İzmir İktisat Dergisi
İzmir Journal of Economics

ISSN:1308-8173 **E-ISSN:** 1308-8505 **YIL:** 2020 **Cilt:** 35 **Sayı:** 4 **Sayfa:** 793-807
Geliş Tarihi: 17.05.2020 **Kabul Tarihi:** 29.12.2020 **Online Yayın:** 31.12.2020 **Doi:** 10.24988/ije.202035409
ÖZGÜN ARAŞTIRMA

IAS 41 Accounting For Agricultural Activities: Case of Turkey

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Abstract

Records of agricultural activities were not found in many countries' accounting records and accounts, like Turkey. The IAS organized by the International Accounting Standards Board has been translated from English to Turkish as a full set. Turkey Accounting Standards / Financial Reporting Standards have taken tehir names. This problem in accounting account plans and records was tried to be overcome with "TAS 41 Agricultural Activities" standard. Our study will make recommendations for the implementation and applicability of IAS 41 in Turkey. The recommendations will be prepared according to the accounting system implemented in Turkey will consist of accounting and records. In this context, the new accounts will be created in Uniform Chart of Accounts implemented in Turkey accounting system. Accounting records for the application of newly created accounts will be explained in a monograph. Our study will be described Turkey example of the International Accounting Standards. The accounting records are applied in other countries will be comparable with the accounting records in Turkey. With this study, there will be a contribution to the companies operating in the Agricultural Sector, a new perspective in the accounting records and uniform accounting practices in this field.

Keywords: *IAS 41 (TAS 41), Biological Assets, Plant Assets, Accounting*
Jel Codes: *M40, M41*

UMS 41 Tarımsal Faaliyetlerin Muhasebeleştirilmesi: Türkiye Örneği

Özet

Türkiye gibi birçok ülkenin muhasebe kayıtlarında ve hesaplarında tarımsal faaliyetlerin kayıtlarına rastlanmamaktadır. Uluslararası Muhasebe Standartları Kurulu tarafından düzenlenen UMS, İngilizceden Türkçeye tam set olarak çevrilmiştir. Türkiye Muhasebe Standartları / Finansal Raporlama Standartları isimleri almıştır. Muhasebe hesap planlarında ve kayıtlarında yaşanan Tarımsal Faaliyetlere ilişkin sorun, "TMS 41 Tarımsal Faaliyetler" standardı ile aşılmaya çalışılmıştır. Çalışmamız, UMS 41'in Türkiye'de uygulanması ve uygulanabilirliği için önerilerde bulunacaktır. Türkiye'de uygulanan muhasebe sistemine uygun hazırlanacak öneriler yeni hesap ve muhasebe kayıtlardan oluşacaktır. Bu kapsamda yeni hesaplar Türkiye muhasebe sisteminde uygulanan Tek Düzen Hesap Planına uygun oluşturulacaktır. Yeni oluşturulan hesapların uygulanması için muhasebe kayıtları bir monografi yardımıyla açıklanacaktır. Çalışmamız Uluslararası Muhasebe Standartlarının Türkiye örneğini anlatacaktır. Diğer ülkelerde uygulanan muhasebe kayıtları Türkiye'deki muhasebe kayıtları ile karşılaştırılabilir olacaktır. Bu çalışma ile Tarım Sektöründe faaliyet gösteren firmaların muhasebe kayıtlarına yeni bir bakış açısı ve bu alandaki tekdüzen muhasebe uygulamalarına katkı sağlanacaktır.

Anahtar Kelimeler: *UMS 41 (TMS 41), Canlı Varlıklar, Bitkisel Varlıklar, Muhasebe*
Jel Kodu: *M40, M41*

1. INTRODUCTION

With the effect of globalization, the fields and volumes of activity multinational companies have increased. As these companies operate in many countries, the problem arises from which headquarters' their operations will be managed, which country's rules will be followed in order to make the activities uniform, or how financial reports and accounting records will be consolidated. For example; As a result of the activities carried out in the countries other than the country where the company is headquartered, tax responsibilities arise in the country where it is located. However, the question of how to make this tax proportionate and accounting record is important. In order to better understand and overcome these problems, the activities in the country where the company's headquarters are

ATIF ÖNERİSİ (APA): Yalçın, Zülkif. (2020). IAS 41 Accounting For Agricultural Activities: Case of Turkey. İzmir İktisat Dergisi. 35(4). 793-807. Doi: 10.24988/ije.202035409

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located and the other countries are seen as a single activity, and it has become compulsory to understand the accounting transactions samely among all countries. For this purpose, many countries, institutions and organizations in the world advocated that a single order should be created in the field of accounting in order to better understand the activities of multinational companies and carried out studies in this field. In 1973, International Accounting Standards Board (IASB) was established and International Accounting Standards (IAS) / International Financial Reporting Standards (IFRS) were established by IASB. These standards have been applied in the European Union since 1 January 2005. TAS has been translated from English into Turkish in full sets by Turkey Accounting Standards Board (TASB), in 2006. In Turkey, Turkey Accounting Standards (TAS) / Turkey Financial Reporting Standards (IFRS) for the implementation of the harmonization process has been started.

IAS 41 (International Accounting Standards) agricultural activities standard has been developed by IASB (International Accounting Standards Board: International Accounting Standards Board). Since the accounting recording process of all countries is different or there are no accounting records for agricultural activities, IAS 41 is recorded in different ways. In this context, the aim of this study, "IAS 41 Agriculture Activities" is to make proposals regarding the applicability of the standard in Turkey. The recommendations, the accounting system implemented in Turkey will consist of accounting and accounting records prepared in accordance. In this context, new accounts considering the Uniform Chart of Accounts implemented in Turkey will be created. Accounting records for the application of newly created accounts will be explained with a monograph.

