

Analysis of the IAS 41 Amendment's Application to Agriculture in Singapore's Listed Plantation Agriculture Companies

Andreas T P Manurung
 Department of Accounting
 Faculty of Economics and Business
 Universitas Indonesia
 Depok, Indonesia
 amanurung1985@gmail.com

Dwi Martani
 Department of Accounting
 Faculty of Economics and Business
 Universitas Indonesia
 Depok, Indonesia
 dwimartani@yahoo.com

ABSTRACT—This study aims to explain descriptively about how the presentation, disclosure and major amendment change of IAS 41 impacts plantation agriculture companies. This study examines seven plantation companies listed in Singapore for the year 2014–2015. The results show that those companies presented and disclosed the requirements of amendment of IAS 41, in accordance with its contents. Each of the companies restated their 2015 financial statements using the effective IAS 41 Amendment for 2016.

Keywords—IAS 41 Amendment, biological asset, bearer plant, restatement

I. INTRODUCTION

A. Background Research

Financial statements are prepared according to accounting standards for uniformity so that a reader of such reports can easily compare financial statements between companies. Accounting standards are used to guide the preparation of financial statements. For auditors who examine them, standards are used as a basis for providing auditor opinions. The auditor's report states that the financial statements have been presented in accordance with generally accepted accounting principles set forth in the accounting standards. Readers of these statements should also understand the financial accounting standards in order to read them. Standards contain assumptions, principles of recognition, measurement, presentation and disclosure. Ignorance of those standards can lead to misinterpretations of the numbers presented in their standardized form.

According to Indra [1], the International Financial Standards Board (IASB) has stated that fair market value is a relevant concept in the business world. The argument goes that fair market value accounting can increase the transparency of information submitted to the public, fair market value being the main information in the current economic situation and with fair market value will provide more real information to investors. Fair market value is considered to be the most appropriate and relevant concept for the preparation of financial statements for a company or business entity because they describe the actual market

value. The depiction is done by measurements based on market value.

In IFRS the use of fair market value is extended to one of the IAS 41 Agricultural elements, i.e., biological assets (e.g., crops or livestock), fixed assets, investment properties and intangible assets as a methodological option other than the cost method. IFRS requires broader disclosure in order for users of financial statements to get more information so they can consider the information in their decision making.

The international accounting standard has issued international accounting standard (IAS) 41 for Agriculture [2], which was effective starting January 1, 2003. It regulates recognition, measurement, presentation and disclosure of biological assets and agricultural products. IAS 41 uses fair market value as a basis for valuation. The use of fair market value is a requirement and changes in fair market value will affect the current year's profit and loss statement. In this initial IAS 41, biological assets are measured at initial recognition and at the end of each reporting period at fair market value minus cost of sales. Agricultural products (consumable biological assets) harvested from bearer biological assets are measured at fair market value minus the cost to sell at harvest.

This international standard has been widely criticized by researchers and accounting observers. Some countries exclude this standard when adopting IFRS due to fair market value use that creates problems in practice and has broad implications for performance and one's financial position. More specifically, IAS 41 is one of the standards that has become an obstacle in Malaysia, Indonesia and India for full adoption of IFRS [3]. As mentioned earlier, IAS 41 requires all biological assets to be measured at fair market value and any differences entered into the income statement. The ASEAN-Oceanian Standard-Setters Group (AOSSG) proposes that bearer biological assets (BBA) should be allowed to use the cost method, similar to the factory machinery set out in IAS 16. Examples of BBA are palm or rubber trees. According to Malaysian thinking, biological assets that have not been harvested can hardly have fair market value applied to them. Instead, Malaysia proposes

using IASB as a practical guide to measure biological assets that have not yet been harvested.

Huffman [4] added that based on a survey conducted by IASB on analysts, analysts did not find that fair market value reporting for BBA was useful because of the fair market value of the application and could distort financial statements from reflecting a proper and reasonable view of the income of an agricultural firm. Furthermore, analysts stated that they always remove the biological profit or loss from BBA when viewing earnings and end users also do not see the fair market value.

