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COST MANAGEMENT IN THE DAIRY SUBCOMPLEX: COST CLASSIFICATION

СҮТ ӨНІМДЕРІНІҢ ШЫҒЫНДАРЫН БАСҚАРУ КІШІ КЕШЕННІҢ: ШЫҒЫНДАРДЫҢ ЖІКТЕЛУІ

УПРАВЛЕНИЕ ИЗДЕРЖКАМИ МОЛОЧНОГО ПОДКОМПЛЕКСА: КЛАССИФИКАЦИЯ ЗАТРАТ

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Abstract. At present, the dairy subcomplex remains one of the most significant sectors of Kazakhstan's agro-industrial complex. In the conditions of the developing market the accounting in the companies engaged in milk processing does not provide the necessary level of information support for adaptation of operational management intentions imputed by the structure of the accounting system, which is not fully used in the enterprises of the republic engaged in secondary processing of non-sort milk raw materials. In the market economy the exact control of costs of production and realization of products, cost estimation of works and services is of particular importance, and cost reduction plays a key role in increasing profits and improving the profitability of goods output. *The aim* is - *to* identify problems associated with the classification of costs of dairy products in the production and processing cycle. *Methods* - comparative analysis to compare different approaches to determining the classification feature of grouping costs for the manufacture of dairy products, traditional methods and modern management reporting systems used in other industries; expert practice was used in studying the opinions of specialists on the current situation in the field of accounting in the dairy industry. As a result of the study the following *results* were obtained - the process of "management", which covers all aspects of agroforming activity, the concept of "costs" was systematized and a more accurate ranking of them for each operational area in the processing of low-quality milk and whey was proposed. *Conclusions* - the developed

theoretical, methodological and practical recommendations can be applied to the effective functioning of the mechanism of controlling and calculating the cost of dairy products in milk processing firms, compliance with technological recipes.

Аңдатпа. Қазіргі уақытта сүт шағын кешені қазақстандық АӨК-нің неғұрлым маңызды секторларының бірі болып қалуда. Дамушы нарық жағдайында сүт өңдеумен айналысатын компаниялардағы бухгалтерлік есеп республиканың сортты емес сүт шикізатын екінші рет өңдеумен айналысатын кәсіпорындарында толық көлемде пайдаланылмайтын есеп жүйесінің құрылымы пайымдайтын жедел басқару ниеттерін бейімдеу үшін ақпараттық қолдаудың қажетті деңгейін қамтамасыз етпейді. Нарықтық экономикада өнімді өндіру мен өткізуге арналған шығындарды дәл бақылау, жұмыстар мен көрсетілетін қызметтердің құнын бағалау ерекше өзекті болып отыр, бұл ретте құнның төмендеуі пайданы ұлғайтуда және тауарлар шығарудың рентабельділігін арттыруда шешуші рөл атқарады. *Мақсаты* - сүт өнімдеріне жұмсалатын шығындарды өндірістік және қайта өңдеу циклдерінде жіктеуге байланысты проблемаларды анықтау. *Әдістер* - сүт өнімдерін дайындауға арналған шығыстарды топтастырудың жіктеу белгісін, басқа салаларда қолданылатын дәстүрлі тәсілдер мен басқарушылық есептіліктің қазіргі заманғы жүйелерін анықтаудың әртүрлі тәсілдерін салыстыру үшін салыстырмалы талдау; сарапшылық практика сүт өнеркәсібіндегі бухгалтерлік есеп саласындағы қалыптасқан жағдай бойынша мамандардың пікірлерін зерделеу кезінде қолданылды. Зерттеу нәтижесінде мынадай *нәтижелер* алынды - агроқұрылым қызметінің барлық аспектілерін қамтитын «басқару» процесі бөлінді, «шығындар» ұғымы жүйелендірілді және сапасы төмен сүт пен сарысуды қайта өңдеу процесінде әрбір операциялық сала үшін оларды неғұрлым дәл ранжирлеу ұсынылды. *Қорытынды* - әзірленген теориялық, әдістемелік және практикалық ұсынымдар сүт өңдеу фирмаларында сүт тауарларының өзіндік құнын бақылау және есептеу тетігінің тиімді жұмыс істеуі, технологиялық рецептураларды сақтау үшін қолданылуы мүмкін.

