



## APPROPRIATENESS OF MEASUREMENT AND ACCOUNTING DISCLOSURE OF BIOLOGICAL ASSETS ACCORDING TO INTERNATIONAL STANDARD 41 IN AGRICULTURAL ESTABLISHMENTS AN ANALYTICAL STUDY

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<p><b>Received:</b> 30<sup>th</sup> March 2022 <b>Accepted:</b> 28<sup>th</sup> April 2022 <b>Published:</b> 10<sup>th</sup> June 2022</p>	<p>The study aims to demonstrate the appropriateness of measurement and accounting disclosure of biological assets in agricultural establishments within the framework of International Accounting Standard 41, which clearly requires the use of fair value measures when measuring animal or plant biological assets and to indicate the extent to which these treatments are compatible with practical application practices, in addition to indicating the importance of applying International Standard 41 determines the problems of measurement and accounting disclosure in the activity of animal and plant production and sets strict controls in this regard, which leads to the lack of multiple alternatives to measurement and accounting disclosure and obtaining reliable and comparable accounting information, and thus this information affects the decision of investors and all parties benefiting from those the information . The problem of the study is represented by asking the question: Is International Accounting Standard 41 suitable for measurement and accounting disclosure of biological assets in agricultural facilities.</p>

**Keywords:** measurement, disclosure, biological origins, international standard 41

### INTRODUCTION:

The agricultural activity is one of the activities that is characterized by a special nature, as this activity differs from the rest of the other activities, whether industrial or commercial, and these characteristics result in a set of accounting implications that must be taken into account when designing the appropriate accounting system for application in agricultural facilities, and this special nature is also reflected in the special problems. This activity faces, especially the accounting measurement problems, whether those related to animal production or plant production.

Given the importance of agriculture and its direct impact on achieving balanced economic development, which is considered among the most important pillars on which the trade balance is based in many countries, the extrapolation of contemporary accounting thought in the field of accounting measurement and disclosure indicates the interest of many professional, local and international organizations in trying to develop both measurement And the disclosure of biological assets in agricultural activities as specialized activities, and this interest culminated in the issuance of the International Accounting Standard 41.

Agricultural activities were accounted for in the framework of historical cost, and animal and plant assets were accounted for within this framework. With these two types of assets, profits appear or are realized when selling to customers, while losses appear in the case of selling or decreasing the value of these assets, but the International Accounting Committee Those concerned with this activity issued the International Accounting Standard 41 in the year 2000, which became effective as of 1/1/2003, through which fair value measures were adopted in conducting the accounting measurement in this activity, as well as changes in the fair value of biological assets were introduced to the list. income directly.

Hence the necessity of adequate attention to the treatment of measurement and accounting disclosure of biological assets in various agricultural activities, and this results in a multiplicity of alternatives for measurement and accounting disclosure without setting strict controls in this regard, which leads to obtaining unreliable accounting information and thus this information affects the decision of investors and all Parties benefiting from that information.

This study is limited to the accounting measurement of both the plant production activity and the animal



production activity only, and their disclosure in the financial statements. The intangible assets and fixed assets of machines, equipment, lands and real estate related to this activity are not included in the scope of this study.

First: previous studies:

Many studies have dealt with accounting for agricultural activities the subject of measurement and disclosure, the most important of which is the study carried out by the members of the Accounting Standards Committee (AcSEC 2000) at the American Institute of Certified Public Accountants (AICPA) on the importance of the presentation draft of IAS 41. Biological origins, as for the study (Argiles & Slof 2001), which was conducted on a sample of European farms, confirmed the existence of a gap between accounting principles in the agricultural sector. That network, as for the study (Elad 2002), which was conducted on the agricultural sector in France, it concluded that the international standard 41 is commensurate with the accounting practices in the agricultural sector in many countries of the world and dealt with the study (Riley, 2002) on how to benefit from the international standard 41 in achieving objectivity Measurement and accounting disclosure of biological assets, where the study confirmed that the international standard has made a major shift in the process of accounting measurement by introducing a model of Fair value in agricultural accounting as an alternative to the traditional cost model, and the study of the National Council of Accountants and Auditors in Tanzania 2003 explained that the purpose of the standard is to describe the accounting treatment, fair presentation and disclosure of agricultural activities in the financial statements. The International Financial Reporting Interpretation Committee (IFRIC, 2004) studied after Several meetings were held during 2003 and 2004 regarding the appropriateness of International Accounting Standard 41. The committee concluded and recommended the need for IASB to make appropriate amendments to the international standard in light of the results of the committee's mechanism represented in the following:

