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# METHODS OF ACCOUNTING AND ASSESSMENT OF THE BIOLOGICAL ASSETS AND AGRICULTURAL PRODUCTS IN THE ABSENCE OF AN ACTIVE MARKET (BY THE INTERNATIONAL ACCOUNTING STANDARDS)

### Abstract:

Reform of accounting secures its refinement according to the universally recognized guidelines, assumptions and regulations set out in the International Financial Reporting Standards (IFRS). According to this concept direct application of the IFRS or creation of the national system of accounting and reporting make the relevant information even more reliable. In addition to the financial accounting the application of IAS 41: "Agriculture" supports the agricultural enterprises in management accounting, their development strategies and scientifically substantiated economic decisions. IAS 41: "Agriculture" came into effect in 2003 emphasizing the specifics of agriculture and the methods how the information on farming and biological assets has to be reflected in financial reporting. IAS 41 also establishes Biological assets at their fair value that is noteworthy in terms of practicability. However, IAS application requires the national legislation to be drafted for accounting the livestock and plants and relevant changes made to the standard acts.

Assessment of the biological assets and agricultural products is the biggest emerging challenge in the introduction of IAS 41. As yet, the normative documents in Georgia do not say anything as to the calculation of fair value of biological assets and agricultural products. As said above, the fair value at the active market cannot always be determined. Hence, we suggest to apply the databank we have developed.

According to this method an enterprise may employ the databank in order to evaluate its own food products, perennial plants, live weight gain and brood (a calf, piglet, lamb, and stallion). In the absence of the active market, the suggested databank and methods of definition of biological assets and agricultural products make accurate and transparent assessment and accounting possible. However, it is noteworthy that whatever way the value may be defined in (depending on the availability or absence of the active market), the value determination method is to be reflected in the accounting policy developed in line with the IFRS.

Assessment of the biological assets and agricultural products at their fair value is subject to adjustments, though the suggested method makes for more accurate evaluation of the performance results, transparency of information in the financial statement and efficiency of a company.

### Keywords:

Accounting, Fair value, Exchange, Initial Price, Biological Assets, Analysis of reliability, Active Market, Agricultural enterprises, discount rate, average growth

**JEL Classification:** M41, J43

## Introduction

Reform of accounting secures its refinement according to the universally recognized guidelines, assumptions and regulations set out in the International Financial Reporting Standards (IFRS).

The concept states that direct application of the IFRS or creation of the national system of accounting and reporting make the relevant information more reliable.

Application of the IAS 41: "Agriculture" provisions is important to the agricultural enterprises not only in terms of financial but also management accounting, their development strategies and scientifically substantiated economic decisions.

Assessment of biological assets at their fair value as established by IAS 41 is also noteworthy in terms of practicability.

Under IAS 41: "Agriculture", companies are to assess biological assets and agricultural products at their fair value, which may be determined in case of availability of the active market. It should be said however that nowadays, the active agricultural market is mostly unavailable. According to the accounting standards, in its initial recognition and at the end of each reporting period, a biological asset must be assessed at its fair value less the sale-related estimated costs, save the case when the fair value cannot be accurately estimated. Agricultural products generated from biological assets are to be assessed at their fair value less the sale-related estimated costs at the time of harvest.

Let us discuss how to assess biological assets and agricultural products at the initial stage of development in case of availability of the active market without violating the IFRS.

## Background

Application of IFRS is important not only in terms of an efficient market economy but also for the purpose of attracting investments, stimulating economic growth and partner relationships. Regardless of the uniform International Accounting Standards, there are industries, such as agriculture requiring additional statutory regulation.

IAS 41: "Agriculture", which came into effect in 2003, highlights specifics of agriculture and the way the information on farming and biological assets is to be reflected in financial reporting. Therefore, for the purpose of IAS, national legislation for accounting the livestock and plants should be drafted and relevant changes made to the standard acts.

Assessment of the biological assets and agricultural products is the biggest among the problems emerging in the introduction of IAS 41.

### According to IAS 41,

an enterprise is to assess a biological asset and agricultural products only when:

- a) it has been monitoring them from the outset;
- b) an enterprise may gain or lose the anticipated economic benefit and;
- c) the fair value or prime cost of the asset may be accurately assessed.

**Note:**

**According to IAS 41, fair value is the sum for which independent, interested and well informed parties may exchange an asset.**

In determining the fair value, “well informed” means the interested sellers and buyers, who are aware of the nature, characteristics, usage (coverage) opportunities and the market conditions by the reporting date. Also, it is assumed that the fair value is agreed between the independent parties, which means that each party acts independently, i.e. the parties to the transaction are not maintaining economic relationships. Apart from this, the fair value depends on the location and condition of the asset.

