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 Research Article

IMPROVEMENT OF METHODOLOGICAL ASPECTS OF RECOGNITION AND ASSESSMENT OF BIOLOGICAL ASSETS

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ABSTRACT

In accordance with the decision of the President of the Republic of Uzbekistan dated February 24, 2020 No. PQ-4611[1] “On additional measures for the transition to international financial reporting standards”. From January 1, 2021, joint-stock companies, commercial banks, insurance organizations and legal entities belonging to the category of large tax payers are required to organize accounting based on international financial reporting standards (IFRS) and prepare financial statements based on IFRS from the end of the year. There are a large number of large taxpayers engaged in agricultural activities in Uzbekistan, and for them, the issues of recognizing biological assets as assets in accounting, evaluating them and reflecting them in financial statements are important in the context of transferring the current accounting system to IFRS.

KEYWORDS

“Agriculture”, Accounting Standard, economic benefits, international financial reporting standards, National Economic.

INTRODUCTION

It is known that the recognition of biological assets and their reflection in financial statements is regulated by International Accounting

Standard [2] (IAS) No. 41 “Agriculture”. According to this standard, a business entity

should recognize a biological asset only if it meets the following requirements:

- if the business entity controls the asset as a result of past events;
- if the business entity has the possibility of future flow of economic benefits related to the asset;
- if the true value or cost of the asset is reliably estimated.

Also, in accordance with IAS 41, a biological asset must be valued at its initial recognition and at the end of each reporting period at its fair value less costs of sale (except in cases where it is not possible to reliably estimate the fair value). It follows that biological assets should be measured at fair value less costs to sell both at the date of initial recognition and at the reporting date.

At this point, it is natural to ask questions such as what is the fair value, how is it formed, what methods are used to estimate the fair value of biological assets on the date of initial recognition and the reporting date, and how is the value of biological assets reflected in the financial statement formed.

It should be noted that in accordance with the order of the Minister of Finance of the Republic of

Uzbekistan dated November 10, 2022 No. 61 “On the recognition of international standards of financial reporting and explanatory texts for use in the territory of the Republic of Uzbekistan”, international standards of financial reporting and explanatory texts are recognized in the territory of the Republic of Uzbekistan. Therefore, the IFRS No. 13 “Estimation of the fair value” is the legal basis for determining the fair value of biological assets and clarifying the information related to the fair value. However, the presence of some problems in assessing the fair value of biological assets and clarifying information on the fair value assessment based on this IFRS creates difficulties in reliable assessment of the fair value of biological assets. Including:

- lack of active market for some biological assets. Because determining the fair value of a biological asset is a valuation based on market data;
- non-availability of accurate sources of information used in assessing the real value of biological assets. This, in turn, does not allow the application of methods for assessing the fair value of biological assets. As a result, the application of the fair value principle in the valuation of biological assets is complicated;

- Lack of qualified personnel in accounting and financial reporting on the basis of IFRS. This complicates the process of applying IFRS in accounting entities.

Also, one of the main problems is the lack of scientific research work on improving the accounting of agricultural activity based on international standards of financial reporting, recognizing biological assets, evaluating them, and reflecting them in accounting and financial reporting. Because the introduction of the National Accounting System into the national accounting system and, as a result, the introduction of new elements related to agriculture, such as agricultural activities, biological assets, agricultural crops, are part of the new reforms that are being implemented in order to improve the information environment for investors, and reflect them in accounting and financial reporting. The issues of harmonizing the system with the National Economic and Social Policy have hardly been studied by the economists of our country. In the scientific works of some economists, only some aspects of improving the calculation of agricultural activity based on the IFRS are highlighted. In particular, the economist B.Yu. Menglikulov [3] researched

and studied some problems in the recognition and accounting of biological assets in animal husbandry, as well as management information supply. In this regard, the economist emphasizes that the concept of biological assets, its accounting as a separate accounting object in our national accounting system and the financial reporting should be followed by the provisions of the 41st IAS. However, the recognition of biological assets, valuation procedures, sources of information used in valuation, valuation methods, including valuation at fair value at the initial recognition and at the end of the reporting period, have not been researched by an economist.

