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FEATURES OF ACCOUNTING FOR BIOLOGICAL ASSETS OF AGRICULTURAL ENTERPRISES OF UKRAINE

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Abstract

The modern development of the accounting system of agricultural enterprises is under the influence of constant changes, which is justified by the need for further research on theoretical issues of evaluation and accounting of biological assets of agricultural enterprises to make effective management decisions. The article considers the current problems of accounting for the management of biological assets of agricultural enterprises. The study provided an opportunity to establish the composition and classification structure of biological assets, the process of formation of their initial value at the time of receipt and disposal, to determine the features of valuation and accounting in the accounts. The authors use a dialectical and systematic approach, methods of generalization and systematization, analysis and synthesis. An improved method of accounting for current biological assets of animal and crop production using accounts is proposed, which, in contrast to the existing one, will allow detailed accounting of availability and movement by their types and obtain complete accounting information on value for each group. The practical value of research lies in the development of correspondence accounts for the accounting of biological assets, which will allow decisions to be made to improve the efficiency of their management.

Key words**:** *accounting, long-term biological assets, current biological assets, animal husbandry, crop production, agriculture*

INTRODUCTION

Accounting for agricultural enterprises has certain features that are directly related to the technology of growing biological assets, crop and animal products, which is the basis of this sector of the economy. Agriculture is a special field of production, because in the process of manufacturing finished products, along with financial, logistical and labour resources, natural resources are also used: land and living organisms.

The procedure for accounting for the availability and movement of such resources is quite complex because they are constantly changing: plants go through certain stages of development, animals gain weight, gain age maturity. The separation of biological assets at enterprises in the accounting and economic category is an important stage in the development of both the national accounting system and the agricultural sector. The development and implementation of ARS 30 "Biological Assets" [1], which regulates the accounting of agricultural assets only, is a relevant and justified phenomenon. The use of ARS 30 "Biological Assets" has become widespread in Ukraine, but the use of the provisions of this standard in the enterprise is still problematic and needs to be improved. One of the reasons for this is the lack of scientific research and the lack of practical explanations on certain aspects of accounting for biological assets of crops and animal. That is why the study of the peculiarities of accounting for biological assets of agricultural enterprises is becoming increasingly important.

The issue of accounting for biological assets has been considered by many domestic and foreign scientists-accountants, including Andrushko [2], Arbidane et al. [3], Brick [4], Cherep et al. [5], Daly and Skaife [6], Fischer et al. [7], Khushvakhtzoda et al. [9],

Kuzmovich [10], Ogiychuk [12], Şevciuc et al. [13], Shepel et al. [14], Simition [15] and others.

These authors cover the issues of accounting for biological assets, formation of costs and revenues, determination of financial results in enterprises, formation of information in financial and statistical reporting, organization of accounting of current biological assets for accumulation, grouping, systematization and analysis of consolidated information on business transactions. receipt, movement and disposal of such assets in the course of economic activity to make sound and timely management decisions.

However, without diminishing the value of the work of the above scientists, it should be recognized that they need detailed study and elaboration of methods of accounting and evaluation of biological assets, their classification and taking into account specific features of agricultural production when displaying information about them. These factors determine the relevance of the chosen research topic. The purpose of the article is to study the features of displaying information about biological assets in the accounting system of agricultural enterprises.

MATERIALS AND METHODS

The study used general scientific methods and specific techniques. A methodological basis is a systematic approach, which allowed to determine the place of the accounting system of biological assets in the management of agricultural enterprises. The study used historical and logical analysis – to consider the theoretical foundations of accounting; methods of induction and deduction – to study the general trends in the development of accounting for biological assets; methods of theoretical generalization and observation – to study the regulatory and legal support of accounting for biological assets in Ukraine.

RESULTS AND DISCUSSIONS

The main normative documents in Ukraine that determine the procedure for conducting business operations with biological assets in agricultural enterprises are ARS 30 “Biological Assets” [1], Methodical recommendations on accounting of biological assets [11] and the International Accounting Standard Accounting (IAS) 41 “Agriculture” [8]. According to ARS 30 “Biological assets”, animals or plants that are in the process of biological transformation can provide agricultural products and/or additional biological assets, as well as bring other economic benefits, defined as biological assets [1]. Given this, the simplest delineation of biological assets is their division into biological assets of animal production and biological assets of crop production (Fig. 1).