In the study, the TAS 41 standard was examined in detail; In Turkey, "TAS 41 Agriculture Activities" standard was examined studies conducted in the field; It has been investigated which accounting accounts should be opened; Account groups and accounting accounts to be opened in "asset accounts" and "resource accounts" was suggested. With the design / methodology / approach method applied in the study, Applied in the Uniform Chart of Accounts in Turkey was found that the accounting accounts not for the implementation of IAS 41. At the same time, it has been observed that there are no accounting records for Agricultural Activities. As a result of these findings, new accounting and posting methods have been proposed. The limitation of our study is that the application part of the study is a very difficult process. This situation has been tried to be overcome with monography.

This study contributes in the creation of new accounting accounts not applied in the Uniform Chart of Accounts in Turkey. İn the study, new accounting and recording methods in the implementation of accounting records in the field of agricultural activities in Turkey are being developed. These developed accounts and account registration methods will be comparable with the accounts and account registration methods applied in other countries. At the same time, it will provide a forecast for companies operating in this field on how to make accounting records. This situation reflects the originality and value of our study.

2. DEFINITIONS AND CONCEPTS OF TAS 41 (IAS 41)

With the studies carried out in 2006, IAS 41, like all other standards, has been translated from English to Turkish as a full set. proper accounts and accounting records in Turkey has tried to create. IAS 41 was corrected in Turkey as TAS. As in IAS 41, the purpose of TAS 41 is to recognize the accounting for agricultural activities and to determine the methods required for the accounting. The standard includes accounting for biological assets, agricultural products at the time of harvest and government incentives. The standard has been defining the production process in three stages. It first identified the biological assets and then the agricultural products obtained from these

biological assets and finally the processing of these agricultural products obtained separately (URL1). The purpose of this distinction is in fact to separate agricultural activities from both commercial goods resulting from processing agricultural activities and fixed assets from which agricultural products are obtained. According to the standard; Fixed Assets; It is obtained from agricultural products, biological assets and the field. Since agricultural products stand between fixed assets and processing, it is thought that they have not been included in accounting records for years.

Standard has tried to define the biological assets with examples such as sheeps, forests groves, plants, dairy product, cattle and fruit trees. On the other hand, agricultural products have been identified with the examples obtained from biological assets such as wool, billet, cotton, sugar beet and milk. However, we can say that the standard evaluates the process after the agricultural products are obtained as "processing" and determines the resulting products as "fabricated products" rather than agricultural products. Already, Biological assets are defined as fixed assets from which agricultural products are obtained, not agricultural products. In this case, the milk taken directly from the animal is an agricultural product, but after certain operations, the milk that comes to our table is a commercial product. The standard applies only to biological assets with agricultural characteristics, but does not apply to the processing of post-harvest crops. In other words, post-harvest applications are already included in the TAS 2 (IAS 2) standard. Similarly, the land related to agricultural land is also included in TAS 16 (IAS 16).

The standard defines the agricultural product as a harvested product of biological assets. Biological assets are; defined as living animals or plants. In this way, the group of biological assets have been determined as a living animals or plants community. As seen here, the standard did not process the field or the land on which the harvest was made within this scope. Because, the field or the land have already been processed in TAS 16 (IAS 16). The standard examined the product from harvests and living assets.

Biological transformation was determined as qualitative and quantitative changes in the standard. This change has been determined as growth, degradation and fertilization. Sales costs have been defined as additional costs incurred by disposing of an asset. The concept of harvest has been defined as the separation of the product from the biological assets or the depletion of the biological assets (URL1).

Within the scope of the standard, some common features are defined in order to attribute the aforementioned definitions to biological assets and agricultural products. These are capacity of change, management of change and measurement of change (URL1). Looking at these features; the Change capacity has been defined as the ability of living beings to undergo a biological transformation. Managing the change has been defined as the feature that distinguishes agricultural activity from other activities. The measurement of change has been defined as the properties that enable the quality and quantity of the products emerging after the management of capacities to be measured and monitored.

2.1 Importance of TAS 41 / IAS 41

Since international businesses operate in many countries outside the country where their headquarters are located, it has become important to write accounting records in a common language and to prepare the presentation of financial reports to be understood by all parties. The absence of common accounting records in many international countries or the absence of a common language in accounting records were affected the reliability and transparency of audits. IASB (International Accounting Standards Board) was established as a result of the studies carried out in the international field. This board was has tried to establish International Accounting Standards (IAS) that can be common to all countries. As a result of these studies; In many countries, business

activities are not reflecting in accounting records as they were not shown in the chart of accounts or It was has observed that accounting records and financial reports could not be harmonized due to the lack of a common language. One of the best examples is that agricultural activities are not shown in the chart of accounts and accounting records. It has been observed that many countries do not include the accounting transactions of agricultural activities in their accounting records and accounts. Only the United States of America overcame this problem with the newly created accounting system "Codification" (Yalçın: 2010: 154-155).

In Turkey, there are beeing the same problems of agricultural activity in accounting practices. The UMS, which are regulated by the International Accounting Standards Board, have been translated from English to Turkish as a full set and Turkey Accounting Standards (TAS) -Turkey Financial Reporting Standards (IFRS) were taken their name. With the "TAS 41 agricultural activities" standard, this problem in accounting plans and accounting records was tried to be overcome. Many shortcomings in the Uniform Accounting System implemented in Turkey with the fact that these standards have emerged. Among these standards, the most interesting standard has been the studies in the agricultural field. Because, the main activity for countries at all times has been agriculture. However, many countries have not kept accounts and account records of this activity in modern accounting records. The same is true in Turkey. In Turkey, Accounting accounts, accounting records and cost elements emerging with practices in the field of accounting are generally prepared in accordance with the industry sector. The reason for this is that the operating in the agricultural field is generally farmer and the activity of the farmers in the laws is not considered as an industry or commercial activity. The reason for this situation is the idea that "non-merchant farmers will not keep accounting records, so there is no need for farmer-appropriate accounting accounts".