The International Accounting Standard Board (IASB) issued an exposure draft (ED) to revise IAS 41 and IAS 16 in June 2013. In the ED, the IASB also requires biological assets that have not yet been harvested, and are still attached to Productive Plants (BBA), to be counted using the fair market value method. Subsequent amendments to IAS 41, which declare BBA assets, fall into the scope of IAS 16, but not in the permanent agricultural products of IAS 41. The amendment of IAS 41 was approved on June 30, 2014. This amendment became effective in 2016. In Indonesia IAS 41 is adopted under PSAK 69 Agriculture.

Accounting standards in Singapore follow international accounting rules closely, including international accounting standards for biological assets listed in IAS 41. Singapore adopts IAS 41 to IFRS 41. Compliance with accounting standards is a requirement of local law and is therefore not a matter of choice. Thus, for firms with biological assets that agricultural firms are required to comply with, the relevant accounting standards are set according to the biological asset in which the asset is located at fair market value at which the change in fair market value between the periods is recognized in profit and loss.

Singapore was among the first to implement IAS 41. Unlike the case with the new Malaysia implementing IAS 41 in 2018. The study was conducted to find out how the implementation of the IAS 41 Amendment came into force after the application of IAS 41 earlier in 2003, how the disclosure of the amendment to IAS 41 transpired, and how much the change in value of the biological assets in the financial statements during 2015–2016. Singapore has several agricultural companies, or more specifically plantations, already listed on the local stock exchange. Therefore, it is easy to conduct research on the financial statements contained in each company's annual report. For the future, research can be used by plantation companies in Indonesia as a comparative study of the disclosure of IAS 41's Amendment.

B. Problem Formulation

Given the foregoing background, issues may be formulated for discussion: (1) how is this amendment to be presented in financial statements, (2) how does the company disclose the amendment, and (3) how do the value of biological assets change in the financial statements during 2015–2016. The purpose of this study is to consider these issues and problems.

II. THEORETICAL BASIS

A. Financial Statements

The financial statements are a structured presentation of the financial position and financial performance of an entity [5]. The purpose of the financial statements according to the IFRS Framework for the Preparation and Presentation of Financial Statements (KDPPLK) is to provide information on the financial position (balance sheet), the performance (profit or loss), and changes in the financial position (cash flow statement) of a company. This information should be useful for users who intend to make economic decisions. While the purpose of financial statements according to PSAK is to provide information regarding the financial position, performance and changes in the financial position of a company are beneficial to a large number of users involved in the economic decision-making process.

B. IFRS Convergence

In 2011, companies had to choose to use PSAK-IFRS or PSAK-ETAP. A PSAK-IFRS basis shall be applied to entities with public accountability such as issuers, public companies, banks, insurance firms, and SOEs. PSAK-IFRS has a transaction base, not a base industry, with the aim of providing relevant information to users of financial statements [6].

Indonesia adopted full compliance on January 1, 2012. After the convergence of PSAK 2012, PSAK was equal to IFRS except for the latest IFRS such as IFRS / IAS 41. After IFRS convergence, PSAK grew dynamically following IFRS. The reason for using IFRS is that Indonesia is part of the IFAC, which should be subject to SMO (statement membership obligation), one of which uses IFRS as the accounting standard. IFRS convergence is one of the Indonesian government's agreements, being a member of the G20 forum. As a result of a meeting of G20 leaders of the forum in Washington DC, November 15, 2008: "Strengthening Transparency and Accountability" and an agreement at the G20 meeting in London, April 2, 2009, entitled "Strengthening Financial Supervision and Regulation" with "to call on the accounting standard setters to work urgently with supervisors and regulators to improve standards on valuation and provisioning and achieve a single set of high-quality global accounting standards."