The need to take into account the potential future growth of a biological asset when determining the present value of the expected net cash flows from this asset.

Choosing reasonable economic prices when evaluating biological assets.

It is clear from the foregoing that most of the above studies stress the need to adopt the International Accounting Standard 41 to measure and disclose biological assets as an alternative to the traditional model and to benefit from it in the objective of measurement and disclosure of those assets.

Second: The concept and definition of accounting measurement

Accounting measurement represents the first step in preparing and presenting information to external users through financial statements. McConnell, 2008: 76), expressed in the monetary unit, which makes the process of comparing financial data possible, clearer and easier despite the diversity of economic activities that take place in the economic unit and its different times (Hanan, 2010: 54)

As for accounting, it depends on all measurement methods. Although the nominal scale is the basis or essential in relation to the accounting process, it is not the only measure, nor is it the most important measure in our field of knowledge. The evaluation process is the essence of accounting theorizing - it employs nominal measurement, and financial statement analysts work Basically in light of the ordinal scale, and certain aspects of cost accounting that can be seen as applying the scale with equal degrees or intervals. The concept of accounting measurement includes determining the values related to each of the basic elements included in the financial statements of a particular company, including the concepts of accounting measurement, accounting unit, continuity The economic unit, the unit of measurement, the preparation of periodic reports, the accounting evidence, the basis of the accounting measurement, which is concerned with determining the monetary effects of external and internal events that can be proven accounting (Hamad, 2013: 117).

This concept also specifies that users of accounting information are more certain in making their decisions if the accounting measurement is within the accepted and agreed standards. But the measurement problem still needs study and investigation, because there are determinants and restrictions that affect giving accurate numbers or quantitative expressions about the financial statements that are built It has subsequent actions. Considering that accounting is the language of numbers, and here measurement is concerned with determining these numbers despite the development in measurement methods, but these numbers remain questionable about their credibility, and the bases on which they were based (Khidir, 2005: 82).

Third: International Accounting Standard 41:

International Accounting Standard 41 was approved by the International Accounting Standards Committee in (December) 2000 and becomes effective for financial statements covering periods beginning on or after January 1, 2003. The standard describes the accounting treatment and presentation of financial statements and disclosures related to agricultural activity, which is A subject not explained in other international accounting standards, and agricultural activity is the management of the biological conversion of plants or live animals



(biological assets) by an entity for sale to an agricultural crop or to additional biological assets. The 41st International Accounting Standard describes, among other things, the accounting treatment of biological assets during the period of growth, decomposition, production and reproduction and for the initial measurement of the agricultural crop at the time of harvest. Situations when the fair value cannot be measured reliably at initial recognition.

Fourth: The concept and characteristics of biological assets:

Biological assets are defined in IAS 41 as the plants and animals that live in a project control area as a result of previous events, and control is through ownership or any other type of legal regulation (Hamad, 2013: 31). Biological assets are divided into the following types :

A- Depreciable assets: The depreciable assets can be defined as "those that will be harvested as an agricultural crop or sold as vital assets. Examples of depreciable assets are as follows:-

- Livestock for meat production.
- Livestock kept for sale.
- Fish in farms.
- Crops such as corn and wheat.
- Trees for Wood

B- Carrier biological assets: They are the assets that are harvested as an agricultural product or sold as biological assets, or they are assets with the exception of biological assets that can be consumed, for example: (Al-Ghabban, 2009: 34)

- Livestock from which milk is produced.
- Fruit trees.
- Trees from which wood is cut while the tree remains

C- Raw (immature) biological assets: They are the assets that are not yet harvestable or that are not ready to begin the process of an organized harvest.