The product produced by the farmers is again bought by the industrial sector and is has processed as a commercial product. However, in the agricultural field, not only the soil is cultivated but also animal production is carried out. In addition, the fact that all people need too many agricultural products and that this need cannot be met only with the products produced by the farmers have made the fabrication production of agricultural products necessary. For this purpose, many companies can produce more reliable and cheaper products and reduce costs by buying their own fields or establishing their own farms, rather than buying agricultural products from outside. In this process, the problem of how these products will be accounting is arises. In order to eliminate this problem, it has become important to account not only the accounting records for the production of commercial products but also the activities in the agricultural field and the accounting accounts must have accounts and records suitable for this sector. TAS 41 comes into play here. TAS 41 separates the product resulting from agricultural activity and the product resulting from fabrication production, enables the comparison and separation of cost elements. This problem has created a new approach outside of normal accounting transactions. This approach emphasizes that the same product should be agricultural product in the field, raw material-finished product in the factory, and commercial product in the wholesale-retail sector. In this respect, TAS 41 is different and important than other standards.

2.2 TAS 41 Change Process

Compliance work for the international accounting standards in Turkey, for the first time, with the Accounting System Application General Communiqué Number 1, the presentation of financial statements must has been required. The Capital Markets Board has made this compulsory for intermediary institutions too. Turkey Accounting Professionals Association for to be able to adapt to International Accounting Standards, first

started working as a member of the association with IASC (International Accounting Standards Committee). After, Turkey Accounting and Auditing Standards Board, later, Turkey Accounting Standards Board (TASB) has been established in Turkey. Finally, in 2011, all the powers of TASB were transferred to the Public Oversight, Accounting and Auditing Standards Board (Güdelci, 2019:199-214). As part of the harmonization process with the standards initiated by TASB, IAS 41, like all other standards, was translated from English to Turkish as a full set and proper accounts and accounting records for Turkey was has tried to create. Especially within the framework of Turkey's harmonization process of standards have been many changes since 2006 by the Public Oversight Board and comments. Especially within the scope of TAS 41, the most important change is that trees, which are live plants, are evaluated within the scope of TAS 16 and included in the scope of carrier plants. The latest regulation for TAS 41 was published in the Official Gazette No. 30656 dated 15.01.2019. (URL 1) As seen, the standards applied in Turkey, in an active way, is to ensure the continuous integration process. TAS 41 too, this is included in.

2.3 Some Studies in the Field of TAS 41

The applicability of TAS 41 has been tested by many researchers. Some of them are as follows; Yılmaz (2014) determined the accounting records and measurement principles of bovine assets in his research. On the other hand, by Çevik (2016); has been applied the standard on Poultry farming. In this study, again, accounting and depreciation issues were taken into consideration. Arslan and Doğan (2018) implemented TAS 41 in accounting for aquaculture products. In the study, especially government incentives were examined, apart from accounting records and recommendations. Demirci (2019) conducted his study on olive cultivation. In the study, the inclusion of live plants and their fruits in the scope of carrier plants was examined. In the literature review on TAS 41 on page 285 of the same study, 22 domestic and 10 international academic studies on TAS 41 were examined. When these studies are examined, it is seen that TAS 41 is for the valuation of animals and biological plants, accounting records and new accounting accounts.

As can be seen, there are many studies in the field of TAS 41. In these studies, applications were made for many species of live animals or living plants. However, the standard has already made the necessary comments on how these applications should be. Researchers contributed to the application of TAS 41 with new accounting records and accounting account proposals. In our study, apart from the new account suggestions, the differences of the same product as agricultural product, fabricated product and commercial product are revealed, and a research has been made on how to accounting by considering TAS 2 and TAS 16. In this respect, it has a distinct importance from other studies.

3. EXAMPLE APPLICATIONS FOR CREATING AND ACCOUNTING ACCOUNTS TO BE USED FOR ACCOUNTING OF TAS 41 (IAS 41

In Turkey; there are no accounts to record agricultural activities and agricultural products in the Uniform Chart of Accounts. As stated in the explanations above, agricultural activities that the farmer is engaged in has not been considered within the scope of commercial. Since the farmer is not a merchant, his activities have not been considered within the scope of commercial activity. However, agricultural activities and the obtained agricultural products have started to be used intensively in commercial activities today. The reason of this; It is caused by the excessive consumption of agricultural products with the increase of the human population. This situation has been required the healthy and reliable production of agricultural products produced in bulk.

The accounts to be opened within the scope of the standard may of course be possible within the Uniform Chart of Accounts, by opening new accounts within the existing groups or by

opening new accounts within the empty groups. However, first of all, it should be determined how some concepts defined in the previous topic and defined in the standard will be expressed in Uniform Chart of Accounts and accounting records.

3.1 The Problem Of Presentation Of Biological Assets In Uniform Chart Of Accounts

If we answer the question whether the Biological Assets mentioned in the standard will be fixed assets or current assets; if the asset is an asset that is harvested and it will be repeated for many years or it will take many years to form, it must be included in the "fixed assets" accounts. If they are to be sold immediately after conversion and processing, they must be included in the "current assets" accounts. Otherwise, if these Biological Assets are purchased and sold without any transaction then it will be "commercial goods". For example chicken; If eggs are to be obtained and sold from these chickens, they must be included in the "Biological Assets" accounts in the fixed assets accounts. If these chickens are chicks (if chicks become chickens after a long period of time, they should be traced in fixed assets accounts) and if they are subject to processing and sold, they should be included in "Biological Assets" accounts in current assets accounts. If these chickens are to be bought and sold without any processing, then they should be included in 153 Commercial Goods accounts, or if these chickens are to be bought directly from the outside and sold as roasted chickens after a certain transaction, they should be included in the 150 First Material and Material Accounts.

