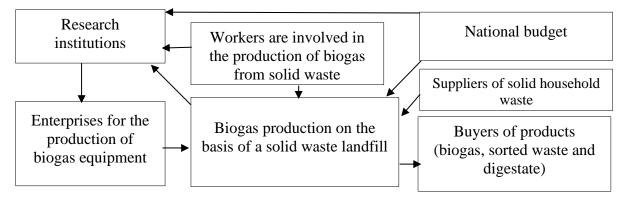


Fig. 1. The model of interaction of waste treatment enterprises focused on the processing of solid waste

Source: systematized based on [137-147]

Assessment of possible ways of developing the potential of energy cooperatives can to be carried out on the basis of three groups of indicators:

- 1) assessment of the abilities of economic entities for innovative activity;
- 2) assessment of the possibilities of using and developing this ability;
- 3) assessment of the effectiveness of the use of all types of resources (intellectual, financial, energy resources) possessed by this or that territory. The "EPIT" development index is calculated on the basis of three main components:

I epit = Fr + Fe + Pn

where: I epit is the "EPIT" development index,

Fr – financial expenses for R&D;

Fe – financial costs for personnel retraining and training;

Pn is the number of implemented patented technological solutions (N1...).

The prospects for the development of the domestic market are connected, first of all, with the construction of low-rise housing, especially cottage villages. As people's incomes increase, the number of middle-income people buying suburban housing increases, and thanks to the efforts of pellet and pellet equipment manufacturers, public awareness of the benefits of heating homes using stones and pellet boilers is increasing. For a private cottage, pellets are the cheapest type of fuel compared to firewood, fuel oil, coal, diesel and electricity. There is growing interest in the use of fuel pellets at industrial and utility enterprises.

Agricultural waste, especially in rural areas, is available in fairly large volumes, but it is not suitable for burning in stoves and boilers in non-gasified settlements. The creation of cooperative formations for the processing of straw into pellets can become one of the ways to solve this problem.

Improvement of investment and innovation activity in the agricultural sector requires improvement of the current mechanisms of investment attraction. Investments in the agricultural sector will allow the introduction of innovative developments in agriculture.

The activity of energy cooperatives should be started according to the appropriate algorithm:

- Step 1. Assessment of the potential of such a cooperative: analyze what resources are available for use in the selected community, potential participants and specialists.
  - Step 2. Choosing a technology to use these resources.
  - Step 3. First economic and technical calculations.
- Step 4. Involvement of members of the cooperative and its supporters. Choice of the community.
  - Step 5. Choosing the legal model of the energy cooperative LLC, PJSC or other.
- Step 6. Development of documentation: charter and its registration in the registration service. At this stage, it is worth attracting future members.
  - Step 7. Purchase of production equipment.
  - Step 8. Start of operational activities of the energy cooperative.
  - Step 9. Establishing cooperation with commercial intermediary entities

The feasibility of energy utilization can be determined by reducing the amount of waste sent to landfills and increasing the service life of new regional landfills. The experience of developed countries shows that separate collection and reuse are developing simultaneously with the energy use of solid waste, competing to a certain extent for raw materials, but not contradicting each other.

From a technological point of view, the simplest projects are biogas collection and utilization, followed by manual and automatic sorting lines, MSW conditioning, aerobic and anaerobic methods, and thermal utilization of prepared and mixed MSW.

As the complexity of the technology increases, specific capital costs for their implementation increase.

The purpose of the work is to determine the theoretical and practical principles and problematic aspects of the organization of solid household waste management and the sale of products made from them.

The implementation of any recycling methods requires the consolidation of the solid household waste management system at the regional level with the potential of at least 100,000 tons of solid waste per year or more. For such a project, satisfactory economic indicators are demonstrated by the mechanical and biological treatment of solid waste with the production of biogas and the subsequent production and sale of electricity at a green tariff.

Another prospect is the production of solid fuel from MSW for further use in the cement industry. The complexity of such an approach is due to the lack of appropriate legislation in Ukraine and, as a result, the current uncertainty of the terms of transfer / sale of fuel to cement plants.

The current tariff for solid waste management mainly covers the costs of transporting waste to landfills, but the landfill itself is paid for on a residual basis. The cost of construction of future solid waste management facilities, both regional managed landfills and waste processing complexes, significantly exceeds the available volume of paid services in the field of solid waste management. Therefore, the need to use tariffs for processing and disposal has become ripe in Ukraine, which would ensure exploitation at the necessary technical and ecological level and would include a certain component for the implementation of investment projects.

Stimulating the production of biofuel through state funding of scientific research works in the field of biofuel production and compensation of interest on loans granted for the creation of factories focused on the processing of solid household waste on the basis of landfills is a necessary prerequisite for ensuring energy independence of Ukraine. It is promising for further research to determine the potential of agriculture in the field of biofuel production.

The main restraining factor for the development of biogas production at solid

household waste landfills is, first of all, the lack of state incentives and the necessary amount of investment. By means of state stimulation of the development of alternative energy and subsidies from local budgets for the relevant utility companies, it is possible to achieve the solution of the tasks in the short term. In further scientific studies, the peculiarities of the formation of information systems for waste management at solid waste landfills will be considered.

In our opinion, one of the main directions of the development of TG should be the implementation of energy saving projects and the use of renewable energy sources with the support of state and regional energy saving programs, which will take place, including through the awareness of employees of institutions about the possibility of receiving additional financing from various sources (including international).

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#### 7. Features of sales system management in enterprises of agriculture

In the conditions of the market economy of Ukraine, the role of enterprises as subjects of market relations is increasing. Within the framework of these relations, there are fundamental changes in their economic behavior, the basis of which is sales activity.

Modern business conditions, which are characterized by the intensification of competition, the variability of macroeconomic indicators, and the growth of consumer demands for the quality of goods and services, require enterprises to respond in a timely manner to changes occurring in the external environment, and to search for new sales management mechanisms. The variability of the external environment determines the need to use a strategic approach in sales management. However, it is not enough to use only strategic management tools in sales management in a market economy. The market requires a marketing approach to managing all areas of the enterprise, including sales. Sales in the conditions of a market economy is becoming increasingly important and even key in the activities of enterprises.

Sales policy occupies an important place in the marketing system. Its purpose is to organize an optimal distribution network for the effective sale of manufactured products, including the use of a network of wholesale and retail stores, intermediate storage warehouses, as well as service centers; organization of transportation, shipping and loading work, documentation, logistics issues, ensuring the effectiveness of merchandising. The sales policy in the marketing system also includes commercial issues: preparation and conduct of sales negotiations, agreement on terms of sales, execution of calculations, conclusion of contracts, control over their execution.

Today, there are many opinions and approaches regarding the essence and place of sales activity in the integral economic system of the enterprise and the management system in particular. The discussions of scientists regarding the relationship between the concepts of «sales-marketing» and «sales-logistics» deserve the most attention,

because when considering special economic literature, the difference between them is often unclear. The authors appeal in the same terms to completely different concepts. These problems, even at the level of theory and methodology, are the cause of difficulties in practical activities: when creating structural divisions of the enterprise, which are engaged in sales activities and their management; in the distribution of duties, rights and powers of employees of these units; when making specific management decisions regarding planning, organization, regulation, motivation, accounting, control and economic analysis of sales activities.

In today's conditions of riskiness and uncertainty, it is impossible to underestimate the role of sales, which is a decisive factor in the continuous activity of industrial enterprises. The company's management is interested in and strives for expanded reproduction, i.e., capital circulation in constantly increasing amounts, and therefore it makes maximum efforts to maintain it in this state and promotes continuous development. Such necessity and complexity of the object itself requires the application of a systematic approach to the management of the enterprise in general, including sales activities.

Sales in a broad sense is the actual sales activity of the enterprise with all its operations and processes, the list of which is so lively offered by scientists. Regarding sales in the narrow sense, we are inclined to the opinion of those authors who consider it the final sale of manufactured products with the aim of turning them into money, obtaining profit and meeting the needs of consumers [150, p. 21].

The approaches of scientists to the term «product sales» are shown in fig. 1.

Sales is an activity to ensure the sale of products. Based on this, we propose to include the following elements: organization of information support on the state of the market, conducting marketing research and drawing up sales forecasts; signing contracts for the supply of products; choice of sales forms and methods, organization of the distribution system; creation of marketing communication and organization of legal support; organization of service and after-sales service.

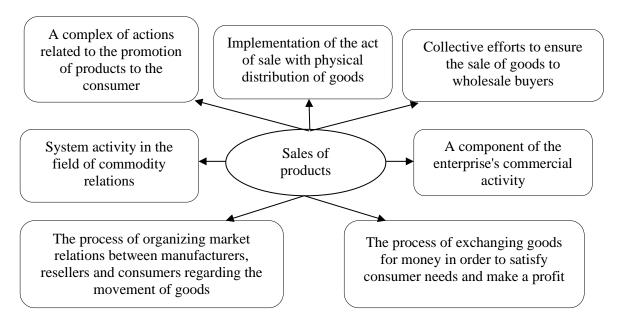


Figure 1 – Scientific approaches to defining the meaning of the term «product sales»

The system of sales activity forms and manifests its properties in interaction with factors of the external environment (for example, demand for manufactured products, government policy of price regulation, etc.). It develops under its influence, but at the same time remains the leading active component of the interaction and tries to preserve the qualitative determination and properties that ensure the relative stability and adaptability of its functioning. The sales system is influenced by factors of the external environment, both direct and indirect. The first group of such factors includes the influence of competitors, market information, buyers and consumers, including potential, demand, risks in the field of sales, regulatory framework and law-making bodies, sales personnel; to the second – international events, scientific and technological progress, political factors, socio-cultural factors, the state of the country's economy.

It should be emphasized that the sales policy depends on the internal and external conditions of the enterprise's functioning, and its development requires a comprehensive analysis of them. Moreover, the macro environment creates general conditions for the functioning of the enterprise and, in most cases, does not have a specific nature. For the systemic analysis of the macro environment, economic,

international, political and social factors are distinguished. The analysis of the macro environment allows to identify the main trends in the development of the economy, individual branches of the national economy, the legal support of the entrepreneurial activity of business entities, and their implementation of the production and sales function. When analyzing the microenvironment, one should focus on the study of those components with which the enterprise is in direct interaction: buyers, suppliers, competitors, intermediaries, and is carried out taking into account the analysis of target markets, the state of competition and distribution networks.

The analysis of the factors of the internal environment in the system of strategic marketing management of sales involves the study of the company's sales policy, the assessment of the level of use of sales potential and the effectiveness of strategic marketing management of sales.

The main tasks of sales management at the enterprise are: determination of the set of sales functions and their content; definition of functional relationships between employees who implement marketing functions at the enterprise; creating a system of interaction between specialists who are responsible for the marketing orientation of the enterprise and other specialists of the company who are responsible for ensuring the coordination of sales, marketing and other functional areas of the enterprise.

A distribution network can be defined as a structure formed by partners participating in the process of competitive exchange, with the aim of providing products and services at the disposal of individual consumers or industrial users. These partners are manufacturers, intermediaries and end buyers. Any sales channel performs a certain set of functions necessary for exchange.

The sales functions are as follows: studying the results of market segmentation and advertising planning; signing contracts with consumers or intermediaries; accounting and control of contract execution; development of a plan for shipping products to customers; determination of sales channels; organization of reception, storage, packaging, sorting and shipment of products to customers; informational, resource and technical support for product sales; sales promotion; establishment of feedback with consumers and regulation [151, p. 283].

The performance of the considered functions leads to the emergence of commercial flows of distribution between the participants of the exchange process, directed in mutually opposite directions. In total, five types of flows can be distinguished in the sales channel: flow of ownership rights: transfer of ownership rights to products from one owner to another; physical flow: sequential physical movement of products from the producer through intermediaries to the final consumer; order flow: orders coming from buyers and intermediaries; financial flow: various payments, bills, commissions, which move from the final consumer to the manufacturer and intermediaries; flow of information: this flow spreads in two directions – information about the market moves towards the manufacturer, information about the offered products at the initiative of the manufacturer and intermediaries is directed towards the market [152, p. 258].

Thus, the presence of a sales channel implies the distribution of functions and flows between exchange participants. The key question when organizing a network is not whether these functions and flows are performed properly, but rather which of the channel participants will perform them. One can observe great diversity in the allocation of functions not only for different markets, but also within the same market.

Therefore, sales is the activity of the enterprise for planning, organizing and controlling the physical movement of materials and finished products from the place of their production to the place of use in order to satisfy the needs of consumers and benefit themselves. It is carried out within the sales policy of the enterprise, the planning of which takes place in the following directions: definition of the sales strategy and sales policy of the enterprise; selection of sales systems and methods and corresponding types of channels; determination of product promotion routes; ensuring sales efficiency, logistics issues.

The existence and development of sales activity is determined by a number of objective reasons:

- 1. Necessity that is, the sales system brings the product closer to the consumer, makes it more accessible.
  - 2. Fighting for the buyer's money by developing the sales network, bringing it

closer to the consumer and creating maximum convenience for him during and after the purchase, the company achieves certain advantages in the market struggle.

3. Rationalization of production processes – is related to the fact that the distribution network takes over a share of the final operations of the production process (sorting, packaging, packaging, etc.), which are rationally carried out at the stage of pre-sales service [150, p. 39].

The sales policy of enterprises is based on marketing strategies in the field of sales and is defined as a set of tactical measures for the formation of demand, establishing relationships with buyers, pricing, transportation, goods movement, sales promotion, service and advertising, aimed at implementing strategies and achieving the goals of the company's sales activities.

Management of the sales activity of the enterprise in the conditions of the market economy from the point of view of marketing is considered as a process of planning, organization, motivation and control of the sales activity of enterprises, which is necessary for the formation and achievement of the sales goal. However, this definition does not specify through which functions of marketing the management of sales activities is implemented, since the listed components of the process – planning, organization, motivation and control – are general functions of management, not marketing.

The adoption of the concept of marketing at the enterprise changes the methods by which the goals of production and sales of products are achieved. Due to the integration of the marketing function into the enterprise management system, a deeper and more effective combination of sales with market situation research, product assortment planning is carried out, and the nature of work related to product sales is changing. The needs and requirements of consumers, rather than the manufacturer of the product, come to the fore, the manufacturer becomes an active participant in the sale of products due to deep interaction with the employees of trade organizations, is included in the retraining of the personnel of the marketing department. On the other hand, employees of sales services, thanks to close interaction with other divisions of the marketing department, have access to deeper information about their customers,

which increases the effectiveness of commercial communications in the management system.

The implementation of a targeted sales policy involves the organization and formation of sales networks capable of covering the target market, quickly and efficiently selling volumes of products adequate to production capacities. The sales policy is related to the problems of attracting intermediaries, contractual relations, determining the forms and types of sales, company offers in view of the specifics of products, the conditions of a specific target market, and the sales policy of competitors [149, p. 79].

Sales channels, ways and methods of promoting products on the market – the most effective marketing actions in conditions of non-price competition. When using a marketing approach to the management of sales policy, it is necessary to take into account the key factors of success, which include the target market, assortment policy, sales personnel, merchandising measures, which depend on the company's position on the market and the effectiveness of sales activities.

Summarizing numerous scientific approaches related to both enterprise management and marketing management, we believe that marketing is a specific function of management and is aimed at increasing sales efficiency [152, p. 212]. That is, it can be stated that the management of the sales activities of enterprises is a management activity oriented towards the achievement of the organization's tasks, related to the formation of demand for goods and services of the manufacturer, their implementation by means of the intensification of this demand.

Thus, management of sales activities is a complex and multifaceted process and requires constant analysis and improvement. The gradual increase in the volume of sales of domestic manufacturers necessitates the formation of the latest effective technologies in sales management systems. Therefore, the priority task of enterprises is to create an effective system of management of sales activities, which would take into account the interests of regional producers. It should include solving a number of theoretical and methodological-applied tasks related to the economic evaluation of sales activities, conducting systematic research of the market situation, creating a

qualified marketing and logistics department, planning a strategy for the development of sales activities, forming analytical and information support [153, p. 89].

Management of the sales activity of the enterprise in the conditions of the market economy from the point of view of marketing is considered as a process of planning, organization, motivation and control of the sales activity of the enterprise, which is necessary for the formation and achievement of the sales goal.

And the creation of a sales management system at an industrial enterprise in accordance with the proposed model will provide real prospects for effective management of sales activities due to the orientation of the company's activities to market demand, an organic combination of sales, supply, and management functions and their focus on more fully meeting the needs of the consumer and obtaining profit [151, p. 223].

Sales management is not limited to sales channel management. Each member of the system has its own sales organization. It is appropriate to understand the construction of a sales management structure, the selection of properly qualified sales specialists, the distribution of tasks, rights and responsibilities among employees, the creation of conditions for effective work (organization of workplaces, provision of necessary information, office equipment, etc.).

The basis of the construction of the sales activity management system is the definition of functions that ensure the formation of methods of managerial influence at all stages of sales operations as a process. Therefore, we believe that the management of sales activities at the enterprise should be implemented through the use of the following functions:

- 1. Planning (selection, classification and preparation for the use of information regarding the development of a sales strategy; assessment and analysis of factors of the internal and external environments; determination of the strategy for the development of sales activities).
- 2. Organization (creation of an organizational structure of sales management at the enterprise; creation of intra-company and intermediary systems of product distribution).

- 3. Motivation (stimulation of participants in the product distribution system: discounts, rewards, bonuses, staff training).
- 4. Control and regulation (establishment of a system of indicators for evaluating the results of the effectiveness of the sales system).

When using a marketing approach to managing sales policy, the main elements in the field of planning sales policy, which should be paid attention to in the first place, are goals in the field of sales, that is, the choice of the direction of implementation of sales policy in the long term.

In the field of organization of sales activity, an important element is the optimization of the organizational structure of sales management, that is, bringing it into line with the established goals in the field of sales and the developed strategies of sales management. Correct organization of sales policy management and timely implementation of sales strategies can provide the company with a strong position on the market and activate the market activity of the company in conditions of fierce competition.

A flexible approach to the distribution of strategic resources is one of the key factors in successful sales policy management. At the same time, the main task is the distribution of resources according to the directions that are the most priority and allow to achieve the set goals in the field of sales.

An integral element of the organization of sales activities is the creation of corporate culture, as it forms the corporate spirit of the enterprise, provides personnel with a system of rules and values, and therefore ensures the achievement of maximum results. Implementation of sales management strategies requires strategic changes in the relevant areas of the enterprise.

In the field of analysis of sales policy, important elements are the study of the macro environment and the environment of the immediate environment of the enterprise, which allows identifying risks in the field of sales [149, p. 101]. Control and regulation of sales involves evaluating the effectiveness of sales policy management, as well as the development and implementation of corrective actions.

