Assessment of Accounting Methods Practiced by Malaysian Public Listed Companies in Agriculture Sector

Nur Naimah Mohamed., Nurshuhada Mohamed

University Malaysia Terengganu, University Sultan Zainal Abidin

DOI: https://doi.org/10.47772/IJRISS.2026.10100083

Received: 30 December 2025; Accepted: 06 January 2026; Published: 22 January 2026

ABSTRACT

This paper examines the existing accounting methods practiced by Malaysian public listed companies in agricultural sector in relation to palm oil trees, which falls under biological assets. The results based on the interview of six palm oil plantation companies indicate that the cost method is the most practiced method as compared to the fair value method. This is because the complexity of fair value raises problems to the company in measuring palm oil trees, and also gives impact to profit and loss account. Furthermore, fair value raises controversial issues particularly relating to palm oil trees where the income-producing biological assets have long economic lives that stretch beyond ordinary accounting periods. The fair value method was introduced by IAS 41 (Agriculture) as measurement method for biological assets. Since palm oil trees gives huge contribution to Malaysia's economy, it is necessary to study this new proposed standard of agriculture before it is implemented in order to determine whether it would bring more advantages or disadvantages to Malaysian plantation companies as well as the Malaysia's economy as a whole.

Keywoods: IAS 41, Accounting Method, Fair Value, Cost Method, Long-lived Biological Assets

INTRODUCTION

Over twenty years ago, agricultural activities mainly took place at small family farms and there were no specific guidelines for the agricultural sector. Marsh et al. (2013) stated that this sector initially received little attention from standard setters and the sector made only a small contribution to the national income. This is because during that time there was no accounting specialty in agriculture, there were poor-quality accountants and agricultural businesses were small (Argiles & Slof, 2001). Now, times are changing and the agricultural sector is becoming very significant and contributes huge income to agriculture-based economies. Furthermore, accounting policies have moved forward in developing measurements for agricultural accounting. It is believed that agriculture should have its own accounting standard to make its outputs match the current accountancy practices, especially in financial reporting. To this end, the International Accounting Standard Board (IASB) has introduced the International Accounting Standard (IAS) 41 to specifically account for the agricultural sector. In particular, IAS 41 sets out the accounting treatment and disclosures applicable to agriculture produce and activity.

The purpose of IAS 41 is to standardise and harmonise accounting for agriculture for those dealing with business-level agriculture. It sets out the accounting principles related to agricultural activities such as the measurement of biological assets that are used to produce agricultural products. This IAS 41 standard also introduces the fair value concept to replace the historical cost method. According to IAS 41, the use of fair value accounting in agriculture is in harmony with the recent practice of using fair value accounting, and also in the measurement of performance in the financial capital maintenance method. The standard rationalises that fair value provides more relevant information about the performance of the entity that undertakes agricultural activity than the traditional cost-based measure of profit and loss (Tan, 2010). However, the use of fair value in the agricultural sector raises several issues as shown by the findings in the literature on this subject worldwide and in Malaysia. In this regard, this study focuses on Malaysia and aims to examine the existing accounting methods as practised by Malaysian palm oil plantation companies in regards to biological assets.

Agriculture is an important sector in Malaysia. The main agricultural industry, especially the palm oil plantation sector, contributes a huge amount of revenue to the Malaysian economy. According to the Malaysian Palm Oil Board (MPOB, 2014), Malaysia is the world's largest producer of palm oil, producing a yearly output of more than 16 million tonnes of crude palm oil (CPO). Although Malaysia had fully converged its accounting standards into IFRS in January 2012 (Chan, 2012), one of the standards is problematic for the country. The standard is IAS 41 (Agriculture). When Malaysia announced it would converge with IFRS, it was clear that the agriculture standard would have to be introduced in Malaysia because the agricultural sector is a major contributor to the Malaysian economy. Indeed, palm oil industry has been the backbone of Malaysia's social and economical development. Since more than 90% of its production is exported, the industry is one of the top earner for the country, contributing about RM 61.3 billion in foreign exchange in 2013 (Malaysian palm oil board, 2014). In addition to that, the palm palnattaion sector in Malaysia is also expected to grow further due to its strong global demands and extensive investments by plantation companies.