THE MAIN FINDINGS AND RESULTS

Economist F.T. Temirov stated that “In our country, in the national standard of accounting (1- IAS, 4- IAS, 5- IAS, 21- IAS) the section “Accounting of biological assets” has been developed, a manual on accounting of biological assets has been developed . Many organizational and methodological problems have not been solved. In particular, No. 5 “Basic tool” describes the methodological aspect of accounting for biological assets, i.e. accounting for long-term livestock, working and productive animals, as

well as breeding and breeding animals in the 4th IAS. However, it is not specified to consider the plant as a biological asset, to evaluate the biological asset, to combine the synthetic and analytical calculation of the plant, and to disclose the information on the basis of agricultural activity in the financial report [4].

Economist S.N.Tashnazarov expresses his approach to the issue of assessing assets at the true value on the basis of the IFRS as follows: “An active market must be formed to switch to the IFRS. IFRS is based on the system of fair assessment of objects. Therefore, there is a need to develop evaluation mechanisms. For example, inventories are valued at the lower of net realizable value or cost. Real estate, machinery and equipment, and financial assets are measured at fair value. These properties are only valued fairly when there is an active market” [5]. It is necessary to recognize the opinion of the economist that an active market should be formed for the transition to IFRS. Because the existence of an active market allows reliable valuation of biological assets used in agricultural activities at the initial recognition and at the end of each reporting period at fair value less costs of sale.

In contrast to the economists of our country, many foreign economists have researched and studied the issues of accounting for biological assets and reflecting them in financial statements, in particular, evaluating them at their true value, based on IFRS. For example, foreign economists Rubén Dario Marrufo García and Abel Maria Cano Morales stated that “From an accounting point of view, in the financial statements for Colombian agricultural enterprises, in the accounting of biological assets at fair value, they have deducted brokerage costs, taxes and fees from the fair sales price formed in planned markets, among other markets. it is important to consider [6] have indicated the application of biological asset accounting systems and IAS No. 41. According to them, the carrying amount of biological assets in financial statements is determined by deducting costs to sell from their fair value. In this case, economists have classified the composition of sales costs. However, they did not specify the procedure for the formation of the fair value of biological assets less the costs of sale.

Latvian economists Iluta Arbidane and Iveta Mietule [7] have shown the process of determining the fair value of biological assets based on the Latvian Law “On Annual Financial

Statements and Consolidated Financial Statements” and 41 IAS. They are classified as the fair value of a biological asset at the time of initial recognition, the market value of biological assets at the time of recognition, and the value of biological assets reflected in financial statements, the fair value of biological assets at the time of recognition. In our opinion, it is appropriate to recognize the market value of biological assets at the time of recognition as the true value of this biological asset and its value after deducting the costs of sale, as the value reflected in the financial statements of biological assets.

At the same time, the economist L.F. Sitdikova offers an algorithm for accounting for biological assets at their true value in the research work she conducted on improving the accounting of biological assets in agricultural enterprises. One of the organizational and economic measures defined in this proposed algorithm is the reflection of biological assets in accounting at fair value, which it claims provides the most reliable and complete information about the activities of agricultural organizations. In our opinion, it is appropriate to define this activity defined in the proposed algorithm as reflecting in accounting by deducting sales costs from the fair value of

biological assets. Because, in accordance with IAS No. 41, it is established that a biological asset must be valued at the initial recognition and at the end of each reporting period at fair value less sales costs.