IFRS characteristics relate to principles-based, fair market value, and full-disclosure accounting. IFRS uses a principles base that emphasizes the interpretation and application of the standards so that it should focus on the spirit of the application of the principle, the standard requires an assessment of the substance of the transaction and an evaluation as to whether the accounting presentation reflects economic reality and requires professional judgment in the application of accounting standards. IFRS uses fair market value in the assessment and, if there is no active market value, must conduct its own assessment (requiring competence), or use the services of the appraiser. IFRS requires greater disclosure—both quantitative and qualitative.

C. IAS 41 Agricultural Section

IAS 41 is applied to the accounting of agricultural activities (IAS 41: 1) such as biological assets, agricultural products at harvest time, and government grants. The biological transformation produces the following output types:

- a) change of assets through (i) growth (increase in the quantity or quality improvement of animals or plants), (ii) degeneration (decrease in the quantity or degradation of the quality of animals or plants), or (iii) procreation (creation of animals or additional plant life); or
- b) production of agricultural products such as rubber latex, tea leaves, wool, and milk.

E & Y [7] formulates differences in the treatment of productive crops and agricultural products before and after the Amendment of IAS 41.

D. Adoption of PSAK 69 Agriculture

Indonesia will adopt IAS 41 Agriculture under PSAK 69 adopted in 2018. Agricultural activity is the management of biological transformation and harvest of biological assets by entities for sale or for conversion into agricultural products or into additional biological assets. Biological assets include animals or live plants. Agricultural products are products that are harvested from the entity's biological assets. Biological assets are measured at initial recognition and at the end of each reporting period at fair market value less costs to sell, except for cases described in paragraph 30 where fair market value cannot be measured reliably. Productive plants are not biological assets. Productive crops that produce agricultural products are fixed assets that are loaded through the amortization process. Agricultural products attached to productive crops (not yet harvested) are biological assets. Agricultural products harvested from the entity's biological assets are measured at fair market value minus the cost to sell at the point of harvest.

III. RESEARCH METHODS

The method used in this research is content analysis method. Content analysis methods are used to identify and provide knowledge on the application of the amendments to IAS 41 conducted by the company and the profound impact arising from the application of IAS 41 itself. This study was conducted by analyzing the financial statements of companies applying the amendment to IAS 41. Financial reports were analyzed in depth in relevant part for this study's purposes. Financial statement data were then collected, described, and compared. The study was conducted based on the concepts, theories, and regulations related to the amendment to IAS 41 to ensure that concepts, theories, regulations have been implemented and in accordance with existing data.

IV. DISCUSSION

A. Presentation of IAS Change 41

1) Sample Overview

The study was conducted by discussing the disclosure of the Amendment of IAS 41 and looking at the changes in the

financial statements. Samples were taken from agricultural companies based and listed in Singapore. Singapore was chosen for applying the IAS 41 Amendment in 2016 after implementing IAS 41 in 2003.

TABLE 2.1 COMPARISON OF MEASUREMENT REQUIREMENTS FOR PRODUCTIVE CROPS

	Before Amendment	After Amendment
On initial recognition	Measured together with embedded agricultural products (one account unit) Measured at fair market value minus cost of sale	Measured separately from embedded agricultural products (two account units) Measured at cost, accumulated up to crop yields
Further measurement requirements	Measured together with agricultural products until harvest (one unit of account per harvest) Measured at the end of each reporting period at fair market value minus cost of sale, whereby the changes are recognized in the income statement	Measured at: Cost, less accumulated depreciation and impairment of assets, in which the changes are recognized in the statements of income Or Fair market value at each revaluation date, less any accumulated depreciation and impairment of assets. The revaluation increment (after taking into account the previous revaluation increase) is recognized in other comprehensive income; all other changes are recognized in profit or loss

TABLE 2.2 COMPARISON OF MEASUREMENT REQUIREMENTS FOR AGRICULTURAL PRODUCTS

	Before Amendment	After Amendment
At the end of each reporting period before harvest	Measured together with productive crops	Measured separately from productive crops by fair market value less costs to sell
At harvest point	Measured separately from productive crops by fair market value less costs to sell	

The authors found seven Singaporean agricultural companies that had implemented the IAS 41 amendment, namely Bumitama Agri Limited, First Resources Limited, Golden Agri-Resources Limited, Indofood Agri Resources Limited, Kencana Agri Limited, Olam Limited and Wilmar International Limited.