So, under the system of management of sales activities, we will understand a set of organizational forms through which the general management of sales activities is carried out at all its stages, as well as economic levers that contribute to the increase in the volume of sales of products and the development of the enterprise.

The purpose of this system is to develop methods of influencing and implementing a set of measures related to the delivery of finished products and services to the consumer, aimed at optimal use of all company resources, taking into account the market situation. The latter is due to the need for constant study of the economic situation, its forecasting, as well as the adjustment of planned sales volumes in accordance with consumer requirements. Each of the functional elements of the sales management system performs the functions of planning, organization, motivation and control through the appropriate set of tools. Their systematization makes it possible to present functional and supporting subsystems as follows (Table 1).

Table 1 – Elements and tools of the functional and supporting subsystems in the sales management system

Elements	Tools	
Functional subsystem		
Intra-firm and	Organization and implementation of distribution and sales	
intermediary distribution	operations; sales forms and methods; sales service; management of	
systems	distribution channels	
Economic	Planning of sales activities; estimation of sales costs;	
evaluation of sales	formation of the budget for marketing; formation of price policy	
activities	taking into account discounts during distribution and sale; control of	
	the results of sales activities	
Providing subsystem		
Sales information	Organization of information support about the state of the	
support	market; marketing research; analysis of competitors and	
	competitiveness; identifying consumer preferences	
Analytical sales	Assessment of the market situation; determination of real and	
support	potential market capacity; demand analysis; proposal analysis; sales	
	volume forecast; formation of a sales activity development strategy	

Management of the sales policy requires the creation of a reliable information support system, in connection with which it is necessary: to determine the volume and structure of the necessary information; choose methods and sources of information collection; to develop an effective system of information processing, transfer and storage; create the necessary conditions for the effective use of information in the

process of strategic sales management [148, p. 253].

So, sales management is a multifaceted management process aimed at ensuring effective sales of the enterprise in the long term in the conditions of the variability of the external environment.

Sales policy is a set of interrelated elements of sales activities aimed at meeting the needs of consumers by optimally using the company's sales potential and ensuring sales efficiency on this basis.

Enterprises must solve sales problems during the development of marketing policy. It is at this stage that a decision should be made regarding the choice of sales markets, sales methods and its stimulation. The development of the company's sales policy involves the determination of priority directions, means and methods necessary for the activation of sales. The development of the company's sales policy should be based on the results of the analysis of the existing sales system. Moreover, it is advisable to carry out this analysis not only by quantitative indicators, but also by qualitative indicators: the level of service, customer satisfaction and commitment, the effectiveness of the communication policy, the correctness of the selection of market segments, the effectiveness of the work of the sales staff, etc.

Sales in the marketing system is of great importance, as it provides feedback to the market, provides the enterprise with information about the dynamics and structure of demand, about changes in the needs and preferences of buyers. The development of sales policy is an integral part of the enterprise's marketing program.

The choice of methods of interaction with buyers and their improvement is of particular importance in the formation of the company's sales policy. At the same time, it is necessary to determine the size and structure of costs for customer service, for the purchase of necessary equipment, personnel training, etc. In order to substantiate the sales policy, it is necessary to choose the optimal option for calculating costs in terms of the main directions of the implementation of the company's sales policy.

Sales policy is a set of principles, methods and measures used by the management to organize and manage the company's sales activities in order to ensure effective sales of goods within defined target markets.

The sales policy of any enterprise (sales channels, methods and methods of promoting products on the market) is formed on the basis of the goal and objectives of sales and must correspond to the business concept of the enterprise. The company's sales policy depends on the internal and external conditions of the company's operation and is built on the basis of supply and demand analysis. Since the demands of consumers are constantly changing, the company's sales policy should be aimed at constantly updating the product range and improving its quality characteristics.

The main constituent elements of the sales policy are the following: sales marketing strategies (especially in terms of positioning, which partially makes up the sales argument); regulatory policy (especially in terms of sales promotion, which also refers to argumentation); assortment policy; pricing policy; distribution policy (principles of formation of channels of product movement); commercial lending policy; collection policy, which refers to the principles in the field of repayment of receivables; transportation policy; organizational aspects of sales; policy of demand formation and sales promotion (advertising, service, commercial lending, discounts).

The main activities that must be carried out within the company's sales policy include: formation of distribution channels; physical distribution (logistics); measures to promote the product; pre-sale events; after-sales activities.

The main factors in the formation of the sales network are:

- characteristics of end consumers their number, concentration, size of average one-time purchase, income level, patterns of behavior when buying goods, required hours of operation of stores, volume of sales staff services, preferred credit conditions, etc.;
- the capabilities of the manufacturer itself its financial position, competitiveness, main directions of the market strategy, production scale. In particular, it is better for small enterprises with a narrow product range and limited financial capabilities to work through independent sales agents, and large companies are recommended to carry out a certain part of sales operations through their own sales network;
  - characteristics of the product type, average price, seasonality of production

and demand, maintenance requirements, storage terms, etc. Thus, enterprises are recommended to sell expensive, unique goods by the direct method, through their own sales network (so as not to transfer profit to intermediaries), and by the indirect method, through independent intermediaries – cheap, mass goods, seasonal goods, goods that require warehousing and storage;

- degree of competition and sales policy of competitors their number,
   concentration, sales strategy and tactics, relationships in the sales system;
- characteristics and features of the market actual and potential capacity,
   customs and trade practices, density of distribution of buyers, average income per
   capita, etc.;
  - the comparative cost of different sales systems and structures of sales channels.

The sales policy of enterprises is based on marketing strategies in the field of sales and is defined as a set of tactical measures for the formation of demand, establishing relationships with buyers, pricing, transportation, goods movement, sales promotion, service and advertising, aimed at implementing strategies and achieving the goals of the company's sales activities [149, p. 155].

All marketing activities related to relations with customers, management of marketing opportunities of sales potential, leveling of sales risks must be mutually agreed and coordinated, because the effectiveness of sales activities of wholesale enterprises depends on the degree of integration of these strategies.

At the current stage of sales activity development, the latter is considered in two directions. The first direction of the development of the company's sales activity should include the creation of a system of measures for the rational distribution and sale of products, namely: the selection of a wholesale sales strategy; construction of a sales network (which includes the establishment of distribution channels, with the determination of the number of intermediaries and specifying their quality characteristics); development of communication solutions regarding price and communication support within the wholesale distribution network [150, p. 103]. The second direction is consideration of the sales activity of enterprises as a system of measures for the effective physical movement of products, in this case, the

rationalization of the logistics chain from the wholesale enterprise to stores, retail outlets, warehouses of other small wholesale enterprises.

It should be noted that all elements of sales policy are interdependent and mutually dependent. Therefore, the construction of the sales policy of any enterprise should be carried out on the basis of a systematic approach.

The main stage of the process of forming a complex of measures regarding the organization of sales policy is the analysis of the needs and capabilities of competitors, as well as their comparison with the production and sales capabilities of the enterprise. At the same time, the enterprise should focus on its target consumer, that is, on the group of buyers whose needs will be satisfied to achieve its goals.

In this regard, the development of methodological provisions in the field of forming a set of measures for the sale of products on the target market is relevant, which include a number of interdependent stages: conducting a situational analysis of the target market, taking into account the activities of the enterprise in it; forecasting of product sales volume; selection of market development strategies; development of sales policy implementation tools; control over the fulfillment of obligations.

At the first stage, using statistical methods, the production potential of enterprises is evaluated, which must be implemented to meet existing consumer demand and maintain competitive positions in the target market.

Product sales forecasting is based on the analysis of dynamic series, taking into account the life cycle of the product, which characterizes seasonal and cyclical fluctuations in its consumer demand and allows more accurate forecasting of product sales volumes in the future.

The main stage of this model is the direct development and implementation of its tools based on situational analysis data, made forecasts of sales volumes and a sound strategy. According to the proposed methodology, the development of the tools of the sales complex should take place in three stages: the construction of a distribution network, the organization of goods turnover, and the organization of sales. To build a distribution network, we have proposed a method of finding the optimal structure of the marketing channel and its corresponding sales forms, depending on the goals set,

the characteristics of the target market, the characteristics of the product and the company as a whole. The process of forming a distribution network is built in the form of a multi-stage procedure, which consists in the systematization of the results of a preliminary analysis of the characteristics of consumers, the capabilities of the enterprise and its product, the determination of the intensity of geographical development of the market for this product, the selection and management of marketing channels, as well as the integration of their participants. The result of such actions should be the selection of appropriate elements of this complex: marketing channels, forms and sales systems. Each of them is developed taking into account criteria specific to a specific situation. In addition, the selection of strategies for developing the market for the company's products is carried out, which largely depends on the territorial concentration of consumers, their proximity, the term of sale of the product, the popularity of the trademark, market share, etc. [148, p. 99].

The final stage in the construction of a distribution network is the integration of its participants into certain systems. For the manufacturer, the need for integration in the field of sales is due to the possibility of controlling various participants in the distribution network and all stages of product sales, as well as gaining access to information about its end consumers. The level of channel integration can vary from traditional marketing channels formed by independent manufacturers and intermediaries to channels owned by the manufacturer.

The goals of sales activities should be based on the mission of the enterprise, be quantitatively measured and limited in time. At the same time, strategic goals should have priority. However, in practice, strategic sales goals are often not established, therefore, in the conditions of a market economy, enterprises need to direct their management activities in the field of sales to a strategic perspective.

Product promotion in marketing refers to a system of ensuring delivery of products to the point of sale or installation at a precisely determined time and with the highest possible level of service.

Promotion is the activity of planning and controlling the movement of products from the place of their creation to the place of sale in order to meet the needs of

consumers and benefit the company. The sales system can be: own (realization by the manufacturer of its own products through the company's trade branches); related to the enterprise (a system of trade under contracts, a system of franchises, that is, sales are carried out by other enterprises that are legally independent, but economically dependent on a certain enterprise); and not related to the enterprise (economically and legally independent sales companies).

The sales form shows whether sales are made through trade organizations related to the enterprise or through third-party organizations. Sales can be made through direct deliveries to end consumers or through indirect deliveries (through wholesale or retail trade).

Each enterprise must decide on the sales method it will use. There are three possible options: the direct method, the indirect method, and the combined method

The direct sales method involves the sale of goods to the final consumer by the manufacturer without the use of any intermediaries. The implementation of this method in practice is possible in two directions: thanks to the creation of own retail outlets for the sale of their products; by personal selling [154, p. 213]. Opening their own retail outlets for the sale of their products is used by enterprises that believe that their products require a special store style. However, the implementation of this method requires significant capital investments. This sales method is mostly characteristic of institutions specializing in the provision of certain services.

Personal selling is used by many companies in the perfume industry. The essence of this sales method is that the company creates its own sales team (in Ukraine they are mostly considered distributors), whose members are employees of the manufacturing company. The sales team searches for the end user and sells products.

Preparation for contact consists in the fact that each member of the sales team forms a circle (compiles an approximate list) of their own potential consumers. At this stage, the task of marketers is to create the widest range of possible customers. The specificity of personal selling is that potential customers belong to the same target audience as the salesperson. The correct selection of the consumer audience allows you to achieve the most effective sales of products.

In addition to forming a list of potential customers, at this stage the sales employee must: thoroughly familiarize yourself with the product (knowledge of the product, understanding its features and characteristics means understanding its usefulness for consumers); to study similar products of competitors (knowledge of goods sold by competitors enables the seller to contrast their advantages and corresponding disadvantages); plan the pre-sale presentation of the goods (the presentation should take place in such a way as to clearly demonstrate the usefulness and advantages of the offered products to potential consumers).

After the preparatory work, contact with potential consumers is established. The first impression very often affects the subsequent perception, therefore, for this stage, sales employees should prepare carefully. Buyers often form an opinion about the products offered during personal selling based on their impressions of the sellers.

The process of selling products using the personal selling method has a clear sequence: preparation for contact; contact setting; clarification of needs; product demonstration; overcoming differences; making a sale; after-sales support.

Establishing contact with potential consumers should provide a pleasant atmosphere, and at the same time, the client should receive visual confirmation of the professionalism of his visitor. The visitor (marketer) must find out the needs and problems of each specific consumer. The uniqueness of personal selling is that each consumer feels that the company cares about him and his interests. Therefore, the salesperson's task is to identify the client's needs and select the product that will best meet the client's needs and provide him with the appropriate benefits. Here we are talking about advantages that combine the needs of the client with the characteristics of the corresponding product.

The task of the sales team during personal selling is to convince the buyer that the given connection really takes place in each specific case. In order to convince the client that receiving the corresponding benefits is possible thanks to the products offered by the sellers, product presentation and demonstration are used. The main attention in the process of product presentation should be focused precisely on the

advantages that it can provide for this client. At the same time, the client can examine the product, try it in use, which seems to bring the desired effect closer to its reality.

Usually, after the presentation and test in use, a certain percentage of consumers immediately agrees to purchase this product. But a significant part of the consumer audience does not agree with certain conditions of making a purchase. Therefore, the personnel of the sales team must be ready to overcome disagreements with consumers. Most often, the dispute between the parties arises around the price. Therefore, the sales staff formulates arguments in favor of its expediency and justification in advance. In addition, in order to convince the client of this, salespeople should remember the basic rules for overcoming disagreements:

- you must listen to the client to the end, without interrupting his thoughts (thus demonstrating your respect);
- you should convince the client according to the principle «agree and put forward counterarguments» (the purpose of this principle is to create a climate of agreement, not conflict [151, p. 233].

If the differences are settled, after that the actual purchase of the product takes place. However, the relationship between the buyer and the seller for personal sales does not end there. During the entire time of using the products, the sales staff implements after-sales support of relations with the client. He is interested in the results of consumption, the degree of satisfaction, accepts and responds to complaints in case of occurrence.

For the company, after-sales support is important for the following reasons: firstly, it allows you to form a circle of regular customers (it is much more efficient and cost-effective to serve regular customers multiple times than to look for new customers each time with personal sales); secondly, the relationship between the client and the seller is a means for the company to obtain marketing information (and this reduces costs for marketing research). Some companies consider the direct sales method (and personal selling in particular) to be the most effective among the sales policy tools. Such opinions are based on the fact that in the case of a direct sales method, communication with the end consumer takes place through the employees of

the manufacturing company, who best understand their own products. This is the basis for solving sales problems that are characteristic of the modern market [150, p. 134].

The indirect method of product sales involves the sale of goods to the final consumer through intermediaries, that is, the formation of one's own network of product distribution channels. Most manufacturers believe that it will be more expedient and more cost-effective to transfer part of the work related to the sale of products to intermediaries. However, this means that to some extent producers lose control over how and to whom this product is sold.

Proponents of the direct sales method criticize the opposite method of their opponents precisely for this. The manufacturers' loss of control over the sales methods and their addressability sometimes threatens the formation of an unfavorable opinion about their products. And intermediaries can be guilty of this. With the expansion of the distribution network, the probability of misunderstandings between channel participants increases.

Enterprises that use the indirect sales method motivate its expediency precisely by the possibilities of solving sales problems in a modern way.

Since each of these methods has both advantages and disadvantages, certain enterprises seek to increase the number of advantages and reduce the effect of disadvantages by using a combined sales method.

The combined sales method involves a combination of direct and indirect methods. That is, the manufacturer can form its own sales network, but not refuse the services of intermediaries and be present in certain markets with the help of agents, representatives, distributors, etc.

One of the points of the company's sales policy is the choice of the optimal sales channel. A product sales (distribution) channel is an organization or person engaged in the promotion and exchange of a specific product (several groups of products) on the market [157, p. 88].

Despite the fact that when using the services of intermediaries, the manufacturer to some extent loses control over the sale of goods, most entrepreneurs consider it beneficial to engage intermediaries. This is explained by many reasons, including: a

significant part of producers lacks financial resources for direct marketing; intermediaries can provide buyers with the necessary assortment of goods and high quality of service, using their contacts, experience and qualifications; even if the manufacturer is potentially able to create its own distribution channels, in many cases it is not profitable for him, because it is more efficient to invest in his main business; a significant reduction in costs for the sale of goods through intermediaries is achieved by reducing the number of direct contacts with consumers.

All distribution channel participants perform at least one of the following functions: gathering information for marketing research; dissemination of positive information about the product (participation in the communication process); establishment and maintenance of relations with potential consumers; adaptation of the goods to the requirements of the consumer, namely sorting, assembly, assembly, packaging; formation of product range; conducting business negotiations with consumers regarding the level of prices and other conditions before entering into supply agreements; organization of goods movement: transportation and storage of goods; partial or full financing of channel operation costs; lending [150, p. 122].

When choosing one or another distribution channel, it is advisable to also compare different options for building the channel and choose the sales method that is the most rational in each specific case. The development of the structure of distribution channels includes the following stages: conducting an analysis of the types of services required by the consumer; determination of channel goals and possible limitations in the process of achieving them; identification of the main options for building distribution channels; evaluation of selected options [156, p. 201].

Factors such as consumers, firm, product, competition, market, and alternative distribution channels must be taken into account to effectively develop a distribution channel structure.

Therefore, for an enterprise, the choice of a sales network (distribution channels) is a strategic decision that must be compatible not only with the expectations of the target segment, but also with its own goals. In addition, the sale of goods can be wholesale and retail.

Wholesale method of product sales. Wholesale trade essentially covers the entire set of commodity resources, which are both means of production and objects of consumption. As a rule, in wholesale trade, goods are purchased in large batches. Wholesale purchases are carried out by intermediary organizations for the purpose of subsequent resale to grassroots wholesale organizations and retail enterprises. In most cases, wholesale trade is not related to the sale of products to specific end consumers, that is, it allows manufacturers to sell goods with the help of intermediaries with minimal direct contact with consumers. In the commodity market, wholesale trade is an active part of the sphere of rotation [155, p. 258].

In addition, wholesale trade is an important lever for maneuvering material resources, contributes to the reduction of excess product stocks at all levels and the elimination of commodity deficits, participates in the formation of regional and sectoral commodity markets. Through wholesale trade, the influence of the consumer on the producer increases, there are real opportunities to achieve a match between supply and demand, to ensure that every consumer has the opportunity to purchase products within their financial capabilities and in accordance with their needs.

Wholesale trade is a form of relations between enterprises, organizations, in which business relations for the supply of products are formed by the parties independently. It affects the system of economic relations between regions and industries, determines the ways of movement of goods in the country, thanks to which the territorial division of labor is improved, and proportionality in the development of regions is achieved. For the rational distribution of the trade situation, the wholesale trade must have specific data on the current state and prospective changes in the situation on regional and industry markets [153, p. 243].

Retail. In the process of goods movement from producers to consumers, the final link that closes the chain of economic relations is retail trade. In retail trade, material resources pass from the sphere of circulation to the sphere of collective, individual, personal consumption, that is, they become the property of consumers. This happens through buying and selling, as consumers receive the goods they need in exchange for their monetary earnings.