Аннотация. В настоящее время молочный подкомплекс остается одним из наиболее значимых секторов казахстанского АПК. В условиях развивающегося рынка бухгалтерский учет в компаниях, занимающихся переработкой молока, не обеспечивает необходимого уровня информационной поддержки для адаптации оперативных управленческих намерений, вменяемых структурой учетной системы, которая не в полной мере используется в предприятиях республики, занимающихся вторичной обработкой несортового молочного сырья. В рыночной экономике особую актуальность приобретает точный контроль затрат на производство и реализацию продукции, стоимостная оценка работ и услуг, при этом снижение стоимости играет ключевую роль в увеличении прибыли и повышении рентабельности выпуска товаров. *Цель* - выявление проблем, связанных с классификацией затрат на молочные продукты в производственном и перерабатывающем циклах. *Методы* - сравнительного анализа для сопоставления различных подходов к определению классификационного признака группировки расходов на изготовление молочной продукции, традиционных способов и современных систем управленческой отчетности, применяемых в других отраслях; экспертная практика применялись при изучении мнений специалистов по сложившейся ситуации в сфере бухгалтерского учета в молочной промышленности. В результате исследования получены следующие *результаты* - выделен процесс "управление", который охватывает все аспекты деятельности агроформирования, систематизировано понятие "затраты" и предложено более точное их ранжирование для каждой операционной области в процессе переработки низкокачественного молока и сыворотки. *Выводы* - разработанные теоретические, методические и практические рекомендации могут быть применены для эффективного функционирования механизма контролинга и расчета себестоимости молочных товаров в молокоперерабатывающих фирмах, соблюдения технологических рецептур.

Key words: agro-industrial complex, accounting, costs of dairy production, cost of production, processing of raw materials, cost management methodology.

Түйінді сөздер: агроөнеркәсіптік кешен, бухгалтерлік есеп, сүт өндірісінің өзіндік құны, өнімнің өзіндік құны, шикізатты қайта өңдеу, шығындарды басқару әдістемесі.

Ключевые слова: агропромышленный комплекс, бухгалтерский учет, издержки молочного производства, себестоимость продукции, переработка сырья, методика управления затратами.

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Introduction

To manage the work of enterprises engaged in the processing of non-grade milk with the development of the entrepreneurial market, there is an urgent need to develop basic accounting methods. Such foundations require a special approach to the formation of the necessary data in modern conditions and should be focused on increasing revenues, reducing costs, and guaranteeing the competitive advantage of manufacturers in the modern market. Accounting does not supply milk processing enterprises in the current market conditions with information systems at the rank necessary for making active management decisions, which is fatal for the formation of effective strategic management accounting. The term management accounting in companies or organizations engaged in the processing of non-grade milk is not yet fully used in our country.

The main purpose of the study is to systematize the theoretical foundations of accounting for the cost of processing non–grade milk, integrate incremental costs for processing whey, and develop methodological recommendations for improving management cost accounting.

By the target orientation of the article, the following tasks are set: to explore alternative aspects of cost accounting in various areas of the dairy industry; to study the trends in loss accounting based on the technology of processing non-grade milk; to group the typology of costs in management accounting and its role in cost management.

The subject of the study is the issues of cost accounting and calculating the cost of production in organizations engaged in the processing of non-grade milk and whey.

The costs of consuming basic and auxiliary materials in the processing industry are regularly increasing. This may be because the cost of production and prices for auxiliary materials may increase, as well as an increase in utility bills.

Material costs account for a significant share of the cost of production. With a high material consumption of production during milk processing, it is important to properly organize operational control and management accounting of waste on time.