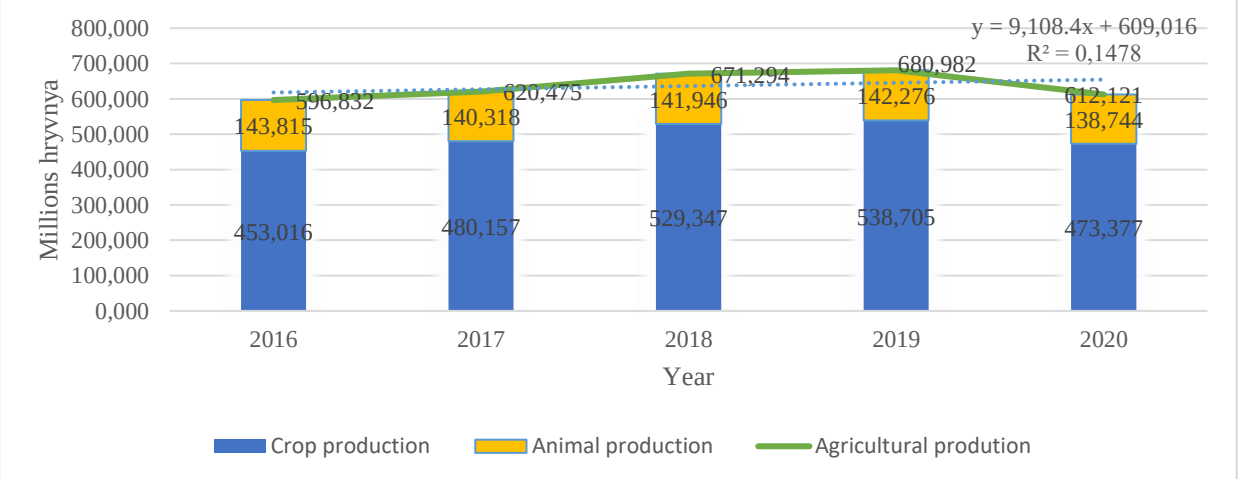

Fig. 1. Dynamics of the value of production of generalized crop and animal products in Ukraine for 2016-2020 (UAH Million)
Source: built by the authors based on statistics [16].

Based on the presented in Fig. 1 of the data shows a significant lead in crop production. In percentages, they range from 75-78%. These two important areas of agricultural activity are inextricably linked. The availability and movement of such resources is a complex, cyclical and dynamic process at the same time, which complicates their accounting.

The organization and methods of accounting have an exceptional impact on the state of biological assets and the efficiency of their use in the production process. This relationship implies the need to study the basic provisions of applicable law in the identification, classification, evaluation of biological assets.

One of the methods of cognition and study of objects related to biological assets is their classification. For ease of perception, the classification of biological assets (BA) is presented in the form of a diagram (Fig. 2).