As it is stated in TAS 1 (IAS 1) that Biological Assets should be collected and presented under separate heading in the balance sheet, it is necessary to form "Biological Assets" group both in "current assets" account group and "fixed assets" account group (Örten, et al.: 2012: 639). However, in the current assets 14 and 16 groups, in fixed assets 20 and 21 groups are empty. Liquidity basis is taken into consideration in the coding of current assets and fixed assets accounts (Tek, Tektüfekçi; 2007; 127). How will the liquidity of Biological Assets be measured or how are the 14 and 16 groups and 20 and 21 groups accounts suitable for the new "Biological Assets" accounts? We cannot change the Uniform Chart of Accounts when answering these questions. Our suggestion is to review the Uniform Chart of Accounts and create a new chart of accounts.

The "Biological Assets" accounts in the current assets section of the uniform chart of accounts; it would be more accurate to have it in the 16 groups due to the fact that it is a stock, obtained as a result of a certain production and its liquidity is less than other current assets. Another reason; As stated in the standard, if the animal or plant products are going to be subjected to a commercial process, the products obtained as a result of this production should be record in the 15-Stock Group as they are commercial. Then we can say that 15-stock are more liquid than 16-Biological Assets. 16 group "Biological Assets"; assets obtained from soil, it is appropriate to call it "160- Plant Assets"; if these Plant Assets are processed in the current period and will go through a production process in, it is appropriate to call it "161- Plant Products in Production". Likewise, for products obtained from animals, "162- Animal Assets", if these animal assets are processed in the current period and will go through the production process, it would be appropriate to open "163- Animal Products in Production" account. In addition, if there is impairment on the Biological Assets in the current assets, the impairment must be shown. In this way, first, "167-Other Biological Assets" account must be opened. Then, "168-Provision for Impairment of Biological Assets" should be opened. Of course, there may be "Advances Given" in account no. 169 (order advances given because it is not considered as stock in the standard). Although the reason for the opening of such accounts is determined by the fair value method, the values of the assets should be opened in accordance with the Uniform Accounting System. Because, TAS and TFRS (IAS / IFRS) are not applied in all sectors

and businesses. Here; It is also necessary to prevent disruptions in the trainings and accounting records to be given.

The situation will be slightly different in the account group of “Biological Assets” in “Fixed Assets”. Because the Biological Assets in the Fixed Assets are less liquid than the “22-Trade Receivables” and “23-Other Receivables” account groups on liquidity basis, they should be in the “24-Living Assets” account group. Since there are “24-Financial Fixed Assets” in the Uniform Chart of Accounts and we will be loyal to the Uniform Chart of Accounts, it would be more accurate to ignore this rule and form the “21-Biological Assets” group. The accounts to be created in group "21 Biological Assets" accounts shall be both Animal and Plant Assets, but since the assets here are not subject to any transactions (the products obtained as a result of production are already recorded in current assets), the accounts in production should not be opened. However, if the production of biological assets in current assets is going to take a long time, these transactions may be included in the biological assets group in fixed assets. Furthermore, if plant and animal assets are to be obtained after long-term investments, these investments can be kept in the accounts to be opened in the “Biological Assets” account group in fixed assets. The group "21 Biological Assets"; 210-Plant Assets, 211-Animal Assets, 215-Plant Assets in Production (Long-Term) 216-Animal Assets in Production (Long-Term), 217-Investments in Plant Assets, 218-Investments in Animal Assets shall be opened. Finally, account may have “219-Advances Given”. Fixed Assets accounts also have a depreciation process. However, “Depreciation" should not be applied to this account group because the redemption of this group should be examined only in the “Biological Assets” account group in Current Assets or in accounts in group “6 Income Statement Accounts” if there is a loss.

As stated in the standard, it is necessary to show the results obtained from the fair value method in the Uniform Chart of Accounts. In fair value determinations, increases and decreases, if any, and where these increases or decreases should be recorded in "6 groups" account should be determined separately. To overcome this problem, it has should been need to identify the following problem; Does the increase in value obtained by the fair value method generate income or expense in the accounting records? The answer to this question would be income. Is the activity of this income “Core Activity” or is it out of the core activity? The answer to this question will also be the Core Activity. Then it would be more appropriate to include the value increases determined by the fair value method in the 60 group gross sales account group. In the Uniform Chart of Accounts group 60, other accounts after 602 Other Revenues are empty. Since fair value increase is also a secondary value, increase in the account "607 Differences arising from increases in the value of biological assets” can be established.

Ultimately, the use of many empty account groups in the balance sheet and income statement for the record of biological assets and products obtained as a result of agricultural activity has been discussed in this section. While creating these accounts, the criteria set out in the Uniform Chart of Accounts were tried to be followed. We will try to reinforce the issue with the sample applications for the use of these accounts identified in the following topics. These examples will be accounted for by using the new accounts specified above and which are set up in the Uniform Chart of Accounts.

3.2 The Problem Of Agricultural Activity And Accounting Of The Product Obtained

Lorem The standard specifies agricultural activity as obtaining products from biological assets, converting these biological assets into different biological assets or harvesting operations from fixed assets. It is also emphasized that these operations should be managed by an entity. This emphasizing says that; the product obtained from the harvest or biological assets of a farmer is an agricultural

product however, in order for this activity to be considered as agricultural activity, it must be managed by a firm. This has been due to the lack of tax liabilities of farmers and the inability to systematically control crops from harvest or biological assets. Furthermore, since the agricultural products obtained through these activities carried out by farmers are not made under the roof of a company, there is no modern accounting record in these transactions. At that time, while the product produced by the farmer is an agricultural product, we can say that the same product is the raw material or commercial commodity for the company that buys this product. However, if the company had realized these products under its management, the products obtained from the harvest or biological assets obtained from the field could be recorded as agricultural products. Example to show this difference according to the uniform accounting system in Turkey;