Unsorted milk, from which cream, sour cream, cottage cheese, and other products are made, is the main raw material for processing in the processing industry, and the whey formed during processing is usually discharged into the sewer. An aspect of the accounting process (the most complex) associated with the processing of non-grade milk is cost management accounting.

Production efficiency is assessed both at the level of the entire milk processing industry and at the level of each workshop to achieve and sustainably increase income. The production of dairy products, and services, as well as obtaining final income from working with its sales in the future is the main goal for the processor today.

Literature Review

Professor Nazarova V.L. [1] says that given the leading position of costs as the main object of this accounting, cost management is a multifaceted and complex element of management accounting (Nazarova V.L.) [1].

Professor Taygashinova K.T. [2] believes that at all stages of market processes, according to the law of value, it is necessary to improve the methods of management accounting for a more accurate and prompt reflection of costs, materials, and labor (Tajgashinova K.T., Erzhanov M.S.) [2].

Therefore, modern processors cannot limit themselves to accounting for the cost of production in accordance with the requirements of IFRS No. 2 "Inventories" (MSFO №2 «Zapasy») [3].

Authors Khoruzhy L.I., Katkov Yu.N., Romanova A.A. et al. [4] and her colleagues describe that the designed management reporting system, which consists of 8 planned stages (standard reports, detailed query reports, specialized reports, notification reports, predictive reports, statistical reports, process optimization reports and modeling reports), creates the likelihood of effectively solving a set of tasks (Khoruzhy L.I., Katkov Yu. N., Romanova A.A. et al.) [4].

A team of authors led by Alaydar Zh., Alaydarkyzy K., Atchabarova A.M.et al. [5] note that management accounting extends beyond the boundaries of accounting for production costs, as prescribed in regulatory acts on cost indicators. However, in this article, the author does not discuss the systematization of costs in management accounting (Alaydar Zh., Alaydarkyzy K., Atchabarova A.M. et al.) [5].

The results of the study conducted by the authors Romer A., Ferrer M.A., Galaviz B. et al. [6] show that the studied companies implement environmental policy, take into account environmental aspects when making investment and financial decisions, and keep records, assess, accumulate, and report on environmental costs, assets, and liabilities.

When using inventory accounting by batches and expiration dates, it becomes possible to make a budget considering time parameters, which allows you to optimally distribute the use of products throughout the entire shelf life corresponding to a certain batch (Butyugina A., Gorbunova E.) [7].

It is necessary to form a set of indicators that, in the context of the concept of sustainable development, covering economic, social and environmental aspects, will reflect the sustainable development of a dairy processing enterprise (Zakirova A., Klychova G., Ostaev G. et al.) [8].

To provide an opportunity to receive up-to-date data, optimize the activities of the enterprise as a whole, and make informed decisions - for the heads of the organization (Tarasov E. M., Nadezhkina S. A., Zolkin A. L. et al.) [9].

The authors Bogdanova I., Posolin M. [10] propose a coordinated approach to improving the budgeting process in integrated structures of the agro-industrial complex (AIC).

Materials and methods

The classification of costs in management accounting is very diverse and is determined by what management task needs to be solved.

Also, cost grouping contributes to management control and special attention to the management of fixed and overhead costs in dairy production, as well as timely adoption of management decisions to optimize milk production costs. The basis of management accounting is the reduction of dairy production costs, which reduces the cost of dairy products and leads to an increase in revenue.

In this regard, the most important tasks of management accounting for the dairy complex are planning the release of dairy production and making management decisions; calculating income and determining the cost of dairy products; regulating and monitoring the work of responsibility centers for milk production.

Direct expenses include the write-off of raw milk stocks for technological needs, expenses for the maintenance and operation of production dairy equipment, as well as wages for the main production workers employed in the dairy complex. These are the main expenses, direct expenses that are associated with the technological process of dairy production, the performance of work and services for milk processing in the dairy industry.