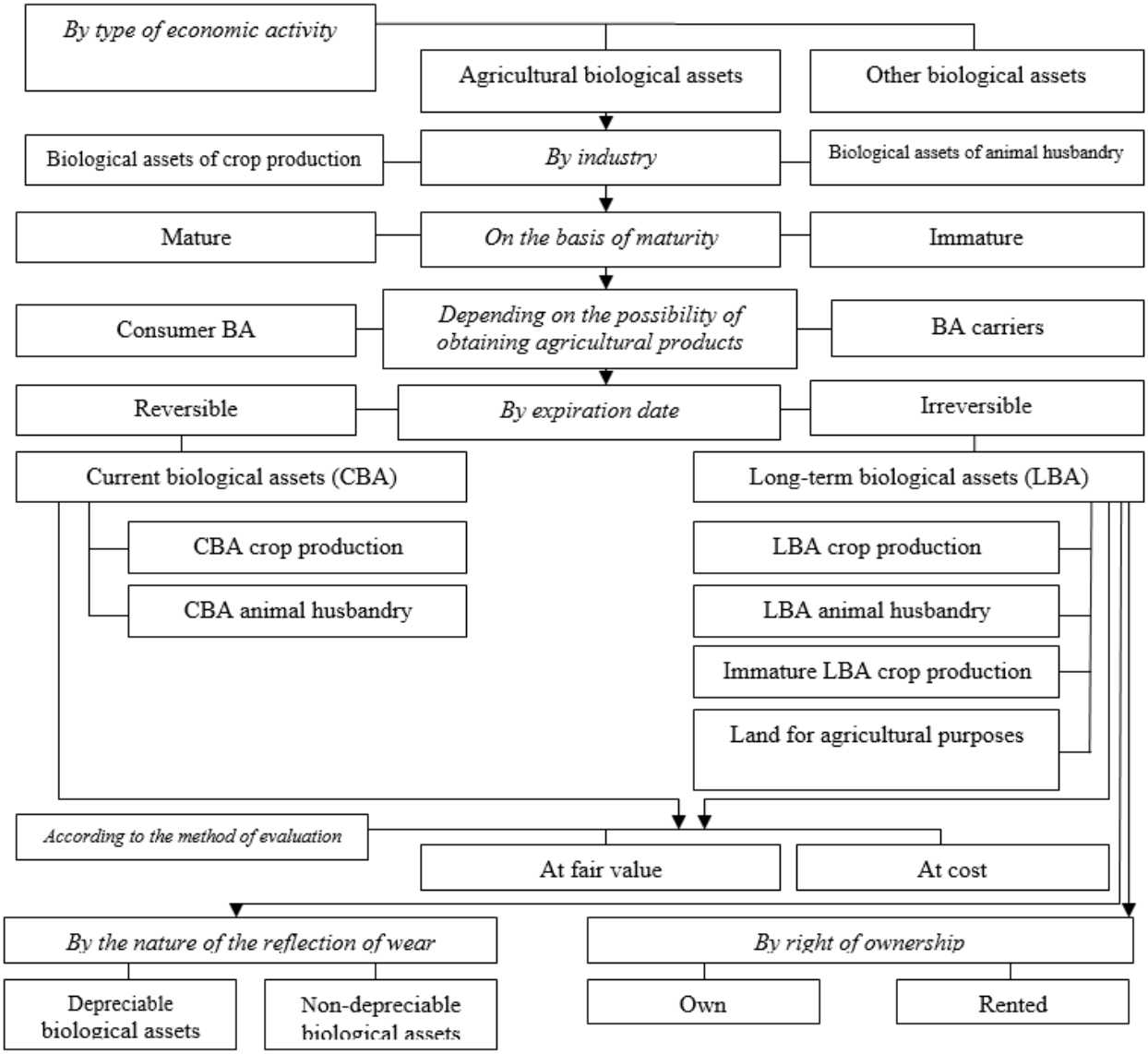

Fig. 2. Classification of biological assets
Source: generalized based on [4, 13, 14].

Examining the classification of biological assets, we found that in accounting, the most common is their grouping by expiration date. It is the division into current and long-term biological assets that are used in compiling the balance sheet. A special classification feature is an approach to the valuation of biological assets, which is due to the presence

of two different options – at fair value and cost. A biological asset and/or agricultural product is recognized as an asset if it is probable that future economic benefits associated with the item will flow to the enterprise and the cost of the item can be measured reliably [8]. The basic approach to the measurement of biological assets is the application of fair value, at which all biological assets and agricultural products at initial recognition and the balance sheet date are measured at fair value with fewer costs to selling. However, the rules of ARS 30"Biological Assets" and the International Accounting Standard Accounting (IAS) 41 "Agriculture" on the valuation of biological assets and agricultural products are not without alternatives [1, 8]. Thus, long-term biological assets whose fair value cannot be measured reliably at the balance sheet date are recognized and recognized at cost, taking into account the amount of depreciation and impairment losses. The separation of the cost approach into a separate classification feature is primarily due to the disclosure requirements for biological assets, as the Notes to the Financial Statements should separately state biological assets not measured at fair value [8].

It is established that the basic approach to the valuation of biological assets is their fair (or market) value, which is expressed by the amount by which you can exchange this asset or repay the debt from the transaction between knowledgeable, interested and independent parties. In domestic practice, mainly use a market approach. There are three types of assessments of biological assets: on receipt; at initial recognition; on the balance sheet date.