The assortment feature is taken into account in the structure of retail trade. Goods are usually grouped into appropriate groups (subgroups) based on their production origin or consumer destination. In this regard, various types of stores operate in retail trade.

Retail trade, taking into account the specifics of customer service, is divided into stationary, mobile, and parcel.

The stationary retail network is the most common, it includes large, modern, technically equipped stores, as well as tents, kiosks, and vending machines. At the same time, self-service stores are distinguished, in which the buyer has free access to goods. A type of stationary trade is also stores of the «store-warehouse» type; goods in them are not displayed on showcases, shelves, which significantly reduces the costs of their loading, unloading, stacking, therefore, they are sold at lower prices. Such stores operate, as a rule, on the outskirts of large cities.

A mobile trade network helps to bring the goods closer to the buyer and provide prompt service. This trade can be delivery using machines, trolley benches, as well as delivery using trays and other simple devices.

Parcel trade provides the population, enterprises, and organizations with book products, stationery, audio and video recordings, radio and television equipment, and medicines. With the help of this form of trade, consumers can also receive some production and technical products (spare parts, tools, rubber engineering products, etc.).

The high level of costs constantly encourages enterprises to search for new sales methods. At the same time, it is obvious that sales functions can be transferred, but they cannot be excluded. From the point of view of the company, the transfer of these functions to intermediaries is justified to the extent that, thanks to their specialization, they are able to perform them more efficiently and with lower costs than the manufacturer himself.

The privileged position of distributors in relation to manufacturers is due to five factors: reducing the number of contacts; economies of scale; reduction of functional inconsistency; improvement of assortment; service improvement.

It should be emphasized that the sales policy, which is formed on the basis of sales goals and objectives, must correspond to the general business concept of the enterprise and the adopted course of action. Moreover, the sales policy of the enterprise should serve as a basis for the development of its supply, production and technological, innovation and financial policies.

Enterprises in the conditions of a market economy pay considerable attention to the problems of optimizing the process of promoting goods from the producer to the consumer.

Promotion refers to a set of various types of activities aimed at conveying information about the merits of a product to potential consumers and stimulating their desire to buy it. Modern enterprises use complex communication systems to maintain contacts with intermediaries, customers, various public organizations, etc.

The marketing policy of promotion uses the elements of the promotion complex as an arsenal of communication tools. A complex of marketing communications is a system of information activities aimed at persuading the consumer to look for and buy the company's products and to stimulate his purchasing activity. In order to achieve success, communication activities must be comprehensive and conducted regularly, which will contribute to the establishment in the minds of consumers and the formation of their positive perception of information.

The promotion of the product is carried out by using a certain proportion of advertising, methods of sales promotion (sales), personal selling and methods of communication with the public.

Advertising is any paid form of non-personal presentation and promotion of ideas, goods and services carried out by a specific customer. In modern conditions, advertising is a necessary element of production and sales activities, a means of creating a sales market, and an active means of fighting for the market.

As part of marketing, advertising should: first, prepare the market (consumer) for a favorable perception of a new product; secondly, to maintain demand at a high level at the stage of mass production of goods; thirdly, to promote the expansion of the sales market.

Depending on the stage of the product's life cycle, the scale and intensity of advertising changes, the ratio between prestigious advertising (advertising of the exporting company, the competence of its personnel, etc.) and commercial (that is, advertising of a specific product); the means of its distribution also change, its arguments are renewed, fresher, more original ideas are selected.

Although the costs of advertising are significant, especially when publishing ads in the foreign press, participating in exhibitions and fairs, they are fully justified. First, the costs incurred for advertising are included in the calculation of the price of the product, and the sale of their corresponding amount compensates for the costs. Secondly, without advertising, trade, as a rule, goes sluggishly, brings losses, often many times outweighing the costs of advertising. As international practice shows, advertising costs average 1,5-2,5% of the cost of manufactured goods and 5-15% of the cost of household goods.

Stimulating the sale of products for buyers involves a significant list of promotional activities, in particular, discounts, coupons, premiums, guarantees, packaging, contests, lotteries, demonstrations, conferences, loyalty cards, etc.

Exhibitions and fairs occupy a significant place in marketing. In any case, visitors come to the pavilions with a clearly expressed intention to learn something new for themselves, and this attitude actively contributes to the introduction of new goods and services to the market. Personal contacts between stand staff (representatives of the seller) and potential buyers make it possible to create an atmosphere of trust and goodwill, which contributes to the development of business relations. The exhibiting company (exhibiting samples of its products) can make presentations at symposia, which are usually held as part of the exhibition (fair), distribute print ads, show movies or TV films, give away advertising packages, handbags, folders, etc. Skillful exhibition activity plays no less, and sometimes a greater, role than the publication of advertisements in the press about goods for production purposes. However, work at the exhibition will be effective only if it is conducted strictly according to the plan and purposefully.

Personal selling refers to the oral presentation of a product for the purpose of

selling it in a conversation with one or several potential buyers. This is the most effective tool for product promotion at certain stages of its sales, especially for creating a favorable attitude among buyers to the offered products, primarily to products for production purposes.

Public relations involves creating good relations with various government and social structures by creating a favorable opinion about the company, its products and by neutralizing unfavorable events and rumors. Communication with the public also includes communication with the press, dissemination of information about the company's activities, lobbying in legislative and governmental bodies with the aim of adopting or canceling certain decisions, explanatory work regarding the state of the company, its products, and social role.

In order to successfully promote its goods on the market, it is also advisable for the enterprise to use the following basic pricing methods: the price with the return of production costs; market leader price; the price for promoting the product to the market; pricing according to the «skimming» method; prestigious price [152, p. 289].

So, under the modern conditions of management at the enterprises of the agricultural sector of Ukraine, the management of the marketing product and sales policy is gaining more and more importance. Enterprises need to pay more attention to planning and increasing the efficiency of their sales policy.

The functioning of agribusiness enterprises in the unstable conditions of the market economy requires timely adaptation of the sales system to changes in the external environment, which, in turn, necessitates the use of marketing in the management of product sales. The development and implementation of marketing approaches in the sales activities of enterprises is an important vital need for the functioning of agricultural enterprises. There is a need to create an effective model for managing the sale of products of agricultural enterprises, taking into account the modern needs of consumers and society as a whole.

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# 8. Formation of a marketing strategy for the sale of products of an agricultural enterprise

The development and implementation of strategic approaches to the marketing activities of enterprises is an important vital need for the functioning of domestic enterprises. However, the very concept of «marketing strategy» applied in the management of production and sales of products is characterized by complexity, multifacetedness and long-term development.

By the strategy of sales activities, we understand the process of long-term planning and organization of sales activities, which allows us to successfully implement the sales philosophy of a specific company-seller.

Many factors influence the formation of the company's sales strategy. The most important among them are: products and services produced by the enterprise; microenvironment of the enterprise (its goals and resources – financial, technological, technical, human, etc.); consumer audiences (their needs, tastes and preferences); conditions of competition; external factors [159, p. 115].

There are many different options for marketing strategies, which can be divided into two groups: product strategy and market strategy. Among them, the following strategies can be distinguished: depending on the competitiveness of the enterprise and the attractiveness of the market, competitive advantages, the competitive position of the enterprise and its competitors, the type of differentiation, the degree of market segmentation, by the elements of the marketing complex, the state of market demand, the term of implementation, etc. [161, p. 49].

The system of marketing strategies of sales management covers seven groups of strategies: business management; target market management; product portfolio management; pricing strategies; management of sales potential; management of marketing risks; management of sales personnel.

The essence of the marketing strategy of business management consists in determining the real market situation of strategic business divisions and strategic directions for their further development.

Marketing management of the company's business portfolio solves the following main tasks: determining the competitive positions of the company's strategic business units; distribution of strategic resources between strategic business divisions of the enterprise; determining directions of strategic development of strategic business units (from preferential development to exclusion from the business portfolio); determination of business portfolio development priorities; reducing the strategic vulnerability of the company's business portfolio; achieving a balance between longand short-term prospects for the development of the enterprise.

The next component of the system of marketing strategies for sales management is marketing strategies for managing the target market, which include: segmentation strategies; strategies for choosing the target market; positioning strategies; strategies for «attracting/retaining» buyers; customer loyalty management strategies.

The segmentation strategy directly affects the level of effectiveness of strategic sales marketing management. The need for market segmentation for agro-industrial complex enterprises in modern economic conditions is due to the advantages it provides: a more complete picture of the needs and preferences of buyers is created; there is an opportunity to increase the efficiency of selling your goods; the process of planning and organizing the sale of goods is facilitated, with an orientation to clearly defined target market segments; costs for promoting goods to the market are reduced; potential, favorable opportunities are revealed on the basis of a thorough study of buyers; advantages are formed over competitors who do not segment the market.

In the conditions of a market economy, it is expedient for agribusiness enterprises to use a strategy of differentiated marketing, the essence of which is to sell a wide variety of goods designed for different market segments, each of which requires a certain set of marketing measures. This especially applies to those agribusiness enterprises that occupy a weak position on the market (enterprises that are at the stage of birth or aging of their life cycle).

The strategy of choosing the target market helps the enterprise to determine how many segments it is appropriate to serve and in what way.

The positioning strategy allows you to distinguish the company from others and

secure a desired place on the market and in the minds of buyers.

Inherent components of sales management marketing strategies are product portfolio management strategies that can be developed based on the McKinsey matrix [162, p. 132-135].

Quite important in terms of the marketing orientation of enterprises are marketing price strategies, which should not only be flexible in order to adapt to changes in the marketing environment, but also take into account the type of buyers (since for economical buyers, price is a decisive factor in making a purchase, and for other types of buyers, it is an important, but not decisive factor).

It is advisable to develop marketing strategies for managing sales potential depending on the stage of the enterprise's life cycle, since at different stages of the life cycle, different subsystems of the sales potential have priority.

In conditions of increased dynamism of the marketing environment, uncertainty of future prospects, marketing strategies for managing sales risks are of particular importance for the improvement of strategic marketing management of sales. The largest number of urgent measures to manage sales risks should be carried out by agroindustrial complex enterprises that are at the stages of birth and aging, since it is at these stages of the enterprise's life cycle that a significant number of risks in the field of strategic marketing management of sales are observed.

Taking into account the marketing strategies of domestic and foreign authors, on the basis of which the sales policy is built, the following structure of the economic and organizational model of the formation of the marketing strategy for the sale of the company's products most fully reflects the sales activity of enterprises (Fig. 2).

Strategies were used to build the model, which best take into account the peculiarities of the functioning of agricultural enterprises.

These strategies are used in the practical activities of agribusiness enterprises and give positive results.

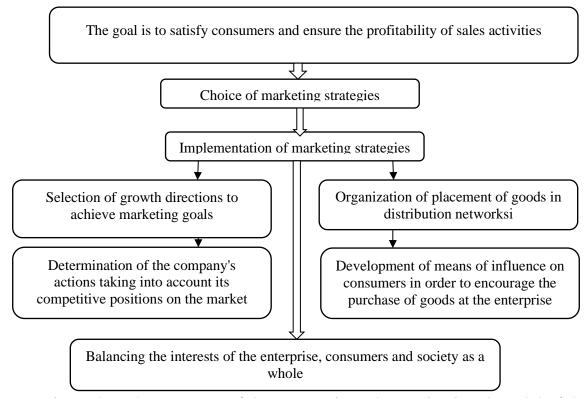


Figure 2 – The structure of the economic and organizational model of the formation of a marketing strategy for the sale of products of an agrarian enterprise

At any stage of the enterprise's life cycle, the effectiveness of sales activities depends entirely on the effectiveness of marketing strategies for sales management. The development of a sales strategy is preceded by an analysis of the assessment of the effectiveness of the existing sales system, both as a whole and for its individual elements, as well as the compliance of the company's sales policy with specific market conditions. Moreover, the entire complex of factors that affect the size of sales, the organization of the sales network, the effectiveness of advertising and other means of sales promotion, the correctness of market selection, time and methods of entering the market.

Analysis of the sales system involves identifying the effectiveness of each element of this system, evaluating the performance of the sales apparatus. The analysis of circulation costs involves comparing actual sales costs for each sales channel and type of costs with plan indicators, in order to identify unreasonable costs, eliminate losses that occurred during the movement of goods and increase the profitability of a functioning sales system.

The sales organization in the marketing system plays a very important role in the sense that it provides feedback between production and the market, is a source of information and consumer demand and needs. Therefore, the development of a sales strategy is the basis of the marketing program, both for each specific product and for the production department as a whole. If, on the basis of the calculation, it turns out that the costs of selling a new product are excessively high and do not allow to ensure a certain level of profitability, the management of the production department may decide on the impracticality of further development and introduction of this product into production.

The development and substantiation of the sales strategy involves solving the following issues regarding a specifically selected product or group of products: choosing a target market or its segment; choosing a sales system and determining the necessary financial costs; choice of sales channels and methods; choice of market entry time; determination of the system of movement of goods and costs for delivery of goods to the consumer; determination of the forms and methods of sales promotion and the costs necessary for this [164, p. 67].

The sales strategy is built in the direction of the simultaneous development of the existing market and the search for new markets for the enterprise, as well as increasing the competitiveness of the enterprise.

In addition, all enterprises should systematically monitor the legislative framework of Ukraine and create a marketing information system that will minimize external sales risks. In modern business conditions, which are characterized by a high intensity of competition, the effectiveness of the strategic marketing management of the company's sales largely depends on the effectiveness of the management of the sales personnel.

At the stage of birth, it is advisable for enterprises to pay the main attention to the formation of the team, the attraction of highly qualified employees who will be able to ensure the competitive advantages of the enterprise in the first years of its activity. At the stage of growth, the main attention should be paid to the development of the sales staff: improving their qualifications and strengthening the corporate culture. At

the stage of maturity, it is advisable to implement measures aimed at stabilizing the sales staff: rotate staff, improve staff qualifications, strengthen social guarantees. At the stage of aging, it is advisable to reduce the number of personnel and update its structure.

As is known from practice, the sales strategy should determine: types of intermediaries and their role in the sales chain; level of sales selectivity; opportunities for wholesale and retail trade; after-sales service needs; optimal structure of sales methods and channels; price structure for the final buyer (consumer). It must be understood that for the manufacturer, the involvement of intermediaries means a loss of control over certain sales functions, because the company entrusts tasks to third-party organizations that could be performed by its own marketing and sales departments.

Thus, the implementation of marketing strategies of sales management in a complex will comprehensively ensure a sustainable competitive advantage of the enterprise (regardless of the stage of its life cycle) on the market in the long term. And the structure proposed in this model takes into account the main areas of sales activity of agro-industrial complex enterprises. In addition, selected groups of strategies can act as a basis for planning marketing activities of enterprises to ensure effective sales of products.

The activity of any enterprise is subject to the sales process. Its optimal organization is one of the most urgent issues for effective functioning, since it is with its help that the enterprise realizes its commercial needs.

When considering the sales activity of enterprises, it is necessary to take into account a number of the following factors: constant demand for products of daily use, low price elasticity of demand, a significant difference between retail and purchase prices; seasonality of production and sale of products; raw material security throughout the territory of Ukraine; a wide range of products; a large range of manufacturers. The approach consists in improving the concept of sales logistics as a complex and complex process, during which finished products go through all stages of production operations, are subject to packaging, packaging, promotion through distribution channels and are

accompanied by the performance of a complex of operations: transportation, warehousing, sales service, as well as sales to its final consumer. Therefore, in a practical sense, this allows us to establish the need to consider sales activity as a systemic process of organizational and economic operations, which includes not only the marketing aspect (market research, but also the analysis of the situation, determining sales volumes, choosing and managing distribution channels), and the logistical aspect (transportation, warehousing, inventory management, order service) [163].

Unlike marketing, which is engaged in identifying and stimulating demand, logistics is designed to satisfy the demand generated by marketing with minimal costs. However, due to the commonality of the object of study, distribution logistics and marketing use common concepts (Table 2).

Table 2 – Comparative analysis of the traditional and logistic concept of management

Signs of a traditional management	Signs of a logistics system
system	
Low level of production integration	High level of production integration
Optimization of production functions	Optimization of material flow
The pursuit of maximum productivity	Ensuring flexibility
High level of production capacity	High throughput
utilization	
Remains of materials to ensure	Remains in the form of capacities
production	
Extended hourly disposition cycle	Very shortened disposition cycle, daily
	and hourly intervals
Low or medium level of readiness of	High level of readiness of manufactured
products for final consumption	products
Teams production oriented to the	Production oriented to customer orders,
production program and warehousing	i.e. to demand

The mechanism for making decisions about sales channels, which is based on the economic and technological expediency of the movement of goods along such a path in order to benefit the manufacturer, intermediaries and the end consumer, and can be calculated according to various criteria. If the element of the chain does not receive the calculated benefit, the implementation channel will be ineffective.

In theory, there are elements of the «4P» marketing complex. The logistics mission

of the enterprise, which characterizes what and to whom it should produce, is often interpreted in foreign practice as the «7P» rule.

By analogy, when translated into Ukrainian, it can be called the rule of ensuring the availability of «the right product in the right quantity and in the right quality in the right place at the right time for the right consumer with the lowest costs».

The characteristic features of the logistics mission in this interpretation are placement, quality, time and costs. Thus, logistics and marketing complexes are connected by goods, placement and costs, and based on this concept, product sales are a component of a group of marketing variables called «placement» [160, p. 211].

Logistics as a complex management of material and information flows within the system should be based on the following principles:

- consideration of the movement of material resources from the primary source to the final consumer as a single material flow, which involves the implementation of such processes as transportation, loading, unloading, moving, warehousing and storage of materials;
- introduction of organizational and management mechanisms for coordination of actions of specialists of various services involved in material flow management. The result depends on how successfully it is possible to link into the system the implementation of a complex of measures for the rationalization of containers, unification of cargo units, improvement of storage, optimization of the size of orders and the level of stocks, the selection of the most profitable routes for the movement of materials, etc. [160, p. 232].

Obviously, the functions related to the formation of the company's material flow are technologically connected, and the costs of their implementation are economically dependent. This means that changes in one of the types of activities affect others, and efforts to reduce individual costs without taking into account others can lead to an increase in aggregate costs.

The ultimate goal of activity in the field of logistics is expressed by 6 rules of logistics: cargo (required goods); quality (of the required quality); quantity (in the required amount); time (delivery on time); place (in the right place); costs (with minimal costs) [158, p. 27].

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9. Management of marketing information cyber security in the conditions of

martial law

In the civilized world, a person adheres to a certain framework of limits and norms of behavior, activity and personal hygiene, or in other words, creating favorable conditions for his body and protecting it from bacteria and viruses. The information

environment combined with the digital environment also needs «hygiene» and

«protection». Regarding the protection of digital information, there is a term «cyber

security».