The costs associated with the management of the production shop are overhead costs. These include the wages of the foreman, foreman and normalizer, production technologist, depreciation of the workshop building, as well as utilities. Overhead costs are complex and consist of several economic elements.

Results

There are 2 types of overhead costs in production practice.

Account 8114 "Other costs" - this account considers workshop and general production costs (salaries of shop workers, such as foreman, technologist, master, expenses for payment of rationalization proposals, special clothing, tools, compliance with safety regulations, etc.).

Expenses that cannot be directly attributed to the production of milk and dairy products, such as expenses for the maintenance of technological equipment for the manufacture of dairy products, containers - are accounted for 8410 "Overhead costs".

In this regard, it is advisable to classify expenses directly and indirectly when creating separate accounting systems. It allows you to determine shop costs, and shop cost of production and assess the impact of the specific weight of shop costs on the volume of products. In management accounting, cost calculation and evaluation of finished products are of particular importance, considering the classification of incoming and expired costs.

Incoming costs represent stocks purchased by a dairy processing company that have not yet been used and are awaiting future use to generate revenue (table).

Expendable stocks are considered overdue expenses when they have already generated income and will not be used in the future. These are costs that are waiting to be used, are available in warehouses or storerooms of workshops and are the costs of maintaining stocks. In addition to auxiliary materials (biologics, chemicals, spare parts, fuel), a feature of accounting in the processing industry is the cost of processing substandard milk. These costs are reflected in the balance sheet asset as part of production inventories and are included in the inventory. Inventory costs are considered expired if they are included in the cost of sales. Thus, for comparison, the terminology of incoming and outgoing costs is given (table).

Table - Terminology of incoming and expired costs

Expenses	
incoming	expired
They are reflected in the active part of the balance sheet as current assets (for example, inventories) that will be included in the cost of dairy products of the next reporting period and will generate income in the future and represent the cost of unfinished dairy production, the cost of future periods, and finished dairy products.	Expenses for which income was received in the current reporting period, included in the cost of products already sold, are considered irrevocable.
Note: the source (Taygashinova K.T.) [11]	

It is important to consider the following cost categories during their processing:

* expenses that may or may not be recognized in the current reporting period are expenses of future periods;

* the choice between alternative options, when in conditions of limited resources it is necessary to sacrifice one for the other, is an imputed cost;

* the expected income that dairy enterprises receive as a result of additional processing of milk, for example, whey, leading to the production of additional finished dairy products, will represent the incremental (marginal) costs.

For decision-making and planning, the cost grouping in the context of management accounting contains various components, such as:

●costs that make up the cost of dairy products and that can vary proportionally to the volume of milk production are variable costs;

●costs that are not subject to volumetric transformations in dairy production are fixed costs;

●costs that are not subject to the management decisions made by the management in the dairy complex are sunk costs (or overdue costs);

●costs that are included in the budget and budgeting of dairy production programs and represent cost calculations for a given volume of dairy production are planned costs;

●costs that represent missed opportunities and arise with limited resources are imputed (imaginary) costs;

●expenses that are only reflected in the actual cost of dairy products and are not included in the dairy production plan are unplanned;

●expenses arise as a result of additional milk production and sales of dairy products - these are incremental (incremental) expenses;

●expenses that are necessary to ensure uninterrupted warehouse operation and are associated with future expenses for servicing and storing dairy products are relevant expenses;

●costs show additional costs for each unit of production - these are marginal costs.

Fixed and variable costs occupy a central position in the dairy complex in the selection of accounting and calculation systems, control, analysis and forecasting of costs in the production of dairy products. Such distribution of costs (in fixed and variable) is the basis for determining the thresholds of competitiveness in dairy production, calculating the critical point of dairy production, analyzing the profitability and range of dairy products and, as a result, forming and designing the economic policy of the enterprise of the dairy complex.

It is important, analyzing the stages of implementation of management accounting described by Averchev I.V. [12], to consider the development of cost classification for the needs of management accounting.