The significance of approaches to the recognition and valuation of biological assets on the results of their use and property status of agricultural enterprises and their image and market position necessitated the need to consider the value of these assets. The identification of discrepancies in valuation allows us to state the need to use alternative valuation to address this issue through the formation of appropriate provisions of accounting policies [9]. The given classification of biological assets can be applied by agricultural enterprises, which will allow to properly organize synthetic and analytical accounting, will promote the full disclosure of information [17].

Table 1. Typical correspondence for accounting of receipts of long-term biological assets

Content of business transactions	**Correspondence of accounts**	
	debit	credit
Acquisition of long-term biological assets for a fee		
Received from suppliers - VAT payers at a value excluding VAT	155	631
The VAT tax credit for the supply transaction is reflected	641	631
The costs of LBA transportation are reflected	155	685
The tax credit for the number of transport services of a third-party organization is reflected	641	685
The acquired long-term biological asset is accounted for	162, 164, 166	155
Free receipt		
Accounts received free of charge received by the LBA	16	424
Costs of transportation of long-term biological assets received free of charge by own transport are reflected	155	234
Transportation costs are included in the initial cost of a biological asset received free of charge	16	155
Contribution from the participant of the enterprise		
Received from a participant of the enterprise as a contribution to the authorized capital of the LBA	16	46
Long-term biological assets that were not previously recorded on the balance sheet		
LBAs that were not previously recorded on the balance sheet are recorded at cost	162, 164, 166	746
LBAs that were not previously recorded on the balance sheet are recorded at fair value	161, 163, 165	719

Source: proposed by authors based on [1, 11, 12, 14].

Accounts 16 "Long-term biological assets" and 21 "Current biological assets" are assigned in the Chart of accounting and generalization of information on the

availability and movement of biological assets.

Accounting of long-term biological assets depends on the sources of their income (Table 1). Commissioning of biological assets (perennial plantations) is carried out by a commission appointed by the head of the enterprise and formalized by an act of acceptance of long-term biological assets.

The correspondence of accounts for the disposal of long-term biological assets is given in Table 2.

Table 2. Typical correspondence of accounts for the disposal of long-term biological assets

Content of business transactions	Correspondence of accounts	
	debit	credit
Accounting for the sale of long-term biological assets valued at cost		
The amount of depreciation of the sold LBA, estimated at cost, is written off	134	162, 164
Transferred to assets for sale, LBA, valued at cost	286	162, 164
The residual value of the sold LBA, measured at cost, is written off	943	286
Proceeds from the sale of LBA, valued at cost	377	712
The amount of VAT liability is reflected	712	641
Accounting for the sale of long-term biological assets measured at fair value		
The value of the realized LBA, measured at fair value, is written off	901	161, 163, 165
Accounting for the elimination of long-term biological assets valued at cost		
The amount of depreciation of liquidated LBA, estimated at cost, is written off	134	162, 164
The residual value of the liquidated LBA, measured at cost, is written off	976	162, 164
Derecognised initial cost of liquidated immature LBA, valued at cost	976	166

Source: proposed by authors based on [1, 11, 12, 14].

Table 3. Correspondence of accounts for the receipt of current biological assets of animal product (CBA)

The content of the business transaction	Correspondence of accounts	
	debit	credit
Received CBA from the supplier	213	631
The amount of VAT tax credit is reflected	641	631
Accounting received free of charge CBA	212	718
CBA received as a contribution to the authorized capital was accounted for	212	46
Transferred to CBA in exchange for a similar facility	361	211
The amount of VAT liability is reflected	361	641
Received CBA in exchange for a similar object	213	631
The amount of VAT tax credit is reflected	641	631
Debts were offset	631	361
Domestic agricultural products were transferred in exchange for CBA	361	701
The amount of VAT liability is reflected	701	641
The cost of transferred agricultural products of own production is reflected	901	27
Received CBA in exchange for a different object	213	631
The amount of VAT tax credit is reflected	641	631
Debts were offset	631	361
The results of exchange transactions are determined		
- increase in the amount of cash based on the results of the exchange	311	361
- reduction of the amount of money as a result of the exchange	631	311
The offspring of animals are posted	212	232
The difference between the fair value of current biological assets of animal and the costs incurred for their biological transformation is recognized		
- income from initial recognition	231	710
- costs of initial recognition	940	231
Animals valued at fair value were culled from the main herd	212	163
Rejected from the main herd of animals valued at cost	213	164
The current biological asset of animal husbandry, which was identified during the inventory, was obtained	212	719

Source: proposed by authors based on [1, 11, 12, 14].