**Example 1**

The fair value of one and the same cow (a biological asset) will differ in Tbilisi and the town of Akhaltsikhe. Consequently, availability of the active markets, for instance in Tbilisi and Akhaltsikhe is important to the calculation of the fair value.

IAS 41 describes agricultural activities as management of the biotransformation subject to accounting. Therefore, it is necessary to create a model of assessing biological assets at fair value according to IAS 41. The model makes it possible to reflect the biotransformation results in financial reporting, which implies change of the fair value of biological assets.

In financial reporting, assessment of the biological assets at their fair value makes it possible to determine the standing and solvency of the enterprises. It will also facilitate a real time analysis of the resources and efficient management of agricultural enterprises.

IAS 41 singles out the active market as the best environment for determining fair value of assets since it is there that transactions involving the same kind of subjects are closed, the buyers and sellers can be found at any time and the price-related information is available. As against this, absence of the active market complicates determination of the fair value. IAS 41 allows for some alternative ways of its computation. In this regard, in order to determine the fair value, along with the market value, the following assessment alternatives may be applied: the in-house transfer price computed according to the inflation, profitability of an enterprise, exchange value, counter value, purchase price, sale price, actual or standard cost adjusted according to the inflation index, capitalized value etc.

IAS 41 describes agricultural activities (farming) as targeted at the management of biotransformation of animals and plants (biological assets), for the purpose of production and sale of agricultural products or generation of surplus biological assets. The standard determines the way of accounting the biological assets during their growth, generation, production and reproduction, as well as initial assessment of the agricultural products at harvesting. However, IAS 41 says nothing about processing the harvested agricultural products even when those are processed at the enterprise

where they were harvested in since processing is regarded as industrial production governed by different standards (namely IAS 2: "Commodity Stocks and Supplies").

Also, the unique description of agricultural activities contained in IAS 41 determines the regulations for stocktaking of the biological assets during their growth, degeneration, production and reproduction, as well as initial assessment of the agricultural products at harvesting. From the initial recognition of the biological assets up to harvesting the agricultural products are assessed at fair value less the estimated sale costs except when the fair value cannot be reliably calculated at the time of initial recognition.

IAS 41 allows for accurate determination of the fair value of the biological assets. The assumption can be rejected only at the time of initial recognition thereof when the information on the market prices is unavailable and the alternative ways of computation of the fair value are not regarded sufficiently reliable, in which case an enterprise is to register a biological asset at its prime cost less the accumulated amortization and depreciation costs. When the fair value of a biological asset can be determined with high degree probability, the enterprise should do so less the estimated sale costs.

Thus, the enterprise is to register the harvested agricultural products at their fair value less the estimated sale costs. The fair value of the harvested agricultural products less the estimated sale costs is to be accounted for in the determination of the net profit (loss) at the time of harvesting.

According to IAS 41, change of the fair value of agricultural products less the estimated sale costs is to be taken into account in determination of the net profit (loss) of the period when the change occurred. Change of the intrinsic properties of a plant immediately results in the growth or decrease of economic benefits of an enterprise.

## Initial Price and Fair Value

In some countries, national accounting standards used to require basing financial reporting on the initial price. The main argument in favor of reflecting the assets and liabilities at their initial prime cost is its higher degree accuracy since the initial assessment can be easily substantiated. There may be several other arguments in favor of initial assessment: streamlined legislation regarding definition and recording the prime cost (initial price), long-standing traditions of accounting and, understandably, scientific studies in the area<sup>2</sup>. However, such kind of assessment considers the asset price in terms of the relevant costs without taking into account its current market price.

Pros and cons for the fair value are given in the diagram below:

**Diagram 1: Positive and Negative Aspects of Assessing the Biological Assets and Agricultural Products at their Fair Value**

Fair Value	
↓	
Positive	Negative

1. "Fair Value is more important, reliable, comparable and understandable in terms of assessment of anticipated economic benefits of biological assets than the initial price thereof (IAS 41)".	1. Fluctuating market prices and cyclicity thereof complicates reliable assessment at the time.
2. The approach allows assessment of surplus biological assets (etc. biotransformation processes) at their fair value by reference to the similar ones available at the active market, which is easier than determination of their value by their prime cost.	2. Application of the fair value requires changes to the standard acts in place and drafting new provisions on the grounds of IAS.
3. Assessment by fair value reflects the current value of assets and liabilities.	3. In some countries, active market of a biological asset may be unavailable
	4. A number of biological assets may not be designed for sale.