•If a farmer was to sell his agricultural product worth TL 100,000 to a Company Selling Wheat, it would be a commercial commodity for the buyer. This merchandise should to be traced in the 153 Commercial Goods account in 15 group inventories. The accounting record would be as follows;

153-COMMERCIAL GOODS	100.000	
ASSETS OR DEBT ACCOUNTS		100.000

•If a farmer were to sell his agricultural product worth 100,000 TL to a company that produces and sells flour, then it would be a raw material for the company that buys this product and would be monitored in 150 First Substances And Materials account. Accounting record would be as follows;

150-FIRST SUBSTANCES AND MATERIALS	100.000	
ASSETS OR DEBT ACCOUNTS		100.000

•The situation will be different when a firm produces wheat on a farm or field. In this context, TAS 41 (IAS 41) would be put into operation and "Agricultural Products" account which would not be in Uniform Chart of Accounts would be created for accounting record. In the Uniform Chart of Accounts 15-Stock This record can be kept or a new group can be established in the 156 account which is empty in the Inventories account group. As mentioned above, this account can be "160-Plant Assets" account. In this case, if a company had harvested Wheat determined by the fair value method to 100.000 TL in its own field, the accounting record would be as follows;

160-PLANET ASSETS	100.000	
ASSETS, LIABILITIES OR COST ACCOUNTS		100.000

The reason why these representations are different is the question of who manages the same agricultural product during production, which is actually the same for all segments. As it can be seen from the above examples, if a farmer produces and sells the product to the firm, this is either raw material or commercial goods for the firm, but if an enterprise produces this product in its own structure, it becomes agricultural product within the scope of the standard.

3.3 The Problem of Fair Value Method and Accounting

The standard makes sense of some terms in order to make the accounting of agricultural products more understandable and easier. The Standard defines the Active Market as the places where the traded goods are homogeneous, the buyer and the seller are certain and the prices can be learned by the public. The balance sheet value is; determined as the accounting value of the agricultural product in the balance sheet. The concept of fair value has been defined as the exchange of an asset as a result of a price arising from mutual negotiations. (URL 1).

The fact that market conditions should be taken into account in the fair value method raises another problem. How will these market conditions be determined and will state intervention be felt in these markets? This will occur in many situations that will raise the

problem. Because companies will look at market conditions when determining fair value, but market conditions will vary from country to country, city to city, and will be affected by economic conditions. At that time, the fair value method of biological assets will not only provide an increase in value, but also a decrease in value. However, the standard did not specify any impairment. Decreases in value will be determined in accordance with other standards (TAS 36 impairment of assets). It is appropriate to record this transaction as determined by the standard in the account of 605-Differences arising from revaluation of biological assets. The sample application for value increases will be as follows;

•A field worth 500.000 TL has been purchased and there are 100 planted peach trees in this field. Assuming that 200,000 TL is paid to the field and 300,000 TL is paid to the trees, 5,000 kilograms of peaches will be harvested at the time of harvest and the weight of the peaches can be sold to 1 TL according to the market conditions.

160 PLANT ASSETS	5.000	
605 DIFFERENCES ARISING FROM INCREASES IN VALUE OF BIOLOGICAL ASSETS		5.000

Looking at the above question, the field, biological assets on the field and plant assets on the biological assets were evaluated separately and value increases were made only through harvest. Because the field is a fixed asset and group 25 should be kept in the tangible assets account. Peach trees on the field are biological beings and should be registered in 210 Plant Assets.

3.4 The Problem Of Accounting Of Biological Assets And Other Assets

In this topic, we have tried to determine the problem that we encountered in the previous topic, that is, how to account for the fields and trees. In the above example, the field is a non-living entity and the tree is sold as a living entity over the non-living entity. Standard is emphasize that field and the biological assets on the field should be valued separately (URL 1). In this distinction, it is stated that the field should be processed in accordance with TAS 16 (IAS 16) tangible assets standard. We can account example as follows;

•Our company produces peach juice. Assuming that a peach field worth 500,000 TL is purchased for peach production, the value of the field is 200,000 TL and the value of the peach trees is 300,000 TL, the record of the field will be made in accordance with TAS 16 (IAS 16), and the record of peach trees will be made in accordance with TAS 41 (IAS 41)

Acconting Record of Land		
250 LAND AND FIELD	200.000	
100 CASH		200.000
Accounting Record of Peach Trees		
210 PLANT ASSETS	300.000	
100 CASH		300.000

4. MONOGRAPHY FOR THE APPLICATION OF TAS 41 (IAS 41)

New account groups to be opened within the scope of the standard were determined. There were certain problems that these accounts could create. At this stage, a monograph in which the accounting records of the new accounts proposed above will be made will help to understand the issue better. This monograph will be done on plant assets and will be shown starting from field purchase.

Our company produces fruit juice. Our company supplies the raw materials needed for fruit juices both from outside and with the fruits it produces in its own fields. Our company needs 1,000 tons of fruit for annual fruit juice production. 200 tons of the need is in its own fields and lands and the other is purchased from outside (farmers and intermediary institutions). One kilogram of imported products costs 1.5 TL, while the cost of the products produced by itself is 1 TL. Therefore, our company has purchased a new field with a capacity of 400 tons in 2019. It bought the field with fruit trees for 2.000.000 TL. However, the fruit trees in the field and the field were calculated with separate prices. 1.200.000 TL

was paid for the field and 800.000 TL was paid for the fruit trees in the fields.

If we account for the following transactions according to the above explanations;[1]

•The accounting record of the field and fruit trees purchased above shall be as follows;

Accounting Record of the Field in 2019

250 LAND AND FIELD	1.200.000	
100 CASH		1.200.000

Accounting Record of Fruit Trees for 2019

210 PLANT ASSETS	800.000	
100 CASH		800.000

•Due to the large field, it was decided to plant new fruit trees that will increase the capacity of 200 tons. The purchase cost of the trees is 150.000 TL. 15.000 TL was spent for planting these trees, 35.000 TL was spent for irrigation costs, rehabilitation, pruning and vaccination of fruit trees. Prices paid in cash.