As one of the countries following IFRS, Malaysia has to adopt this standard to standardise its financial reporting on agriculture so that it is in line with that of other countries that have adopted IFRS. Jeanjean and Stolowy (2008) stated that more than 100 countries have agreed to require the adoption of IFRS, or have established timelines for the adoption of IFRS. Furthermore, Brazil, Canada, China, and India have all committed to formal timelines for the adoption of IFRS, and Japan made 2011 its target for convergence with IFRS (Jeanjan and Stolowy (2008). The number of countries that allows and require an adoption IFRS dynamically increased since 2004 (92 countries) to 2012 (120 countries) and in 2015 a little bit more than 120 countries (Dvorak and Vasek, 2015). Moreover, according to Yapa, Joshi and Kraal (2015), there are 150 countries have adopted the IFRS based on the sources from IASB website. In recent year, there are 166 profile jurisdictions by region of the world use the IFRS standard according to the IFRS foundation 2018. Moreover, the IFRS foundation released the number of profile IFRS application in 166 jurisdictions all around the world (IFRS foundation 2018) which is accessible by public.

Besides being an essential agricultural production material, palm oil plantation has become the main asset of many other agricultural businesses. For the Malaysian agricultural sector, palm oil is its biological assets. Thus, the selection of an appropriate measurement for this key biological asset has become an important issue in agricultural accounting. Due to the importance of this Malaysian's main biological asset (i.e., palm oil plantations), the adoption of IAS 41 is being proposed.This is because issues related to the recognition, measurement and disclosure of biological assets will have a significant effect on the regulation of agricultural companies' accounting treatment as well as on the information disclosure practised by Malaysian agricultural businesses, especially in the palm oil sector.

A palm oil tree has an economic value for 25 to 30 years (Tan, 2010) This raises the question, what is the fair value of a palm oil tree with a longer life span that ends up with no active market? The issue raised in relation to this fair value measurement is the issue of there being an inactive market for the biological asset of the palm oil tree itself as well its fruit (Asian Oceanian Standard Setter Group Working Party (AOSSG WP), 2011). Tan (2010) believes that there is no market as such for biological assets, such as palm oil trees, because every biological asset has different phases in their transformation process, such as growth, degeneration, production, and procreation, that causes qualitative or quantitative changes in the biological asset. For instance, the life span of a palm oil tree is about 25 years longer than that of other biological assets such as deer, cows and paddy fields, among others.

As it is generally known, fair value is concerned with two qualitative characteristics of accounting information, namely reliability and relevancy. According to Aryanto (2011), when making decisions, it is useful if the accounting information has these two qualitative characteristics. These qualitative characteristics reveal that the fair value measurement in the agricultural sector is indeed a better method as compared to the cost method. According to Li and Yun (2013), using the cost method for measuring biological assets, although reliable, results in irrelevant values. The cost method is deemed reliable because it focuses on the actual cost incurred, but it is likely to be less relevant as it is historical and hence, outdated.

Arguably, the cost method tends to produce results that does not reflect the true underlying value of assets (Herranz & Osma, 2009). Bohusova et al. (2012) claimed that the historical cost method, when used as a basis

for measurement, does not take into account the value added by the biological process. Furthermore, it does not consider the net present value (NPV) as an appropriate basis for the measurement of biological assets either. For instance, if the cost method is used, the value of the biological asset at the end will be zero in terms of book value because of depreciation, but the asset will still have a certain value in the market, which would be apparent if the fair value method were applied.

Therefore, using the fair value method to measure biological assets is seen to be more relevant. However, it has been argued that such a method is not reliable in an inactive market (Li & Yun, 2013). This is because companies will use various methods to determine the fair value in an inactive market. As a result, the accuracy of the value of biological assets value cannot be certified, and the information on the financial statement of biological assets cannot be compared due to the use of different methods. Thus, the purpose of IAS 41, which is to harmonise the reporting of biological assets so that companies can be competitive with those in other countries, cannot be achieved. In contrast to the fair value market, there is no market for certain biological assets, especially those with long life span (Bosch et al., 2011). For instance, based on a study in India, Beria (2010) claims that the fair value method proposed by IAS 41 is inappropriate to be implemented for agricultural enterprises involving timber trade as there is no active market for timbers. This is because timber has an economic life span of 50 years, which continues beyond one accounting period. Similarly, it is argued that fair value is not an appropriate measurement basis to be used in valuing palm oil trees as they also have a long time span.

All the issues raised above explain why Malaysia introduced this agriculture standard. This is primarily due to the nature of its biological assets – in the context of this study, the assets are the palm trees. In addition, in light of the above discussion on qualitative characteristics, it is fair to deduce that both reliability and relevancy are crucial in delivering good accounting information. Thus, in order for the IAS 41 standard to be applied, it is important to ensure that this standard is both relevant and reliable in the present time as well as in the future. Equally important is that the standard should be able to cater to the problem of active market regardless of a commodity's life span.