The main advantage of assessing at fair value is that the approach is preferred by investors and the other users of the financial reporting information.

**IAS 41 does not prohibit initial assessment when the fair value cannot be accurately determined.**

However, IAS 41 does not prohibit initial assessment when the fair value is inapplicable. Assessment by the initial price is appropriate to Georgia as well.

The difference between assessments by the initial or fair value may have significant impact on the evaluation of the biological assets and agricultural products in accounting.

## **Assessment of Biological Assets and Agricultural Products: Background**

Let us compare results of assessment of biological assets and agricultural products in terms of the historical prime cost and fair value.

### **Example 2**

Analysis of reliability of assessment of the biological assets and agricultural products has given the following results (table 1)

**Table 1: Assessment of the Biological Assets and Agricultural Products by their Prime Cost and Fair Value Less the Sale Costs (1 pc. Gel), 2011**

<b>Kind of biological asset (agricultural product)</b>	<b>Prime cost</b>	<b>Market value</b>	<b>Fair value</b>	<b>Revenue from the sale of a biological asset (agricultural product)</b>	
				<b>By prime cost</b>	<b>By fair value</b>
Cattle and Poultry by live weight	590.06	493.35	387.64	-96.71	-202.42

Table 1 makes unreliability of assessment by prime cost evident. In this case, the fair value less the sale costs and the market value are smaller than the prime cost. Consequently, current assessment of the cattle and poultry by live weight is incorrect.

Today, assessment of the biological assets and agricultural products at their prime cost is incongruent with their current prices. Given the practice in various countries, the biological assets (productive livestock, perennial plants) assessed by their initial price are entered into the balance under the heading: "Fixed Assets", less the depreciation costs. The other biological assets – the two-way cattle, food crop, sheltered ground vegetables (unfinished production costs) – are itemed under the heading: "Negotiable Assets". The practice of accounting the domestic animals (biological assets) also envisages transcribing their book value in the annexes to the financial statement. Revaluation of biological assets by a certain date may be envisaged by the legislation.

Therefore, established practice of accounting by prime cost makes a reliable assessment of assets as of the current date impossible.

## **Computation of Fair Value in Terms of Availability or Unavailability of the Active Market**

According to IAS, the active market:

- a) is the one at which uniform commodities are traded
- b) where there are both sellers and buyers and
- c) the prices are publicly known.

Without the active market, application of IAS 41: "Agriculture" is fairly difficult.

### **Note**

Under IAS 41, if the active market is unavailable, for the purpose of determining the fair value an enterprise applies one or more of the following (if possible):

- a) the latest transaction price providing the economic situation did not changed materially from the date of closing the transaction to the reporting date;
- b) market prices of similar assets with adjustment for differences;

c) statistical basis of the sector, such as the value of an orchard by each export opportunity, bushel or hectare, as well as the cattle price per kg of the meat

The standard implies that the active market may not be available in all the countries and for all kinds of biological assets.

Informational support for the purpose of definition of the fair value of biological assets is an acute problem in Georgia.

Well-developed active markets for biological assets are unavailable in this country. Therefore, alternative information sources, mainly agricultural enterprises have to be used.