Management accounting tasks require a structured economic classification of these costs. The material costs of basic and auxiliary materials are included in the variable costs. Variable costs change in proportion to the change in production volume. These changes can affect both production and non-production processes and directly depend on the activities of the processing enterprise.

Receiving finished products and cooling dairy products in the context of dairy processing production are the main components of the shop supply.

It is recommended to use whey to produce various types of products in the processing industry. The following enterprises can be classified as types of primary dairy production:

■milk processing enterprises, production of dairy semi-finished products and ice cream for sale;

■processing dairy products - processing enterprises;

■ individuals and farmers engaged in the production of milk and dairy products.

Coordination of the long-term development of the organization and information for management decision-making is what management accounting is aimed at, based on the grouping of costs by management objects, goals and functions (Arystambayeva A.Z.) [13].

The previously mentioned types of main production should be reflected through appropriate synthetic accounts in the work plan of accounts. Analytical cost accounting accounts, which act as cost accounting objects, and production products, which will be considered as calculation objects, will be allocated for each production.

In her work, Espergenova L.R. [14] considers cost centers, or, in other words, cost accounting objects – those places where such costs arise.

Each processor of dairy products, based on the planned volume of dairy production, which corresponds to the capacity of the equipment involved, determines its costs.

The expediency of such an approach in management accounting, organization and cost planning for the maintenance of stocks and warehouses is beyond doubt. Managing the costs of maintaining stores and stocks in

the long term contributes to achieving profitability of an individual warehouse and the entire warehouse economy.

Analysis of associated costs of dairy production, conducted annually, including actual and estimated costs of maintaining each dairy complex facility, helps to reduce the shelf life of raw milk stocks. Conducting an analysis of dairy production costs helps to reduce the costs of maintaining stores and warehouses, which has a beneficial effect on the overall income of the dairy enterprise.

The expenses and income that will occur at the subsequent stage are considered through the prism of their connection with the decisions being made. Under such conditions, expenses and incomes are distributed and considered in management accounting for decision making.

Marginal costs and revenues are considered at the unit level, and this is how they differ from incremental costs. This means that the margin income is equal to the difference between the income received from the sale of a unit of production and the marginal cost of producing a unit of production.

The processing industry does not show the processing of whey, although additional income can be obtained through its processing. The following example, they began to produce products from one additional associated raw material as they began to generate income.

The cost of raw materials and resources required to produce products represents the cost of production. The cost of production is the cost of the resources and resources needed to produce a product. It is necessary to look for new ways to raise costs and account for their expenses.

Effective cost control and management in management accounting require an understandable cost classification.

Planned costs are focused on the current volume of production and represent costs that are calculated based on limits and estimates, norms and standards. The planned calculation, which determines the planned cost of production, is formed from planned and standard costs.

Additional and excess costs that exceed the limits of the planned cost and are based on actual costs represent unplanned costs. Data on unplanned costs become available only at the actual cost of production.

Marginal and incremental costs and revenues reflect additional costs and revenues generated because of the production of additional products.

This type of cost is important in the context of management efficiency, which is achieved through the control and regulation of operations within the workshop or other departments. Managers exercise this control by allocating responsibility centers that are responsible for certain types of work or costs.

Inefficient expenses are expenses that do not contribute to the production of products or increase income, but, on the contrary, lead to a decrease in the income received. These costs may arise because of production losses such as defects, shortage of inventory in warehouses, equipment downtime, and other types of losses such as penalties, penalties, and fines.

Discussion

Production costs of dairy production are related to expenses of the current reporting period. In addition to production costs, in the situation with dairy farms, non-production costs are also considered, which are not included in the cost of dairy products, and which affect the reduction of total income. This classification of costs and expenses of dairy production is important to consider when developing the accounting policy of a dairy farm.

The first types of expenses contribute to the assessment of potential income from stocks, while the second types are not included in the cost of finished dairy products and affect the reduction of the income received.

Alborov R.A., Livenskaya G.N. [15] note that expenses, as a rule, in production organizations are detailed when forming accounting policies in management accounting, considering the specifics of the industry (Alborov R.A., *Livenskaya* G.N.) [15].