Cybersecurity is a set of processes, practical advice and technological solutions that help protect critical systems and networks from cyberattacks. As the volume of data increases and more users work and communicate from anywhere, cybercriminals are developing sophisticated methods to gain access to resources, steal data, sabotage businesses or extort money. Every year, the number of attacks increases, and attackers develop new methods to avoid detection. An effective cybersecurity program includes professionals, processes, and technology solutions that work together to reduce the risk of business interruption, financial loss, and reputational damage from attacks.

Cybersecurity is critical in a state of war, as the use of cyberattacks can have a significant impact on the outcome of military operations and national security as a whole.

In wartime, cybercriminals, cyberspies and cyberterrorists can use a variety of techniques and technologies to attack computer systems and networks. Such attacks can have serious consequences, such as the destruction of critical infrastructure facilities, destruction of data, shutdown of transport systems, telecommunications and other life support systems [165, p. 43].

One of the main strategies for combating cyber aggression is to ensure cyber security by ensuring a high level of protection of information systems, as well as ensuring high timeliness of detection, analysis and response to cyber attacks. National cyber security should be part of the overall security of the country.

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Martial law conditions can also lead to an increase in cyber attacks, so it is important to have cyber attack recovery plans and procedures in place to help restore damaged systems and networks.

In addition, cybersecurity education and training for military and civilian personnel must be provided so that they can effectively protect the nation's information infrastructure in wartime.

Marketing, like other areas of activity, has its own characteristics and components, after analyzing which you can focus on information protection and cyber security.

Marketing information is any information that is used to promote a product or service in the market. It can be information about product features, price, promotions, discounts, as well as any information that attracts the attention of potential buyers and forces them to make a purchase.

Marketing information can be presented in various formats, such as advertisements, brochures, booklets, catalogs, videos, press releases and others. It is important that this information is accurate, correct and corresponds to the real state of affairs, since any inaccurate information can cause a negative reaction from buyers and affect the company's reputation.

Marketing information can be used to promote a product or service at various stages of sales – from attracting the attention of potential buyers to the end of the purchase and sale transaction. Also, marketing information can be used to study the market and competitors in order to improve the effectiveness of the company's marketing strategy.

There are many types of marketing information that are used to promote products or services in the market. Here are some of them [166, p. 56]:

- 1. Advertising: it can be banners on websites, advertisements in magazines and newspapers, advertisements on radio and television, direct mails, etc.
- 2. Brochures, booklets and catalogs: These materials contain information about the products or services that the company offers, their features, benefits and other details.

- 3. Videos: These can be used on company websites, social media, conferences, exhibitions and other events.
- 4. Press releases: these materials are used for public information about news and events related to the company or its products.
- 5. Social media: This can be posts on Facebook, Twitter, Instagram, LinkedIn, etc.
- 6. Email marketing: it can be direct email mailings, newsletters, mailings with offers, and others.
- 7. Sponsorship: These can be sponsored events such as sports matches, concerts, etc., which are used to promote products or services.
- 8. Online advertising: These can be search engine ads, website banners, YouTube ads, etc.

These types of marketing information can be used individually or in combination, depending on the company's marketing strategy and its target audience.

The last points of marketing information are components of digital marketing.

Digital marketing is marketing that provides interaction with customers and business partners using digital information and communication technologies and electronic devices, in a broader sense, it is the implementation of marketing activities using digital information and communication technologies.

Digital marketing is the use of all possible forms of digital channels to promote a company and its product. Television, radio, internet, social media are all digital marketing tools. Digital marketing is closely intertwined with Internet marketing, but it has already developed a number of techniques that allow you to reach your target audience even in an offline environment. It solves the following tasks [167, p. 72]:

- 1) support of the brand image;
- 2) support for bringing a new brand or product to the market;
- 3) increasing recognition;
- 4) sales promotion.

Digital marketing uses the following basic techniques, each with a set of terms.

- 1. SEO (English search engines optimization) site optimization in search engines, promotion of the site to the first page of search engine results for key queries;
- 2. SMM (eng. social media marketing) social media marketing, media advertising in the form of static or animated pictures placed on website pages for the purpose of product promotion;
- 3. SMO (eng. social media optimization) optimization for social networks, advertising in social networks: blogs, forums, online diaries;
  - 4. Big Data technology research of large data arrays;
- 5. Marketing of games promotion of games, including the process from creating a game to selling the game and making profit from the game;
- 6. SEM (English search engine marketing) marketing activity in search engines aimed at increasing website traffic;
- 7. Remarketing (eng. retargeting) retargeting, repeated display of previously viewed Internet advertising;
  - 8. Mobile marketing marketing activity using mobile devices;
  - 9. E-mail marketing text messages of an advertising nature sent by e-mail;
  - 10. Web analytics analytics in the field of digital marketing
  - 11. Contextual advertising of Google Adwords, Yandex Direct;
  - 12. RTB (English real time bidding) bidding in real time.

These techniques are used to attract new customers and provide services to existing customers that help develop customer relationships through CRM systems. Customer Relationship Management (CRM) – the use of digital communication technologies to increase sales to existing customers and encourage continued use of online services through methods such as databases, personalized web messages, customer service, chatbots, email and marketing in social networks. However, for digital marketing to be successful, there is still a need to integrate these methods with traditional media such as print, television, direct mail and sales and PR as part of multichannel marketing communications.

The rating of the frequency of use of digital marketing methods is as follows:

- first place SEO (site optimization in search engines) this method is used by 90% of enterprises;
- second place SMM (social media marketing) and SMO (optimization for social networks) 65% of enterprises;
  - third place contextual advertising 60% of enterprises;
  - fourth place SEM (search marketing) 33% of enterprises.

The first place of search optimization is explained by the fact that 70-90% of consumers, depending on the type of market (B2C, B2B), start their search for a product from search engines. This is the basis of the paradigm and concept of digital marketing, which is manifested in the philosophy: «Cooperate with those who want it». This approach is a priori the most effective.

When a user turns to a search engine, his request is fixed, and thus the needs of consumers are determined. Further, with the help of other digital marketing tools, he is offered alternative options for meeting demand.

The second place of marketing activity in social networks is due to the popularity of social networks and a high level of trust in the recommendations of acquaintances and friends. Social networks are an artificial platform for realizing the biosocial propensity of people to communicate. This is facilitated by unlimited interactive communications, direct participation of users in the generation and relaying of media content, a high degree of involvement in the communication process, maximum feedback speed, and user personalization. Meanwhile, in addition to social networks, there are other types of social media that also allow influencing the position of consumers: Internet forums, blogs, photo and video hosting, virtual worlds, communities for the production of joint content, joint projects, geosocial services, event communication communities, dating sites, social aggregators. That is why the methods of SMM and SMO are so important, which allow you to form and consolidate a positive image of the company among the network community due to the organization of media sites and attracting the target audience to them, placing advertising or PR content in places of concentration of the target audience, creating

and managing blogs, cooperation with bloggers, creation or sponsorship of additional software products, holding contests.

An additional tool for social networks is viral marketing, which is effective under the condition of harmonizing the content of commercial information and the form of its illustration. Mobile marketing is not yet among the leaders of digital marketing, but it is rapidly gaining momentum and its share in the total volume of advertising should be expected to increase in the near future. The increasing potential of mobile devices, the growing number of GPS devices and various mobile applications will lead to a restructuring of digital marketing in favor of mobile marketing. Mobile marketing is 2-5 times more effective than internet marketing.

Creating effective digital programs that strengthen the product involves understanding the target audience, the customer profile and proactively developing digital solutions to solve the company's problems. The company should provide answers to the following questions [167, p. 75]:

- 1. Is the offer limited by issues of reach, understanding, trust or loyalty?
- 2. Are there problematic issues with important customer touch points?
- 3. If there are gaps in brand perception, how can digital marketing tools close or bridge them?

Taking this into account, the effective operation of the company is achieved by the synergy of the actions of Internet marketers and employees of other departments, in particular the marketing department, since digital marketing should not function in a reactive mode. Digital marketing comes into play at the planning and design stage of marketing programs, and its application should not be delayed. For example, Starbucks reinforces its offline value proposition with an app that lets you take advantage of quick checkout, tip, earn stars, find stores, choose personalized offers, and more. Such a strategy is aimed at obtaining a sustainable advantage in the future, which is supported by the application of innovations and an aggressive brand strategy. Consequently, staff involved in the development and promotion of R&D, R&D, design, manufacturing and marketing proposals will need to collaborate with the digital team.

The rapid development of digitization of technology and its large-scale integration

into all spheres of human activity contribute to the development of such a phenomenon as digital transformation.

Digital transformation is the introduction of modern technologies into the enterprise's business processes. This approach involves not only the installation of modern equipment or software, but also fundamental changes in management approaches, corporate culture, and external communications. As a result, the productivity of each employee and the level of customer satisfaction increase, and the company gains the reputation of a progressive and modern organization.

Digitization of processes is relevant not only at the level of individual enterprises: entire industries choose this path of development as the only opportunity to meet the rapidly changing conditions of the surrounding world. Thanks to this, the digital transformation of industry, retail trade, the public sector and other areas is already changing the life of every person and every company today.

The use of digital media, data and technology to support marketing activities has given rise to a wide range of terms proposed by practitioners and academics alike. – digital marketing, Internet marketing, electronic marketing and web marketing. Digital marketing is the evolution of internet marketing.

The digital economy is a global network of economic and social activity that is accessible through such platforms as the Internet, mobile and sensor networks. Since the digital economy is, on the one hand, a derivative of the electronic economy, and on the other, the next stage of development, the identification of fundamental differences in marketing in the digital economy is unresolved.

The new phenomena that give the digital economy independence and specificity are:

- mobile technologies;
- cloud technologies;
- business analytics based on digital technologies;
- social media.

Mobile technologies significantly change business models, as various actions with information can be carried out remotely. Smartphones are personified multifunctional

network devices that have a wide range of applications, video cameras, still cameras, allow you to connect with all devices on the Internet, with other people.

The higher the economic growth rate, the faster the number of smartphones increases. Currently, China's economy has reached the first place in the world in terms of growth rates, accordingly, China ranks first in the world in terms of the number of smartphone owners. In second place is the US economy – the US ranks second in the number of smartphone owners.

Cloud technologies allow processing large arrays of unsystematized information, systematizing it. It certainly makes marketing decisions easier. Therefore, the costs of implementing cloud services are increasing in the world.

Currently, 60% of the information collected in the world is stored in the cloud. National programs for the development of cloud services have been adopted in the USA and EU countries: in the USA, the «Federal Strategy for Cloud Computing»; in the EU – «Unlocking the potential of cloud computing in Europe» (2.5 million additional jobs, 160 billion euros in annual additional income).

Business analytics on the basis of digital technologies changes the traditional, time-stretched scheme of analytical work: information was collected for a certain time, and then analyzed. Nowadays, automatic network analysis of the flow of undocumented data, directly or indirectly related to the enterprise, is important. Business analytics tools are: business analytics platforms (business intelligence, BI), performance management tools (corporate performance management, CPM), advanced analytical applications. The largest specialized manufacturers are SAP and Microsoft.

Social media harmonize the cross-functional coordination of business divisions and communication with consumers and partners. The recent growth of social networks is due to two factors: the increase in the number of people who connect to the Internet through mobile phones, and the growth of the audience of social networks at the expense of people of older age categories (Table 1).

Techniques have already been developed that allow you to influence the target audience even in an offline environment (phone applications, SMS/MMS, advertising displays on the streets). This is the latest type of marketing, which is based on the use

of data in digital form and devices that process them (computers, phones, smartphones).

Table 1
Parameters of the main social networks

The name of the social network	Number of visitors per day, million people	Number of unique visitors per month, million people	Characteristics of the audience
Facebook	665	900	The fastest growing segment is people aged 45-54
Twitter	35	500	The fastest growing segment is people aged 55-64
YouTube	-	1000	The fastest growing segment is 18-34 year olds
Google+	120	359	The fastest growing segment is people aged 45-54
LinkedIn	9	200	The world's largest professional network

Digital marketing is broader than Internet marketing by:

- 1) new possibilities of mobile communication:
- text messages (SMS);
- automatic voice menu (IVR);
- multimedia messages (MMS);
- local radio communication between communication devices (Bluetooth);
- wireless data transfer protocol (WAP);
- Mobicode a combination of numbers that makes it possible to make payments or receive discounts;
- QR code a picture on printed products that allows a quick transition to the virtual environment;
- technologies Click To, Flash SMS, Location Based Services (LBS) –
   technologies for convenient downloading of software products;
  - 2) new possibilities of television:
- technology of augmented reality (Augmented Reality) technology of reproduction of virtual elements in reality;
  - 3) new possibilities of interactive screens:

- 3D-projections (3D-mapping) the technology of projecting an image onto an object in the environment;
  - 4) new possibilities of POS terminals, video cameras:
- biometric technologies the technology of automated identification of consumers based on physiological (fingerprints, facial recognition, DNA, iris pattern, palm or ear shape, smell) or behavioral (handwriting or keyboard handwriting, voice) characteristics.
  - 5) new e-mail features:
- sending electronic advertising messages in the form of sms to mobile devices, i.e. telephone marketing is combined with postal mailing.

Advantages of digital marketing:

- interactivity active involvement of the consumer in interaction with the brand;
- absence of territorial restrictions during the implementation of marketing ideas;
- ease of access to the resource (web and wap resources);
- significant spread of the Internet and mobile communication ensures active involvement of the target audience;
- possibility of operational evaluation of campaign measures and management of events in real time.

Digital marketing is divided into:

- 1. Pull form: the consumer independently selects the information (content) he needs and turns to the brand himself. In this case, the audience uses what is offered to them.
- 2. Push-form (pushing): the consumer, regardless of his desire, receives information (sms, spam, etc.). This form has a significant drawback the information obtained in this way is often not paid enough attention, and therefore such efforts are sometimes useless.

Today, the most relevant types of marketing information are precisely those related to the Internet resource and computer technology.

The problem of information protection began to gain relevance with the spread of computer technologies and the increase in the volume of information processing and

storage. Historically, the problem of information protection was associated with the military sphere and espionage, which is extremely important at the moment in Ukraine, but with the development of information technologies and the spread of the Internet, this problem has become relevant for all spheres of activity, including business, science and personal life. , the loss of data confidentiality to the benefit of the enemy can also lead to undesirable economic consequences in the country and disruption of economic stability.

One of the biggest reasons for the problem of information protection is the increase in the number of criminal acts related to the theft and theft of information. These crimes can result in loss of confidential information, loss of financial assets and damage to reputation.

Another reason for the problem of information protection is the increase in the volume of stored and processed information. The increase in the amount of data that is stored on computers and on the Internet creates more opportunities for criminals who can break the information protection system and use the obtained information for their own purposes.

In addition, the increasing number of devices and systems connecting to the Internet creates more access points for criminals. Not all of these devices and systems are adequately protected, which can lead to information security breaches.

Ukraine has a European direction of development, including in the field of information technologies, which, for example, in the course taken by Ukraine to enter the European space (supported by the Decree of the President of Ukraine On the Cybersecurity Strategy of Ukraine dated January 27, 2016 [168].

In the conditions of martial law, the protection of marketing information becomes an extremely important task for any company. Unfortunately, in such periods, the number of threats related to the misuse of marketing information increases, so it is necessary to take additional measures to ensure its security.

Basic measures that can be taken to protect marketing information in martial law include the following:

Storage of information on secure servers and computers with storage of backups

on secure disks. It is important that the company has access to secure servers where marketing information is stored during martial law.

Use of encryption for marketing information. All data must be encrypted to avoid unauthorized access to information.

Limiting access to marketing information to only those employees who have the right to do so. Companies must establish access rules and control visits to individual pages of the site that contain marketing information.

Ensuring security when sending marketing information by e-mail. Marketing information should only be sent via e-mail with a secure data transmission channel.

Increased control over external service providers. Companies must monitor their external suppliers.

Data protection in marketing is important because companies collect and process large amounts of personal data about their customers. This data may include name, address, email, telephone number, purchase information and other personal data. Illegal access to this data can lead to a violation of customer privacy and cause serious business consequences.

Here are some guidelines for protecting information in marketing that are especially important in martial law [169, p. 178]:

- 1. Ensure data security: Apply technical and organizational measures to protect data. Use strong passwords, encryption and virus protection to prevent unauthorized access to data.
- 2. Tell customers about the collection and use of their data: Tell your customers what data you collect about them and how you collect and use it. Provide an option to opt out of receiving promotional messages.
- 3. Comply with data protection legislation: Comply with the requirements of the Personal Data Protection Act and other relevant regulations governing the collection and processing of personal data.
- 4. Restrict access to data: Restrict access to data to only those employees who need to have access to it, and ensure strong identification and authentication.
  - 5. Protect data in transit: Protect data in transit between computers and other

devices.

A separate item should be the protection of servers on which information is directly stored.

The protection of servers in Ukraine under martial law requires increased security measures and consideration of additional protection options. Some of these opportunities may include:

Ensuring physical security of servers – server rooms must be equipped with access control devices, such as access control systems with cards, door locks with electronic keys and video surveillance systems.

Ensuring cryptographic protection of data - data transmitted over the network must be encrypted to prevent its interception and use by unauthorized persons.

Use of security software – servers must be protected by software that detects and blocks malicious programs, including viruses and spyware.

Data Backup – To prevent data loss as a result of military operations, data should be backed up on a regular basis and stored in secure locations.

Staff training and education – staff who work with servers must be trained in security measures and protocols for behavior in dangerous situations.

Cooperation with security services - in the event of a threat to the security of servers, you should cooperate with security services and take the necessary measures to protect information.

In general, the protection of servers in a state of war requires a comprehensive approach and constant monitoring of the protection to prevent any unauthorized interference.

In accordance with the beginning of the full-scale invasion of the aggressor country on our territory on February 22, 2023, the Law of Ukraine «On Amendments to Certain Laws of Ukraine Regarding Ensuring the Functioning of Information and Communication Systems, Electronic Communication Systems, and Public Electronic Registers» was adopted, which made it possible to improve the protection information and make information systems of Ukraine more resistant to hacker attacks [170].

Actually, the threat to information security can be accidental (failures, errors, side

effects, etc.) or intentional (criminal actions of society).

Analyzing the activity and goals of hacker attacks on servers and websites of Ukraine during 2022-2023, we can come to the conclusion that with the beginning of a full-scale invasion, cyber attacks have become a tool for conducting hostilities rather than a means of putting pressure on individuals and their private data. The majority of cyberattacks were directed at the public sector. Their total number has increased tenfold.