D- Ripe biological assets: They are the assets that can be harvested or that are ready to start the harvest process. The consumable assets are mature when they have the qualities that qualify them for harvesting, and the bearing biological assets are mature when they are ready to start production operations or harvest them.

Fifth- Accounting measurement of biological assets according to International Standard 41:

There are many accounting measurement problems for biological assets, whether these assets are animals or plants. For the purposes of study and simplification, biological assets have been divided into two groups:

The first group: includes gardens, orchards, nurseries and the like, as well as livestock for work or production purposes and not for trading purposes. All of them are included under the fixed assets item.

The second group: includes livestock kept for trading purposes or for the production of meat, as well as

agricultural products such as honey and dates, which are included under the item of current assets.

The following is an analytical study to measure these assets in accordance with International Accounting Standard 41:

A-: Measurement in plant activity:

1- Accounting measurement of expenditures upon initial acquisition of the plant asset:

The method of accounting measurement differs upon the initial acquisition of the plant asset, according to the method of acquisition. The cost of the asset represents the purchase cost.

2- Accounting measurement of expenditures subsequent to the acquisition of the plant asset:

Subsequent expenditures for the acquisition of the plant asset are treated according to the following:

-If the plant asset is classified as a fixed asset, the subsequent expenses after the production stage are considered operating expenses or revenue expenses that are charged to the account of the result for the period in which these expenses arise

- If the plant asset is classified as an immature current asset, the subsequent expenses are added to the cost of the asset until it becomes mature and salable. In this case, the original is considered a working item (Al-Khatib, 2009: 164).

3- The subsequent accounting measurement of plant assets after the initial measurement:

Before the issuance of IAS 41, the measurement in this case was carried out according to the type of plant asset if it was a fixed asset or a current asset. It is a fixed asset, and its subsequent measurement was made on the basis of cost minus the accumulated depreciation. After the application of International Accounting Standard 41, the subsequent measurement of all assets became fair value on the balance sheet date.

4- Accounting measurement for by-product vegetable products:

Accidental vegetable products are products of relatively little importance and usually appear without being targeted in themselves, meaning that they are not the main objective of agricultural activity, such as planting some vegetables on the ground of gardens until fruiting. The cost of the main products, or is it transferred to the income statement as revenue (Al-Khatib, 2000: 24).

5- Accounting measurement resulting from impairment in the value of plant assets:

Plant assets may wither when their productive capacity wanes, and this is related to fixed plant assets only, such as gardens, in which production begins to decrease continuously, as trees become weak in production, begin to stop completely in production, or begin to stop production completely, and this stage ends with complete cessation of production or fruits or less The quantity of its production of fruits so that its



exploitation becomes uneconomic, and in accordance with the requirements of International Accounting Standard 36, the entity should estimate at the date of each balance sheet if there is an indication of impairment in the value of the fixed asset, and if this is the case, the entity must recognize impairment losses for this asset on To be included in the income statement for the period in which it occurred. (Fri, 2013 : 87(.

B: Measurement in animal production activity:

1- Accounting measurement problems at the initial acquisition of the animal asset:

The agricultural establishment acquires some animals for different and multiple purposes. It may acquire these animals for use in agricultural work or for the purpose of obtaining their production or products, or for fattening them with the aim of reselling or trading in them, and the animal origin is acquired through purchase or through production ( births(.

Expenditures subsequent to the initial acquisition of the animal asset are treated as current operating expenses that are charged to the income statement in the periods in which they arise, on the basis that the animal asset in this case represents a fixed asset whose cost does not include such expenses. (Hamad., 2013:33(.

