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Measurement And Disclosure Of Biological Assets In Accordance With Local Bases And International Standards

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Abstract;
The research aims to clarify the measurement and disclosure of biological assets in the light of local bases according to accounting base 11 (Accounting in Agricultural Activity), and in light of international standards in accordance with the International Accounting Standard IAS41 (Agriculture), and biological assets are characterized by a set of characteristics that distinguish them from other assets such as growth, reproduction and decay, This distinguishes led to the specificity of measurement and disclosure of these assets, which need continuous valuation, and the International Accounting Standard IAS41 addressed the problems of measurement and disclosure of these assets based on fair value, and with Iraq's Attention to adoption international accounting standards in all sectors, including the agricultural sector, so it stands out The research problem is that the accounting base 11 approved by the Accounting and Oversight Standards Board in 1998 does not meet the requirements of measurement and disclosure of these important assets. These assets are going through, as it takes into account all the quantitative and qualitative changes that occur in the biological assets, in addition to Market price changes and thus this measurement provides accounting information with honest representation, while the most important recommendations reached by the researcher, the adoption of international accounting standards has become an urgent need, especially the adoption of the IAS41 standard in the measurement and disclosure of biological
Assets at fair value in Iraqi agricultural economic units.

Keywords: Standard IAS41, Accounting base 11, Biological assets

1- Introduction

Agricultural activity is one of the most important resources for economic development as it receives the attention of many countries of the world, and this activity plays an important role in the economic, environmental and social aspect, This activity includes a group of assets called biological assets and these assets are Features by unique characteristics where they go through many stages of biological transformation such as growth, reproduction, production and decay and these stages cause quantitative and qualitative changes in these assets, Biological assets both plant and animal contribute to provide of food security as well as economic security by supplying the markets with their products which are included in many food industries and these assets represent the main activities of agricultural economic units, Biological assets need accounting treatments that are accurate and appropriate with their nature, so in 2003 the IASB issued IAS41 International Accounting Standard (Agriculture) and in light of this standard alternatives are used for measurement and disclosure of historical cost in the valuation of

biological assets, is measurement and disclosure at fair value, In 1998, Accounting base (11) was issued by the Accounting and Oversight Standards Board in Iraq and specialized in agricultural activity, and the accounting base (11) did not been updated after the issuance of IAS41 and did not consistent to the many changes that have occurred in the Iraqi and international economic environment, After the adoption of international standards by the Iraqi government in the banking sector as of a year ago2016, And it must be adoption of the economic units the standards start from the fiscal year 2022, The adoption of international standards enhances the reliability of financial information and the transparency of financial statements to support the needs of users of accounting information
investors and others and help them make rational decisions.

2- Methodology and Literature Review;

Problem of research

Biological assets are Feature by a set of characteristics that distinguish them from other assets such as growth, reproduction and death, and this distinction led to specificity in the measurement and disclosure of these assets, which need to be Continuous valuation, IAS41 has Processed the measurement and disclosure problems of these assets by Based on fair value, With Iraq's Attention to adopt international accounting standards in all sectors including the agricultural sector, Therefore, the problem of research by the failure the accounting base (11) approved by Accounting and Oversight Standards Board in 1998 to the requirements of measurement and disclosure of these important assets, The problem of research can be formulated by the following questions;-

1-Does the measurement and disclosure of biological assets in accordance with accounting base 11 provide appropriate information to users about these assets?

2-The possibility of adopting the international standard IAS41 in the measurement and disclosure of biological assets to enhance the appropriateness of accounting information.

importance of research:

The importance of research shows the importance of agricultural activity, it represents the main element of economic development and with the aim of encouraging investment and attracting investors to this activity, and helping them in making rational decisions, especially with regard to measurement and disclosure of biological assets, and for Iraq's orientation towards the adoption of international accounting standards, including the international standard IAS41 and for the specificity of biological assets, this research came as a road map for the adoption of this standard.

The Objective of the research;

The research aims to achieve the following;-

- Indicate the intellectual bases on which the measurement and disclosure of biological assets in the local and international environment.
- Indicate the fundamental differences between the application of the accounting base(11) and IAS41
-The possibility of adopting the International Accounting Standard IAS41 in the Iraqi environment.