Figure 1 shows an example of the formation of stages and directions of information security:

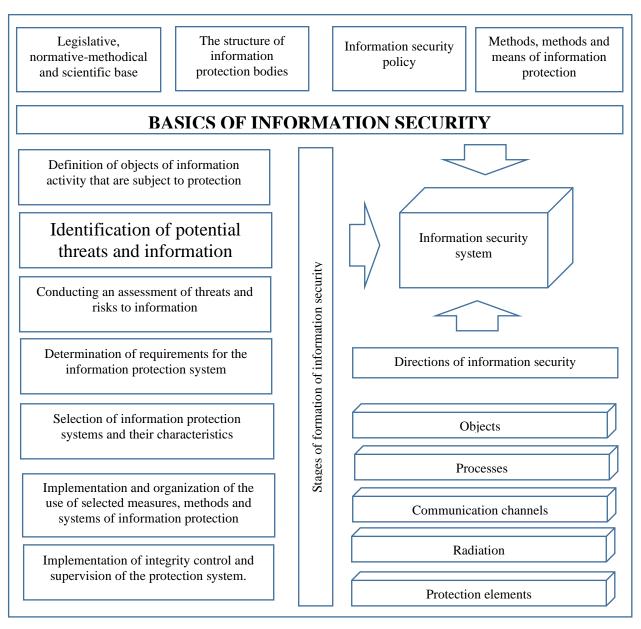


Fig. 1. Basics, stages and directions of formation of information security

According to the State Special Communications Service, the main cyberattacks since February 24 occurred on

- state and local authorities;
- information resources of the security and defense sector;
- energy sector;
- financial sector;
- commercial sector;
- telecom sector and developers;
- transport industry.

When a hacker interferes with the work of the financial sector, it can result in the theft of money, which is our taxes, pensions, wages, subsidies, etc.

The work of the energy sector, logistics hubs, and transport depends on information support and information exchange, so a hacker attack (even a successful one) can paralyze the operation of the system and the availability of services for users.

The State Intelligence Service emphasizes that before the full-scale invasion, cybercriminals focused on attacks on the central government, the media, and the military, and since February 24, they have taken up their usual business: terrorizing civilians. In particular, trying to destroy the operation of strategic infrastructure (energy, transport, communication), without which people cannot live normally.

The statistics provided by the State Intelligence Service in response to the request of the NGO «Human Rights Platform» are telling. If in February (from February 1 to 23), about 143 thousand attacks were carried out on the public sector, then in the following months this number increased rapidly:

- 3.2 million attacks in two decades of April,
- 42.7 million attacks in May,
- 27.7 million in June,
- 32.3 million attacks in July,
- 28.7 million attacks in August,
- 25.1 million in September.

The most common type of cyberattack is scanning, that is, the collection of

information about the system and networks by malicious software. This is the reading of passwords, correspondence, installed applications with access, activity on the network and visiting sites: everything that should be both a private matter of the user and a trade secret of an enterprise or institution. Other forms of cyberattacks are spam, malicious connections, exploits, authorization attempts, and DDoS attacks.

This is how, for example, the distribution of cyberattacks on state bodies in September looked like by category [170]:

- scanning (collection of information about systems or networks) 24,308,395 attacks;
- attempts to exploit a vulnerability (intrusion attempts using a vulnerability in a system, component or network) -639,806 cases;
- malicious connection (attempts to connect from/to IP/URL addresses associated with known malware, such as C2C or a distribution resource of components associated with the activity of a certain botnet) 151,597 attempts;
- attempts to authorize or enter the system (attempt to enter services or access mechanisms, unsuccessful attempt to select authentication data or use previously compromised data that is no longer relevant) -63,089 cases;
- DoS/DDoS denial-of-service attacks (influence on the normal operation of a system or service, which is achieved by directing requests from one or more sources to the target resource to oversaturate bandwidth or system resources) 1,791 attacks;
  - spam (sending unwanted messages or a large number of messages) -708 cases.

Let's not forget about phishing (sending e-mails/messages with malicious software, opening which or following the attached link risks data loss, virus infection, transfer of personal data (including passwords and bank card data), loss of network access), which also happens often. In September 2022, the State Service for Special Communications and Information Protection recorded 1,060,939 phishing attacks on the public sector, in August – 977,785, and in June – 1,312,401 attacks.

Who exactly and how is being attacked – official information and information with closed access, writes the State Special Communications Service in response to a request from the Human Rights Platform NGO. But separate descriptions of cyber

attacks in the public space make it possible to understand the picture of threats and know what to watch out for.

For example, in September, UAC-0098, a group linked to the Russian hacking group Conti, carried out a series of cyberattacks on Ukrainian and European organizations using phishing emails impersonating the Cyber Police of Ukraine, representatives of Starlink, Microsoft, and an Indian hotel chain [171]. This was reported by The Verge with reference to a report by the Threat Analysis Group, a division of Google that monitors state-sponsored cyber activities/

Conclusions. Taking into account the growing role of information technologies in the life of modern society and the threats they pose, the problem of information security is becoming more and more urgent and requires a comprehensive approach to its solution. Assessment of threats to information security is a necessary component of this approach, in particular when conducting a study of threats to the organization. This research should cover actions before, during, and after an attack, with particular attention to internal and external threats to ODI. Analysis of the parameters associated with these threats will allow to determine the probability of their implementation, as well as understanding the possible consequences of their implementation.

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# 10. Directions for improving marketing management of agro-industrial production in the region

New economic relations in the agro-industrial production of the region necessitate the formation of an effective system of management, organization of production, and sale of products to meet the needs of consumers. Market relations offer not only the production of products, but also the need to study possible sales channels, search for consumers, and focus on marketing activities.

In the conditions when Ukraine joined the WTO and guaranteed provision of food security is necessary, for agro-industrial production as a whole and for individual agricultural formations and processing enterprises that pursue long-term development goals, strengthening the marketing function of management becomes the basis of a comprehensive solution to a number of strategic tasks and a key tool, optimizing business in situations of uncertainty, risk and competition.

Ensuring balanced economic growth of agro-industrial production is impossible without effectively built marketing management.

According to F. Kotler [173], the process of marketing management includes four components: analysis of market opportunities, selection of target markets, development of a marketing complex, implementation of marketing enterprises. Each of these elements, in turn, consists of separate components.

Analysis of market opportunities, for example, consists of a system of marketing research, study of target consumer markets and enterprise markets.

The selection of target opportunities includes measurements of demand volumes, market segmentation, product positioning on the market.

The development of the marketing complex is based on product development, product pricing, product distribution methods, and product sales promotion.

Marketing in management activities is evolving, and certain stages can already be identified in this process. So. F. Kotler notes that:

1) marketing becomes a function equivalent to the management of production, finances, personnel;

- 2) the role of marketing in comparison with the listed functions is increasing;
- 3) marketing is transformed into the main function to which others are subordinate;
- 4) the consumer becomes a controlling link that directs the development of the listed functions;
- 5) the actions of the consumer act as controlling, and marketing as an integrating function [173].

The following stages of the evolution of marketing management are distinguished:

- pre-scientific, intuitive stage of marketing toolkit formation;
- the stage of formation and development of the entity's marketing management concepts;
- the stage of formation and development of the subject's marketing management concepts [172].

The need to use the concept of marketing in the management of the region at the current stage is determined by the following reasons:

- increased competition between regions, as well as their differentiation and division into promising and depressed ones;
- the growing inability of executive authorities at the regional level to make adequate management decisions that require sound market analysis and marketing thinking;
- the use of outdated organizational mechanisms, management procedures and directive methods in the management of the region, which does not allow the executive authorities to implement the policy of self-development of the region;
  - a decrease in investment activity in many regions in recent years;
  - a decrease in the standard of living of the population in most regions;
- predominance in the management of the region of the production concept, which is mainly connected with the use of traditional factors of production [176].

When marketing management of agro-industrial production in the region, key features of the functioning and development of the agro-industrial sector of the

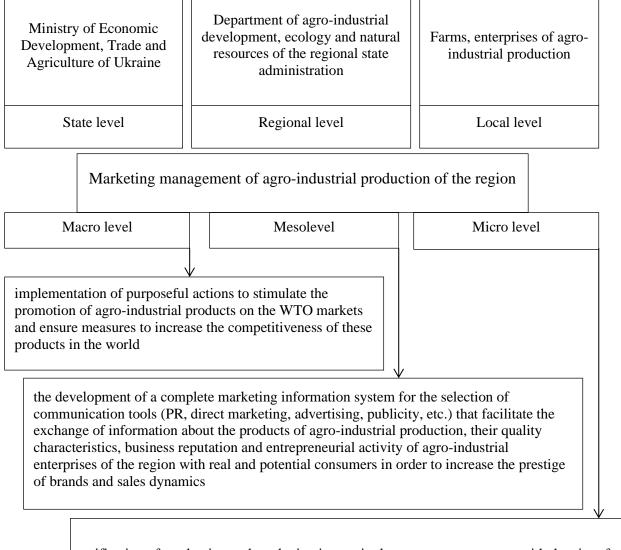
economy should be taken into account:

- 1) agro-industrial products are essential goods that, as a rule, have a limited shelf life. Therefore, the movement of goods should be organized with the formation of the necessary stock, but at the same time, the socio-demographic and mental characteristics of consumers should be taken into account;
- 2) basic agricultural raw materials can objectively be produced only in the spring-summer season, while the production of final products can be carried out throughout the year. Therefore, it is important to ensure clear interaction of agricultural and processing enterprises;
- 3) modern innovative technologies can (and should) be used in the production of agricultural products. And this can become the main factor of positioning in the market, which wants to learn about quality products produced at high-tech enterprises;
- 4) high competition on the market and the identity of sold goods require constant contact of marketing services with consumers. For the field of agro-industrial production, this is still a new trend that can ensure a high level of consumer loyalty [175].

The need to use marketing management of agro-industrial production in the region is caused by the fact that it makes it possible to reveal the agricultural and production potential of the region, to determine the ways of gaining market positions, to study and forecast the state and development of the market, and on this basis to develop programs for the socio-economic development of the region taking into account its agricultural production.

Marketing management of agro-industrial production is characterized by higher receptivity, adaptability, self-organization and self-governance, which is explained by increased consumer demand for these products, fierce competition in agricultural markets due to the identity of agricultural raw materials and food products, the need for rapid adaptation of the marketing system to institutional decisions of decision-making bodies [175]. The structure of marketing management in the field of agro-industrial production is associated with various consumer properties of certain types of agricultural products and directions of their use. According to the territorial feature, it

can be divided into macro (world, interstate, national), meso (regional, interregional, local) and micro (local) economic levels (see Fig. 1).



unification of production and marketing into a single management process with the aim of identifying the need for a particular product at the zero stage of the product life cycle, carrying out scientific and research work on the development of market novelty products, flexible pricing, indicative planning and demand forecasting, attracting financial and investment resources , organization of effective movement of goods and sales, promotion and advertising of brands in the appropriate place and at the optimal time

Fig. 1. Levels of marketing management of agro-industrial production in the region

#### Compiled by the author

The marketing management system is a set of organizational structures and specific forms and methods of management, as well as legal norms, with the help of which economic laws operating in specific conditions are implemented. Therefore, the

Ministry of Economic Development, Trade and Agriculture of Ukraine acts as the highest body of state power, which carries out the functions of implementing state policy and legal regulation of the agro-industrial complex at the state level. The state pays special attention to the development and regulation of foreign economic activity. In the process of adapting our economy to the conditions of the World Trade Organization, it is necessary to ensure the economic interests of the domestic agro-industrial complex with the help of direct (legislation, the system of management bodies and their powers, state ownership of material resources, etc.) and indirect (fiscal, financial, monetary credit, tax policy, etc.) state regulation.

At the macro level, marketing management is carried out through the priority of stimulating and information-analytical methods, as well as through the direct directions of marketing regulation of the agro-industrial market, which include: implementation purposeful actions with stimulation promotion of agro-industrial products production on WTO markets;

- software measures of increase competitiveness of this product in the world;
- support agricultural manufacturers in the form of state programs that mean –
   different benefits , subsidies and others levers regulation that increase competitiveness
   of products;
  - promoting the integration of subjects of the agro-industrial production system;
- development of a competitive environment, conditions for creation and implementation of competitive advantages of subjects of the agro-industrial market of the region to form the attractiveness of this area of the region, including the investment area:
  - informational support of the functioning of the market;
- promotion of the products of the subjects of agriculture and processing industry of the region;
- implementation of the ideas of social and ethical marketing through various programs of a social nature and the ecological component of production and consumption.

At the regional level, the Department of Agro-Industrial Development, Ecology

and Natural Resources of the Regional State Administration with the corresponding tasks, functions and rights as a Ministry deals with the regulation of marketing activities of agro-industrial production.

At the meso-level, marketing management is carried out through the development of a complete marketing information system for the selection of communication tools (PR, direct marketing, advertising, publicity, etc.) that facilitate the exchange of information about agricultural products produced, their quality characteristics, business reputation and entrepreneurial activity of enterprises agricultural sector with real and potential consumers in order to increase the prestige of brands and sales dynamics.

At the local level, marketing management of agro-industrial production is carried out by individual agricultural enterprises, peasant (farming) farms and households mainly according to the functional, commodity, regional, market, headquarters and matrix principles.

At the micro level, marketing management is carried out through the unification of production and marketing into a single management process with the aim of identifying the need for a particular product at the zero stage of the product life cycle, carrying out scientific and research work on the development of market novelty products, flexible pricing, indicative planning and forecasting demand, attraction of financial and investment resources, organization of effective movement of goods and sales, promotion and advertising of brands in the appropriate place and at the optimal time.

At the same time, the main attention in forming a positive image of agroindustrial production enterprises of the region and expanding distribution channels should be focused on the development of such PR tools that are available and applicable for any organizational strategy, with the help of participation in exhibitions and fairs, support of corporate style, reviews in press, interview.

Marketing management of the region's agro-industrial production is based on the analysis and awareness of the region's needs and is aimed at realizing the geophysical, labor, financial and other resources of the territory in order to meet the needs of the

region's consumers.

Based on the above, we can form the goal of marketing management for the production of agro-industrial products in a specific region: on the basis of detailed study and forecasting of both current and potential demand and market conditions, ensure the effective development of this branch of the country's economy.

The marketing management system must be integral, with interconnected elements, economical, flexible, receptive to agribusiness policy, consumer needs and demand, market conditions, competition, commercial changes, entrepreneurship, production level. At the same time, it should be constantly improved on the basis of scientific achievements and best practices. The structure of the system of marketing management of agro-industrial production is shown in fig. 2.

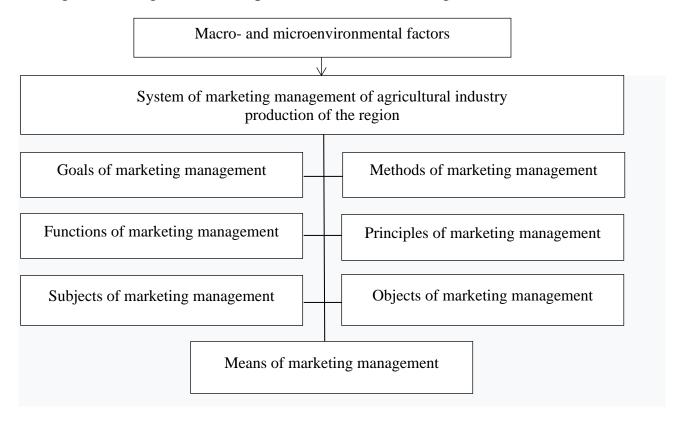


Fig. 2 System of marketing management of agro-industrial production of the region

#### Compiled by the author

The marketing management system is influenced by macro- and microenvironmental factors. Macroenvironmental factors affecting the agro-industrial market include: general political system and law; the level and structure of the national

economy; culture, education, customs; the level of scientific and technological progress in society; economic and social conditions; demographic factors.

Microenvironmental factors are the level of competition with enterprises in similar industries; market conditions; the structure of a specific market and the requirements of buyers; advertising of competitors and others.

Marketing management affects the results of marketing activities in the field of agro-industrial production, competitive advantages and efficiency of enterprises and the region. For effective marketing management, you should decide on specific goals. This is, first of all:

- Increasing or maintaining the competitiveness of agro-industrial production entities located in the region and the quality of life of the population,
- Attracting new investors to the region, increasing the volume of agro-industrial production;
- Ensuring profitability from the activities of agro-industrial enterprises in the region and increasing the revenue part of the regional budget,
- Developing new markets, international markets, forming regional markets,
   increasing market share, weakening the market positions of competitors,
  - Formation of a favorable image, achievement of high consumer satisfaction.

At the heart of marketing actions are always certain principles that determine the essence, goals and conditions of application of marketing management, knowledge and observance of which is mandatory for the effective solution of all tasks of marketing management. Marketing management of agro-industrial production in the region is characterized by its own principles that determine its specificity as a special management activity.

#### are distinguished:

- 1) systematicity marketing is aimed at strengthening the well-being of the region, business entities and the population;
- 2) target orientation marketing should contribute to the achievement of strategic goals and the solution of specific tasks;
  - 3) planning determines the obligation to plan marketing activities;

- 4) innovativeness determines the use of innovations, including in the management of the region;
- 5) flexibility establishes the need for a quick and adequate response to dynamically changing conditions of activity and the influence of environmental factors;
- 6) comprehensiveness involves constant and comprehensive consideration and analysis of all factors of the external and internal environment that determine the activity of the region in specific conditions, which ensures the necessary adequacy of its marketing offer to the main parameters of the market;
- 7) competitiveness (competition) involves the formation of competitive advantages of the region;
- 8) stimulation involves managing the motives of human actions. Without learning to manage them, one cannot manage social processes;
  - 9) partnership means forming long-term relationships with potential consumers;
- 10) the principle of globalization aims at the constant search for new markets [176].

In addition, the following principles can be distinguished:

- 11) compatibility ensures interaction with other economic systems in accordance with established rules;
- 12) the principle of protection ensures the protection of the rights of consumers and producers of products.

The principles on which the model of marketing management of agro-industrial production of the region is based reflect the objective requirements for management, namely: the priority of the social goal, the unity of the economic and social processes taking place in the regional economy, the coherence of all subjects of the regional marketing system [176].

Subjects of marketing management are all agents of social and socio-economic relations (state, regional authorities, population, enterprises of agro-industrial production). In modern practice, the idea that the regional government is the initiator of the application of regional marketing has taken root. However, this shows the

narrowness of the mentioned management approach. Regional authorities should perform the function of coordination of directions of development of the region, classification of problems; the selection of strategies and tools for their achievement that are most adequate to resource possibilities.

The object of regional marketing is the region as an economic entity, which implies possession of a number of important, from the point of view of marketing, parameters.