We believe that it is more appropriate to talk about costs and their grouping in management accounting to make management decisions.

Among the various methodologies for calculating production costs in agribusiness, the Total Cost, Operating Costs and Agro Costing methodologies stand out for being specific to agricultural and livestock production systems (Bassotto L.C., Lopes M.A.) [16].

The authors formulated the main problems of the mechanism of formation and use of profit as part of the financial capital of an agricultural enterprise: failure to comply with the deadlines and technologies for the implementation of agricultural measures; lack of complete control over the cost of production (Butkova O., Chumakova N., Rudskaya I. et al.) [17].

Conclusion

1. The control system contributes to an increase in total income and a reduction in the

cost of manufactured dairy products, which in turn ensures, in the long term, the implementation of measures according to standards aimed at reducing the costs of dairy production and increasing the efficiency of dairy production.

2. The entire system of classification of costs and expenses necessary to determine the cost of production is the basis of calculation in management accounting. The cost of a unit of production plays a key role not only in planning and making management decisions to reduce both costs and expenses that significantly affect total income, but also in calculating income and estimating inventories. Each center of responsibility should have its own calculation units.

3. The effectiveness of the impact on management personnel and the processes of implementing management decisions directly depends on the information provided by management accounting. The information system for management personnel should be more detailed and extensive than at present. It is necessary to improve the information support for the processing of secondary raw materials, including whey.

4. The obtained theoretical conclusions and methodological recommendations can be used to improve the cost accounting system further, calculate the cost of production, and substantiate operational management decisions in the processing industry.

5. It is also important to include issues of cost classification in management accounting in the accounting policy. It is advisable to make changes to the accounting policy for milk processing that will be aimed at organizing management accounting using the "cost-output" method and to select employees from the management of the production accounting department who will be responsible for this process.

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References

[1] Назарова, В.Л. Управленческий учет: уч.- Алматы: «Фортуна полиграф», 2021.-414с.

[2] Тайгашинова, К.Т. Управленческий учет: учеб. / К.Т. Тайгашинова, М.С.Ержанов. – Алматы: Алматинская академия экономики и статистики, 2020. – 99с.

[3] МСФО №2 «Запасы» [Электронный ресурс].- URL: https://www.finacademy.net/materials/standartu-msfo/msfo-ias-2-zapasy (дата обращения: 11.09.2024)

[4] Khoruzhy, L.I. Adaptive management reporting system in inter-organizational relations of agricultural enterprises according to ESG principles / L.I. Khoruzhy, Yu.N. Katkov, A.A Romanova, E.A. Katkova, M.K. Dzhikiya // Journal of Infrastructure, Policy and Development. – 2022. – Vol.6. – Issue 2. –P. https://doi.org/10.24294/jipd.v6i2.1649

[5] Әлайдар, Ж. Системы учета затрат и калькулирования себестоимости ремонтных работ / Ж.Әлайдар, К. Алайдаркызы, А.М. Атчабарова, Г.С. Алишарова // Статистика, учет и аудит. – 2020.– 2(77). – С.16-20.

[6] Romer, A. Environmental management accounting in companies of the agro-industrial sector / A. Romer, M. A. Ferrer, B. Galaviz, J. Castro // Revista Venezolana de Gerencia. - 2019.- N. 88.– P. 1086–1097

[7] Butyugina, A. Improvement of budgeting subsystem in agriculture of the "AdeptIS: Agrocomplex" configuration / A. Butyugina, E. Gorbunova // E3S Web of Conferences 254. Fundamental and Applied Research in Biology and Agriculture: Current Issues, Achievements and Innovations, 2021. - 10013. https://doi.org/10.1051/e3sconf/202125410013 Scopus