Research Hypothesis;

answer the questions of the research problem and achieve the objectives of the research, the following hypotheses can be formulated

Hypothesis 1: The accounting base11 did not the requirements for measurement and disclosure of biological assets in Iraq.

Hypothesis 2: The adoption of the IAS41 standard in the measurement and disclosure of biological assets in Iraq enhances the relevance of accounting information.

Literature Review;

Safawi ,(2016)

(The use of fair value in the valuation of biological assets and their impact on enhancing

the quality of financial reporting to companies of the agricultural sector in Iraq).

The study aims to explain the impact of the adoption of a fair value approach in the valuation of biological assets in agricultural companies in enhancing the quality of accounting information, and the most important conclusion reached by the study is the use of the fair value approach in the valuation of biological assets provides more appropriate information and enhances the predictive ability of users to better estimate the future benefits of biological assets.

Sytnik O. E, (2016)

(Accounting Aspects of the Practical Application of IFRS IAS41 "Agriculture" in Agricultural
Organizations).

The study aims to analyze aspects of the practical application of IFRS IAS41 "Agriculture" in agricultural organizations, because of the need to introduce accounting practices of agricultural organizations with international standards, while the conclusions reached by the study that each agricultural unit specifies in accounting policies specific procedures for recording accounting information for biological assets and the results of their biological transformation.

Lotfy et al.,(2018)

(Using the Fair Value Method in Valuing Biological Assets in order to Increase the Efficiency and Effectiveness of Financial Statements).

The study aims to use the fair value method to evaluate biological assets and increase the efficiency and effectiveness of financial statements, in addition to strengthening the confidence of the beneficiaries of the accounting information contained in the financial statements, and the most important conclusions reached by the study is that the accounting measurement of biological assets at fair value is to show the actual outputs of assets in real terms in order to achieve information efficiency financial statements.

Węgrzyńska & Nowotarska, (2021)

)Measurement and Evaluation of Biological Assets: A Research Study(

The study aims to identify the factors that influence the choice to measure and evaluate the biological assets of two selected provinces in Poland, and the most important conclusion of the study is that most agricultural economic units are not users of IFRS, the measurement of biological assets and agricultural products according to the International Accounting Standard IAS41 means a change in the measurement approach.

3- Theoretical biological assets

The concept and nature of biological assets

The importance of biological assets is highlighted as a source of revenue or a large income for agricultural economic units because they represent many activities such as forestry, vineyards, and livestock, so this type of asset usually appears in the list of financial position of agricultural economic units,

Biological assets change to increase and decrease naturally and this is what distinguishes them from other assets, it is important to note that the term "biological assets" is unique in the field of accounting for the purpose of clear classification and identification of assets owned by economic units**(https://corporatefinanceinstitute.com,2021.11.10).**

Biological assets are one of the other types of assets, and are used in agricultural activity and have many characteristics that distinguish them from other assets, these assets go through several stages such as the processes of growth, reproduction, and decay, and the resulting quantitative and qualitative changes, reflected in the processes of recognition and accounting measurement(**Safawi,2016;28).**

Biological origins go through many stages that cause quantitative and qualitative changes and these stages are called biological transformation, which can be reviewed as follows;-:

According to the accounting base (11) Biotransformation means the processes of reproduction, growth, and decay that all-cause qualitative and quantitative changes in the animal or plant, reflected in the increase or decrease in the value of living assets **(Accounting and Oversight Standards Board in 1998, accounting base 11: 1).**

According to **IAS41**biotransformation means the processes of growth, decomposition, production, and reproduction that cause quantitative or qualitative changes in biological assets and cause biotransformation to the following types of results;- **(IFRS,2022:Part A, IAS41;1615)**

1- Changes in the original through

- Growth(an increase in quantity or an improvement in the quality of an animal or plant).

-Decay (decrease in quantity or deterioration in the quality of an animal or plant).

-Reproduction (production of live animals or additional plants).

2-Production of agricultural crops such as tree juice, tea leaves wool, and milk.