The objects of marketing management are agro-industrial production of the region, its macro -micro environment and place on the market, competitive and business relations.

An important aspect of the integrating role of marketing management of agroindustrial production in the region is the close relationship between government, business, science and society, including in the form of public-private partnership. For the implementation of projects on the food market, which represents the sphere of common interests of the state, business, science and society, this form of interaction is relevant due to its effectiveness and is one of the modern concepts of marketing partnership relationships [175].

Manifestation of the marketing character, which determines the functions and tools of management of agro-industrial production in the region, occurs through the involvement of entities that influence the market of economic organizations and the population, households of various types of groups. In modern conditions, it should be taken into account that these subjects develop according to the principle of self-organization and are not subject to direct regulation of their activities. The specificity of marketing management consists in the formation of the principles of the management system, coordinating targeted measures of the influence of subjects of different levels and mechanisms that determine the consistency of its implementation and focus on the given directions and parameters of development.

It should be noted that each of the subjects of marketing management implements all marketing functions, but at the same time, it can delegate the implementation of some of them, which will allow not only to optimize its activities,

but also to obtain a certain synergistic effect from this.

Achieving the goals of balanced development of agro-industrial production in the region objectively involves the use of a set of special means of spatial marketing policy, which can be classified according to certain groups:

- 1) regulatory and administrative: legislative and regulatory acts, territory planning tools, development rules, master plans, land allocation permits, construction permits, sanctions, standards, limits, land ownership, land privatization, land management tools objects of communal property, etc.;
- 2) economic, which perform the functions of promoting/restraining territorial development: instruments of monetary policy, assistance in obtaining loans, state guarantees in the field of lending, municipal borrowing; instruments of financial and budgetary policy, benefits and incentives for taxes, territorial differentiation of payments for communal services, exemption from payment of local taxes and fees;
- 3) infrastructural means of shaping the region's space: construction and modernization of the transport network, which increases access to land resources; developed production infrastructure; extensive social infrastructure; means aimed at the formation of a comfortable living and industrial and economic space;
- 4) innovative-organizational, which provide for the organization in the region of priority development territories, "growth poles", technology parks, logistics centers, business incubators, etc., with the aim of purposeful localization of certain groups of producers or workers in the field of service provision;
- 5) informational means aimed at orienting all interested parties regarding the possibilities and limitations of the development of the territory: first, individual informational means advertising aimed at specific consumers of the regional product, investment proposals for specific investors, a list of real estate, other communal property intended for sale; secondly, mass information means investment strategies for the development of the region, programs for the economic and social development of the region, programs for partnership, interregional and cross-border cooperation.

When combining into a single management process of production and marketing, the main attention in forming a positive image of the agro-industrial

production of the region and expansion of distribution channels is given to the functions of marketing management. These include: analysis of marketing information and market research, study of consumer demand, analysis of the surrounding environment, implementation of product policy, product life cycle support, pricing and pricing policy, product movement and sales, demand formation and promotion of product sales, commercial activity, foreign economic marketing activity, strategic and indicative planning, implementation of marketing strategies and control over their implementation.

The use of such means of marketing management of agro-industrial production in the region as marketing research, development of a marketing complex, market segmentation and positioning of agro-industrial production products will enable regional management bodies to take into account changes and trends in the development of the region in the external environment; coordinate the decision-making process taking into account the needs of different target groups; ensure coordination of the set of offered services with the needs of their consumers; effectively use the existing socio-economic and innovative potential of the region in order to improve the image of the territory; ensure the strengthening of the region's positions on the markets; promote public involvement in making important decisions regarding regional development. The development of a marketing complex is one of the main activities that applies marketing principles in its activities, and is based on the results obtained in the course of marketing research.

Thus, in particular, the development and implementation of the product policy is carried out on the basis of the formation of the range of manufactured products (its optimization, renewal, improvement), maintaining its competitiveness by ensuring the necessary quality and achieving a high level of other consumer characteristics of products (ensuring a high degree of consumer satisfaction with the product ). For agricultural producers, the formation of the assortment consists mainly in the development of a varietal policy (for the cultivation of agricultural crops and varieties that are in the greatest demand) and the determination of the breed and species composition of animals, taking into account the available opportunities.

The basis of pricing policy is the purpose of its development: maintaining the market, maximizing profit or ensuring survival, which only involves the possibility of selling the manufactured products. Based on the chosen goal, as well as on the results of the analysis of demand, costs, prices of competitors, the company can implement its price strategies, while setting different price ranges for different segments (depending on the current situation and the uniqueness of the products).

Transportation, warehousing, storage, finishing, packaging, pre-sale preparation, sale, after-sale service – all these actions are an integral element of the marketing sales policy. Its effectiveness largely depends on the chosen sales channel, the limitations of which on the markets of agricultural products and raw materials justify the search for new sales channels, the expansion of interregional connections, the improvement of existing channels (the development of electronic and exchange trading, the holding of fairs, the creation of wholesale and distribution centers and wholesale and retail markets, development of cooperation (functioning of trading and purchasing and sales cooperatives), etc.) [174].

In addition, as studies of foreign and domestic practice show, the development of the logistics system (the creation of logistics centers) is currently significant, which contributes to the reduction of costs associated with the transportation, storage and storage of agro-industrial products, based on the optimization of these processes. The application of promotion policy (informing consumers (actual and potential), intermediaries and other market subjects) in the agro-industrial market is quite relevant. In modern conditions, the following are quite effective in this regard: holding exhibitions and fairs, promoting a healthy lifestyle with an emphasis on the consumption of goods manufacturers' products, advertising products.

Based on this, modern marketing management of agro-industrial production can be defined as a continuous process of purposeful influence of the subject of management on the object of management, which is carried out according to a certain technology and has characteristic features that are closely related to the specifics of agro-industrial production, the variety of product assortment and market participants, the seasonality of agricultural production, as well as the diversity of organizational

forms of management. Since in the conditions of a market economy, marketing measures are gaining more and more importance in the socio-economic development of the region, which are aimed at the effective interaction of all subjects of the marketing system to ensure the promotion of the interests of the agro-industrial production of the region, so we proposed a model of marketing management of the agro-industrial production of the region (see Fig. 3).

The proposed model of marketing management of agro-industrial production of the region is a set of interconnected and mutually dependent components that create a single, integral, continuous process of forming an effective organization of strategic marketing management of agro-industrial production of the region in accordance with the strategic goals of the development of the region as a whole.

The introduction of marketing management at the meso- and macro-levels makes it possible to strengthen the competitive advantages of agro-industrial producers directly (as the main suppliers of resources for the product offer of agricultural raw materials and products of their processing on the market) with the help of implementation of marketing research, which involves conducting a SWOT analysis (identification of the company's strengths and weaknesses, opportunities and threats, establishment of relationships between them), PEST analysis (assessment of the influence of political, economic, socio-cultural, technical and technological factors of the external environment), analysis and classification of the main areas of activity by market share in relation to competitors and by annual growth rates in this market (due to the construction of the BKG matrix), evaluation of consumers and identification of groups whose requests the company can best satisfy (based on segmentation), without scattering limited resources (material, financial, personnel), analysis of the competitive environment. On this basis, development of an appropriate competitive marketing strategy for agro-industrial production in the region, focused on the future.

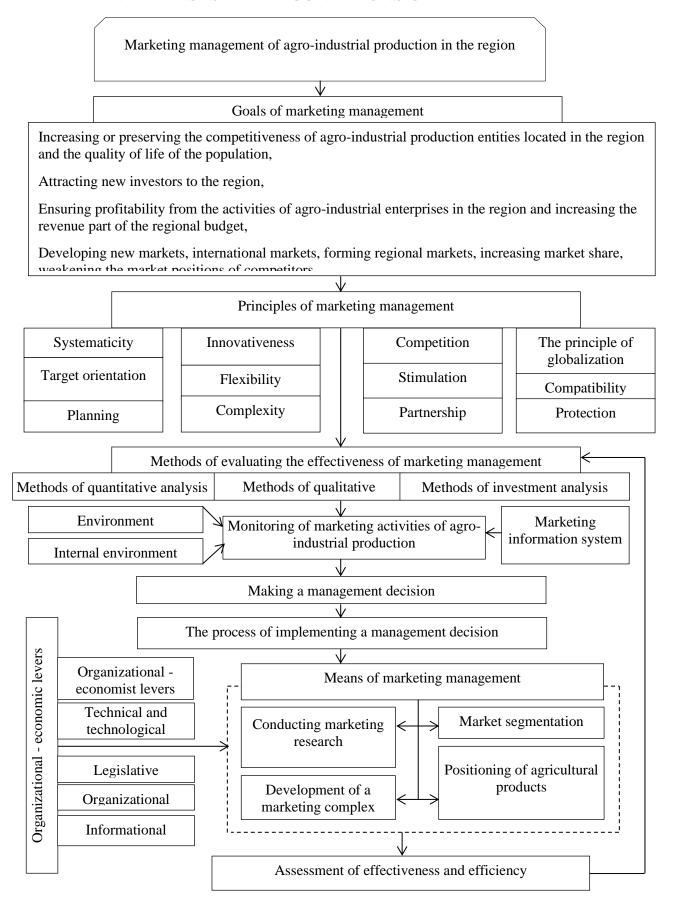


Fig. 3 Model of marketing management of agro-industrial production in the region

The implementation of marketing contributes to increasing the level of awareness of consumers about the products available on the market by means of the development and implementation of a communication policy (promotion policy), while highlighting the features of each manufacturer and the characteristic properties of its products (on the basis of positioning).

Thus, the implementation of marketing measures by the subjects of the agroindustrial market (with the support of the state) will ensure the most complete
satisfaction of the needs of buyers, the rational use of the resources available at the
disposal of the market subjects, an increase in their profitability, which is manifested
in obtaining economic (increase in turnover, profitability), social (employment
provision) and budgetary (increase in budget revenues, achievement of planned
expected results within the framework of program documents) effects. At the same
time, the orientation of market subjects to the modern concept of socio-ethical
marketing involves meeting the needs of buyers taking into account the interests of
society, which, among other things, involves the implementation of measures to
improve the environmental situation.

In addition, it will enable the regional management bodies to take into account changes and trends in the development of agro-industrial production of the region in the external environment and coordinate the decision-making process taking into account the needs of various target groups, as well as effectively use the available resource potential of the region to improve the image of the territory, ensure the strengthening of the region's positions on the markets and involve the public in decision-making regarding the socio-economic development of the region.

#### REFERENCES

- 1. Lohosha R. V. Formuvannia postindustrialnoho rynku ovochevoi produktsii v Ukraini [Formation of the post-industrial market of vegetable products in Ukraine]: monohrafiia. Vinnytsia: PrAT «Vinnytska oblasna drukarnia». 2017. 515 s.
- 2. Iermoshenko M.M. Stratehichna informatsiia ta stratehichnyi analiz u marketynhovomu planuvanni [Strategic information and strategic analysis in marketing planning]. Aktualni problemy ekonomiky. 2007. № 5. S.42–47.
- 3. Lohosha R.V. Conceptual bases of development of management of marketing activity of agrarian enterprises. In: Marketing research of agricultural enterprises: theoretical and practical aspects: monograph. Boston, USA: Primedia eLaunch, 2022. P. 297(319. DOI: 10.46299/979-8-88680-819-3.10
- 4. Kaninskyi M.P. Pidvyshchennia konkurentospromozhnosti silskohospodarskoi produktsii na osnovi marketynhu [Increasing the competitiveness of agricultural products on the basis of marketing]. Ekonomika APK. 2009. № 3. S. 141(144.
- 5. Lohosha R.V., Polova O.L. Osoblyvosti formuvannia marketynhovykh stratehii silskohospodarskykh pidpryiemstv [Peculiarities of formation of marketing strategies of agricultural enterprises]. Mizhnarodnyi naukovyi zhurnal «Internauka». Seriia: «Ekonomichni nauky». 2018. № 11. URL: https://www.internauka.com/issues/2018/11/3944
- 6. Lohosha R.V. Systemnyi pidkhid v metodolohii doslidzhennia ahrarnoho rynku [A systematic approach in the methodology of agricultural market research]. Infrastruktura rynku. 2017. Vypusk 8. P. 43–48. URL: http://www.market-infr.od.ua/uk/2017.
- 7. Osnovy ahrarnoho pidpryiemnytstva [Basics of agrarian entrepreneurship] / za red. Malika M.I. Kyiv: Instytut ahrarnoi ekonomiky, 2000. 582 s.
- 8. Andriichuk V.H. Efektyvnist diialnosti ahrarnykh pidpryiemstv: teoriia, metodyka, analiz [Efficiency of agricultural enterprises: theory, methodology, analysis]: monohrafiia. Kyiv: KNEU, 2005. 292 p.
- 9. Ovsianetska O. Mekhanizm lateralnoho marketynhu u protsesi stvorennia relevantnoho innovatsiinoho produktu [The mechanism of lateral marketing in the process of creating a relevant innovati ve product]. URL: http://www.nbuv.gov.ua.
- 10. Lohosha R.V., Semchuk I.A. Identyfikatsiia modelei marketynhu vzaiemodii silskohospodarskykh pidpryiemstv z vyrobnytstva biopalyva [Identification of marketing models of interaction of agricultural enterprises in the production of biofuel.]. Mizhnarodnyi naukovo-vyrobnychyi zhurnal «Ekonomika APK». 2020. № 12 (314). P. 45–54. DOI: https://doi.org/10.32317/2221-1055.202012045

- 11. Dlihach A.O. Stratehii konkurentnoi povedinky v systemi stratehichnoho marketynhu [Strategies of competitive behavior in the system of strategic marketing]. Kultura narodov Prychernomoria. 2006. № 80. S. 33–37. URL: http://www.nbuv.gov.ua/Articles/Kultnar/knp80/knp80\_33-37.pdf
- 12. Marketynhove doslidzhennia rynku ovochevoi produktsii v Ukraini [Marketing research of the market of vegetable products in Ukraine: monograph]: monohrafiia / R.V. Lohosha, K.V. Mazur, V.Iu. Krychkovskyi. Vinnytsia: TOV «TVORY», 2021. 344 s.
- 13. Kovalchuk V.V., Moiseiev L.M. Osnovy naukovykh doslidzhen [. Basics of the scientific research]. Kyiv: VD "Profesional", 2005. 240 s.
- 14. Kovtun O.I. Stratehii pidpryiemstva [Enterprise strategies]: monohrafiia. Ukoopspilka; Lvivska komertsiina akademiia. Lviv : Vydavnytstvo Lvivskoi komertsiinoi akademii, 2008. 424 c.
- 15. Kredysov A. Marketynh: osnovni kontseptsii 2-yi polovyny XX st. ta deiaki tendentsii razvytku na pochatku XXS st [Marketing: basic concepts of the 2nd half of the 20th century. and some development trends at the beginning of the 21st century]. Ekonomika Ukrainy. 2005. № 11. S. 12–20.
- 16. Lohosha R. Methodological bases of the mechanism of ensuring the efficiency of agrarian enterprises' marketing activities. In: Management of marketing activities of agricultural formations in the conditions of european integration: monograph. Boston, USA: Primedia eLaunch, 2022. P. 8–29. DOI: 10.46299/979-8-88862-828-7.1
- 17. Vynohradova O.V. Fabraia I.M. Stratehichnyi analiz yak instrument marketynhovoho doslidzhennia [Strategic analysis as a marketing research tool]. Visnyk natsionalnoho universytetu "Lvivska politekhnika". Lohistyka. 2005. № 526. S. 19–23.
- 18. Lohosha R.V., Mazur K.V., Pidvalna O.H. Modeliuvannia kotraktnykh vidnosyn mizh osnovnymy retsypiientnymy hrupamy ahentiv rynku [Modeling of contractual relations between the main recipient groups of market agents]. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky. 2019. №2. S. 30–44.
- 19. Lohosha R.V., Krychkovskyi V.Iu., Bielkin I.V. Marketynhovi stratehii rozvytku pidpryiemstv ovocheproduktovoho pidkomplesu [Marketing strategies for the development of vegetable subcomplex enterprises]. Ekonomika ta suspilstvo. Vypusk 42. 2022. URL: https://economyandsociety.in.ua/index.php/journal/article/view/1607/1544. DOI: https://doi.org/10.32782/2524-0072/2022-42-10
- 20. Lohosha R.V., Pronko L.M. Marketynh-menedzhment u systemi upravlinnia ahrarnykh pidpryiemstv [Marketing management in the management system of agricultural enterprises]. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky, 2022, №3. p. 77–91. http://efm.vsau.org/storage/articles/March2023/YvVhETzm1D0RgifDbuzE.pdf

- 21. Lohosha Roman, Moroz Iryna, Nataliia Semenyshena, Alla Chykurkova. Market Institute: Research methodology in context of basic cognitive approaches. Intellectual Economics. 2019. № 13 (2). P. 172–194. DOI: https://doi.org/10.13165//IE-19-13-2-09
- 22. Kihel V. Metody i modeli pryniattia rishen v rynkovii ekonomitsi [Methods and models of decision-making in the market economy]. Kyiv: TsUL, 2003. 202 p.
- 23. Montemurro F. Anaerobic digestates application on fodder crops: effects on plant and soil. Agrochemica. 2008. Vol. 52. P. 297–312.
- 24. What is digestate? Anaerobic Digestion: Opportunities for Agriculture and Anvironment, Milano, January 24-25, 2008. Regione Lombardia, Universita Degli studi di Milano: Ed. by F. Adani, A. Schievano, G. Bossalie. Italy, 2009. P. 7–18.
- 25. Amon T, Amon B, Kryvoruchko V, Zollitsch W, Mayer K, Gruber L (2007) Biogas production from maize and dairy cattle manure-influence of biomass composition on the methane yield. Agric Ecosyst Environ 118: P. 173–182. doi:10.1016/j.agee.2006.05.007
- 26. Arpit H. Bhatt. Economic Perspectives of Biogas Production via Anaerobic Digestion [Electronic resource] / Arpit H. Bhatt, Ling Tao. 2020. Resource access mode: https://doi.org/10.3390/bioengineering7030074.
- 27. L. E. Gauer. Effects of nitrogen fertilization on grain protein content, nitrogen uptake, and nitrogen use efficiency of six spring wheat (Triticum aestivum L.) cultivars, in relation to estimated moisture supply [Electronic resource] / L. E. Gauer, C. A. Grant // Canadian Journal of Plant Science. 1992. Resource access mode: https://doi.org/10.4141/cjps92-026.
- 28. Palamarchuk V.D., Krychkovskyi V.Iu. Perspektyvy vykorystannia dyhestatu dlia pidvyshchennia efektyvnosti biohazovykh kompleksiv. Materialy IV mizhnarodnoi naukovo-praktychnoi konferentsii «Bioenerhetychni systemy». 29 travnia 2020. Zhytomyr. S. 124–128.
- 29. Lohosha R.V. Ekonomichna ta bioenerhetychna efektyvnist vykorystannia dyhestatu biohazovykh stantsii pry vyroshchuvanni silskohospodarskykh ta ovochevykh kultur v umovakh yevrointehratsii Ukrainy. Biznes Inform. 2022. 9. Rezhym dostupu do resursu: https://doi.org/10.32983/2222-4459-2022-9-40-52.
- 30. Zymovets V. Finansove zabezpechennia innovatsiinoho rozvytku ekonomiky. Ekonomika Ukrainy. 2007. № 11. S. 9–16.
- 31. Lupenko Yu.O., Mesel-Veseliak V.Ia. Stratehichni napriamy rozvytku silskoho hospodarstva Ukrainy na period do 2020 roku. Kyiv: NNTs «IAE», 2012. 182 s.
- 32. Kovalchuk O.V. Ekonomichna efektyvnist vyrobnytstva produktsii roslynnytstva. Rozvytok ekonomiky, pidpryiemnytstva, torhivli ta birzhovoi diialnosti v umovakh hlobalizatsii. 2018. № 15. S. 58–63.