The problem of fair value in the context of this study is that there is no market for palm oil trees and the fruit growing on the trees(Beria, 2010; Bosch et al. 2011; Tan, 2010; AOSSG WP, 2011). According to Chan (2012), this is why Malaysia is still deferring the implementation of the agricultural standard IAS 41. This statement is supported by AOSSG WP (2011) that discusses the irrelevance of fair value in measuring biological assets because there is no active market price for biological assets such as palm oil trees. Palm oil trees have their own biological transformation process which consists of several phases including growth, degeneration, production and procreation. The palm oil tree's economic life span ranges from 25 to 30 years and it can produce fresh fruit bunches (FFB) three to four times, sometimes more, during its life time (Tan, 2010). However, the problem with using fair value is the non-existence of an active market for long-lived biological assets including palm oil trees (Beria, 2010).

Due to issues of inactive market, IAS 41 proposes that players can use three bases to deal with this problem. These are use the market prices of similar products, hire independent evaluators and use net present value (NPV) method (Lazar & Huang, 2008). For example, comparing the market prices of similar products derived from the biological assets. As mentioned earlier, there is no market for palm oil or rubber trees. However, there are commodity prices for their products, CPO and rubber, respectively. However, the comparison of prices in this case is not very accurate and therefore, irrelevant. CPO and rubber are the final output commodities, whereas biological assets are the assets that are being used to produce the products, so they are similar in nature to a physical asset. This is supported by AOSSG WG (2011), who said that the comparison of the commodity price for CPO with the value of a palm oil tree is not very accurate or relevant because CPO is a product of processed palm oil, which was originally obtained from the palm tree itself, whereas the palm oil tree bears its own fruits, the quantities and qualities of which differ from tree to tree, making those two values incomparable.

The second basis is that the company may employ an independent evaluator to measure the fair value of a palm oil tree. This is one of the bases of valuation to determine the fair value (Ajith, 2009; Aryanto, 2011). Alternatively, they may use the third basis, which is, the present value. In certain circumstances, market-determined prices or values may not be available for a biological asset in its condition at the time. In such circumstances, an entity should use the present value of expected net cash flows from the asset discounted at a

current market-determined pre-tax rate in determining fair value (Lazar & Huang, 2008). The cash flows used should reflect the expectation of market participants in respect to the asset in its most relevant market. In the case of bearer biological assets, the present value of expected future cash flow generally represents an ongoing concern regarding the value of all the assets involved in the farming activity (Maina, 2010). As such, fair value might be subjectively arrived at depending on which consultant the company chooses and what basis the company chooses for the determination of fair value. As a result, the fair value obtained might not be relevant and its reliability will be disputed (Ayanto, 2011).

Moreover, comparison of financial statements with those of companies in the same and in other countries cannot be undertaken because companies can choose a different basis and method to deal with the issue of an inactive market. Using various method may lead to manipulation and subjective judgment in order to obtain a value for their biological assets. This is supported by Aryanto (2011) who studied the use of different measurement models and found that these result in differences in the earnings quality of the agricultural sector and, as a result, comparability cannot be achieved. Since there is no market price for long-lived biological assets, the reliability of fair value seems to be questionable in terms of providing the true value of a company's assets. Thus, it could result in misleading information for the users of financial statements and cause them to make wrong decisions. Hence, the presentation of all transactions and events is not true and fair in this context. Consequently, in the case of palm oil plantations in Malaysia, the fair value obtained for asset valuations is not very appropriate for measuring palm oil tree assets when there is an inactive market.

As aforementioned, biological assets such as palm oil trees may not have readily available market price and hence, various bases are used in estimating their fair values. This could lead to inconsistencies in the measurement values and provide opportunities to plantation companies to manipulate financial information. Such inconsistency and subjectivity in the fair value determination process could result in the value of palm oil trees to be over- or under-reported (Li and Yun, 2013). Hence, it appears that it is crucial for IAS 41 to be approprietely considered before it is to be implemented in Malaysia.

The insights found from the study will be useful for interested parties such as regulators, policy makers, accounting practitioners and in particular the agriculture players. It is hoped that this study will encourage the standard setters to throughly review the proposed IAS 41 standard that is to be imposed on agricultural sectors including palm oil plantation. The study will also identify the practical reporting challenges confronting plantation companies in the agricultural sector in the application of fair value. Then, the study will analyse the effect of fair value reporting on the information which is available to various groups of external users in the agricultural sector. Based on this, various groups, such as agriculture players, can predict the problem of fair value for biological assets, and also through this research, some solutions can be given to agriculture players due to the arising problem of fair value in measuring biological assets.