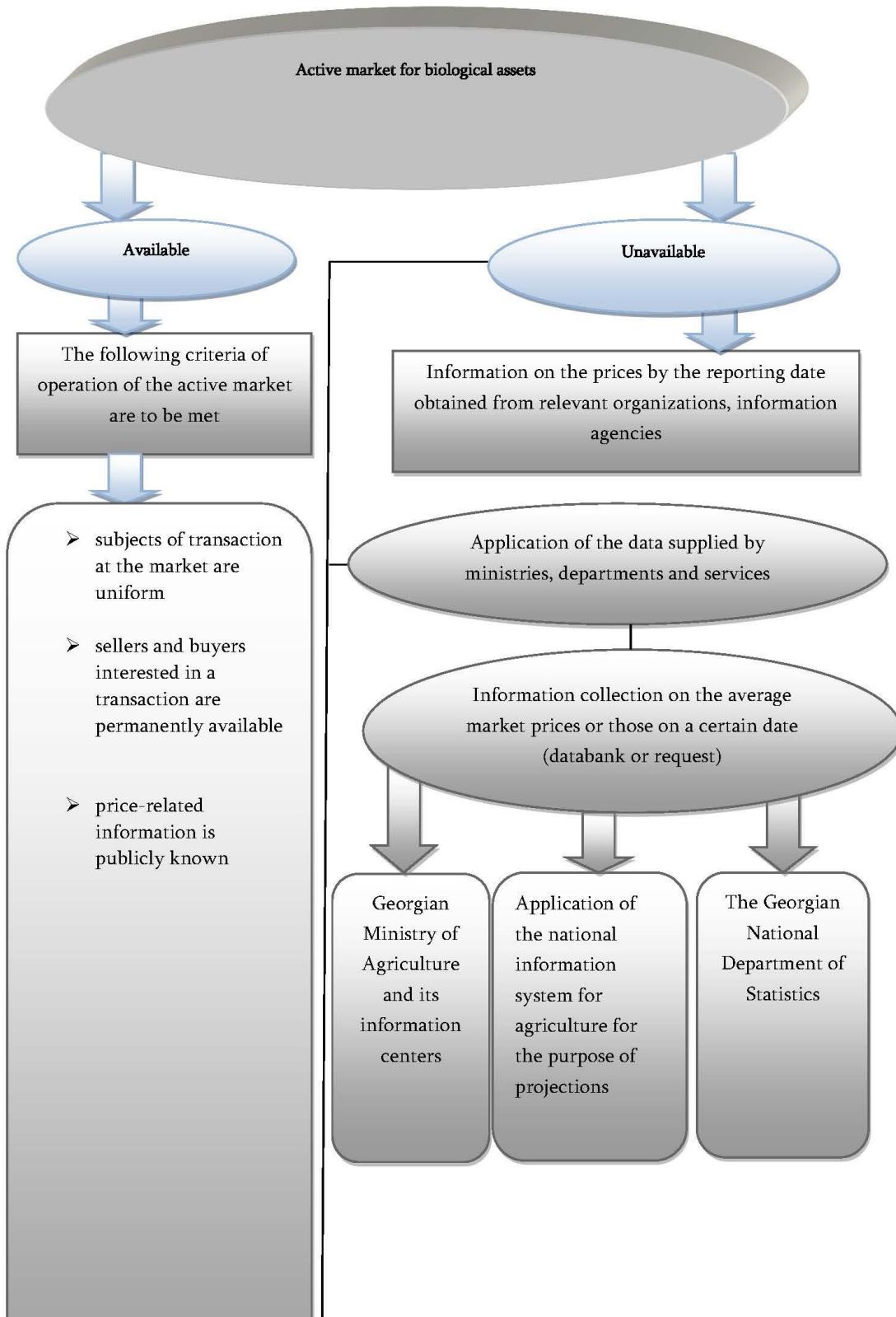
**Well-developed active markets for biological assets are unavailable in Georgia. Therefore, alternative information sources will have to be used.**