The main sources of income of current biological assets of animal product to the enterprise are purchase for a fee; free receipt; contribution to the authorized capital; exchange for similar and dissimilar assets; rearing in the enterprise – as a result of biological transformations, in particular, the offspring of young productive and working cattle, poultry incubation and others.

The procedure for reflecting the receipt of current biological assets of animal product in the accounts is shown in Table 3.

The main products obtained from raising young animals and fattening animals are:

a) increase in live weight of animals during the reporting period (the peculiarity of this product is that it can not be separated from living biological assets; therefore, the increase in live weight is added to the mass of biological assets, and its value increases the value of biological assets);

b) live weight of animals (this is the weight of animals sold, slaughtered in the enterprise, transferred to other groups and left at the end of the reporting period).

Correspondence on the disposal of current biological assets is shown in Table 4.

Table 4. Correspondence of accounts for the disposal of current biological assets of animal product

The content of the business transaction	Correspondence of accounts	
	debit	credit
Revenue from the sale of current biological assets of animal is reflected	361	701
Accrued VAT liability	701	641
The cost of sold CBAs, which are measured at fair value, is written off	901	212
CBA transferred free of charge	949	212
Accrued VAT liability for the free transfer of assets	949	641
Transferred CBA (at fair value) to the authorized capital of another enterprise	143	701
Accrued VAT liability	701	641
The cost of the transferred CBA is written off, which is equal to the fair value	901	212
Young animals were transferred to long-term biological assets at fair value	155	212
The animals in the main herd were posted	163	155
The fair value of CBAs removed from fattening for slaughter in the enterprise is reflected	233	212
The death of animals from the CBA (accounted for at fair value) is written off within the technological norms	232	212
The skins of dead animals were posted	27	232
The death of animals above technological norms has been written off	947	212
Revealed, as a result of inventory, shortages and losses of CBA	947	212

Source: proposed by authors based on [1, 11, 12, 14].

Agricultural products during its separation from biological assets include: in crop production – grain, fruits, berries, vegetables, seeds, green mass, potatoes, roots, hay; in animal husbandry – milk, wool, eggs, honey. Agricultural products are debited from account 27 “Agricultural products” at fair value.

The reflection of operations on the accounting of long-term and current biological assets using the proposed accounts will not only quickly and without additional selection to form financial statements, but also to obtain full information about them for operational control and analysis, organization of efficient agricultural enterprises.

CONCLUSIONS

The results of the study allow us to draw the following conclusions:

-Biological assets – one of the most important components of agricultural production, which determines its results and without which it can not exist. In this context, it is important to properly manage such assets, which cannot be done without a proper accounting system.

-Biological assets are classified according to the period of receipt (provision) of economic

benefits or by term of use into long-term and current. In addition, it is appropriate to distinguish groups of such assets based on: their maturity; branch of agriculture (animal, crop production); the nature of the reflection of wear; by right of ownership; purposes of use; by type of agricultural market; type of assessment; structure. The classification of biological assets by structure is the basis of analytical and synthetic accounting and economic analysis.

-Recognition and valuation of biological assets have a significant impact on the results of their use and property status of agricultural enterprises, as well as their image and market position [18]. The basic approach to the valuation of biological assets is their fair (or market) value, which is expressed as the amount at which the asset can be exchanged or arrears between knowledgeable, interested parties and independent parties. In domestic practice, mostly use a market approach. There are three types of estimates of biological assets: on receipt; at initial recognition; on the balance sheet date.

In our opinion, the proposed system of accounting for long-term and current biological assets will allow us to obtain relevant information in full, strengthen the control function of accounting and promote the organization of effective financial and economic activities of agricultural enterprises.

The complex of theoretical, regulatory and practical issues related to biological assets and inquiries about ways to improve the management of their use requires the development of new types of accounting, able to provide the necessary information to all interested users.

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