LITERATURE REVIEW

Fair Value versus Cost Method

The issue concerns whether fair value or the cost method is more relevant and reliable for measuring biological assets. "In an era which has seen a shift away from traditional historical cost measurement bases for reporting, the challenge is to maintain the qualitative characteristics of relevance, reliability and consistency in order for financial information to be meaningful to users" (Burritt et al. 1990). The application of the fair value model represents the most significant principle in MFRS 141 as it presumes that fair value can provide more relevant and reliable information about the performance of an entity that undertakes agricultural activity than the traditional historical cost-based measure of profit and loss. However, some scholars have argued that the cost method is more reliable than fair value in measuring biological assets (Elad, 2004; ; Burnside, 2005; Bosch et al., 2011). According to Rashad Abdel-Khalik (2010), the advantages of using historical cost lie in the quality of hardness in terms of lower susceptibility to assumptions and judgement. Besides, Burnside (2005) believes that the cost of an asset is entirely reliable because the transaction has already taken place.

However, the disadvantage of the cost method is that is is not as relevant as compared to fair value, especially in giving the information about current asset, because the cost method does not reflect the current market price.

This is because the cost method does not give a genuine impression of the value of the asset or true value of the asset when the asset is sold (Burnside, 2003). Furthermore, Burnside (2005) noted that fair value is not as reliable as cost. Rayman (2007) stated that fair value accounting can result in misleading information if it is based on expectations that turn out to be false. Ronen (2008) complains that fair value suffers from a lack of reliability and can be subject to manipulation. In the same vein, Liang and Wen (2007) are critical of the beneficial effects of moving to fair value because it can lead to more managerial manipulation and induce less efficient investment decisions than cost valuations.

Moreover, Bosch et al. (2011) argued that fair value is irrelevant because it lacks verifiability, whereas relevant historical cost accounting requires accurate and reliable cost calculations. However, this assumption is rebuttable in the case of most forms of agriculture. If we move beyond the discussion about unrealistic historical cost and fair value accounting regimes, taking into account the characteristics of accounting practices in the agricultural sector, historical cost cannot be expected to be free of the problems of volatility, smoothing and predictability. Based on the discussion above, Bosch et al. (2011) concluded that historical cost accounting has scarce information content in regard to agriculture because it does not reflect the current market price.

Besides, the cost method is lacking when compared to the fair value method in terms of presenting the current value of an asset. This is because the historical cost does not take into consideration the value added by the biological process. On the other hand, the cost method does not consider the net present value as an appropriate measurement basis for biological assets, as argued by Bohosuva et al. (2012). Moreover, Borsch et al. (2011) concluded that fair value accounting can be more easily applied in the agricultural sector than historical cost accounting, and that historical cost conveys a less accurate grasp of the real situation of a farm. Borsch et al. (2011) also argued that there needs to be a comparative study of the difficulties in accounting preparation and judgment in agriculture using fair value and historical cost for the valuation of biological assets. It is clear from the above that both methods (historical cost and fair value) have advantages and disadvantages in measuring biological assets.

Even though most studies are not supportive of the requirement in IAS 41 to use fair value for biological assets, there are also advocates of the fair value approach. According to Bonaci et al. (2012), fair value accounting is a financial reporting approach in which companies are required or permitted to measure and report on an on-going basis certain assets and liabilities at estimates of the prices they would receive if they were to sell the asset. They argued that the advantages of fair value are that it has the ability to enhance accountability by improving understandability, comparability and timeliness in governmental financial reporting, although the use of objective measures to estimate fair values is a necessity. Nevertheless, the authors emphasised that this depends on the types of assets and the existence of an active market, which are crucial to improving the comparability of financial statements when applying fair value accounting. Moreover, Bosch et al. (2011) argued that fair value makes it easier not only to value biological assets, but also to prepare and complete the accounts, and more specifically the income calculation for the accounting period. Besides, it gives the figures on financial performance over a given period greater weight (Borsch et al., 2011). The fair value model also gives rise to more relevant information for the users of financial statements, whereas the historical cost model fails to provide an accurate representation of the recent past or the situation of the firm at the time of preparing the financial statements.