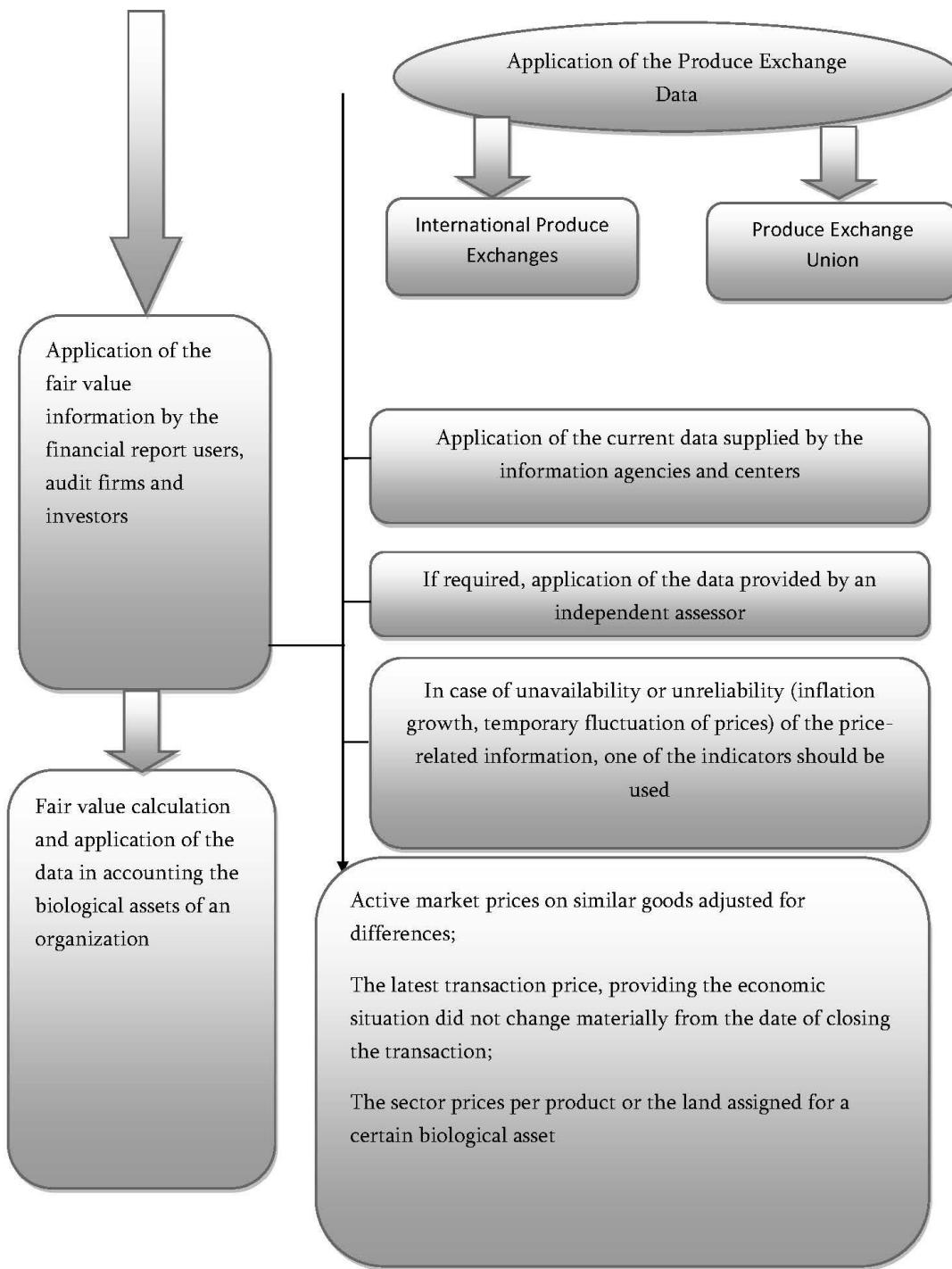
Since it is the enterprises themselves that the IAS 41 requirements apply to, those may be used as active agricultural markets. An enterprise will be able to buy, sell and exchange a biological asset via another ("Agricultural Market"). The following conditions will apply to both the agricultural and active markets: broad availability of price-related information, sellers and buyers interested in a transaction, uniform commodities. We should say that by "the agricultural markets" we mean agricultural enterprises except for private farms (PF) since those differ from the active market in terms of permanent availability of the interested buyers and sellers.

For the purpose of determining the fair value, information on current prices may be obtained from information agencies monitoring the biological asset prices, the Georgian Ministry of Agriculture, statistical authorities and, also, the information provided by the other sources, such as professional literature, Media and commercial agencies. In certain cases, an enterprise may use expert opinion on the price of the agricultural products or a biological asset in question.

Diagram 2 depicts alternative sources of information on the fair value of biological assets, which the enterprises may use when active markets are hardly available in the country.

**Diagram 2: Databank for Determination of the Fair Value of Biological Assets and Agricultural Products**





Let us consider several points on the basis of the databank. The active market is an information source on prices. In the absence thereof, the information on the fair value (or the market price less the sale costs) is provided by ministries, departments, information agencies etc. Relying on the supplied data, the agricultural enterprises will be able to perform assessment according to IAS. Some of the information in Georgia may be obtained from the web-sites of Department of Statistics of Georgia etc.

However, requesting information is more secure in terms of accuracy of the price-related data.

In the absence of the active market, the suggested databank makes it possible to assess fair value of the biological assets and agricultural products and, consequently, draft the financial statement according to the international assessment standards.

## **Evaluation Methods of the Biological Assets and Agricultural Products**

As yet, the normative documents in Georgia do not say anything as to the calculation of fair value of biological assets and agricultural products. As said above, the fair value at the active market cannot always be determined. Hence, our suggestion to apply the databank we have developed.

An enterprise may employ the suggested method in order to evaluate its own food products, perennial plants, live weight gain and brood (a calf, piglet, lamb, and stallion). See our method of evaluation of various biological assets and agricultural products in table 2.

**Table 2: The Way of Evaluation of Biological Assets and Agricultural Products**

Value of the biological asset	Evaluation formula	Interpretation of Meanings
1. Enterprise produced food for own use	Market value of fodder = market value of standard fodder X average index of nutritional ingredient	Market value of the fodder – the fodder unit price in Gel; market value of standard fodder (determined as market price of oats less sale costs), Gel; Average index of nutritional ingredients of the fodder the fair value of which is to be determined
2. Live weight gain	Market value of brood = nutritive value of live weight per 1cwt X ( $W_{\text{by the year end}} + W_{\text{Lost}} + W_{\text{Brood}}$ )	Market value of live weight gain – value of the live weight gain, Gel Market value of live weight per cwt in Gel; $W_{\text{by the year end}}$ – weight of animals by the year end, cwt; $W_{\text{Lost}}$ – cattle lost during a year, including the dead by their weight at the last

		weighing, cwt; $W_{Brood}$ – brood and live weight gain, cwt
3. Brood (a calf, piglet, lamb, stallion)	Brood market price = 1 head weight X market value of 1cwt live weight	Market value of brood – brood value in Gel; 1 head weight – weight of brood per unit, cwt; Market value of live weight per 1 cwt in Gel.