2- Subsequent accounting measurement of animal assets after the initial measurement:

Before the issuance of International Standard 41, animal assets were evaluated according to the purpose of their acquisition. Livestock were evaluated for use in farms or those acquired for the purpose of dairy production at their historical cost minus the accumulated depreciation provision as fixed assets. As for livestock acquired for the purpose of fattening, they were evaluated As current assets treated as production stock in operation, but after the issuance of the above standard, the valuation of animal assets of all kinds became at their fair value minus the estimated point of sale costs. Bohušová, 2012:54);)

3- Accounting measurement of the depreciation of animal assets:

The value of animal assets may decline, if the value of the animal asset falls below the value expected to be recovered from the use or sale of this asset. International 41 In the event that it is not possible to measure the fair value of an animal asset in a manner that can be reliably and reliably measured in the absence of available markets to determine the prices or value of these assets, where it is required in this case to measure the animal asset at its cost minus the provision for depreciation and any losses in the impairment of its value. However, IAS 36 has clearly and explicitly excluded the impairment in the value of biological assets in general and related to agricultural activity from the scope of its application (IAS 36, IASB, 2004(

4- Problems of the dead in biological origins:

It sometimes happens in the animal production activity that some animal assets are spent due to diseases and epidemics. The value of the dead animal assets is treated as a reduction in the cost of assets and at the same time represents a loss that must be charged to the results accounts, and sometimes a distinction is made between the normal deaths that fall within The limits of the proportions of his decision set by the administration and the mortality that exceeds these limits, which is considered an unusual expense, for the purposes of differentiating between costs and losses in cost accounting (Al-Khatib, 2009: 465(.

5- Measuring and treating animal waste waste:

The value of the waste is estimated by the technicians and on the basis of the average market value of the price per cubic meter or ton during the previous three years and it is recorded in the books by making the account of the waste stock debit and the account of the waste debit.

Sixth: Accounting disclosure of biological assets in the financial statements:

The research deals with the areas of disclosure of biological assets, both of them, the origins of plant production and the origins of animal production and my agencies:

1- Concept and definition of disclosure:

The language dictionaries indicated that what is meant by the meaning of disclosure in general is the statement, disclosure and clarification, and the definition of the Financial Supervision Bureau came as "meaning that the financial reports must clearly disclose the procedures followed to facilitate the process of evaluating the activity of the economic unit." (Observation Bureau, 1985: 7) As for the Accounting Rule No. (6) issued by the Accounting Standards Board, the disclosure states, "Achieving a better understanding of the financial statements, providing information and indicators on the performance of economic units, and giving a true, clear and balanced picture of the results of their activities and their financial conditions." The auditor must carry out audit procedures to verify the validity of such allegations, and of course, disclosure includes what is stated in the heart of the financial statements or what is appended to them in the form of notes or attachments, and of course, the objective of presenting the lists must be implemented and fulfill all the essential elements in Financial Statements. (Barbara, 2002:23) and the need to include in the reports all the necessary information necessary to give the users of these reports a clear and correct picture of the economic unit. And that the term disclosure in accounting refers to providing the necessary information about the unit that is expected to affect the decision of the informed reader of that information.



(Lutfi, 2007: 33) As for Kisu, "providing information that is of sufficient importance to influence personal judgments and decisions made by the conscious user." (Kieso 2007:42)

2- Disclosure of biological assets: It is worth noting that the International Accounting Standards Board encourages agricultural economic units to provide a quantitative description of each group of biological assets with a distinction between:- (Friday, 2013: 331-336)

a- Depreciable assets and vital bearing assets.

B - Mature and immature biological assets.

3- Areas of disclosure if it is possible to measure the value of biological assets:

In the event that the facility is able to reliably measure the fair value of biological assets, it must be obligated to measure the biological assets according to the fair value model. Therefore, the disclosure includes the following aspects and areas: (Huffman, 2014:3 4).

- The entity must disclose the gain or loss arising during the current period from the initial recognition of the biological assets and the change in the fair value less the estimated costs at the point of sale of these assets. The facility shall provide descriptive and quantitative information about each group of biological assets, distinguishing expendable assets and carrying assets, in addition to distinguishing between mature assets and immature assets.