In addition, Nishikawa (2000), who earlier commented on ED 65, mentions that in ED 65, the change to a fair value measuring approach can avoid inconsistency in measuring assets especially in the case of a natural disaster or disease outbreak. Other authors have argued that recording the biological asset by fair value accounting provides more disclosure and it is compatible with transparency (Barlev & Haddad, 2003). In other words, the fair value concept gives a more consistent valuation, and is a reliable and comparable source of information. Moreover, Argiles & Slof (2001) pointed out that fair value is a good option for family farms that do not have the resources and skill to calculate their costs.

Barlev & Haddad (2003) argued that historical cost accounting is a source of irrelevance and obscures the real performance of the firm. They argued that fair value accounting increases management efficiency and decreases the principal–agent conflict. Additionally, fair value accounting figures provide information that serves the purpose of evaluating potential payments and the risk of default. In general terms, the authors hold that historical

cost accounting allows the firm to conceal information and manipulate figures, while fair value accounting improves them and reflects reality more accurately. More specifically, historical cost fails to adequately deal with biological transformations of living animals or plants managed by agricultural activity. Its ability to reflect these kinds of processes is limited. Under a transaction-based historical cost model, an entity with biological assets may report no revenue until the assets have matured, been harvested and sold. Beria 2010 mentioned this whole process may take a very long time (perhaps 30 years after planting).

Besides, a historical cost valuation of most biological assets generated and grown on farms is controversial, and subject to complex calculations and arbitrary cost allocation criteria. In contrast, fair value recognises and measures the different phases of biological growth using current values and reports changes throughout the whole transformation process. Therefore, it is more able to reflect processes involving biological assets. However, the fair value model falls down in terms of providing relevant and reliable information to users of financial statements when there is an inactive market especially in the case of biological assets with a longer life than one balance sheet date (Barlev & Hadad, 2003).

Other than that, Knechtle & Attenslender (2000) stated that the determination of fair value is unreliable when it comes to harvest time. This is because at harvest time there may be an inherent risk of diseases and natural disaster that cannot be predicted. Thus, this creates a problem in terms of measuring the assets and thus, the users of financial statements may misunderstand the information about the assets and use their own judgement to determine the price of the assets. To conclude the review of the literature, the fair value and cost methods have their pros and cons in measuring biological assets. However, it is believed that the fair value method is more relevant to implement in the future and currently, if the market price for all biological assets include short and long life span. All the issues raised above indicate that the standard setters may need to revise the standard in order to make it applicable for all biological assets and for the Malaysian context.

RESEARCH METHOD

Given the small number of Malaysian plantation companies that deal with palm oil, this study chose the case study method because it allows for a detailed approach to collecting data. According to Myers (2009), a case study can be conducted on a social process, an organisation or any collective social unit. It can involve an in-depth analysis of a single case or multiple cases, focusing on details within each case and context (Neuman, 2014). This study used the multiple case study research approach to note the differences in methods that are practiced between small and big plantation companies. Moreover, this study uses the semi-structured interview approach. It is the most practical way to collect data for this study because it gives the researcher structure yet it allows room for improvisation where important insights may be developed from the interviews. Besides that, by adopting a semi-structured interview method, the researcher can lead the interview to cover specific areas of interest which are important to the research objectives. In order to do this, six plantation companies were selected and 13 of the employees from these companies were interviewed.The researcher categorised the companies into two types, based on size; three big companies and three small companies. In this study, for the purpose of anonymity, the three big companies are referred to as BC1, BC2, and BC3, while the three small companies are referred to as SC1, SC2, and SC3. The respondents in the semi-structured interview comprised of profesional employees in the companies' accounting department who are accountants, chief financial officers, general managers, finance managers, account managers, executive accountants and heads of finance. Respondents with an accounting background were selected because of their involvement in measuring biological assets and their awareness of the proposed standard. They are also aware of the controversial issues surrounding the use of fair value valuation for biological assets. Therefore, given their accounting background and experience, the respondents are assumed to be experts in the subject matter and should be able to respond to the questions asked during the interview appropriately.To analyse the data, the software ATLAS.ti was applied in the research.

Findings

The findings are reported according to research questions, which is: What is the current accounting practice used by the Malaysian palm oil plantation companies to measure biological assets**?** The thematic approach is used in order to answer this research objective. The 13 respondents were asked about their companies' current accounting practices and about the methods of measuring their biological assets. The theme for this section is

‘‘accounting practices’. Two codes were used for this theme: (i) Types of Biological Assets; and (ii) Method of Measurement. The findings are summarized in Table 4.1.

Table 4.1 Findings for the research question.