Let us consider the suggested computation of the biological assets' value in more detail.

Given the unavailability of a well-developed active market of food products, the agricultural enterprises may evaluate own produced food products by analogues. We believe that a unit "market" price of own produced food products should be comparable to that of the ingredient contained in mixed fodder. In modern agriculture, standard fodder is a kind of benchmark. Our approach to the computation of fodder price implies market value of the standard fodder.

The standard fodder price is the basis for accurate price computation of any own produced food products.

The positive side of the suggested approach is its reference to the fair value. Apart from this, it includes all the quality parameters of the fodder (not only the composition of nutritive ingredients in a 1 cwt of a certain kind thereof as is usually the case).

At the first stage of value calculation of the own produced fodder, values of three indexes of the most important nutritive parameters, such as average index of nutritional ingredients, metabolic energy index and digestive protein index are to be computed.

#### Note

**Index of nutritional ingredients** = actual composition of nutritional ingredients per 1 kg fodder/ composition of nutritional ingredients per 1 kg standard fodder;

**Metabolic energy index** = actual metabolic energy per 1 kg fodder/ metabolic energy per 1 kg standard fodder;

**Digestive protein index** = actual amount of crude protein per 1 kg fodder/ crude protein per 1 kg standard fodder.

In calculation of nutritional ingredients, we take 1 kg of semidry oats as the standard.

Table 3 reflects composition of nutritional ingredients, metabolic energy and crude protein in certain kinds of fodder (such tables are included in a number of zootechnics manuals).

**Table 3: Chemical Composition of Certain Kinds of Fodder**

		Index					
Name of fodder	Nutritional ingredient per 1 kh fodder	Metabolic energy mJ			crude protein		
		Cattle	Pigs	Sheep	Cattle	Pigs	Sheep
Barley	1,15	10,5	12,7	11,2	85	85	90,7
Bean	1,18	11,1	13,06	11,47	192	195	198,9
Oat	1	9,2	10,78	9,46	79	79	81,6
Beetroot	0,12	1,65	1,74	1,74	9	10	9,6
Earth apple	0,29	2,76	3	3	15	17	16,1
New skim milk	0,13	1,31	1,51	1,31	35	35	35
Sorghum	0,2	2,12	-	2,12	14	-	14,47
Mixed herb silage	0,15	1,78	-	1,42	12,4	-	16
Mixed herb haylage	0,22	3,1	2,79	-	20,2	18,18	21,21
Mixed herb hay	0,44	6,45	-	6,85	56	-	59,5
Raw potato	0,3	2,82	3,19	3,19	10	12	11,4
Dry potato	1,25	11,34	13,08	11,5	52	65	60

Afterwards, average index of nutritional ingredients in fodder, containing the aforementioned coefficients is to be calculated by the method of average geometrical value.

$$\text{Average index of nutritional ingredients} = \text{Index of nutritional ingredients}_{1/3} + \text{Metabolic energy index}_{1/3} + \text{protein index}_{1/3}$$

where: Average index of nutritional ingredients (AINI) is the average index of nutritional ingredients in fodder.

Where the active market is unavailable, value of the own produced fodder should be determined as follows:

**Fodder market value (FMV) = market value of standard fodder X average index of nutritional ingredients (AINI)**

where: **market value of fodder** is the value of a certain kind thereof.

**Market Value of Standard fodder** (defined as market value of oats, i.e. standard fodder less the sale costs).

### Example 3

Let us determine the value of barley. In order to calculate the indexes, we'll use data in table 3 and richness degree of barley, the standard fodder.

Nutritional ingredient index (NII) = 1,15 /1 = 1,15

Metabolic energy index (MEI) = 10,5/9,2 = 1,14

Crude protein index (CPI) = 85/79 = 1,08

Now, let us compute the index of nutritional ingredients in fodder = average index of nutritional ingredient =  $1,15_{1/3} + 1,14_{1/3} + 1,08_{1/3} = 1,12$

Let us determine the value of 1t barley taking into account that fair value of 1t oats is 346.5 Gel (the average price in Georgia is determined on the grounds of the Agricultural Ministry data). The fair value of barley =  $346,5 \times 1,12 = 388,08$  Gel.

