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# IMPROVEMENT OF METHODOLOGY ACCOUNTING MANUFACTURING STOCKS OF ENTERPRISE: PROBLEMS AND AREAS OF SETTLEMENT

**Abstract.** To date, special attention needs to pay process optimization of accounting manufacturing stocks enterprise, because they serve by the main resource and precondition of each production cycle of enterprise. The article deals with the theoretical and practical problems accounting of manufacturing stocks. Found that needs improving existing classification of reserves through continued expansion of the list of nomenclature. This is due to the expansion of production, a significant proportion of material costs in production costs and rising prices for resources. In the transition to a market economy is important to improve quality indicators of manufacturing stocks. Also content of the article highlights the practical aspects of the turnover, business continuity and rhythm of a single enterprise. By improving the process accounting of manufacturing stocks was developed algorithm optimization of inventory accounting. We believe that the presented recommendations will help resolve current problems in accounting for inventories and improve their records.

**Keywords**: Productive supplies, mechanism of optimization, rational use, account of supplies. **JEL Classification**: G31, M41

Formulas: 1; fig.: 3; tabl.: 1; bibl.: 10

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# УДОСКОНАЛЕННЯ МЕТОДОЛОГІЇ ОБЛІКУ ВИРОБНИЧИХ ЗАПАСІВ ПІДПРИЄМСТВА: ПРОБЛЕМАТИКА ТА НАПРЯМИ ВИРІШЕННЯ

Анотація. В роботі розглянуті основні теоретичні та практичні аспекти обліку виробничих запасів. Наведена сучасна проблематика оптимального використання виробничих запасів підприємства. Розроблені конкретні шляхи для удосконалення процесу використання виробничих запасів. Зокрема представлений механізм оптимізації обліку запасів. У вигляді схеми наведена розгорнута структура шляхів удосконалення обліку виробничих запасів.

Ключові слова. виробничі запаси, механізм оптимізації, раціональне використання, облік запасів.

Формул: 1; рис.: 3; табл.: 1; бібл.: 10

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## УСОВЕРШЕНСТВОАНИЕ МЕТОДОЛГИИ УЧЕТА ПРОИЗВОДСТВЕННЫХ ЗАПАСОВ ПРЕДПРИЯТИЯ: ПРОБЛЕМАТИКА И ПУТИ РЕШЕНИЯ

Аннотация. В работе рассмотрено теоретические и практические аспекты учета производственных запасов. Приведена современная проблематика оптимального

использования производственных запасов предприятия. Разработаны конкретные пути для усовершенствования процесса использования производственных запасов. В частности представленный механизм оптимизации учета запасов. В виде схемы приведена развернутая структура путей усовершенствования учета производственных запасов.

Ключевые слова: производственные запасы, механизм оптимизации, рациональное использование, учет запасов.

Формул: 1; рис.: 3; табл.: 1; библ.: 10

**Introduction and problem definition**. Today, farms need substantial reform of the management structure of economic activity. At the same time, it is very important to determine the minimum value of production stocks of enterprises, as material costs for these companies have the largest relative share. Optimization of production stocks is one of the main factors of enterprise's crisis recovery. This necessitates redefining the role, place, and content of the accounting and analysis of production stocks, proving its methodology in the management system.

**Analysis of the study and objective definition**. The main prerequisite for the success of the production process, as a key link in economic activity subject, is the availability and efficient use of production stocks. The study of literature sources on the study of problems of production stocks accounting showed that there are a number of scientific approaches. The generalized concept of the definition of production stocks is presented in Table 1.

In particular, we shall note that a significant contribution to the development of theoretical and methodological aspects of accounting and auditing of production stocks made the works of such scholars as L. V. Burdenina [4], K. L. Croxton, S. Garcia–Dastugue, D. M. Lambert, D. S. Rogers [5], L. Panteleichuk [6], I. A. Blank [7], N. Roztocki [9], M. Arena [10] etc. Also, it should be noted that despite a significant number of works aimed at disclosure of problematic issues of the essence of production stocks, there is no common opinion among scholars on the matter.

Table 1

of production stocks (PS)		
The approach to interpretation of problematic issues of PS	Essence of the problematic issue	Scholars
Reforming of regulatory and legal provisions	In the process of reforming of the accounting system and implementation of national accounting standards, requirements for accounting and analysis of production stocks are changing and their tasks are expanding	Pavliuk I. [1]
Reforming of the administrative aspect of production activity	Today, the agricultural enterprises need substantial reform of the management structure of economic activity. At the same time, it is very important to determine the minimum value of production stocks of enterprises, as material costs for these companies have the largest relative share	Kuznetsova M. [2].
Optimization of PS accounting system	Optimization of production stocks is one of the main factors of enterprise's crisis recovery. This necessitates redefining the role, place, and content of the accounting and analysis of production stocks, proving its methodology in the management system	Vovchak O.D. [3].