2019 year

217- INVESTMENTS IN PLANT ASS.	150.000	
100 CASH		150.000
217- INVESTMENTS IN PLANT ASS.	15.000	
100 CASH		15.000
217- INVESTMENTS IN PLANT ASS.	35.000	
100 CASH		35.000

As can be seen here, it is not right to consider fruit trees as Biological Assets before they are ready to bear fruit. Therefore, it would be correct to open the account as "investments in plant assets". As a matter of fact, if the trees dry up with this reason, it would not be right to consider these dried trees as biological assets.

•In 2020, 30.000 TL of these trees were dried and the remaining part was ready to bear fruit. It is understood that the value of the dried fruit trees has decreased to 15.000 TL but can be sold as wood.

As can be seen from the above accounting record, if a biological asset loses its quality, it is no longer considered as a biological asset. You need to get this asset to other biological assets as it is in stocks. Then you need to calculate the impairment.

Accounting record of mature fruit trees in 2020

210 PLANT ASSETS	170.000	
217- INVEST. IN PLANT ASS.		170.000

Accounting record of dried fruit trees in 2020

167- OTHER BIOLOGICAL ASS.	30.000	
217- INVEST. IN PLANT ASS.		30.000

Calculation of impairment in 2020

654 PROVISIONAL EXPENSES	15.000	
168- PROVİSİON FOR IMP. OF BIOLOGICAL ASS		15.000

•In 2020, costs such as irrigation and spraying have been applied for trees. The total of these expenses is 10.000 TL. Since these trees are new, they produced 50 tons of product in 2020. It is determined that the value increase of these products by the fair value method is 1,25 TL.

50 ton X 1000 KG=50.000 KG

50.000 KG X 1,25 TL=62,500 TL

Value Increase: 62.500 TL – 10.000TL= 52.500 TL

Expenses incurred in 2020 and value increase

161 PLANT ASSETS IN PRODUCTION	10.000	
100 CASH		10.000
161 PLANT ASSETS IN PRODUCTION	52.500	
605 DIF. ARIS. FROM INCRES. IN VALUE OF BIO. ASSETS		52.500

As can be seen, after the trees are held in the soil, fruit can be collected from these trees. The expenses made until the fruit is taken are made for investment, the expenses made after the fruit are taken to obtain the product.

Here, it is important to pay attention to the costs of obtaining the product. Since the crops are not harvested, they are still on the tree.

[1] Some examples were obtained by looking at the source (Örten,et all.:2012:637-643), (Özerhan,Yanık:2012;765-800)

Since our company produces fruit juice, the fruits produced will enter into the fabrication production process after harvest. Then, since the costs made and to be made are the costs of the harvest for the current period and since the products are still in the tree, it would be correct to transfer the accounting records of these costs to 161 Plant Products in Production. The costs of TL 10,000 first goes to the 161 account, after the harvest, fabrication will start and it will be appropriate to transfer it to cost accounts 7 (cost accounts). Since the products to be harvested will be the raw material of the fruit juice, it should be transferred to 710 Direct First Substances and Materials account. Costs incurred or to be made, since the crops are in the trees before harvesting, it would not be correct to make an accounting record of 160 or keep it in 210 Biological Assets account. Because the costs made to the tree are made to get fruit. Fruit is a product emerging in the current period. Costs incurred to obtain this product should be accounted for as 161 because there is a production and conversion process. However, the value increase should be kept in the 605 Differences arising from increases in the value of biological assets. The accounting account should be 161 Plant Products in Production since there is an increase in value for the current period, not 210 Plant Assets.

•During the harvest period of 2020, the fruits were harvested. 50% of the fruit is stocked for fruit juice production. The fruits in the stock were put into production. 30.000 TL labor cost was incurred for the fruits put into production. At the same time, 15,000 TL of general production expenses were incurred. Fruits in the production process were transferred to the accounts of reflection account.

As can be seen, account no. 160 does not contain the products whose production is not completed. The fruits in the tree are monitored in account 161 while the production continues. When the production is completed and harvested, we can now transfer the fruits to account 160. However, not all of the fruits produced were sent to production for fruit juice production. The remaining fruits remain in account 160. At this stage the standard has been determined; first the biological assets (210 Plant Assets), then the agricultural products obtained from these biological assets (accounts 161 and 160) and finally the processing of these agricultural products obtained (150 and other production accounts) were determined separately. Since the fruit is taken into stocks to produce fruit juice, the fruit is no longer an agricultural product but becomes a commercial product. Therefore, the fruits to be sent to production are not transferred directly from account 160 to account 710. First, the fruits should be removed from being agricultural products. In this case, the fruits in account 160 should be transferred to account 150.

Harvesting of fruits in 2020		
160 PLANT ASSETS	62.500	
161 PLANT ASSETS IN PROD.		62.500
50% of the fruits are sent to stocks for production, in 2020		
150 FIRST SUBSTANCES AND MATERIALS	31.250	
160 PLANT ASSETS		31.250
Sending the products in stock to production in 2020		
710 DIR. FIRST SUB. AND MAT. COST	31.250	
150 FIRST SUB. AND MAT.		31.250
Labor costs		
720 DIRECT LABOR COST	30.000	
335 PERSONNEL DEBT		
360 TAX PAYABLE		30.000
361 SOC. SEC. INTERRUPTIONS		
General production cost		
730 GENERAL PRODUCTION COST	15.000	
100 CASH		15.000
Using reflection accounts		
151 SEMI-PRODUCTION LINE	76.250	
711 D.F.S.M.C REF.		31.250
721 D.L.C REF.		30.000
731 G.P.R. REF.		15.000

•The fruits on the production line were produced and stocked. Since the fruits in the stocks were exhausted, the remaining part of the harvested fruits was taken into the stocks.