The term biological assets have been mentioned in many accounting standards issued by professional organizations, and accounting standards and local guidelines of some countries have called these non-human organisms biological assets, and Table 1 The concept of biological assets according to the International Accounting Standards issued by professional organizations and local accounting guidelines and rules are as follows;-

Table (1) Concepts of biological assets

Source	Concept
Iraqi Accounting Base (11) for the year 1998 by **Accounting and Oversight Standards Board in 1998 of the Republic of Iraq.**	**They are the living groups of plant and animal varieties owned by agricultural economic units, for the purposes of production or trade (sale).**
International Accounting Standard IAS41 2003. **(IFRS,2022:Part A,IAS41,1613)**	**The biological asset is a living plant or animal.**

Source: Preparation of the researcher based on the sources mentioned in the table.

Classification of biological assets according to the International Accounting Standard IAS41.

Biological assets are classified according to IAS41 into two types;- **(IFRS,2022:Part A,IAS41,1618).**

1- Biological assets for consumption

Assets that will be harvested as an agricultural product or sold as biological assets, Examples of biological assets for consumption are cows for meat production, cows for sale, fish on farms, crops such as barley, a product that grows on fruitful plants and trees that are a purpose for the wood.

2- Biological assets of production

These assets are different from the biological assets of consumption, such as cows from which milk is produced, and fruit trees from which fruit is harvested.

Classification of biological assets according to the accounting base (11)

Biological assets are classified according to accounting base (11) into two main types, animals and plants;- (**Accounting and Oversight Standards Board in 1998, Accounting base 11:2-3).**

1- Animals

Wealth means animals owned by agricultural economic units for the purpose of obtaining their products or for the purpose of fattening and breeding them with the purpose of trading them or using them in production.

-**production herd**: It means animals that are not for sale but are sold when they become old or for some other occasional reason, such as egg chickens, or cows for milk production.

- trade herd; It means cows for sale and fattening, sheep, horses**.**

2-Plants

It includes plants for the purpose of agricultural production, which are classified into two main types;-

-Seasonal agriculture: It is divided into two types of seasonal crops represented in (legumes, cereals, oilseeds, and fodder crops) and vegetables (cucumbers, tomatoes, leaves, potatoes, and onions).

- **perennial crops**; Implants for more than a year are considered to be a fixed asset, and these plantings usually go through three stages, namely the period of Create and configuration, the period of fruiting, the period of decreasing and decay, such as orange trees, pomegranates.

3- Discussion Research Objectives and hypotheses

The requirements of the International Accounting Standard IAS41 compared to Accounting base 11 (Accounting in Agricultural Activity) that was issued Accounting and Oversight Standards Board in12 /30/1998, To be applied to the financial statements for the financial year ended 12/31/2000, Table 2 shows the differences between the accounting base 11 and IAS41:-

Table(2)Comparison between IAS41 and Accounting base(11)

Comparison Type	International Accounting Standard IAS41	Accounting base 11	Comparison Analysis
objective	The objective of this standard is to describe accounting processing and disclosures related to agricultural activity.	-Provide accounting knowledge for various accounting activities. -Identify and clarify the principles adopted for the biological assets transformation processes of living assets. - definition of the bases used in the assessment of the biological of animals and plants.	**IAS41 is objectively consistent with accounting rule 11, the difference is that IAS41 focused on measurement and disclosure so IAS41 is more comprehensive in terms of objective. Accounting base11 was not included in the objective and the disclosure paragraph focused on measurement.**