Scientific approaches to determination of problematic issues of production stocks (PS)

We believe that in spite of a sufficient number of studies and publications, today there is a need for a more detailed definition of "production stocks", covering the theoretical aspects of improving production stocks accounting, the process of improvement of documentation of production stocks accounting. We would like to mention that the process of enterprise's production stocks usage has not been sufficiently optimized.

The purpose of this article is to analyze the organizational and methodological aspects of accounting and auditing of production stocks of enterprise and to develop ways of their improvement.

**Results of the study**. The economic transformations faced by Ukraine are inextricably connected with the search for fundamentally new methods of production organization and management. This requires adequate changes in the structure of economic accounting and therefore necessitates the improvement of accounting information system which is necessary for management decisions [1].

Production stocks (raw materials, stocks, fuel, etc.) are objects at which human labor is aimed in order to receive finished products. Unlike the means of labor, preserving the shape in the manufacturing process and gradually carrying value to the product, labor items are consumed totally and they transfer their value to the product completely being replaced after each production cycle. Consumption of commodity stocks and supplies in production is gradually increasing in industry. This is caused by expansion of production, a significant proportion of material costs in production costs and rising prices for resources. In the context of the transition to a market economy, it is important to improve quality indicators of production stocks usage (reducing of relative shares of materials in production costs, economizing, etc.) [3].

At present, there is a trend to accelerate the company's stocks turnover, and thus to reduce the size of stocks, but they still occupy a central role in ensuring the normal operation of the enterprise. At the level of firms, stocks are among the objects that require large investments and therefore constitute one of the factors determining the accounting policies and influence a service level in general. However, many enterprises fail to pay due attention to it and constantly underestimate their future needs for existing stocks. As a result, they usually face the fact that they have to invest in their stock more than they planned to. Thus, the daily labor items requirement at ongoing enterprise allows us to include them among stock reserves of the enterprise and to consider them current assets [5].

Production stocks, being the most important and significant part of company's assets, are used in the economic activities of enterprises of all forms of ownership and of all sectors of the economy. On the one hand, formed production stocks provide consistency, continuity, and smooth functioning of the enterprise, as they guarantee its economic security, and on the other hand, production stocks at the level of large industrial enterprises require major investments. Therefore, accurate assessment of enterprise's profit, its financial position, competitiveness on the market and enterprise's effectiveness, in general, depend on the organization and accounting of production stocks [4].

Taking into account the opinions of many researchers within economics we would like to offer our own interpretation of the term "production stocks", namely production stocks (raw materials, stocks, fuel, etc.) are objects at which human labor is aimed in order to receive finished products. Unlike the means of labor, preserving the shape in the manufacturing process and gradually carrying value to the product, labor items are consumed totally and they transfer their value to the product completely being replaced after each production cycle.

Consumption of commodity stocks and supplies in production is gradually increasing in industry. This is caused by expansion of production, a significant proportion of material costs in production costs and rising prices for resources. In the context of the transition to a market economy, it is important to improve quality indicators of production stocks usage (reducing of relative shares of materials in production costs, economizing, etc.) [2].

In accounting methodological fundamentals of information formation on stocks and its disclosure is governed by the Regulations (Standard) of Accounting 9 "Stocks". Stocks are considered to be an asset if it is probable that the enterprise will receive future economic benefits associated with their use, and their value can be reliably measured [7].

The main prerequisite for the success of the production process, being the main activity of the enterprise, is the availability and efficient use of production stocks. At the same time, the matter

of improvement of the documentation of operational and analytical accounting of production still remains unresolved, there is an especially urgent problem of an automated system of accounting for such stocks. These problems shall be solved by means of development of principal ways and specific recommendations for improvement of the method of production stocks accounting, by means of their assessment after elimination, methods of analysis of the efficient usage of production stocks and strengthening of information and control functions of accounting in production management. To solve these problematic aspects we offer fundamental ways of improvement of production stocks accounting set out in Figure 1.



Fig. 1. Offered structural algorithm of ways of production stocks accounting improvement

Arrangement of primary documentation, widespread implementation of common standardized forms, enhancing automation of accounting and computing operations, ensuring strict order of receipt, storage and consumption of raw materials, stocks, components and so on facilitate improvement of the provision of resources.

It is also necessary to introduce effective forms of preliminary and current control over the observance of norms related to the stocks and consumption of material resources, to pay more attention to improvement of operational traffic count of semi-finished products, components, parts and assembly units in production. Accounting data should include information for finding reserves to reduce production costs in terms of efficient use of materials, lower consumption rates, ensuring proper storage.