[8] Zakirova, A. Analytical support of management accounting in managing sustainable development of agricultural organizations / A. Zakirova, G. Klychova, G. Ostaev, Z. Zalilova, A. Klychova // E 3S Web of Conferences 164. Topical Problems of Green Architecture, Civil and Environmental Engineering 2019, 2020.-10008. https://doi.org/10.1051/e3sconf/202016410008 Scopus

[9] Tarasov, E.M. Modern models of accounting and analytical support for management decision-making / E.M. Tarasov, S.A. Nadezhkina, A.L. Zolkin, O.V. Saradzheva, A.N. Kornetov // E3S Web of Conferences 449. Priority Directions of Complex Socio-Economic Development of the Region, 2023.– 05002. https://doi.org/10.1051/e3sconf/202344905002

[10] Bogdanova, I. The Signification of General Problematics and Budgeting Development Options in the Integrated Systems of Corporate Type in the Agro-industrial Complex / I. Bogdanova, M. Posolin // Lecture Notes in Networks and Systems.- 2023.- Vol. 574.– С.657–666 https://doi.org/10.1007/978-3-031-21432-5_69

[11] Тайгашинова, К.Т. Система развития управленческого учета: логистические затраты, их классификация, сервис логистических услуг / К.Т. Тайгашинова.– Алматы: Экономика, 2014.– 212с.

[12] Аверчев, И.В. Управленческий учет и отчетность. Постановка и внедрение / И.В. Аверчев. – М.: Вершина, 2007. – 512с.

[13] Арыстамбаева, А.З. Классификация затрат в управленческом учете и ее влияние на управление издержками [Электронный ресурс]. - 2015. - URL: https://www.s.esrae.ru/buhforum/pdf/2015/1(8)/16.docx (дата обращения: 11.09.2024)

[14] Еспергенова, Л.Р. Учет затрат по центрам ответственности: проблемы и перспективы [Электронный ресурс]. - 2018. - URL: https:// www.science-bsea.narod.ru/ 2009/ ekonom _2009/espergenova_uchet.htm (дата обращения: 11.09.2024)

[15] Алборов, Р.А. Управленческий учет затрат по центрам ответственности в производственных организациях / Р.А. Алборов, Г.Н. Ливенская.- Ижевск: Удмуртский университет, 2013. - 108с.

[16] Bassotto, L.C. Comparison of different costing methodologies for calculating production costs in dairy farming / L.C. Bassotto, M.A. Lopes // Custos e Agronegocio. – 2023.-Vol. 19. - Issue 3.- P. 252 – 276.

[17] Butkova, O. The Mechanism for Profit as the Main Source of Financial Capital at an Agricultural Enterprise: Problems and Solutions / O. Butkova, N. Chumakova, I. Rudskaya, N. Guzhvina, G. Lebedeva // Lecture Notes in Networks and Systems. - International Scientific Conference "Fundamental and Applied Scientific Research in the Development of Agriculture in the Far East". - 2024.-Vol. 733. – P. 1199 – 1207. https://doi.org/10.1007/978-3-031-37978-9_116 [in English].

References

[1] Nazarova, V.L. (2021). Upravlencheskii uchet: uch. – Almaty: «Fortuna poligraf» - Management Accounting: Textbook – Almaty: "Fortuna Polygraph", 414 [in Russian].

[2] Taigashinova, K.T., Yerzhanov, M.S. (2020). Upravlencheskii uchet: ucheb. [Management Accounting: Textbook]. *Almaty: Almatinskaya akademiya ekonomiki i statistiki - Almaty Academy of Economics and Statistics*, 99 [in Russian].

[3] MSFO №2 «Zapasy». Available at: https://www.finacademy.net/materials/standartu-msfo/msfo-ias-2-zapasy (date of access: 11.09.2024) [in Russian].

[4] Khoruzhy, L.I., Katkov, Yu.N., Romanova, A.A., Katkova, E.A., Dzhikiya, M.K. (2022). Adaptive management reporting system in inter-organizational relations of agricultural enterprises according to ESG principles. *Journal of Infrastructure, Policy and Development,* 6(2), https://doi.org/10.24294/jipd.v6i2.1649 [in English].