- 33. Enerhetychna otsinka ahroekosystem: navch. posib. O.F. Smahlii [ta in.]; M-vo ahrar. polityky Ukrainy, Derzh. ahroekoloh. un-t. Zhytomyr: Volyn, 2004. 132 s.
- 34. Tarariko Yu. Systemy bioenerhetychnoho ahrarnoho vyrobnytstva. Kyiv: DIA, 2009. 16 s.
- 35. Wen Ke Liu. Soilless cultivation for high-quality vegetables with biogas manure in China: Feasibility and benefit analysis. Wen Ke Liu, Qi-Chang Yang, Lianfeng Du. Cambridge University Press. 2009. DOI: https://doi.org/10.1017/S1742170509990081.
- 36. Dinh Pham Van. A review of anaerobic digestion systems for biodegradable waste: Configurations, operating parameters, and current trends Dinh Pham Van. Environmental Engineering Research . 2019.
- 37. Kaletnik G.M. (2008). Sotsialno-ekonomichne znachennia rozvytku rynku biopalyva v Ukraini [Socio-economic significance of biofuel market development in Ukraine]. Mizhnarodnyi naukovo-vyrobnychyi Zhurnal «Ekonomika APK», 6. p. 128–132.
- 38. Babyna O. & Babyn I. (2022). Modern aspects of marketing management activities of agricultural enterprises. Management of marketing activities of agricultural formations in the conditions of European integration. Monograph. Primedia eLaunch, Boston, USA. P. 82-106 DOI:10.46299/979-8-88862-828-7.4
- 39. Vovchanska Olha & Ivanova Liliya (2022). Specifics of marketing tools under martial law. Economy and society. № 38. DOI: https://doi.org/10.32782/2524-0072/2022-38-32
- 40. Bagorka M.O. & Abramovych I.A. (2022). Formation of a comprehensive system of agrarian marketing of the enterprise. Collection of scientific works "Problems of the systemic approach in economics", № 1 (87), P. 97–102. DOI: https://doi.org/10.32 782/2520-2200/2022-1-14.
- 41. Fomishyna V.M. (2015). Transformation of the components of the classic "enterprise marketing complex" into a modern "consumer marketing complex". Scientific Bulletin of NLTU of Ukraine, vol. 25.2, P. 288–293.
- 42. Kotler F., Katarjaya G., & Ivan Setyavan (2018). Marketing 4.0. From traditional to digital; translation from English K. Kunytska and O. Zamayeva. Kyiv: Ed. KM-BUKS group, P. 208.
- 43. Bahorka M.O. & Varvarova A.S. (2022). Directions for increasing the effectiveness of the marketing complex of agricultural enterprises. Scientific Bulletin of the Uzhhorod National University. Series "International Economic Relations and World Economy", № 43. P. 7–12.
- 44. Kotler, F., Keller, K., & Pavlenko, A. (2008). Marketing management. Kyiv: Khimdzhest.

- 45. Nebylitsa O.A. Peculiarities of management of marketing activities of enterprises of the agrarian sector of the economy in the conditions of martial law. Retrieved from: http://repository.hneu.edu.ua/bitstream/123456789/28634/1/%d0%9d%d0%b5%d0%b1%d0%b8%d0%b8%d1%86%d1%8f\_%d0%9e.%d0%90..pdf
- 46. Gamova I.V. (2014). The main functions of marketing management of enterprises in the field of e-commerce. Economic Herald of Donbass. № 3(37). P. 88-95.
- 47. Principles of marketing management. Retrieved from: https://stud.com.ua/176707/marketing/printsipi\_upravlinnya\_marketingom
- 48. Babyna O. (2022). Management of marketing activities of agricultural enterprises. Marketing research of agricultural enterprises: theoretical and practical aspects. Monograph. Primedia eLaunch, Boston, USA. P. 40–71. DOI 10.46299/979-8-88680-819-3.2
- 49. Ostrovsky P.I. (2006). Agrarian marketing: textbook. Center of educational literature. 224 p.
- 50. Ivchenko, E.A. (2009). Investigation of approaches to determine the essence of enterprise marketing strategy. The mechanism of economic regulation. vol. 4. P. 90-96.
- 51. State Statistics Service of Ukraine. Retrieved from: http://www.ukrstat.gov.ua
- 52. Kolyadenko S.V. (2010). An economic-mathematical model of accounting for the purchase and sale of agricultural products. Collection of Scientific Works of VNAU: Economic Sciences Series. Volume. 3. Issue 5. P. 111-114.
- 53. Villain V.G. Marketing. (2002). Textbook. Kyiv: National Academy of Management. 404 p.
- 54. Marketing activities of enterprises: modern content. Monograph on general ed. Doctor of Economics, Prof. N.V. Karpenko. Kyiv: Center for Educational Literature, 2016. 252 p.
- 55. Bahorka M.O. & Abramovych I.A. (2023). Choice of marketing channels of distribution in the integrated marketing system of sale of farm products. Scientific Bulletin of the Uzhhorod National University. № 46. P. 11-15. DOI: https://doi.org/10.32782/2413-9971/2023-46-2.
- 56. Danylko V.K. (2013). Cost management: a guide. Kyiv: Condor. 320 p.
- 57. Kostina K.V. (2015). Methods of determining the effectiveness of sales logistics agribusiness enterprises. Scientific Bulletin International Humanitarian University. № 13. P. 101-105. Retrieved from: http://nbuv.gov.ua/UJRN/Nvmgu\_eim\_2016\_13\_24
- 58. Analysis of economic activity: theory, methodology, analysis of concrete of situations: Teaching. manual/Edited by K.F. Kovalchuk. Kyiv: TsUL, 2015. 328 p.
- 59. Hryniv B.V. (2015). Economic analysis of trade activity: training. manual. Kyiv: TsUL. 392 p.

- 60. Ivanov M.M. & Komazov P.V. (2012). Operational management: a study guide for higher school. Kyiv: Center for Educational Literature. 368 p.
- 61. Kolos Z.V. (2017). Problems of agricultural marketing enterprises. Agroworld. № 10. P. 8-11.
- 62. Kovalenko V.V., Tridid S.O. & Toryanyk Z.I. (2011). Marketing: a study guide. Lviv: Novy Svit-2000. 266 p.
- 63. Kaletnik, H.M., Honcharuk, I.V., Yemchyk, T.V. & Lutkovskaya, S.M. (2020). Agrarian policy and land relations: a textbook. Vinnytsia: VNAU. 307 p.
- 64. Kaletnik, H.M., Kozlovsky, S.V., Tarasyuk, N.M. & Semenenko, V.V. (2013). Management of economic relations of enterprises of the dairy subcomplex of the agricultural sector of Ukraine: Monograph. Vinnytsya. 248 p.
- 65. Honcharuk, I.V., Branitsky, Y.Y. & Tomashuk, I.V. The main aspects of effective formation and use of resource potential in agricultural enterprises. Economics, finance, management: current issues of science and practice. 2017. № 10. P. 54-68.
- 66. Babyna O., Babyn I. Peculiarities of small enterprise development in Ukraine. Management of enterprises of the agro-industrial complex of the economy in the conditions of globalization transformations. Monograph. Primedia eLaunch, Boston, USA, 2021. P. 243–280. DOI- 10.46299/978-1-68564-510-6
- 67. Honcharuk, I.V., Kish, L.M., & Prysiazhniuk O.I. (2022). The main directions of increasing the efficiency of the use of electronic commerce by agricultural enterprises. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky Economics, finance, management: topical issues of science and practical activity, 2 (60), 157-168. DOI: 10.37128/2411-4413-2022-2-11
- 68. Logosha, R.V. & Mazur, K.V. (2020). Methodical approaches to assessing the effectiveness of the economic potential of agricultural enterprises. The scientific heritage. № 49. Part 6. P. 3-12.
- 69. Babyna O. & Babyn I. Organization of marketing activities at milk-processing enterprises of Ukraine. Marketing research of agricultural enterprises: theoretical and practical aspects. Monograph. Primedia eLaunch, Boston, USA, 2022. P. 72–107. DOI 10.46299/979-8-88680-819-3.3
- 70. Babyna O.M. (2022). The state and development prospects of the printing industry of Ukraine in the context of marketing. Economy and society. №. 44. DOI: https://doi.org/10.32782/2524-0072/2022-44-38
- 71. Logosha, R.V. & Pronko, L.M. (2022). Marketing management in the management system of agricultural enterprises. Economics, finance, management: topical issues of science and practical activity. № 3. P. 77-91.

- 72. Mazur, K.V. & Gontaruk, Ya.V. Restructuring as a tool for redesigning business processes in agro-industrial production. Slovak international scientific journal. 2020. № 42. P. 30-37.
- 73. Kotler F. Osnovy marketynhu. F. Kotler, H. Armstronh. 5e vyd.: per. zanhl. Kyiv: Dyalektyka, 2020. 880 s.
- 74. Balabanova L.V., Kholod V.V., Balabanova I.V. Marketynh pidpryiemstva: navchalnyi posibnyk. Kyiv: Tsentr navch. lit., 2012. 612 s.
- 75. Balabanova L. V. Upravlinnia marketynhovym potentsialom pidpryiemstva: navch. Posib.; M-vo osvity i nauky Ukrainy, Donets. derzh. un-t ekon. i torhivli im. M. Tuhan-Baranovskoho, Shkola marketynhovoho menedzhmentu. K.: Profesional, 2006. 288 s.
- 76. Zakharenko-Seleznova A.M. Marketynhovi instrumenty vplyvu na kliientiv, yak systema upravlinnia prodazhamy. Visnyk KhNU (Ekonomichni nauky). 2021 № 1, S. 44-48.
- 77. Ivannikova M.M. Marketynhove upravlinnia konkurentnymy perevahamy pidpryiemstva. M Ivannikova Naukovyi visnyk PUET: Economic Sciences, 2014. http://www.journal.puet.edu.ua/index.php/nven/article/view/68/62
- 78. Karpenko N.V. Upravlinnia marketynhom na torhovelnomu pidpryiemstvi. Naukovyi visnyk PUET. Seriia: Ekonomichni nauky. Poltava: PUET, 2018. №1 (86). S. 62- 67. http://journal.puet.edu.ua/index.php/nven/article/view/1440/1252
- 79. Marketynhova diialnist pidpryiemstv: suchasnyi zmist [monohrafiia] za zah. red. d.e.n., prof. N.V. Karpenko. Kyiv: Tsentr uchbovoi literatury, 2016. 252 s.
- 80. Dzhefri K. Laiker. Filosofiia Toyota K.: Nash format, 2017. 424s.
- 81. Perspektyvy rozvytku innovatsiinoi struktury na vyrobnychykh pidpryiemstvakh. Zakharenko-Seleznova A.M. S116-118. «Formuvannia ta perspektyvy rozvytku pidpryiemnytskykh struktur v ramkakh intehratsii do yevropeiskoho prostoru» Materialy IV Mizhnarodnoi naukovo-praktychnoi konferentsii (zaochna forma). Poltava, 2021.
- 82. Vykorystannia intehrovanykh marketynhovykh komunikatsii dlia formuvannia konkurentnykh perevah pidpryiemstva. Zakharenko-Seleznova A.M.- S.32-33. I International Scientific and Practical Conference «RICERCHE SCIENTIFICHE E METODI DELLA LORO REALIZZAZIONE: ESPERIENZA MONDIALE E REALTÀ DOMESTICHE» Materialy I Mizhnarodnoi naukovo-praktychnoi konferentsii. 14.05.2021. Bolonia, ITA, 2021.
- 83. Brovkova O.H. (2019) Stratehichnyi menedzhment. Navchalnyi posibnyk [Strategic management. Tutorial]. Tsentr navchalnoi literatury (TsUL). 224 p.
- 84. Buryk A.F. (2019) Planuvannia diialnosti pidpryiemstva [Enterprise activity planning]. Tsentr navchalnoi literatury (TsUL). 260 p.

- 85. Dykan V.L. (2019) Stratehichne upravlinnia [strategic management]. Tsentr navchalnoi literatury (TsUL). 272 p.
- 86. Ivanova K., Oviechkina O., Solokha D. (2019) Planuvannia marketynhu. Navchalnyi posibnyk [Marketing planning. Tutorial]. Tsentr navchalnoi literatury (TsUL). 352 p.
- 87. Kovalenko A.O. (2018) Stratehichne planuvannia staloho rozvytku Ukrainy [Strategic planning of sustainable development of Ukraine]. ProfKnyha. 160 p.
- 88. Chukhrai N.I., Lisovska L.S. (2016) Ekonomika innovatsiinoho pidpryiemstva [Economics of an innovative enterprise]. Lvivska politekhnika. 294 p.
- 89. Chukhrai N.I., Prosovych O. P. (2015) Stratehichne upravlinnia innovatsiinym rozvytkom pidpryiemstva [Strategic management of innovative development of the enterprise]. Lvivska politekhnika. 284 p.
- 90. Voronkova A. E., Kalyuzhnaya N. G., Otenko V. I. Management decisions in ensuring the competitiveness of the enterprise: organizational aspect: monograph. Kharkov: ID "INZHEK", 2008. 427 p.
- 91. Gavlovskaya N. I. Strategic business management: a modern aspect / N. I. Gavlovskaya, E. M. Rudnichenko // Science and Economics. 2015. Issue. 1 (37). P. 110–114.
- 92. Epifanova I.Yu., Tkachuk L.M., Pankova V.D. Strategic risk management in the personnel management system. Bulletin of the Khmelnitsky National University. Economic Sciences 2021. No. 6. Vol. 1. P. 12.
- 93. Zolotarevsky A.V. Creation of a strategy for the economic development of the company. Formation of market relations in Ukraine. 2014. No. 11(162). P. 107-113. URL: http://nbuv.gov.ua/UJRN/frvu\_2014\_11\_23
- 94. Kasatonova I. A. The essence of complex enterprise management systems / I. A. Kasatonova // Formation and prospects for the development of entrepreneurial structures within the framework of integration into the European space: materials of the II Intern. scientific-practical. conf. 2019, P. 244–247.
- 95. Kvilinskiy A. The mechanism for assessing the competitiveness of an industrial enterprise in the information economy. Scientific works on economics and finance. 2018. No. 3(1). P. 7-16.
- 96. Krysko Zh. L. Adaptation of the enterprise to the external environment through the mechanism of restructuring / Zh. L. Krysko // Galitsky economic bulletin. 2009. No. 2. P. 38–42.
- 97. Marketing: textbook / Skull O.G. Kyiv: Publishing house "Condor", 2020. 728 p.
- 98. Marketing management: Textbook / F. Kotler, K.L. Keller, A.F. Pavlenko and others. M .: Publishing house "Hilgest", 2008. 720 p.

- 99. Meskon M.Kh., Albert M., Hedouri F. Fundamentals of management: Per. from English. M.: Delo, 1992. 702 p.
- 100. Models and algorithms for making managerial decisions / Ya.G. Bersutsky, N.N. Lepa, N.G. Guz et al. Donetsk: IEP NAS of Ukraine, 1998. 307 p.
- 101. Oklander M. A., Oklander T. O., Pedko I. A. Marketing research of innovations and entrepreneurial risks: monograph. Odessa: Astroprint, 2017. 284 p.
- 102. Fundamentals of management: Lecture notes [Electronic resource]: textbook. allowance. for students of the specialty 073 "Management" of the educational and professional program "Management and business administration" / Igor Sikorsky Kyiv Polytechnic Institute Igor Sikorsky; compilers: T.V. Lazorenko, S.A. Perminovaya Electronic text data (1 file: 560 KB). Kyiv: KPI im. Igor Sikorsky. 2021.166 p.
- 103. Pavlenko, A. F. Marketing: [Text] / A. F. Pavlenko, A. V. Voychak. K.: KNEU, 2009. 246 p.
- 104. Management decision making: textbook. allowance. / ed. Y. Petruni. 2nd ed. Kyiv: Center for Educational Literature, 2011. 216 p.
- 105. Skudar G.M. System-targeted approach to managing the competitiveness of a large joint-stock company: the experience of NKMZ // Problems of improving the efficiency of the functioning of enterprises of various forms of ownership. Donetsk: IEP NAS of Ukraine. 1999. P. 45-61.
- 106. Soroka P.M., Kharchenko V.V., Kharchenko G.A. Information systems and technologies in organization management: textbook. allowance. K .: Central Bank Komprint, 2019. 518 p.
- 107. Fedorchenko, A. V. The system of marketing research: monograph / A. V. Fedorchenko. K.: KNEU, 2009. 259 p.
- 108. Ekonomichna statystyka. Navkolyshnie pryrodne seredovyshche. Derzhavna sluzhba statystyky Ukrainy. URL: http://www.ukrstat.gov.ua/ (data zvernennia 20.03.2023).
- 109. Dryhval I.O., Voloshyna N.O. Mizhnarodnyi dosvid u sferi povodzhennia z vidkhodamy. Innovatsii u sferi povodzhennia z vidkhodamy: dosvid ta praktyka : materialy naukovo-praktychnoi konferentsii (m. Kyiv, 16 kvitnia 2019 roku). Kyiv : Natsionalnyi pedahohichnyi universytet imeni M.P. Drahomanova, 2019. URL: http://enpuir.npu.edu.ua/bitstream/123456789/24454
- /1/Innovatsii%20U%20Sferi%20Povodzhennia%20Z%20Vidkhodamy%20Dosvid%20Ta%20Praktyka\_2019.pdf (data zvernennia 20.03.2023).
- 110. Leheza Yu.O., Pushkina O.V., Iliushchenko H.V., Tiuria Yu.I. (2021). Legal regulation of the use of technogenic waste of a mining enterprises in Ukraine. Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu. 6. R. 153–157. https://doi.org/10.33271/nvngu/2021-6/153