The facility shall, when disclosing biological assets, specify:

(a) The nature of the activities included in each group of biological assets.

b- Non-financial measures or estimates related to the physical quantities of each group of the establishment's biological assets at the end of the period and the outputs of the agricultural product during the period.

The entity shall disclose the significant methods and borrowings applied in determining the fair value of each group of agricultural product at the point of harvest and each group of biological assets.

The fair value less estimated costs at the point of sale of the harvested agricultural product should be disclosed.

- The facility must disclose: Gonçalves et al, 2014: 65 )

a-The carrying amount of biological assets with restricted ownership and the carrying amounts of the pledged biological assets as security for liabilities.

b- Amount of commitments to develop or purchase biological assets

c- A financial risk management strategy related to agricultural activity.

The entity shall provide an adjustment for changes in the recorded value of biological assets between the beginning and end of the current period.

In the event that agricultural activity is exposed to climatic problems or other natural diseases, the nature and amount of items related to vinegar and expenses should be disclosed in accordance with International Accounting Standard 8 on net profit and loss for the period, fundamental errors and changes in accounting policies.

4- Areas of disclosure if it is not possible to reach a reliable measure of the fair value of biological assets:

In the event that the entity is unable to measure the fair value of the biological assets reliably, the biological asset is measured at cost less the accumulated depreciation provision or any losses resulting from the decrease in value. In this case, the entity shall disclose the biological assets as follows: (: Millicent: 2008, 65(

A- Description of biological origins.

b- An explanation of the reason why it is not possible to reliably measure the fair value of biological assets.

C- The extent of the estimates in which the fair value is likely to fall significantly.

d- The depreciation method used.

E- The useful life or depreciation rates used.

F- The total amount recorded and the accumulated depreciation provision and its aggregation with impairment losses at the beginning and end of the period.

In the event the entity disposes of biological assets measured at cost less provision for accumulated depreciation or any impairment losses, it must disclose any gains or losses recognized upon disposal of these biological assets and also disclose amounts related to these biological assets separately. It also ensures the settlement of the following amounts Included in the net profit or loss related to those biological assets (IAS: 41, 2003(.

-Impairment losses

-Reversal of impairment losses

- depreciation

In the event that the fair value of the biological assets are valued at their cost less the accumulated depreciation provision or any impairment losses so that they can be measured reliably during the current period, the facility shall disclose for those biological assets:

Description of biological origins

Explain why the fair value can be measured reliably.

- Effects of change.

Study analysis:

Global companies applying international standards differ in their accounting treatment from treatments based on traditional local standards and rules that are currently applied, and this difference in accounting applications may generate some problems in measurement and accounting disclosure. And that there are a lot of foreign companies that want to invest their money in countries similar to them in terms of applying



standards in order to facilitate accounting procedures as well as ease of comparison of financial statements, and as a result of the many characteristics that agricultural activity has, such as the multiplicity of agricultural products, the agricultural production unit (the farm often ) by producing several products at the same time, such as the production of livestock on the farm: meat, dairy, wool, fertilizers and the production of wheat, grains, hay, straw. These multiple products have different selling prices or prices varying in terms of necessity, so the cost of each product must be determined correctly through the availability of a unified and appropriate system for agricultural activity based on unified international standards. Accordingly, professional organizations such as the International Standards Council and the American Standards Council have been interested in developing an international standard that regulates and defines the accounting treatments for agricultural activity, statement of related disclosure requirements, and how to display data related to the activity, as international standards No. 41 were formulated or developed, which was applied to the accounting of biological assets and agricultural crops at the point Harvest or unconditional government grants relating to a biological asset measured at fair value contingent upon specific events. The objective of this international standard is to indicate the accounting treatment and the presentation of financial statements and disclosures related to agricultural activity.

In all cases, the project measures the agricultural crop at the point of harvest at its fair value, minus the estimated costs at the point of sale. This view reflects that the fair value of the agricultural crop at the point of harvest can be measured reliably.