These fruits in stocks were sent to production and the same costs occurred with the same process.

Taking stock of produced fruit juices		
152 PRODUCTS ACCOUNT	76.250	
151 SEMI-PRODUCTION LINE		76.250
Storing the remaining fruit as a result of production (not shown since the production process is the same)		
152 PRODUCTS ACCOUNT	76.250	
151 SEMI-PRODUCTION LINE		76.250

The cost of the products sent to the total production and become fruit juice is 152.500 TL. 600-Sales Account must be used when products are sold.

•The products have been sold for 250.000 TL. (VAT not taken into account)

Sales record		
100 CASH	250.000	
600 SALES ACCOUNT		250.000
Cost record		
620 COST OF SALE GOODS	152.500	
152 PRODUCTS ACCOUNT		152.500

The situation to be considered here, 60 Gross Sales group consists of 600 Domestic Sales 250.000 TL, 605 Biological Assets Valuation Increases 52.500 TL and total 302.500 TL. Because, a cost of 10,000 TL was effect and a product of 62,500 TL was obtained. The increase in value of 52.500 TL should be presented and taxed just like sales. If only the 10,000 TL spent to obtain the herbal product was added to the costs, then the resulting cost of 620 Cost of Sale Goods would also change. In fact, with the increase in value, the real sales value of fruit juice has emerged.

5. CONCLUSION

The reliability of accounting records has gained more importance due to the fact that international firms operate in many countries and many financial crises have emerged in this field. It is also important to record and report the accounting records of the companies operating in many countries in a uniform manner and in a language that all countries can understand. In order to eliminate this problem, many countries, institutions and organizations came together and brought certain standards for accounting, alleviating the accounting problems faced by international companies. While determining the standards, it has been tried to find solutions to many problems that can be understood by all countries in the world. One of these problems was that the activities in the agricultural sector could not be included in the accounting records and accounts. In order to overcome this problem, IAS 41 agricultural activity standards have been regulated.

These standards have been translated from English into Turkish in Turkey as a full set, like all other standards. As a result of this translation, many laws and regulations have been regulated by the TASB (Turkey Accounting Standards Board) and now the Public Oversight Authority (POA) for the implementation of the standards. Because of this obligation, it has created many problems regarding the implementation and training of TASs. One of these problems is the Uniform Accounting System and the Uniform Accounting Plan. New accounts and groups has been created are created without checking the compliance with the Uniform Chart of Accounts.

In our study, the scope of standards, according to the Uniform Chart of Accounts applied in Turkey has tried to create new accounts. With these accounts opened, a new accounting system was created with the help of the accounts opened separately in the "current assets" and "fixed assets" group in the Asset accounts and in the "income statement accounts no 6" group. A sample application was made for the accounting records of these accounts. With this application, it was tried to provide foresight about how accounting records will be made. In our study, it is stated that the “Biological Asset” accounts should be separated according to the short-term and long-term status and the appropriate accounts

should be opened. In addition, agricultural activities should be record separately from commercial activities. The products obtained as a result of agricultural activity should be evaluated and recorded separately in commercial stocks if they are to be used in a commercial activity. In addition, in our study, it has been tried to find a solution to the problem of how valuation differences will be accounted for expenditures on biological assets.

As a result of this research, the following results have been reached and accounting records have been made;

•The accounting of agricultural activities appears to be an activity whose implementation in all countries of the world is left behind. The reason for this; It has been evaluated as those who are engaged in agriculture are considered as farmers and not taken into account in tax liability. This situation eliminates the accounting registration requirement. However, since the product they produce is processed or sold by merchants, it has been evaluated as a commercial product. This situation has revealed that the producer (farmer) of the product does not evaluate as a merchant, but rather the product itself as a commercial product. In this case, we can say that agricultural activity was not taken into account, but the produced product was taken into account in commercial activity. It can be thought that agricultural products have not been included in accounting records for years, as they stand between "fixed assets" and "processing". However, this problem has been solved with TAS 41 and these two concepts have been separated from each other.

•According to TAS 41, "biological assets" and "commercial assets" are separated from each other in the first place. Later, since biological assets have the characteristics of commercial assets after a certain transaction, this situation is also explained in the standard. The standard also defines agricultural products as animals and biological plants. In addition, it emphasized that living plants on standard fixed assets should also be monitored within the scope of TAS 16.

•In this study, 16 Group of Current Assets in Uniform Chart of Accounts was created taking into account the liquidity principle. However, since we cannot change the uniform chart of accounts for the 21 groups in Fixed Assets, the liquidity principle has not been taken into account. Likewise, land and plat and plant assets are separated from each other. The reason for this is that there is no depreciation in land and plats. In biological assets, on the other hand, it is possible to observe both a value-enhancing and a depreciating situation. It has been explained that in order to apply value increasing and depreciating situations on plant assets, it has to be recorded separately from land and plats and accounting records have been made.

•It is also shown how to make accounting records in the accounts included in "6 income statement accounts" for the impairment and depreciation in the assets.

•It was emphasized that the same product can be both a fabricated product and a commercial product that results from agricultural activity. It was explained that this same product should be recorded differently in the accounting records within the scope of TAS 41. Likewise, if the agricultural product has been fabricated, it has been stated that this product is now semi-finished or finished. Likewise, it has been explained that the product resulting from the fabrication process is now a commercial product when it leaves the factory. Separately accounting records of these differences have been made. Newly opened accounting accounts have been tested separately.