Therefore, price of 1t barley for domestic animals is 388.08 Gel, with its richness degree index taken into account.

Obviously, the method is subjective but it is easily computed. Also, price of the non-market products is determined according to the quality indexes thereof.

It has been suggested to determine the value of perennial plants according to the actual market value of a full-grown tree and the number of the perennial plants.

We also suggest evaluating live weight gain of domestic animals on the grounds of the market value per 1 cwt live weight meat.

Alternatively, at the active market, fair value of live weight gain of cattle may be defined as difference between the fair value of the analogous weight class cattle available at the market and that of an animal by previous evaluation. However, we believe the approach is complex due to the scarcity of the same weight class cattle at the developing active market. For that reason, the method we suggest seems more acceptable.

For the purpose of census, the suggested live weight gain formula should be applied by age groups. For instance, in pig breeding, we suggest the following groups:

- a) sow with under 2 months pigs;
- b) pigs of 2-4 months;
- c) young pigs of 4-6 months;
- d) a full-grown animal.

Not only such a breakdown makes it easier to determine fair value of individual groups of animals but it helps in providing a more in-depth economic analysis.

The enterprises registering their animals by sectors, with the youngsters not taken into account (sheep- rabbit breeding, game propagation) the value is computed by the

suggested formula, with the age of an animal disregarded. Thus, various enterprises employ different accounting systems by the animal age groups. Meanwhile, the formula we suggest implies value computation either sector-by-sector or the animal age groups.

Brood (calf, pig etc. domestic animals) determination implies generation of the market price per animal weight and the one per cwt live weight. In evaluating the brood, fair value is more applicable than prime cost. The developed method will make it possible not only to evaluate the brood (a calf, a pig etc.) at fair value but by the weight of newborn animals, as well (qualitative description).

## New Standard for the Fair Value

Since 1 January 2013, enterprises, including the agricultural ones have had to apply new standard IFRS 13: "Fair Value Measurement" for accounting reasons. The said standard generalizes requirements for determination of fair value reflected in the applicable standards. The new standard introduces uniform approach to all the assets, including the biological ones, which should be assessed at their fair value. Assessment at prime cost etc. alternatives (capitalized value, exchange value) should be applied only in exceptional cases.

## Methods of Accounting the Biological Assets of Agricultural Enterprises by the International Financial Reporting Standards

Agricultural enterprises are to apply IAS 41: "Agriculture" for the purpose of accounting the following:

- biological assets – animals or plants;
- agricultural products at harvesting – yield of the biological assets.

The yield of the biological assets should be evaluated at their fair value at harvesting. When IAS 2: "Commodity Stocks and Supplies" comes into play, the agricultural products are evaluated at their prime cost. In terms of evaluation of the ready agricultural products, the provision of IAS 41 may be applied as follows (table 4):

**Table 4**

Index	Formula	Index values	Calculation for "Kabadoni" Agro-industrial complex
1	2	3	4
Fair value by harvesting	$WC=PC-IICP$ (1.1)	MV – market value of 1 cwt ready product ESC - Estimated sale costs per 1 cwt ready product	$WC=334.25-5.51=328.74 \text{ Gel}$

Amount of ready product by fair value	$Q_{CH}=WC \times BII$ (1.2)	TP - Total production of ready product, cwt	Q SP = 328.74 Gel X 392 278  cwt=128 957 Gel
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For the purpose of applying IAS 41 by "Kabadoni" Agro-industrial complex, let us determine the fair value by the suggested method of capitalized cash resources broadly employed in market economies. However, in case of fluctuating inflation rates, it's not always applicable due to the complexity of defining the relevant interest rate. Given the seasonality of agricultural products, the method makes it possible to project the cash flow yield by the structure, volume, time and frequency thereof, as well as determine the interest rates the prospected value is to be determined by.

Essentially, the method implies determination of cash flow by discount rate on the assessment date.

In terms of mathematics, discount rate is a percentage rate applied in revaluation of the anticipated incomes within the uniform current value. Depending on the specifics and prospects of an enterprise, one of the following may apply:

- calculation by liquidation value, in case of impending bankruptcy of an enterprise and sale of all its assets;
- method of weighted average cost of capital used in forecasting minor investment projects;
- build-up method - makes it possible to define the discount rate for the assessment of a business or its individual assets and liabilities.