Economist N.N. Agoshkova [8] also conducted research on improving the procedure for recognition, evaluation, accounting and financial reporting of biological assets. In particular, the economist recommends an algorithm for determining the fair value of biological assets in the presence and absence of an active market in accordance with IAS No. 41. According to his recommendation, if transactions related to biological assets are carried out in an active market, the fair value of the asset should be determined based on its value in this market. In the absence of an active market, the fair value is determined based on the current actual price of the biological asset, the last transaction price for such biological assets, fatness, weight, breed of animal, varieties of fruit crops and other indicators. It can be seen that the economist recommended mainly classifying the sources of information used in assessing the fair value of biological assets.

Economist L.I. Kulikova, “The 41st IAS considers several alternative options for determining the true value of a biological asset or agricultural product without taking into account the costs of sale” [9] noting that, in determining fair value, the biological asset or agricultural product is classified and described in terms of whether or not there is an active market in its current state and location. In it, the economist recommends algorithms for determining the true value of a biological asset in the presence and absence of an active market, as well as in the absence of market prices or other cost indicators. In our opinion, it is appropriate to use the algorithms recommended by the economist as sources of information used in the assessment of the real value of biological assets. Because they mainly describe what

information should be used in determining the true value of biological assets when there is an active market and when it is not.

Of course, in recognition of the approaches of the above economists to the recognition and valuation of biological assets, we refer to IFRS No. 13 “Estimation of Fair Value”, “this IFRS defines fair value as the price that would be received to sell an asset or pay to transfer a liability in an ordinary transaction between market participants at the measurement date” [10] The terms market participants, operation, asset or liability, and price, which are the main keywords in this definition, are described as follows (Table 1).

1- table

Description of the terms market participants, transaction, asset or liability and price in accordance with IFRS 13[11]

Basic concepts	Explanation
Market participants	Buyers and sellers in the primary (or most beneficial) market for the asset or liability, having all of the following: (a) they are independent of each other; (b) they are aware of the asset or liability and have a reasonable understanding of the transaction through all available information, including information obtainable through routine and customary due diligence; (v) they will be able to enter into a transaction for an asset or liability;

	(g) they seek to carry out a transaction for an asset or liability, meaning that they are not forced or otherwise induced to do so, but encouraged.
A typical operation	A transaction that assumes market exposure prior to the valuation date to allow for marketing activities that are customary and customary for transactions involving such assets or liabilities.
An asset or a liability	A fair value estimate is assumed for a particular asset or liability. Therefore, if market participants can take into account the characteristics of the asset or liability at the measurement date, the entity should take these characteristics into account when estimating the fair value. Such features include, for example: <ul style="list-style-type: none"> (a) the condition and location of the asset; and (b) a restriction, if any, on the sale or use of the asset
Price	Fair value is the price that would be received to sell an asset or pay to transfer a liability in an ordinary transaction in the primary (or most advantageous) market at the valuation date based on current market conditions.

Therefore, according to the above definition, the fair value of a biological asset is the price that could be obtained from the sale of the biological asset in an ordinary transaction between market participants at the valuation date. This price is formed using various valuation methods. In this case, the business entity should use valuation methods only when there is sufficient information to estimate the fair value that is reasonable under the existing conditions. Therefore, it is reasonable to measure fair value

by maximizing the use of observable data sources while minimizing the use of unobservable data sources.

In order to assess the true value and ensure consistency and comparability of the disclosed information in accordance with the hierarchy of the true value established in the 13th IFRS, the sources of information used in the assessment of the true value of biological assets can be divided into three level categories (Fig. 1).