In our study, detailed explanations about the new accounts and the operation of account groups have been made. The study has tried to explain in detail the biological assets, agricultural products and the distinction of commercial products resulting from the processing of these products. Our suggestion is to rearrange the Uniform Chart of Accounts to include agricultural activities. Our study carries

an application example especially for companies operating in the agricultural sector. In this study, new accounts, concepts and perspectives are tried to be introduced to accounting science, technique and literature.

KAYNAKÇA

Ağca A. Aktaş R., Uluslararası Muhasebe/Finansal Raporlama (IAS/IFRS) Standartları İMKB'de Yer Alan Firmaların Finansal Tablolarını Nasıl Etkiledi?, Dumlupınar Üniversitesi S.B.E, Sayı:18, Ağustos, 2007 (http://sbe.dumlupinar.edu.tr/18/227.pdf)

Akbulut, Y.Ö., Vergi Usul Kanunundaki Değerleme Hükümlerinin Türkiye Finansal Raporlama Standartları Kapsamında Değerlendirilmesi, IV.Muhasebe Uygulamaları Ve Uygulamaları Sempozyumu, ASMMO, Antalya,02-06 Mart 2008,MÖDAV 2008/1, s:1-40

Akdoğan N., Sevilengül O., TMS Ve TFRS Uygulamalarının Tekdüzen Hesap Planı Üzerine Etkileri Ve Öneriler, IV.Muhasebe Uygulamaları Ve Uygulamaları Sempozyumu, ASMMO, Antalya,02-06 Mart 2008,MÖDAV 2008/1, s:187-258

Arzova B., POROY A. A., "TMS 41 Tarımsal Faaliyetler Çerçevesinde Canlı Varlıkların Muhasebeleştirilmesi ve Finansal Tablolarda Sunuluşu", Vergi Dünyası, Yıl 25, Sayı 300, Ağustos 2006, Syf:135-147

Çevik Z., Türkiye Muhasebe Standardı (TMS) 41 Tarımsal Faaliyetlerin Kanatlı Hayvan Yetiştiriciliği İşletmelerinde Uygulanması, Uluslararası Yönetim İktisat ve İşletme Dergisi, ICAFR 16 Özel Sayısı, E-ISSN: 2147-9194, 2016, s:694-702

Demirci D.D., Türkiye Muhasebe Standartlarına Göre Zeytin Yetiştiriciliği İşletmelerinde Muhasebe Uygulamaları, Muhasebe Bilim Dünyası Dergisi Haziran 2019; 21(2); s:282-304

Demirkol Ö. F., TMS 41 Kapsamında Seracılık Faaliyetlerinde Muhasebe Kayıt Sürecine İlişkin Genel Bir Değerlendirme, Muhasebe Ve Vergi Uygulamaları Dergisi, ISSN 1308-3740, Cilt:1 Sayı:1, Mayıs 2008, Ankara, Syf:115-120,

Doğan, Z., Arslan, S., Tarımsal Faaliyetler Standardı: TMS-41 Çerçevesinde Su Ürünlerinin Muhasebeleştirilmesi, İşletme Araştırmaları Dergisi, 10 (4), 2018, 1047-1065.

Güdelci E.N., Uluslararası Muhasebe Standartlarının Tarihi Gelişim Sürecinde Etkili Olan Uluslararası ve Ulusal Kuruluşlar, International Journal of Economics, Politics, Humanities & Social Sciences, Vol: 2 Issue:3 e-ISSN: 2636-8137, Summer 2019, s:199-214

Örten R., Kaval H., Karapınar A., Türkiye Muhasebe-Finansal Raporlama Standartları (TMS-TFRS) Uygulama Ve Yorumları, 6. Baskı, ISBN:978-9944-165-18-1, Gazi Kitabevi, Ankara, Nisan 2012

Özerhan Y., Yanık S., Açıklamalı Ve Örnek Uygulamalı Türkiye Muhasebe Standartları Türkiye Finansal Raporlama Standartları, TÜRMOB Yayınları-427, ISBN:978-605-87134-1-3, Güncelleştirilmiş 2. Baskı, Ankara, 2012

Tek N., Tektüfekçi F., Finansal Muhasebe, İzmir, 2007

TMS/TFRS, TMSK, ISBN:978-605-60206-2-9, Fersa Matbaası-Ankara, 2010

Trak, S., İktisat Tarihi, Bursa İ.İ.T.A. Yayını, İstanbul, 1973

UFRS İle Uyumlu Türkiye Muhasebe Standartları TMS/TFRS, Türkiye Muhasebe Standartları Kurulu, TMSK Yayınları 5, Fersa Matbaası, Ankara, 2010

URL1:https://www.kgk.gov.tr/Portalv2Uploads/files/DynamicContentFiles/T%C3%BCrkiye%20Muhasebe%20Standartlar%C4%B1/TMSTFRS2019Seti/TMS/TMS%2041.pdf

Yalçın Z., Uluslararası Muhasebe Sistemlerindeki Çakışma Ve Ayrışmalar Işığında Amaca Yönelik Muhasebe Organizasyonu Önerisi, Doktora Tezi, Ege Üniversitesi S.B.E., 2010

Yılmaz E., TMS-41 Tarımsal Faaliyetler Standardı Kapsamında Büyükbaş Canlı Varlıkların Değerlemesi Ve Muhasebeleştirilmesi, Journal of Management and Economics Research, 2014, s:232-248

FASB Codification, http://asc.fasb.org, 2010 professional view.

FASB Learning Guide, For The Codification Researh System, Frofesional Wiew, March 1, 2012 http://asc.fasb.org

http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1978/L/01978L0660- 20040501-en.pdf

https://www.iasplus.com/en/standards/ias/ias41

https://www.ifrs.org/issued-standards/list-of-standards/ias-41-agriculture/

https://www.pkf.com/media/10033171/ias-41-agriculture-summary.pdf

https://www.kgk.gov.tr/DynamicContentDetail/9182/TMS/TFRS-2019-Set