Upon determination of the discount rate, the computation is performed by the Gordon Growth model according to which the value of the prospected cash flows is calculated by capitalization rate, i.e. the difference between the discount rate and long-term growth rates of the capital subject to evaluation. If there is no growth, the capitalization rate is equal to the discount rate. The model relies on the assumption of prospected steady earnings.

The following formula is applied in the calculation of fair value by the Gordon Growth model:

$$S=Vt+1/(K-g)$$

where:  $Vt+1$  is the prospected earnings in a relevant period in Gel.

K – discount rate, %

g – average growth rate of sales revenue.

Given the specifics of organizations of the said agro-industrial complex, such as the sale of products and management of turnover and commercial risks, they should not employ the cumulative method in the determination of the discount rate.

Table 5 reflects calculation by Gordon Growth Model recommended for "Kabadoni" Agro-industrial complex.

**Table 5: Assessment of Fair Value of the Ready Agricultural Products (Cereals and Legumes) by Gordon Method**

Initial Data of an enterprise		Calculation method	Calculation for “Kabadoni” Agro- industrial complex, in thousands Gel
Index	Value		
1	2	3	4
Rate of return on capital in the absence of risks	0.115	Discount settlement rate	$0.115+1.5=1.63$
Surplus for the assessment of contingency costs depending on the volume of production	1.5	Discount rate, %	$1.63-0.443=1.187$
Average growth rate of income, %	0.44.3	Fair value by Gordon method	262 $400/1.187=2210614$

It should be said that the fair value of the products sold by “Kabadoni” Agro-industrial complex amounted to 239 266 Gel. Obviously, the enterprise sold its ready products assessed at fair value for a fairly large sum.

Incidentally, the said method is pretty subjective and allows for a number of assumptions.

However, it still has several advantages: firstly, there is no alternative to it to this day, and secondly, the fair value and discount rate are computed in the management accounting system, with a human factor playing a significant part.

IAS 41: “Agriculture” states that biotransformation consists of production growth, degeneration and reproduction resulting in the qualitative and quantitative changes, such as change of an asset during its growth (increased number of animals and plants or a better quality thereof); degeneration (reduced number of animals and plants or deterioration of their quality); reproduction (breeding and cultivating extra animals, plants); production of agricultural products.

The biotransformation changes of biological assets are to be reflected in accounting, namely in the computation of net profit or loss. Performance of an enterprise cannot be evaluated unless the biotransformation is taken into account. The way of accounting agrees with the accrual method. For the purpose of convenience, as well as entering information on biological assets assessed at their fair value into its financial statement, an enterprise may categorize them as consumable and fruit-yielding.

The consumable biological assets are harvested or sold. The instances of the consumable biological assets are fattening animals or those for sale, cereals etc.

Fruit-yielding biological assets may be divided into ripe and unripe ones. As against the latter, the former have reached the parameters that make them fit for regular harvesting.

The biological assets, such as plants rooted in the ground (e.g. grain crop, fruit-yielding shrubs, fruit -trees) are registered separately from the land they grow on, which, according to IAS 16: "Fixed Assets" should be evaluated at prime cost less depreciation costs. If an agricultural land is reflected in a financial statement according to IAS 40: "Investment Property", it should be assessed at its fair value or prime cost less depreciation costs.

Biological assets may be recognized in the accounting records of an agricultural enterprise if:

- the enterprise controls the asset as a result of past events;
- the enterprise is likely to benefit from the asset by way of agricultural products etc. earnings;
- the asset can be assessed at its fair value or prime cost with sufficient degree of probability.

Control over an asset can be proved by the title to it or the relevant land or a long-term lease contract. As to animals, the zootechnic registration card issued at birth or acquisition will be sufficient evidence. In the assessment of biological assets at their fair value, the incomes, costs, profit and loss are to be specified. Incomes from agricultural activities are determined by the fair value of the agricultural products calculated at the recognition thereof or the one changed by the next reporting date.

The state subsidy related to a biological asset reflected at its fair value is not restricted in the reporting period it was provided in. The prime cost less the depreciation costs that the biological assets may be assessed by at their initial recognition may also be considered as incomes.

The agricultural costs are made up of inventory holdings, labor costs, social expenditure, amortization etc. costs incurred in the ordinary course of business.

## Conclusion

In the absence of the active market, the suggested databank and methods of definition of biological assets and agricultural products make accurate and transparent assessment and accounting possible.

It is noteworthy that whatever way the value may be defined in (depending on the availability or absence of the active market), the value determination method is to be reflected in the accounting policy developed in line with the IFRS.

Although assessment of the biological assets and agricultural products at their fair value is subject to adjustments, the suggested method makes for more accurate evaluation of the performance results, transparency of information in the financial statement and efficiency of a company.

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