In terms of measurement, we note that International Standard 41 is the best in the matter of evaluating biological assets because it depends on the value closest to reality and thus gives its accounting information a feature of appropriateness and eliminates all the gaps that occur between registration in accounting books and the economic reality in the markets. Therefore, the evaluation on the basis of fair value simulates reality The biological assets will be in their actual reality. As for the recognition process, the recognition of the biological asset must be after the company obtains it and expects to benefit from it in the future. This is the essence of the definition of the asset. The standard referred explicitly to the gains and losses realized from the initial recognition of the agricultural crop at the value minus the estimated costs at the point of sale and referred to it in the income statement.

Agricultural crops (field crops and perennial plants) are measured in traditional systems on the basis of cost or market, whichever is lower. The international standard uses fair value, minus estimated costs at the point of

sale. If it is not possible to determine the fair value, the standard recommends using another market equivalent price. If there is no significant change in economic activity, which gives greater flexibility in the measurement process. As we mentioned earlier, we see that fair value is the most appropriate measure for evaluating biological assets, whether (animals or agricultural crops) as they are the most realistic for economic activity.

As for the issue of the disclosure of biological assets, we note that the international standard has focused on that the disclosure be clearly for each of the establishment of biological assets and the policies followed in the issue of valuing the asset, and that the disclosure should be about all profits and losses resulting during the current period, and the company must provide a description of each group From biological assets, that is, this standard gave a more detailed clarification in the profit and loss paragraph publicly and referred more focus to the process of disclosing data on biological assets so that these data help determine the timing of future cash flows, which indicates that disclosure within this standard is more Transparency and provides decision makers with detailed information to help them make their decisions.

All of these effects indicate that the measurement and disclosure of biological assets in agricultural institutions in accordance with International Accounting Standard 41 is more appropriate in application than local national standards and rules due to the general characteristics of international standards in terms of their application, and that different standards lead to different bases of measurement and accounting disclosure, and then lead To a discrepancy in accounting practices between different countries of the world according to the following: 1 - Variation in revenue realization 2 - Variation in charging expenses 3 - Variation in accounting terminology 4 - Variation in the basis of assessment and accounting measurement. 5- There is a difference in the basis for preparing the financial statements, but despite these discrepancies and their justifications and the laws and regulations that support them, we find that the voices calling for the development of accounting towards achieving convergence are increasing.

In view of the urgent needs that have emerged for several reasons, the most important of which are: the globalization of the economy, the growth and liberalization of international trade and international direct investment. Evolution of global financial markets. Privatization in some countries of the world. Changes in the international monetary systems. The growing power of multinational companies to include all corners of the globe, whether by establishing branches in regions and countries, or controlling subsidiaries. Weakness and



absence of local accounting standards in some developing countries that lack taking into account global and accounting developments

## CONCLUSIONS AND RECOMMENDATIONS:

### FIRST, THE CONCLUSIONS:

- 1- Agricultural production is characterized by a set of characteristics that affected the multiplicity and difference of accounting problems under measurement.
- 2- The agricultural sector is considered one of the sectors that attract investment and that need attention to accounting aspects, especially in the field of measurement and disclosure.
- 3- International Accounting Standard 41 is considered one of the most important standards that have adopted fair value measures when making an accounting measurement in agricultural activity, as it requires the measurement of biological assets upon initial recognition or when preparing the budget at its fair value, as this standard has absolutely adopted fair value measures.
- 4- International Standard 41 is considered the best in the matter of evaluating biological assets because it depends on the value closest to reality and thus gives its accounting information a feature of appropriateness and eliminates all the gaps that occur between recording in the accounting books
- 5- The measurement and disclosure of biological assets in agricultural institutions in accordance with International Accounting Standard 41 is more appropriate in application than the local national standards and rules because it requires the facility to provide descriptive and quantitative information about each group of biological assets, while distinguishing the consumable assets and carrier assets in addition to distinguishing between assets Mature and immature assets.