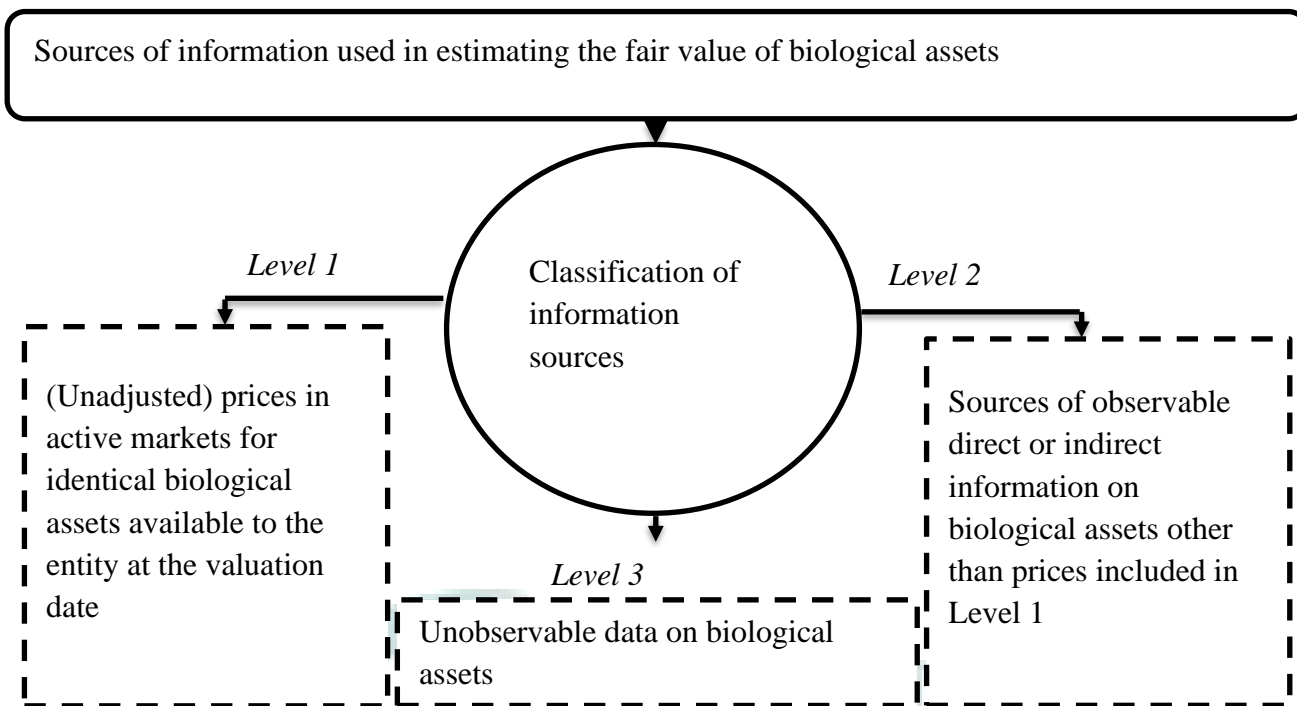


Figure 1. Classification of sources of information used in the assessment of the fair value of biological assets [11].

The conducted studies show that in our republic, the (unadjusted) prices in active markets for the same biological assets, which can be used to estimate the real value of biological assets, i.e., the 1st level information sources, are not observed. That is, there is no active market for the same biological assets. For this reason, we mentioned above that an active market should be formed. Because prices are used unadjusted to estimate the fair value of biological assets only when there is an active market for the same biological asset. This provides the most reliable evidence of fair

value assessment of a biological asset. Therefore, today, business entities are using 2nd level information sources to determine the true value of biological assets. These sources of information include:

- prices for similar biological assets in active markets;
- prices for the same or similar biological assets in inactive markets;

- sources of information other than observable prices for biological assets.

Level 3 sources of information are unobservable sources of information on biological assets. Therefore, an entity should, in certain circumstances, identify sources of unobservable information on biological assets, which may include information it owns, based on the best information available.

Thus, the business entity will need to use valuation methods for which there is sufficient information to be used in estimating the fair value of biological assets. The most widely used valuation methods today are the market approach, the cost approach, and the income approach (Table 2).