Theme: Accounting Practices						
Name of Companies	**BC1**	**BC2**	**BC3**	**SC1**	**SC2**	**SC3**
1. Types of Biological Assets						
1) Types of Biological Asset- one biological asset	✓	✓	✓			
Types of Biological Asset- More than one biological asset				✓	✓	✓
Types of Biological Asset- Long-lived	✓	✓	✓	✓	✓	✓
Types of Biological Asset- Short lived						
2. Method of Measurement						
2. Method - Cost Capital Maintenance Method	✓	✓	✓		✓	
Method- Amortisation method						✓
Method- Other				✓		

Types of biological assets

This coding refers to the types of biological assets that the plantation companies have. BC1, BC2 and BC3 are major companies in the plantation business and these companies concentrate mainly on palm oil products. Below are several of the respondents’ answers related to the first coding. According to BC3:

“*Our biological asset is palm tree or palm oil... this contributes 100% to our company’s income*.”

Also referring to this code, BC1 stated:

“*We focus on plantation, particularly palm oil and the major income is from palm oil itself.*”

SC3 has many types of biological assets such as plantation, Narra trees and Acacia trees. However, it derives most of its income from plantations. The other two small companies, on the other hand, deal more with agriculture than palm oil. Their main agriculture is plantation. As stated by SC2:

“*Our income is 90% from plantation and another 10% comes from olive oil.*”

The differences of assets between the companies depend on the size of the company. For example, the big companies mostly deal in plantation sectors compared to the smaller companies who own various types of biological assets but have fewer plantation estates. Under this code, the companies were also asked about the types of biological assets they have in terms of short-lived or long-lived biological assets. All the companies have long-lived biological assets. The following statement by BC3 is evidence of this:

“*We have palm oil trees that can grow until 30 years or more. We categorise this asset as long-lived biological assets.*”

A statement by SC3 also affirms this:

"*We have palm oil, Acacia and Narra trees. These types of assets are long-lived biological assets that are expected to grow for more than 30 years.*"

Method of Measurement

Under the code of method of measurement, the findings showed that all the three big companies use the capital maintenance method. BC1 stated that:

"*Currently, we are using the capital maintenance method, where other costs incurred by our plantation's historical cost are capitalised as biological assets. This is capitalised and subsequently used for replanting expenses for the profit and loss account.*"

Also referring to this code, all the respondents of BC2 and BC3 also stated that they used the cost capital maintenance method to measure biological assets"

On the other hand, SC3 uses the amortisation method since late 2012. SC3 stated that:

"*Based on the annual report, we used the amortisation method. Before 2013, we measured our assets by cost.*"

The other two small companies, namely SC1 and SC2, use the revaluation method and the cost method respectively.

SC1 stated that:

"*We are using the revaluation method and re-valued it once in five years based on MRFS 116.*"

Also referring to this code, SC2 stated:

"*We used the cost method. We capitalise the asset and amortise when the expenditure is transferred to property, plant and equipment when the estate matures.*"

To recapitulate, the first research objective was aimed at examining the current methods practised by the plantation companies for their biological assets. The findings showed that the big companies prefered to use the cost capital maintenance method because of their large scale farming and land plantation estates. The cost capital maintenance method is more convenient for them to measure their biological assets in and outside of Malaysia. In addition to that, in practise, all the big companies in this study used the cost capital maintenance method. On the other hand, the small companies used various methods such as the revaluation, cost capital maintenance and amortisation methods. Furthermore, the cost capital maintenance and amortisation methods were suggested in the exposure draft by MASB to measure the biological assets prior to the implementation of IAS 41 in Malaysia. Since, this standard is not yet adopted, other methods such as the revaluation method are also allowed, but they have to prepare the disclosure as requested in IAS 41, para 46:

"*An entity should disclose the method and significant assumption applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets.*"

This shows that the companies follow the correct regulation and adhered to the exposure draft. In addition, based on the findings obtained from this study, the six companies used one of the methods was that suggested by standard. Moreover, the annual reports were also analysed and it was found that the valuation method used by each company is consistent with the views provided by them during the interviews. Besides that, they stated that if they adopted the IAS 41 standard, they would need to measure the assets on every reporting balance sheet date which is impractical on large scale worldwide plantations. They would not be able to complete a report of their assets of one year. In addition, all the companies are dealing with long-lived biological assets such as palm oil trees. Palm oil trees can naturally live and grow for up to 30 years as compared to other biological asset, such as paddy and cattle, which have shorter life span. Thus, using the cost capital maintenance method to measure their palm oil trees is far easier to measure long-living biological assets.