scope of application	-biological assets, except for bearer plants -agricultural produce at the point of harvest; and -government grants	-Accounting rule 11 applies to all economic units engaged in agricultural activity	**The scope of application under accounting rule 11 is comprehensive and there was no exception compared to IAS41.**
Recognition and measurement	-the entity controls the asset as a result of past events; - it is probable that future economic benefits associated with the an asset will flow to the entity; and - the fair value or cost of the asset can be measured reliably**.** - Biological assets shall be measured on initial recognition and at the end of each reporting period at their fair value less costs to sell, except for the case described in paragraph 30 where the fair value cannot be measured reliably. - Agricultural produce harvested from an entity's biological assets shall be measured at its fair value less costs to sell at the point of harvest. **Gains and losses** -A gain or loss arising on initial recognition of a biological asset at fair value less costs to sell and from a change in fair value less costs to sell of a biological asset shall be included in profit or loss for the period in which it arises. -A gain or loss arising on initial recognition of agricultural produce at fair	Accounting base (11) did not indicate any conditions for the recognition of biological assets. - valuation of the varieties of the productive herd at purchase prices in addition to all the costs spent on the animal until it enters the production stage. -When purchasing new animals and multiple purchase prices, they then depend on the rate of cost price (standard costs). - As for the births intended for the productive herd, the expenses spent on them are capitalized until they enter the production stage. - valuation of the varieties of the trading herd at the cost of production or at the Net realizable value whichever is low. **Seasonal Agriculture** The yield prepared for sales such as barley and wheat is evaluated at the cost of production or by the Net realizable value, whichever is lower. - The yield used as food (feed) is evaluated on the basis of the average cost of production**.** - The yield used as food (feed) is evaluated on the	**-There is a difference in terms of measuring biological assets between the accounting base 11 and the international accounting standard IAS41;-** **-The biological assets are measured according to the IAS41 standard at the fair value less costs to sell, while biological assets are measured according to the accounting base 11 at the cost or in Net realizable value, whichever is lower.** **- As for newborns, the expenses spent on them are capitalized until they enter the production stage.** **-IAS41 takes into account the valuation of certain biological assets at the point of harvest while accounting base 11 does not take this into.** **- IAS41 takes the harvested production from biological assets uniformly, while accounting base 11 separates multiple types of products separately.**

	value less costs to sell shall be included in profit or loss for the period in which it arises. **<u>Government grants</u>** -An unconditional government grant related to a biological asset measured at its fair value less costs to sell shall be recognized in profit or loss when, and only when, the government grant becomes receivable. -If a government grant related to a biological asset is measured at its fair value less costs to sell is conditional, including when a government grant requires an entity not to engage in specified agricultural activity, an entity shall recognize the government grant in profit or loss when, and only when, the conditions attaching to the government grant are met.	basis of the average cost of production. - The yield prepared for germination such as seeds is evaluated at the cost of their production or at the Net realizable value, whichever is lower. - valuation of agriculture (incomplete production) at the end of the period at the cost spent on that cultivation from the expenses of plowing, fertilizer, and any other expenses up to the date of valuation. **<u>Perennial plantings</u>** - The amounts spent on perennial crops during the period of their composition and Created and before the date of fruiting shall be treated as capital expenditures, while during the fruiting period the amounts spent shall be treated as revenue expenses. - As perennial crops age, they suffer from decreasing and decay, and this decreases their productive capacity. - Accounting base 11 did not address government grants.	**- IAS41 did not treat Perennial plantings because they are fixed assets are within the IAS16 standard of accounting for fixed assets, and only their fruits (harvested product) are treated at fair value less costs to sell while accounting base 11 treated perennial plantings during the stage of their formation and Create capital expenditures before fruiting, and the fruits they produce are considered expenses on which they have been spent as revenue expenses.** **-Accounting base 11 did not indicate gains and losses resulting from the initial recognition of biological assets because it did not depend on fair value in the measurement.** **-There is a difference between IAS41 and Accounting base 11, as accounting base 11 did not indicate the recognition of government grants.**
Disclosure	-An entity shall disclose the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell biological assets.	-The asset values of animals must be disclosed clearly and independently in the financial statements each according to its purpose and the policies adopted in its valuation. - Disclosure of the amounts realized from the sale of	**-IAS41 discloses gains and losses arising when valuing at fair value.** **-Accounting base11 discloses the amounts realized from the sale of biological assets.**