Table 2

Appraisal methods used in the assessment of fair value in accordance with IFRS No. 13 [11]

No	Evaluation method	Description
1	Market approach	This approach uses prices and other relevant information arising from market transactions covering identical or comparable (similar) assets and groups of assets.
2	Consumption approach	This approach is the amount that would be required in the current period to replace the service capacity of the asset.
3	Income approach	This approach converts future amounts into a single present (discounted) amount. In this case, fair value estimates reflect current market expectations of these future amounts.

According to the results of the monographic research, it is appropriate to use methods based on the market approach in assessing the real value of assets used in agricultural activities, particularly biological assets. Therefore, we suggest using the following valuation methods based on the market approach to determine the fair value of biological assets (2-fig).

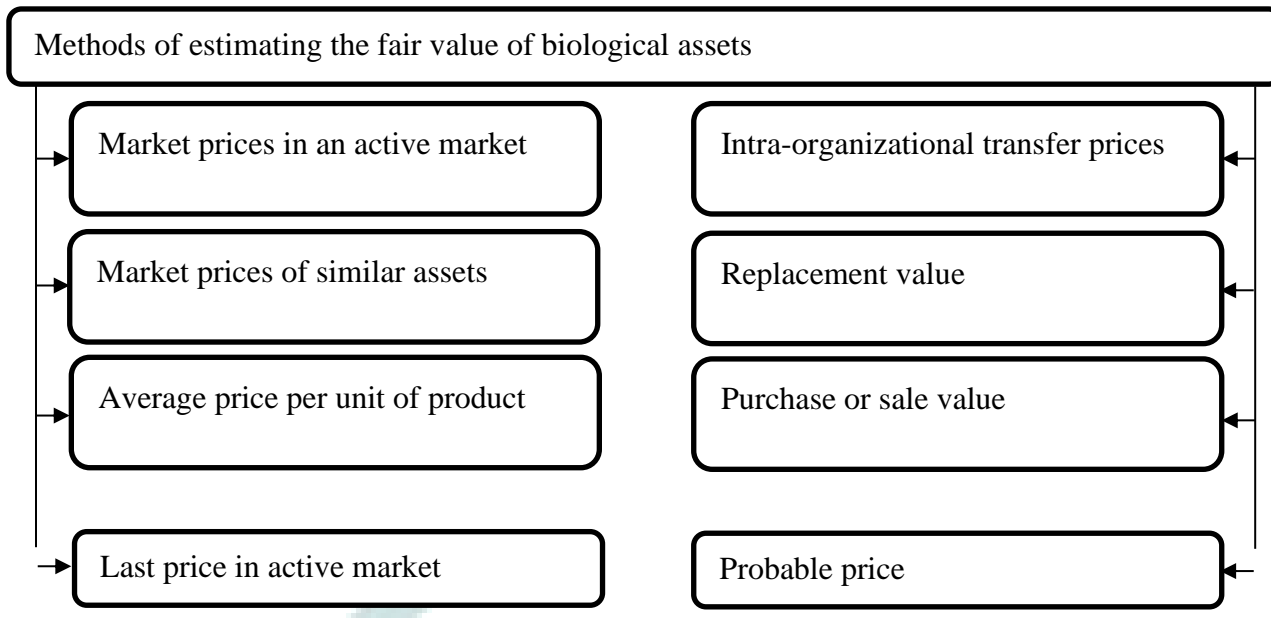


Figure 2. Valuation methods based on the market approach in determining the fair value of biological assets [Developed by the author based on research results].

- We would like to demonstrate the determination of the fair value of biological assets using the valuation methods based on the market approach presented in Figure 2 above, based on the following practical approaches:

- Let's say that a business entity uses the following methods to estimate the fair value of biological assets used in agricultural activities:

- market prices in an active market. This method is used when there are market prices in a market where transactions in biological assets occur with sufficient frequency and volume to provide continuous pricing information. For

example, the volume of commercial fish grown in agricultural activities of the business entity was 1500 kg. The price of 1 kg of commercial fish in the active market is 30,000 soums. Expected costs related to the sale of commercial fish grown in the business entity (transportation costs, fees paid at the sales market and other fees) were estimated as 5,000,000 soums. In this case, the real value of the total volume of commercial fish grown in the business entity is equal to 40,000,000 $((1500 \times 30,000) - 5,000,000)$ soums.