### SECOND: RECOMMENDATIONS:

According to the aim of the research and the conclusions of the study, the researcher recommends the following:

- 1- It is necessary to rely on international standards in accounting applications, as they represent the constitution for work Accounting and approved by the countries of the world so that there is no difference between accounting applications applied among the world.
- 2- It is necessary to recommend reliance on the use of fair value in the matter of measuring assets Biological values and their valuation, because the fair value basically mimics the reality and evaluates the assets in their realistic values.

- 3- Agricultural establishments should provide financial information prepared on the basis of fair value measures in order to help decision makers take rational decisions in this type of agricultural activity.
- 4- Encouraging researchers and paying attention to accounting research related to agricultural activity to contribute to addressing the accounting problems faced by the activity.

### SOURCES:

#### First: Arabic:

- 1- Abu Nassar, Muhammad, Juma'a Hemeidat, "International Accounting and Financial Reporting Standards, Theoretical and Practical Aspects", second edition, Amman, 2009
- 2- Al-Khatib, Khaled Ragheb, "Accounting in Agricultural Establishments and Institutions", first edition, Dar Al-Badaa for Printing and Publishing, Cairo, Egypt, 2009
- 3- Al-Ghabban, Faiza Ibrahim and Thaer Sabri Mahmoud Al-Ghabban, "Specialized Accounting Systems", second edition, Memory Library, 2009
- 4- Al-Khatib, Dr. Hashem Ahmed Attia (Accounting in the Agricultural Exploitation Sector) Cairo - Ain Shams Library 2000
- 5- International Accounting Standards, International Accounting Standard No. 41, for the year 2003
- 6- Abu Nassar, Muhammad, Humaidat, Jumah, International Accounting and Financial Reporting Standards - Theoretical and Practical Aspects, Jordan, Amman, 2016.
- 7- Jumah, Ahmed Helmy, Accounting for Biological Assets - Plants and Animals - Poultry and Eggs - Beekeeping, Dar Safaa for Publishing and Distribution, Jordan, Amman, 2013.
- 8- Hanan, Radwan Hilweh, Alternatives to Contemporary Accounting Measurement, first edition, Wael Publishing House, Amman, 2003.
- 9- Khader, Ali Muhammad Ali, Foundations of Farm Business Administration, Omar Al-Mukhtar University Publications, Al-Bayda, Libyan Arab Jamahiriya, 2005.
- 10- Al-Khatib, Khaled Ragheb, Accounting in Agricultural Institutions and Establishments, Dar Al-Bidaya, Jordan, Amman, 2010.
- 11- Hamad, Mona Kamel, The Importance of Compliance with International Accounting Standards for Accounting in Agricultural Activity A comparative analytical study of the International Accounting Standard (41) and the Iraqi Accounting Rule (11), Journal of Baghdad College of Economic Sciences, Issue (36), pp. 339-357, 2013



**Second, the foreign:**

- 1- McConnell, Campbell R., Brue, Stanley L., Economics: Principles, Problems and Policies, 17 Edition, Mc Graw-Hill Irwin, USA, New York, 2008.
- 2- ACSEC, (letter to Agriculture (E65) February, 2000 .
- 3- Argiles, Jo sep m, (Accounting information and the prediction of farm viability, July, 2001 .
- 4- Elad, c, (fair value Accounting in the agriculture sector: some impaction for international accounting harmonization.
- 5- Barbara M. Wheeling, AGRICULTURAL ACCOUNTING: A CASE ON ASSET VALUATION, Southern Colorado. 2002.
- 6- Bohušová; Svoboda Patrik; , Nerudová Danuše, Biological assets reporting: Is the increase in value caused by the biological transformation revenue? , Agric. Econ. Czech, Vol.58 No.(11), 2012.
- 7- Gonçalves, Rute , Lopes, Patrícia , Accounting in Agriculture: Disclosure practices of listed firms, No. (16) pp. 1-34, 2014.
- 8- Huffman Adrienna, Matching Measurement To Asset Use: Evidence From IAS 41, Pp. 1-40, 2014.
- 9- Millicent Chang & others, Does Disclosure Quality via Investor Relations Affect Information Asymmetry, 2008,.