2) Performance

The largest profit was earned by Wilmar Limited International (US\$1,093.66 million) in proportion to its

sales and assets of US\$41,401.69 million and US\$37,032.43 million, even though its productive crops only occupied fourth place with US\$726.73 million.

3) Auditor

The public accounting firms in the sampled companies are dominated mainly by Ernst & Young LLP Singapore. Exceptions occurred with Golden Agri-Resources Limited and Kencana Agri Limited, each of which was audited by Moore Stephens LLP and RSM Chio Lim LLP. While there are some changes to the assigned partners.

TABLE 4.1 PERFORMANCE AND SAMPLE ASSETS OF 2016

(In millions of US\$)	2016				
	Profit	Sales	Total Asset	Biological Asset	Bearer Plant
Bumitama Agri Limited*	87,11	486,05	1.082,62	19,27	520,23
First Resources Limited	131,79	575,23	1.699,55	24,56	623,18
Golden Agri-Resources Limited	402,82	7.208,85	8.306,42	85,17	1.101,37
Indofood Agri Resources Limited*	58,09	1.065,32	2.676,21	34,42	1.034,78
Kencana Agri Limited	-8,91	138,58	392,19	9,97	160,82
Olam Limited	339,09	20.587,03	15.173,21	324,20	1.188,42
Wilmar International Limited	1.093,66	41.401,69	37.032,43	49,44	726,73
*Exchange rate December 31 st , 2016	13.640				

TABLE 4.2 NAMES OF PUBLIC ACCOUNTING FIRM AND PARTNERS

Company	Public Accounting Firm	Partners	
	2014–2016	2015	2016
Bumitama Agri Limited	Ernst & Young LLP	Phua, Chun Yen Alvin	Low Bek Teng
First Resources Limited	Ernst & Young LLP	Low Bek Teng	Low Bek Teng
Golden Agri-Resources Limited	Moore Stephens LLP	Neo Keng Jin	Christopher Bruce Johnson
Indofood Agri Resources Limited	Ernst & Young LLP	Gajendran Vyapuri	Vincent Toong Weng Sum
Kencana Agri Limited	RSM Chio Lim LLP	Kaka Singh	Kaka Singh
Olam Limited	Ernst & Young LLP	Vincent Toong Weng Sum	Vincent Toong Weng Sum
Wilmar International Limited	Ernst & Young LLP	Wong Mun Yick Christopher	Wong Mun Yick Christopher

B. Presentation of Amendment Amendments IAS 41

1) Public Accountant Opinion

Overall, the public accounting firm (KAP) incorporated the amendment to IAS 41 into the key audit matters in the audit assignment at the sample companies. Table 4.3 shows the key audit matter for First Resources Limited was audited by KAP Ernst & Young LLP.

At Olam Limited, the key audit matter is not mentioning performing restatement, but the company did so and did not show referral of financial statement notes but they are still available. Some companies do not specify the amount of changes in the key audit matter, though the details of the financial statements can be seen.

TABLE 4.3 KEY AUDIT MATTER FIRST RESOURCES LIMITED

Adoption of FRS Amendment 16 Property, Plant and Equipment and FRS 41 Agricultural - Productive Plants
Following the amendments to FRS 16 <i>Property, Plant and Equipment</i> and FRS 41 <i>Agriculture – Bearer Plants</i> (“Amendments”), biological assets that meet the definition of bearer plants will no longer fall within the scope of FRS 41. Under the standard, such bearer plants will be accounted under FRS 16 and have to be measured at accumulated cost (before maturity) using either the cost model or revaluation model (after maturity). Agricultural produce that grows on bearer plants will remain within the scope of FRS 41 and continues to be measured at fair market value less the cost to sell them.