On the other hand, the small companies used various methods to measure their biological assets: SC1 and SC2 used the revaluation of the assets every five years and cost method respectively, while SC3 used the amortisation method to measure the biological assets. Their small-scaled palm tree asset allows all three companies to use various methods as compared to the bigger companies who prefer the cost method because their palm trees and estate are larger.

DISCUSSION ON FINDINGS AND RECOMMENDATION

This study examines the current accounting practice of the plantation companies in measuring biological assets. Overall, the findings showed that three methods are used by the plantation companies. The small companies use a variety of methods in the valuation of their biological assets. These methods include the amortisation method, cost method, and revaluation method, where the revaluation process is done every five years based on MFRS 116. However, all three big companies adopt the capital maintenance method, where all of their replanting costs are capitalised and not amortised. The big companies have continued to use this same method over the years. This is because the cost method is more manageable and easier for them to use for reporting the financial condition of large estates.

Second, using the cost method capitalises new planting costs but does not amortise them. Hence, the biological asset is written off in income when incurred. It is for these two main reasons that the cost method is preferred by the big companies. Thus, based on the literature and findings in this study, it appears that the fair value method is perceived to be inappropriate as a basis for the measurement of long-lived biological assets; instead it is more suitable for short-lived biological assets. To date, there seems to be no active market for palm trees (AOSSG, WP 2011). Thus, the introduction and implementation of IAS 41 is being deferred in Malaysia (Chan, 2012). Hence, the cost method is currently the method that is widely used to measure biological assets, and particularly the palm trees in Malaysia (AOSSG, WP 2011; Chan, 2012).

Based on the information gathered from the interviews, it appears that big companies often have plantations that are not only situated in Malaysia but also abroad. According to the companies, in such a situation it is easier to use the cost method rather than the fair value method when measuring biological assets. If the fair value method is adopted, a yearly valuation would be required and this would be an excessive burden for them. Nevertheless, those big companies are in the process of preparing themselves to switch to the fair value method in case IAS 41 is made mandatory. Compared to the big companies, small companies were found to use a range of different methods to measure their biological assets, which could be due to the different scale of their respective operations. Small companies can use various methods such as hiring an independent evaluator because they have small-scale plantations and thus such methods are not prohibitively expensive. For big companies that have much bigger plantations in different parts of the country and also abroad, ome methods such as independent evaluation would definitely cost a lot more due to the large size and complexity of their operations.

In summary, most of the plantation companies in Malaysia utilise the cost method when measuring their biological assets because the implementation of IAS 41 is still deferred (Chan, 2012). Furthermore, the cost method is preferred by most companies in this study because it is more manageable, easier to implement, and less complex. However, even though the implementation of IAS 41 is still pending, plantation companies should undertake the necessary action to prepare themselves for the adoption of the standard in the future.

The following recommendations are made from the results of this study:

- The insights found from the study will be useful for interested parties such as regulators, policy makers, accounting practitioners and in particular the agriculture players. It is hoped that this study will encourage the standard setters to throughly review the proposed IAS 41 standard that is to be imposed on agricultural sectors including palm plantation.

- Specifically, this study highlights the potential problems that could be faced following the implementation of IAS 41 based on the opinions and views obtained from several palm plantation companies in Malaysia. These information would provide useful guidance to the standard setters and policy makers in dealing with the issues associated with the implementation of IAS 41 in Malaysia.

- The study will also identify the practical reporting challenges confronting plantation companies in the agricultural sector in the application of fair value. In addition, the study adds to the extent literature on agricultural and IAS 41 that is currently scarce, particularly in relation to Asian countries such as Malaysia.

- Apart from that, this study used a software to analyze the data using qualitative method. Such a method as chosen by the researcher has not been widely used by previous researchers.

- Lastly The Agricultural Research Council or MPOB can develop a guide on the various input costs affecting the different biological assets which can be availed to the accountants and agronomists to assist with the valuation.

CONCLUSION

Based on the findings obtained from the conducted interviews, it can be concluded that from the Malaysian perspective, most of Malaysian plantation companies used cost method to measure the biological assets as compared to fair value. This is due to the complexity of IAS 41, and the absence of fair value market especially for palm oil trees and other long-lived biological asset. However, most of palm plantation companies agreed that this standard is appropriate for short-lived biological assets. Besides, most companies claimed that the advantages of implementing fair value is that it gives high disclosure to users in making decision from reading the financial statements. The fair value method is more relevant to be implemented in the future and currently, most of the assets are going to be computed with the fair value except for this biological asset. Having a proper, detailed and clear guideline in the IAS 41, it is hoped that the fair value method will steadily be accepted among the industry players and becomes important and beneficial in the future. Overall, it is hoped that the standard setters will revise the existing agricultural standard and find some practical solutions to the problem of the inactive market in order to ensure that IAS 41 will be relevant and applicable for all biological assets.