- market prices of similar assets. This method uses prices for similar assets in an active

market or, if no active market exists, prices for the same or similar assets in available markets. For example, the business entity has 100 Simmental cows. There is no active market for these biological assets. However, recently, in the current market, cows with similar characteristics were sold for 25,000,000 soums per head. Expected costs related to the sale of cows in the market were estimated at 20,000,000 soums. In this situation, the real value of 100 Simmental cows is 2,480,000,000 $((100 \times 25,000,000) - 20,000,000)$ soums.

There are many more examples of determining the fair value of biological assets. It is worth mentioning that the business entity may use one or more valuation methods in assessing the fair value based on the specific characteristics of biological assets. Because when there is an active market for biological assets, it is appropriate to use the only valuation method based on prices. Therefore, the judgments used at the valuation date of biological assets may vary. This requires the following to be determined when assessing the fair value of biological assets:

- existence of a specific biological asset that is the subject of assessment;

- the preliminary condition of the assessment, which is appropriate for the assessment of the true value of the biological asset (in a manner consistent with its most correct and effective use);

- existence of the main (or most beneficial) market for the biological asset;

- an appropriate valuation method or methods for valuing biological assets at fair value.

The business entity selects an appropriate valuation method for each type (group) of biological assets, based on considerations that can be applied at the date of valuation of the fair value of biological assets. The business entity should reflect the selected appropriate assessment methods and the sources of information used in their development in its accounting policy and clarify this information in the financial report.

Of course, in the scientific-methodical works of economists and business entities studied as the object of monographic research, there are approaches to the methodology of assessing the true value of biological assets. However, the presented approaches are mainly approaches to the valuation of biological assets at fair value at

the time of initial recognition of biological assets. Also, the review of the scientific and methodological works of some economists shows that the true value of a biological asset and its value reflected in financial statements are treated as the same concept. However, these concepts are different from each other. The fair value of a biological asset is the value estimated through a reasonable valuation method based on the sources of information used in its valuation. The

value of the biological asset reflected in the financial statement is formed on the basis of deducting the expected costs related to its sale from the true value of the biological asset, and the information on this value is disclosed to the users of the financial statement information. Here, we offer the following model of formation of the value of biological assets reflected in the financial statement (Figure 3).