TABLE 4.4 DISCLOSURE OF KEY AUDIT MATTER

	Restatement/Comparative	Amount of change	Notes to financial statement	Audit Procedure	Valuation
Bumitama Agri Limited	Available	Available	Available	Available	Available
First Resources Limited	Available	Available	Available	Available	Available
Golden Agri-Resources	Available	Available	Available	Available	Available
Indofood Agri Resources Limited	Available	Not available	Available	Available	Available
Kencana Agri Limited	Available	Not available	Available	Available	Available
Olam Limited	Not stated but done	Not available	Not available	Available	Available
Wilmar International Limited	Available	Not available	Available	Available	Available

2) Restatement Presentation

From the observation of seven companies, the changes were made retrospectively with the restatement. The retrospective application of a new accounting policy change is the correction of recognition, measurement, transactions, events and other conditions as if the policy had been applied. In the financial statements, the company added one column for restatement number 2015. Reporting is done with a single note to separate financial statements or are merged into one into the notes to the financial statements for

biological assets and productive crops. Figure 4.1 shows the restatement presentation report on Bumitama Agri Limited that appears in the notes to separate financial statements.

From the table can be seen movement of biological assets and productive plant Bumitama Agri Limited. Biological assets decreased by Rp 7,193,413 million from Rp 7,57,948 million to Rp 324,535 million. While productive crops appear for the restatement figures in 2015 amounting to Rp 5,714,631 million.

TABLE 4.5 FINANCIAL POSITION AT PT. BUMITAMA AGRILIMITED

	As previously Reported IDR million	Prior year Adjustments IDR million	As restated IDR million
Balance as at 1 January 2015			
Biological assets	7,517,948	(7,193,413)	324,535
Bearer plants	-	5,714,631	5,714,631
Deferred tax assets	256,592	(213,627)	42,965
Deferred tax liabilities	(690,933)	494,832	(196,101)
Retained earnings	(4,889,062)	1,097,167	(3,791,895)
Non-controlling interests	(625,490)	100,410	(525,080)
Balance as at 31 December 2015			
Biological assets	8,016,549	(7,783,241)	233,308
Bearer plants	-	6,091,413	6,091,413
Deferred tax assets (Note 18)	392,732	(279,478)	113,254
Deferred tax liabilities (Note 18)	(780,080)	589,845	(190,235)
Retained earnings	(5,515,407)	1,274,141	(4,241,266)
Non-controlling interests	(653,213)	107,320	(545,893)
For the year ended 31 December 2015			
Cost of sales	(3,726,382)	(161,217)	(3,887,599)
Income tax expense	(219,079)	22,635	(196,444)
Loss arising from fair market value change in biological Assets	(45,925)	(45,302)	(91,227)

C. Disclosure of Amendments to IAS 41

1) Disclosure Method

The companies sampled have sufficiently disclosed changes to the amendment of IAS 41 both in the Summary of the Accounting Policies and in the Notes to the Financial Statements.

2) Disclosure of IAS Amendment 41

a) Summary of Accounting Policies

For the same KAP the disclosure is relatively uniform. Table 4.7 shows an example of Overview of Accounting Policies at Wilmar International Limited.