REFERENCES

1. Ajith Ratnayake. (2009). Valuing biological assets, (May), 36–38.
2. AOSSG. (2011). Working Paper Issues Paper on IAS 41. Retrieved August 2011. http://www.aossg.org/docs/WG/Agriculture/Appendices_part_1_of_4_to_Issues_paper_on_IAS 41_Nov_2011.pdf
3. Argilés, J.M., Slof, E.J., (2001). New opportunities for farm accounting", European Accounting Review, 10(2), pp. 361-383.
4. Aryanto, Y. H. (2011). Theoretical Failure of IAS 41 : Agriculture. SSRN, 1–5. Retrieved from SSRN
5. Barlev, B., Haddad, J.R., (2003). Fair value accounting and the management of the firm", *Critical Perspectives on Accounting*, 14(4), pp. 383-415.
6. Beria, S,. K. (2010). Agriculture Industry and IFRS : Application Review of IAS 41 –Agriculture (The Fair Value …). Journal of the Institute of Chartered Accountants of India,58(May), 1783–1789.
7. Bohušová, H., Svoboda, P., & Nerudová, D. (2012). Biological assets reporting: Is the increase in value caused by the biological transformation revenue?.*Agricultural Economics* (ZemědělskáEkonomika), 58(11), 520-532.
8. Bonaci, C. G., Strouhal, J., & Mustata, R. V. (2012). Fair Value Measurement as a Challenge for the Accounting Standard Setting Process
9. Bosch, A,. J. M., Sabata, A., & García Blandón, J. (2011). A comparative study of difficulties in accounting preparation and judgement in agriculture using fair value and historical cost for biological assets.
10. Burritt, R. L., & Cummings, L. S. (2002). Accounting for biological assets-the experience of an Australian conservation company. Asian Review of Accounting, 10(2), 17-42.
11. Burnside, A., (2005). IAS 41 and the forest industry – A study of the forest products companies' perception of the IAS 41 today", Bachelor Thesis, Department of Business Administration, Göteborg University.
12. Chan, J. (2012). How is the Progress on IFRS convergence in Malaysia now: (Crowe Horwath)

13. Herranz, S. and Garcia-Osma, B. (2009). 'Background and recent developments in fair value measurement: From FASB's 1996 four decisions to the recent financial crisis.' Revista Española de Financiación y Contabilidad, XXXVIII (144): 647-660.
14. Lazar, J., & Huang, C., C. (2008). Financial Reporting Standard of Malaysia. Asia: McGraw-Hill Education.
15. Li, G. and Yun, Y. (2013). Study on Measurement Attributes of Biological Assets in Chinese Agribusiness., Informatics and Management Science IV, Lecture Notes in Electrical Engineering Volume 207, pp. 323-328
16. Liang, P.J. and Wen, X. (2007) Accounting measurement basis, market mispricing, and firm investment efficiency, *Journal of Accounting Research, 45*(1), 155-197
17. Maina, P. N. (2010). Fair value reporting challenges facing small and medium-sized entities in the agricultural sector in Kenya (Doctoral dissertation).
18. Malaysian Palm Oil Board. (2014). Fact Sheet Malaysian Palm Oil. Malaysia: National Library of Malaysia.
19. Marsh, T., & Fischer, M. (2013). Accounting for Agricultural Products: US Versus IFRS GAAP. Journal of Business & Economics Research (JBER), 11(2), 79-88.
20. Nishikawa I. (2000): Comment Letter on Exposure Draft E65 – Agriculture No. 24.
21. Rashad Rashad Abdel- Khalik-Khalik, A. (2010). Fair Value Accounting and Stewardship*.Accounting Perspectives, 9(4), 253-269.
22. Rayman, R.A. (2007). 'Fair value accounting and the present value fallacy: the need for an alternative conceptual framework'. *British Accounting Review*, 39: 211-225
23. Ronen, J. (2008) To fair value or not to fair value: a broader perspective, *Abacus*, 44(2), 181-208.
24. Tan, L., T. (2010). Financial Accounting and Reporting in Malaysia. Vol. 2, (4th Edn). CCH: Wolter Kluwer Business.