- 111. Pro zatverdzhennia Poriadku vyiavlennia ta obliku bezkhaziainykh vidkhodiv : Postanova Kabinetu Ministriv Ukrainy № 1217 vid 03.08.1998. URL: https://zakon.rada.gov.ua/laws/show/1217-98-%D0%BF#Text (data zvernennia 20.03.2023).
- 112. Pro zabezpechennia sanitarnoho ta epidemichnoho blahopoluchchia naselennia : Zakon Ukrainy vid 24 liutoho 1994 roku № 4004-XII. URL: https://zakon.rada.gov.ua/laws/show/4004-12#Text
- 113. Pro povodzhennia z radioaktyvnymy vidkhodamy : Zakon Ukrainy vid 30 chervnia 1995 roku № 255/95-VR. URL: https://zakon.rada.gov.ua/laws/show/255/95-vr#Text (data zvernennia 20.03.2023).
- 114. Pro metalobrukht : Zakon Ukrainy vid 5 travnia 1999 roku № 619-XIV. URL. https://zakon.rada.gov.ua/laws/ show/619-14#Text
- 115. Pro zhytlovo-komunalni posluhy : Zakon Ukrainy vid 9 lystopada 2017 roku № 2189-VIII. URL: https://zakon.rada.gov.ua/laws/show/2189-19#Text (data zvernennia 20.03.2023).
- 116. Pro khimichni dzherela strumu : Zakon Ukrainy vid 23 liutoho 2006 roku № 3503-IV. URL: https:// zakon.rada.gov.ua/laws/show/3503-15#Text
- 117. Pro veterynarnu medytsynu : Zakon Ukrainy vid 25 chervnia 1992 roku № 2498-XII. URL: https:// zakon.rada.gov.ua/laws/show/2498-12#Text (data zvernennia 20.03.2023).
- 118. Pro vyluchennia z obihu, pererobku, utylizatsiiu, znyshchennia abo podalshe vykorystannia neiakisnoi ta nebezpechnoi produktsii : Zakon Ukrainy vid 14 sichnia 2000 roku № 1393-XIV. URL: https://zakon.rada.gov.ua/laws/ show/1393-14#Text (data zvernennia 20.03.2023).
- 119. Kodeks Ukrainy pro nadra : Zakon Ukrainy vid 27 lypnia 1994 roku № 132/94-VR. URL: https:// zakon.rada.gov.ua/laws/show/132/94-vr#Text (data zvernennia 20.03.2023).
- 120. Pro zatverdzhennia Poriadku vedennia reiestru mists vydalennia vidkhodiv : Postanova Kabinetu Ministriv Ukrainy vid 3 serpnia 1998 r. № 1216. URL: https://zakon.rada.gov.ua/laws/show/1216-98-%D0%BF#Text (data zvernennia 20.03.2023).
- 121. Pro vyklyky i zahrozy natsionalnii bezpetsi Ukrainy v ekolohichnii sferi ta pershocherhovi zakhody shchodo yikh neitralizatsii : rishennia Rady natsionalnoi bezpeky i oborony Ukrainy «», yake vvedeno u diiu Ukazom Prezydenta Ukrainy vid 23.03.2021 roku № 111/2021. URL: https://zakon.rada.gov.ua/laws/show/n0018525-21#Text (data zvernennia 20.03.2023).
- 122. Pro obmezhennia obihu plastykovykh paketiv na terytorii Ukrainy : Zakon Ukrainy vid 1 chervnia 2021 roku. URL: https://zakon.rada.gov.ua/laws/show/1489-20#Text (data zvernennia 20.03.2023).

- 123. Pro vidkhody ta skasuvannia deiakykh Dyrektyv : Dyrektyva Yevropeiskoho Parlamentu ta Rady 2008/98/IeS vid 19 lystopada 2008 roku. URL: https://menr.gov.ua/news/31288.html. (data zvernennia 20.03.2023).
- 124. Zakon Ukrainy «Pro upravlinnia vidkhodamy» vid 20 chervnia 2022 roku № 2320-IX URL: https://zakon.rada.gov.ua/laws/show/2320-20#Text (data zvernennia 20.03.2023).
- 125. Pro skhvalennia Natsionalnoi stratehii upravlinnia vidkhodamy v Ukraini do 2030 roku. Rozporiadzhennia Kabinetu Ministriv Ukrainy. 2017. URL: https://zakon.rada.gov.ua/laws/show/820\$2017\$%D1%80#Text (data zvernennia 20.03.2023).
- 126. Zakon Ukrainy «Pro vidkhody». Vidomosti Verkhovnoi Rady Ukrainy. 1998. № 36-37. St. 242). URL: https://zakon.rada.gov.ua/laws/show/187/98\$%D0%B2%\$ D1%80#Text (data zvernennia 01.04.2023
- 127. Honcharuk I.V., Vovk V.Yu. (2020) Ponyatiynyy aparat katehoriyi sil's'kohospodars'ki vidkhody, yikh klasyfikatsiya ta perspektyvy podal'shoho vykorystannya dlya vyrobnytstva bioenerhiyi [Conceptual apparatus of the category of agricultural waste, their classification and prospects for further use for bioenergy production]. Ekonomika, finansy, menedzhment: aktual'ni pytannya nauky i praktyky, 3 (53), 23–38. DOI: https://doi.org/10.37128/2411-4413-2020-3-2
- 128. Ofitsiinyi sait Derzhavnoi sluzhby statystyky Ukrainy. URL: http://www.ukrstat.gov.ua. (data zvernennia 20.03.2023).
- 129. Honcharuk I., Tokarchuk D., Gontaruk Y., Hreshchuk H. Bioenergy recycling of household solid waste as a direction for ensuring sustainable development of rural areas. Polityka Energetyczna-Energy Policy Journal. Volume 26. Issue 1. P. 23–42 DOI: https://doi.org/10.33223/epj/161467
- 130. Honcharuk I.V., Furman I.V., Dmytryk O.V. (2022). Kompleksna pererobka tverdykh pobutovykh vidkhodiv yak shliakh vyrishennia ekolohichnykh problem Illinetskoi terytorialnoi hromady [Complex processing of solid household waste as a way to solve environmental problems of Ilyinets territorial community]. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky. № 1 (59). P. 7–20. https://doi.org/10.37128/2411-4413-2022-1-1
- 131. Sait Epitsentr. https://epicentrk.ua/ua/shop/trotuarnaya-plitka-staryy-gorod-seraya-h-4.html [data zvernennia: 30.04.2023].
- 132. Alternatyvne RDF-palyvo. URL: http://pyriatyn.org.ua/data/files/new/RDF%D0%BF%D0%B0%D0%BB%D0%B8%D0%B2%D0%BE%20%D0%B4%D0%BB%D1%8F%20%D0%B5%D0%BD%D0%B5%D1%80%D0%B3%D0%B5%D1%82%D0%B8%D0%BA%D0%B8.pdf [data zvernennia: 30.04.2023].

- 133. Budivnytstvo ta ekspluatatsiia kompleksu dlia vyrobnytstva elektrychnoi enerhii shliakhom zboru ta utylizatsii zvalyshchnoho hazu z polihonu tverdykh pobutovykh vidkhodiv u misti Khmelnytskomu. URL: https://khm.gov.ua/uk/file/66987/download?token=qbsLRIYG
- 134. Hrytsenko A. V., Nedava O.A. Oriientovna otsinka obiemu biohazu, shcho vydiliaietsia z polihonu tverdykh pobutovykh vidkhodiv. Problemy okhorony navkolyshnoho pryrodnoho seredovyshcha ta ekolohichnoi bezpeky. 2016. Vyp. 38. S. 38-42.
- 135. Mazur K.V. Rozvytok alternatyvnoi enerhetyky v APK. Zbirnyk naukovykh prats VNAU. 2012. № 1 (56). T. 2. S. 181-186.
- 136. Mazur K.V., Hontaruk Y.V. (2020) Tendenciyi ta umovy efektyvnogo funkcionuvannya syrovynnoyi bazy pidpryyemstv APK. [Trends and conditions of effective functioning of the raw material base of agro-industrial enterprises]. The scientific heritage. N 49 R. 5. p. 29–39.
- 137. Mazur K.V., Hontaruk Ya.V. (2022) Perspektyvy vyrobnytstva biohazu z vidkhodiv pidpryiemstv ta domohospodarstv na polihonakh tverdykh pobutovykh vidkhodiv [Prospects for the production of biogas from the waste of enterprises and households at solid household waste landfills]. Skhidna Yevropa: ekonomika, biznes ta upravlinnia, 2 (35), 63–71. DOI: https://doi.org/10.32782/easterneurope.35-9
- 138. Furman I. V. (2017). Systema finansovoho rehuliuvannia ahrarnoho sektoru Ukrainy: otsinka suchasnoho stanu ta aktyvizatsiia funktsionuvannia [The system of financial regulation of the agricultural sector of Ukraine: assessment of the current state and intensification of functioning]. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky. 5. 35-50. (in Ukrainian).
- 139. Furman I.V. (2017). Vektory pidvyshchennia efektyvnosti upravlinnia prybutkom pidpryiemstva [Vectors of improving the efficiency of enterprise profit management]. Naukovyi visnyk Natsionalnoi akademii statystyky, obliku ta audytu: zbirnyk naukovykh prats. 3. 55–64. (in Ukrainian).
- 140. Bondarenko V.M., Hontaruk Ya.V. (2022). Formuvannia modelei marketynhu vzaiemodii silskohospodarskykh pidpryiemstv z vyrobnytstva biopalyva. [Formation of marketing models of interaction of agricultural enterprises in the production of biofuel]. Ekonomika ta suspilstvo. № 37. DOI: https://doi.org/10.32782/2524-072/2022-37-67 (in Ukrainian).
- 141. Furman I. V., Tokarchuk D. M. (2018). Prodovolcha bezpeka ta ekonomichni zasady vyrobnytstva biopalyva [Food security and economic principles of biofuel production]. Ekonomichnyi analiz, vol. 1, pp. 168–174.
- 142. Hontaruk Y., Bondarenko V. Formation of marketing models of agricultural enterprises focused on the production of biofuels. Marketing research of agricultural enterprises: theoretical and practical aspects. Monograph. Primedia eLaunch, Boston, USA. 2022. P. 185–217 DOI: https://doi.org/10.46299/979-8-88680-819-3.6

- 143. Kaletnik G.M., Hontaruk Ya.V. (2020) Dyferentsiatsiia rozvytku haluzei pererobnoi promyslovosti ahrarnoho sektoru Vinnytskoi oblasti [Differentiation of development of branches of processing industry of agrarian sector of Vinnytsia region]. Economics, finance, management: topical issues of science and practical activity, vol. 3 (53), pp. 7-23. DOI: https://doi.org/10.37128/2411-4413-2020-3-1.
- 144. Furman I.V., Ratushnyak N.O. (2021). Perspektyvy vyrobnytstva biopalyv v umovakh reformuvannya zemelnykh vidnosyn [Prospects for the production of biofuels in terms of reforming land relations]. Economics, finance, management: topical issues of science and practical activity, no. 3 (57), pp. 53-68. DOI: https://doi.org/10.37128/2411-4413-2021-3-4.
- 145. Kaletnik G., Hontaruk Ya. Modeling of dependence of financial and economic results of processing enterprises of Vinnitsa region. The scientific heritage. 2020. № 56. Vol. 6. P. 5–13.
- 146. Hontaruk Y.V., Shevchuk H.V. (2022). Napriamy vdoskonalennia vyrobnytstva ta pererobky produktsii APK na biopalyvo [Directions for improving the production and processing of agricultural products for biofuels]. Ekonomika ta suspilstvo, 36. DOI: https://doi.org/10.32782/2524-0072/2022-36-8
- 147. Tokarchuk, D.M., Furman, I.V. (2020). Suchasni enerhoefektyvni tekhnolohii v APK Ukrainy [Modern energy-efficient technologies in the agricultural industry of Ukraine]. Ekonomika, finansy, menedzhment: aktualni pytannia nauky i praktyky Economy, finance, management: topical issues of science and practical activity, 4 (54), 99-116. DOI: https://doi.org/10.37128/2411-4413-2020-4-7.
- 148. Balabanova L.V., Mytrokhina Yu.P. Upravlinnya zbutovoyu politykoyu [Management of sales policy] : navch. posibnyk. Kyyiv : Tsentr uchbovoyi literatury, 2011. 240 s.
- 149. Balabanova L.V. Marketynhovyy audyt systemy zbutu torhovel'nykh pidpryyemstv [Marketing audit of the sales system of trade enterprises] : navch. posibnyk. Kyyiv : Profesional, 2004. 240 s
- 150. Balabanova L.V., Kholod V.V., Balabanova I.V. Marketynh pidpryyemstva [Marketing of the enterprise]: navch. posibnyk. Kyyiv: Tsentr navchal'noyi literatury, 2012. 612 s.
- 151. Bilovods'ka O.A. Marketynhova polityka rozpodilu [Marketing policy of distribution]: navch. posibnyk. Kyyiv: Znannya, 2011. 495 s.
- 152. Bilovods'ka O.A. Marketynhovyy menedzhment [Marketing management] : navch. posibnyk. Kyyiv : Znannya, 2010. 332 s.
- 153. Borysenko Z.M. Osnovy konkurentnoyi polityky [Basics of competition policy]: pidruchnyk. Kyyiv: Takson, 2004. 704 s.
- 154. Borysenko M.A., Hron' O.V., Shchetynin V.M. Promyslovyy marketynh [Industrial marketing]: navch. posibnyk. Kharkiv: KHNEU, 2010. 292 s.

- 155. Herasymchuk V.H. Marketynh. Hrafichne modelyuvannya [Marketing. Graphical modeling]: navch. posibnyk / Za red. A.F. Pavlenka. Kyyiv: KNEU, 2008. 300 s.
- 156. Krykavs'kyy YE., Deyneka I., Deyneka O., Patora R. Marketynhova tovarna polityka [Marketing commodity policy] : navch. posibnyk. L'viv : L'vivs'ka politekhnika, 2008. 276 s.
- 157. Kudenko N.V. Marketynhovi stratehiyi firmy [Marketing strategies of the firm]. Kyyiv: KNEU, 2002. 246 s.
- 158. Zubar N.M., Hryhorak M.Yu. Lohistyka u restorannomu hospodarstvi [Logistics in the restaurant industry]: navch. posibnyk. Kyyiv: Tsentr uchbovoyi literatury, 2010. 312 s.
- 159. Kyslyy V.M., Bilovods'ka O.A., Olefirenko O.M., Smolyanyk O.M. Lohistyka: teoriya ta praktyka [Logistics: theory and practice]: navch. posibnyk. Kyyiv: Tsentr uchbovoyi literatury, 2010. 360 s.
- 160. Kitchenko O.M. Osoblyvosti stratehichnoho marketynhovoho planuvannya na promyslovykh pidpryyemstvakh [Peculiarities of strategic marketing planning at industrial enterprises]. Visnyk sotsial'no-ekonomichnykh doslidzhen'. 2014. Vyp. 3 (54). S. 115-119.
- 161. Kudenko N.V. Marketynhovi stratehiyi firmy [Marketing strategies of the firm]. Kyyiv: KNEU, 2002. 246 s.
- 162. Severynova Yu.M. Udoskonalennya mekhanizmu analizu ta planuvannya marketynhovoyi diyal'nosti pidpryyemstva [Improvement of the mechanism of analysis and planning of the enterprise's marketing activities]. Ekonomichnyy visnyk Donbasu. 2011. № 3 (25). S. 132–135.
- 163. Solomyanyuk N.M. Teoretychni osnovy protsesu marketynhovoho planuvannya [Theoretical foundations of the marketing planning process]. URL: http://www.economy.nayka.com.ua/?op=1&z=2231
- 164. Yanyshyn Ya.S, Kashuba Yu.P. Udoskonalennya orhanizatsiyi upravlinnya zbutom produktsiyi v ahropidpryyemstvi [mprovement of the organization of product sales management in agricultural enterprises]. Ekonomika APK. 2013. № 9. S. 67–70.
- 165. Lohosha R.V., Pidlubnyi V.F. Interpretation of the author's theory in the model of the universal market. Colloquium-journal. 2020. № 31 (83). V.4. P. 39–50. http://www.colloquium-journal.org/wp-content/uploads/2020/11/colloquium-journal-3183-chast-4.pdf
- 166. Lohosha R.V., Pidlubnyi V.F. Methodology of research, evaluation and modeling of vegetable market development in Ukraine. Colloquium-journal. 2021. № 14 (101), część 5. P. 53–64. http://www.colloquium-journal.org/wp-content/uploads/2021/05/colloquium-journal-14101-chast-5.pdf

- 167. Logosha R.V., Bratkovsky O.A. Marketing activities management system. Formation of market relations in Ukraine. 2022. № 2 (249). P. 69–75. https://doi.org/10.5281/zenodo.6610058
- 168. About Cyber Security Strategy of Ukraine. Decree of the President of Ukraine №96 /2016 of January 27, 2016. URL: http://zakon3.rada.gov.ua/laws/show/287/2015
- 169. Lohosha Roman, Moroz Iryna, Nataliia Semenyshena, Alla Chykurkova. Market Institute: Research methodology in context of basic cognitive approaches. Intellectual Economics. 2019. № 13 (2). P. 172–194. DOI: https://doi.org/10.13165//IE-19-13-2-09
- 170. Law of Ukraine. URL: https://ips.ligazakon.net/document/view/t222130?an=8&ed=2022\_03\_15
- 171. 25 million cyberattacks every month. How Russia is trying to harm Ukraine in the digital space. URL: https://detector.media/infospace/article/204308/2022-10-29-25-milyoniv-kiberatak-shchomisyatsya-yak-rosiya-namagaietsya-zashkodyty-ukraini-v-tsyfrovomu-prostori/
- 172. Bondarenko V.M. Theoretical and Methodological Foundations of Management of Restructuring of Agricultural Production Enterprises. Scientific Journal "Business Inform". Kharkiv, 2015. No. 9, pp. 365-370
- 173. Kotler F. Fundamentals of Marketing. Short Course. M.: Izd-Vo Williams, 2007. 656 p.
- 174. Lamben Jean-Jacques. Strategic Marketing. European Perspective. St. Petersburg M.: Nauka, 1996. 589 p.
- 175. I.L. Reshetnikova Marketing Strategy: Features of Formation in Domestic Enterprises. Luhansk: VUGU. 1998. 270 P.
- 176. Tsiba T.E., Sokur M.I., Bayura V.I. Marketing Planning. K.: TsUL, 2007. 125p.