	-An entity shall provide a description of each group of biological assets. -An entity is encouraged to provide a quantified description of each group of biological assets, distinguishing between consumable and bearer biological assets or between mature and immature biological assets. An entity shall present a reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period. **Additional disclosures for biological assets where fair value cannot be measured reliably.** If an entity measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses at At the end of the period, the entity shall disclose such biological assets: - description of the biological assets; - an explanation of why fair value cannot be measured reliably; - if possible, the range of estimates within which fair value is highly likely to lie; - the depreciation method used; - the useful lives or the depreciation rates used; and - the gross carrying amount and the accumulated depreciation	living assets according to the type of those assets, whether they are intended for the purposes of sale, they are considered the revenues of the current activity, If it is intended for purposes and production, it is considered capital revenues. - Disclosure of living assets intended for sale purposes that can be managed within the revenues realized internally. - Disclosure cost the existing agriculture with a separate account. - Disclosure of changes in the values of living assets at the end of the term for the first term both in their fair value and in tangible property. - Disclosure of the cost of purchasing agricultural land separately in the financial statements. -Accounting base11 did not indicate additional disclosures.	**-IAS41 is consistent with accounting base11 in the disclosure of biological asset values.** **-IAS41 does not disclose the cost of agricultural land, while accounting base 11 discloses the cost of agricultural land.** **-Accounting base11 adoption fair value by the display and not adoption in measurement, while IAS41 adoption fair value by display and measurement.** **- Accounting base 11 indicates the disclosure of agricultural land, while IAS41 did not disclose agricultural land within the scope paragraph.** **-Accounting base 11 did not indicate additional disclosures, while IAS41 indicate additional disclosures.** **- accounting base 11 did not indicate disclosure of government grants, while IAS41 indicate the disclosure of government grants.**

	(aggregated with accumulated impairment losses) at the beginning and end of the period.		
Effective Date	- IAS41 becomes effective for annual financial statements covering periods commencing on or after January 1, 2003.	- Accounting base 11 becomes effective on the financial statements for the year ended 12/31/2000.	**- Accounting base11 previously the issuance of IAS41.**

Source: Prepared by the researcher based on the international accounting standard IAS41 and accounting base 11.

The researcher believes that the accounting base11 is objectively consistent with IAS41, while there are many differences in terms of measurement and disclosure of biological assets between accounting base 11 and IAS41 because accounting base 11 was previously the issuance of IAS41, and therefore IAS41 came to treat the problem of measurement and disclosure of biological assets objectively.

Indicate that Accounting and Oversight Standards Board follows the strategy of adopting international accounting standards to suit the Iraqi environment, while we find that accounting base 11which is concerned with agricultural activity, approved by the Board in 1998, to be applied to the financial statements for the year ended 12/31/2000, previously the issuance of the International Accounting Standard IAS41 (Agriculture), where this standard was issued in 2001 and became effective on 1/ 1/2003 **(Hamad,2013:251).**

Indicate **(Al-Sa'bari & al-Adly**) to the valuation of biological assets according to the fair value approach has many advantages as the fair value is more appropriate in representing the reality of the biological transformation than biological assets from the historical cost approach, This helps users of financial reports to properly to the performance of agricultural economic units and their financial position over a given period, and as fair value is appropriate to the changes that occur as a result of the biological transformation of biological assets and these changes in biological assets have a direct relationship with changes in the expectations of future economic benefits, When there are active markets for biological assets the fair value approach is easier and appropriate and good than the historical cost approach and based on active markets are easier to apply**(Al-Sa'bari & al-Adly, 2019:146 -147).**

(Safawi) believes that the fair value approach is appropriate to the unique characteristics of biological assets in agricultural economic units, which is useful in the measurement process, and that the International Accounting Standard IAS 41 came up with a new accounting for the biological assets of both animals and plants and that the main reason for valuation biological assets according to the fair value approach is to disclose all the biological transformation processes that these assets to help users of financial reports to and the performance and financial position of economic units its best**(Safawi,2016:50**).

4- Conclusions and recommendations

Conclusions;

-Valuation of biological assets according to accounting rule 11 on the basis of historical cost ignores the biological transformation of these assets and ignores the change in market prices

and therefore does not provide accounting information with faithful representation.

- The measurement and disclosure of biological assets at fair value in accordance with the adoption of IAS41 are appropriate for the stages of biological transformation, as it takes all quantitative and qualitative changes in biological assets in addition to changes in market prices and this provides accounting information with faithful representation.

Recommendations;

- The orientation to apply international accounting standards has an important role in keeping pace with the Iraqi environment to international economic changes and this is one of the indicators of achieving the economic success of the country.

-The adoption of international accounting standards has become an urgent need, especially the adoption of IAS41 in the measurement and disclosure of biological assets at fair value in Iraqi agricultural economic units in measurement and disclosure of all stages that biological assets from growth, reproduction, and decay.

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