[5] Alaydar, Zh. (2020). Sistemy ucheta zatrat i kalkulirovaniya sebeostoimosti remontnykh rabot [Systems of cost accounting and calculation of repair costs]. *Statistika, uchet i audit - Statistics, accounting and audit,* 2(77), 16-20 [in Russian].

[6] Romer, A., Ferrer, M. A., Galaviz, B., Castro, J. (2019). Environmental management accounting in companies of the agro-industrial sector. *Revista Venezolana de Gerencia,* 88, 1086-1097 [in English].

[7] Butyugina, A., Gorbunova, E. (2021). Improvement of budgeting subsystem in agriculture of the "AdeptIS: Agrocomplex" configuration. *E3S Web of Conferences*, 254, 10013. https://doi.org/10.1051/e3sconf/202125410013 [in English].

[8] Zakirova, A., Klychova, G., Ostaev, G., Zalilova, Z., Klychova, A. (2020). Analytical support of management accounting in managing sustainable development of agricultural organizations. *E3S Web of Conferences*, 164, 10008. https://doi.org/10.1051/e3sconf/202016410008 [in English].

[9] Tarasov, E.M., Nadezhkina, S.A., Zolkin, A.L., Saradzheva, O.V., Kornetov, A.N. (2023). Modern models of accounting and analytical support for management decision-making. *E3S Web of Conferences*, 449, 05002. https://doi.org/10.1051/e3sconf/202344905002 [in English].

[10] Bogdanova, I., Posolin, M. (2023). The Signification of General Problematics and Budgeting Development Options in the Integrated Systems of Corporate Type in the Agro-industrial Complex. *Lecture Notes in Networks and Systems,* 574, 657-666. https://doi.org/10.1007/978-3-031-21432-5_69 [in English].

[11] Taigashinova, K.T. (2014). Sistema razvitiya upravlencheskogo ucheta: logisticheskie zatraty, ikh klassifikatsiya, servis logisticheskikh uslug [System of development of management accounting: logistics costs, their classification, logistics service]. *Almaty: Ekonomika*, 212 [in Russian].

[12] Averchev, I.V. (2007). Upravlencheskii uchet i otchetnost. Postanovka i vnedrenie [Management accounting and reporting. Implementation and integration]. *Moscow: Vershina*, 512 [in Russian].

[13] Arystambaeva, A.Z. (2015). Klassifikatsiya zatrat v upravlencheskom uchte i yeye vliyaniye na upravleniye izderzkami [Cost classification in management accounting and its impact on cost management]. Available at: https://www.s.esrae.ru/buhforum/pdf/2015/1(8)/16.docx (date of access: 11.09.2024) [in Russian].

[14] Espergenova, L.R. (2018). Uchet zatrat po tsentram otvetstvennosti: problemy i perspektivy [Cost accounting by responsibility centers: problems and prospects]. Available at: https://www.science-bsea.narod.ru/2009/ekonom_2009/espergenova_uchet.htm (date of access: 11.09.2024) [in Russian].

[15] Alborov, R.A., Livenkaya, G.N. (2013). Upravlencheskii uchet zatrat po tsentram otvetstvennosti v proizvodstvennykh organizatsiyakh [Management accounting of costs by responsibility centers in manufacturing organizations]. *Izhevsk: Udmurtskiy universitet,* 108 [in Russian].

[16] Bassotto, L.C., Lopes, M.A. (2023). Comparison of different costing methodologies for calculating production costs in dairy farming. *Custos e Agronegocio*, 19(3), 252-276 [in English].

[17] Butkova, O., Chumakova, N., Rudskaya, I., Guzhvina, N., Lebedeva, G. (2024). The Mechanism for Profit as the Main Source of Financial Capital at an Agricultural Enterprise: Problems and Solutions. *Lecture Notes in Networks and Systems*, 733, 1199-1207. https://doi.org/10.1007/978-3-031-37978-9_116 [in English].

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