We believe that another problem that remains unresolved consists in reflection of transportation and procurement costs in accounting. Any enterprise does not acquire some specific kind of stocks very often. Usually, a transport document contains information about production stocks which differ not only in their names, but also in units of measure, purchasing value, weight, grade, etc. In this case, the distribution of insignificant amount of transportation and procurement costs between types of acquired production stocks is a time–consuming and unjustified part of work, because it requires the calculation of each item of stocks. In some cases, distribution of transportation and procurement costs is simply impossible because of the late receipt of transaction shipping documents and so on.

In our opinion, reflection of transportation and procurement costs as expenses of the reporting period would solve the problem of their accounting. We offer to use the following formula for rational distribution of transportation and procurement costs (1):

$$TPC = (TPC0+TPCM)*100\% / V0+VM$$
(1);

where, TPC means an average percentage of transportation and procurement costs;

- TPC0 means transportation and procurement costs at the beginning of the reporting month;
- TPCM means transportation and procurement costs of the reporting month;
- V0 means value of stocks at the beginning of the reporting month;
- VM means value of stocks received in the reporting month.

Based on the foregoing material, we believe that the process of optimization of production stocks accounting, as well as improvement of their efficient use should be facilitated not only by high–quality documentation, but by established production process as well. Therefore, we offer to apply an elaborated economic mechanism (Fig. 2) for further optimization of production stocks accounting.

The mechanism of improvement of production stocks accounting we offer may be the main prerequisite for the success of the production process. Thus, we should note that the simplification of processing of operations related to the movement of production stocks, will enable you to monitor over thorough and timely inventory and to improve accounting methodology which will give you an opportunity to plan the construction of sufficient storage facilities and to determine the optimal need for production stocks and their rational use.



Fig. 2. Elaborated economic mechanism of production stocks accounting improvement

In the practical work of most enterprises many kinds of resources are procured in order to perform the planned production program. If you compare the cost of individual resources with the total cost of all resources, you will see that they have a different share. In the ABC model resources are divided into three classes: A, B and C. Class A includes alternately (in descending order of share's value) resources until total share of aggregate resources reaches 80%. Class B includes the following resources in the same way until their total share of the total resources needed reaches 15% and the class C includes types of resources not included into classes A and B:

- A-parts include those that occupy 75% of total turnover;

- B-parts include those that occupy 20% of total turnover;

- C-parts include those that occupy 5% of turnover.

On the basis of the foregoing, we would like to offer production stocks optimization model by their classification and types of suppliers based on ABC analysis (Fig. 3).

You can significantly improve organization of production stocks accounting by means of improvement of the documenting process, that is to use storage documents to a greater extent (resource limit cards, registers, etc.), inventory cards as expenditure paper related to released materials (undocumented system of registration of material consumption).



Fig. 3. Developed model of stocks accounting optimization

It is advisable also to develop a single form of the document (to release material) designed for machine processing. This document should include all items of main and auxiliary production under corresponding codes, which should indicate the way in which material resources are to be used – the main products, parts, consumer goods, one–time orders, repair and maintenance needs.

In order to avoid errors and irregularities in the process of collection and recording of operative facts related to production stocks subject to be keeping in register, it would be appropriate to develop a detailed instruction for each performer (in the form of service instructions, extracts from schedule for document flow) about order and terms of data registration, and to use a system of rewards and punishments for executing professional duties. Control activities (inspections, comparative checks, inventories) reduce the risk of an ineffective system of collecting and recording of operative facts.

The use of standardized forms of documentation is also appropriate at all stages of accounting as it is aimed at improvement of production stocks accounting. Moreover, there are some other essential conditions:

- elaboration of schedules for document flow of stocks accounting and promulgation of functions to performers during creation and verification of the primary document;

- issue of administrative documents to persons responsible for the implementation of some business transactions, and have the right to sign primary documents;

- accounting staff supervision of the accuracy of primary documents related to accounting of production stocks (inclusion of such duty into service instructions of accountant who process the document; imposing liability for failure to comply with such duty).

Thus, the implementation of these ways of improvement of production stocks accounting will significantly increase the efficiency, financial and economic activity of enterprises and will help to establish a more efficient and less time–consuming accounting, control over the presence, movement and use of production stocks and to achieve their economy.

**Conclusions**. In this article related to practical aspects of production stocks accounting and contemporary issues of the production process, we have described a number of ways of production stocks accounting improvement. In particular, we have offered the mechanism of production stocks accounting improvement that can be a major prerequisite for the successful implementation of the production process; – we have presented a detailed structural model which contains description of necessary measures which implementation in production will optimize financial and economic activity of enterprises, minimize acquisition costs, write–off in production and efficient use of production stocks. Besides, this analysis will allow implementing of a high–quality current control over their use, which will influence the gradual increase of profits of enterprise in the future.

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