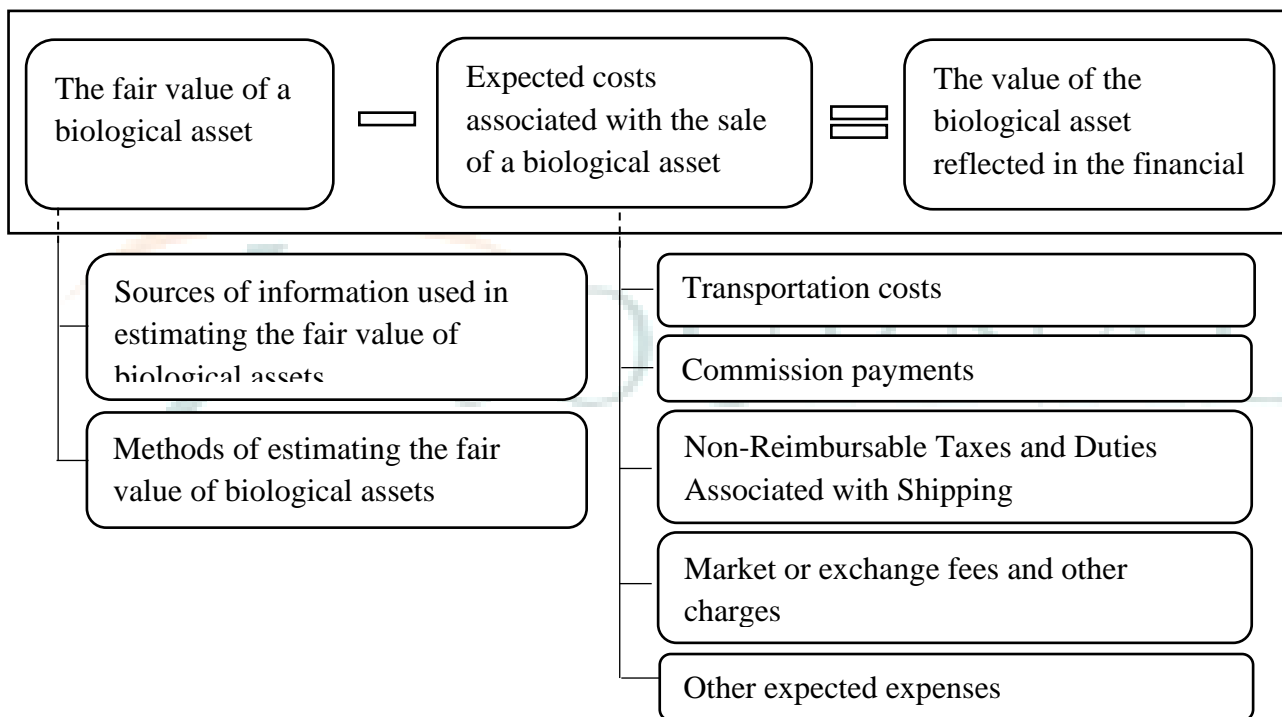


Figure 3. The model of the formation of the value of biological assets reflected in the financial statement [Developed by the author based on research results].

We would like to clarify the procedure for forming the value of biological assets reflected in the financial statement using this model proposed by us using the following practical example. Let's say that there are 100 head of cattle in the livestock sector of the business entity. The real value of these livestock is estimated at 2,000,000,000 soums. The expected costs associated with the sale of livestock in the market were estimated as follows:

- transport costs - 20,000,000 soums;
- the fee paid in the sales market - 10,000,000 soums.

In this situation, based on the above model, if we form the value of livestock, which is a biological asset of the business entity, reflected in the financial report, it will be 1,970,000,000 (2,000,000,000 – (20,000,000 + 10,000,000)) soums. Therefore, the business entity should reflect the value of 100 head of cattle as a biological asset in the financial statement as 1,970,000,000 soums.

CONCLUSION

We believe that reflecting the value of biological assets in the financial statement based on this

model will ensure the correct presentation of information on biological assets and the disclosure of information in the financial statement on it will be understandable to the users of the information.

Thus, as a result of researching and studying the methodological bases of recognition and evaluation of biological assets, the following conclusions and proposals were formed:

- on the basis of international and national experiences, the terms of recognition of biological assets as assets, fair value, market participants, operation, asset or liability and price terms were described in a classified manner. This of course allows for the application of the above recognition terms and terms with the correct interpretation in practice;
- In order to ensure consistency and comparability in the assessment of the real value of biological assets in accordance with the 13th Developed by the author based on research results, the information sources were divided into categories and the procedure for their use was justified;
- the evaluation methods used in the evaluation of the real value were described and

the evaluation methods based on the market approach were proposed for determining the real value of biological assets. The procedure for assessing the true value of biological assets using the proposed methods was revealed on the basis of practical data. It was also justified that the business entity should choose the appropriate valuation methods for each type (group) of biological assets based on the considerations that can be used on the valuation date, and should reflect the sources of information used in their development in the accounting policy and clarify this information in the financial report;

- a model for forming the value of biological assets reflected in the financial statement was proposed. In our opinion, this model ensures that information about the value of biological assets is correctly presented in financial statements and that information about biological assets in financial statements presented to users is understandable.

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