TABLE 4.6 DISCLOSURE OF AMENDMENT AMENDMENTS IAS 41

	Summary of Significant Accounting Policies		Notes to financial statement	
	Bearer Plant	Biological Asset	Comparative Figures	
Bumitama Agri Limited	Available	Available	Available	Available
First Resources Limited	Available	Available	Available	Available
Golden Agri-Resources Limited	Available	Available	Available	Available
Indofood Agri Resources Limited	Available	Available	Available	Available
Kencana Agri Limited	Available	Available	Available	Available
Olam Limited	Available	Available	Available	Available
Wilmar International Limited	Available	Available	Available	Available

TABLE 4.7 SUMMARY OF ACCOUNTING POLICIES - WILMAR INTERNATIONAL LIMITED

Summary of Accounting Policies - Productive Plants and Biological Assets
Bearer plants are living plants used in the production or supply of agricultural produce; are expected to bear produce for more than one period; and have a remote likelihood of being sold as agricultural produce, except for incidental scrap sales. Bearer plants mainly include mature and immature oil palm plantations. Immature plantations are stated at acquisition cost which includes costs incurred for field preparation, planting, fertilizing and maintenance, capitalization of borrowing costs incurred on loans used to finance the developments of immature plantations and an allocation of other indirect costs based on planted hectares. Mature plantations are stated at acquisition cost less accumulated depreciation and impairment. Mature plantations are depreciated on a straight-line basis over its estimated useful life of 20-25 years, upon commencement of commercial production.

TABLE 4.8 PRODUCTIVE PLANT DISCLOSURES AND BIOLOGICAL ASSETS AT SUMMARY OF ACCOUNTING POLICIES

	IAS 41 Amendment	Bumitama Agri Limited	First Resources	Golden Agri-Resources
Bearer Plant				
Definition	Available	Available	Available	Available
Measurement	Available	Available	Available	Available
Capitalization	Available	Available	Available	Available
Impairment	Available	Available	Available	Available
Depreciation	Available	Available (25 years)	Available (20 years)	Available (25 years)
Fruit mature time	Not Available	Not Available	Not Available	Not Available
Disposal	Not Available	Available	Not Available	Ada
Review	Available	Available	Not Available	Ada
Biological Asset				
Definition	Available	Available	Available	Available
Measurement	Available	Available	Available	Available
Gain/loss Recognition	Available	Available	Available	Available
	Indofood Agri Resources	Kencana Agri Limited	Olam Limited	Wilmar International Limited
Bearer Plant				
Definition	Available	Available	Available	Available
Measurement	Available	Available	Available	Available
Capitalization	Available	Available	Tidak Ada	Available
Impairment	Available	Available	Tidak Ada	Available
Depreciation	Available (25 years)	Available (20 years)	Available (15-30 years)	Available (20-25 years)
Plant mature time	Not Available	Available (3-4 tahun)	Not Available	Available (30-36 months)
Disposal	Available	Not Available	Not Available	Available
Review	Available	Not Available	Not Available	Available
Biological Asset				
Definition	Available	Available	Available	Available
Measurement	Available	Available	Available	Available
Gain/loss Recognition	Available	Available	Not Available	Not Available

There is a time difference between depreciation companies, but rangenya range from 15 to 30 years. Some companies described the time to a fruit's maturity. In general, the company has disclosed matters contained in the amendment of IAS 41, with additional information concerning the disposal of productive crops not listed in the amendment of IAS 41. There are some companies that do not include an explanation of the allocation of income from the valuation of fair market value of biological assets.

b) Comparative Figures

Figure 4.9 shows the notes to the financial statements for the presentation of comparative figures from Indofood Agri Resources Limited.

From the notes to the financial statements for the comparative figures can be seen biological assets decreased from Rp 15,878.40 million to Rp 360,802 million, a decrease of Rp 15,518,138 million. While the fixed assets increased by Rp 9,905,019 million in accordance with the emergence of productive crops.

c) Biological Assets

Table 4.10 shows the notes to the financial statements for the biological assets of Kencana Agri Limited. An increase in biological assets for 2016 to US\$9,965,000 from US\$5,126,000. The Company presents initial figures for the

year, the effects of changes in accounting policies, the effects of foreign exchange rates and changes in fair market value.

TABLE 4.9 NOTES TO FINANCIAL STATEMENTS FOR COMPARATIVE FIGURES INDOFOOD AGRI RESOURCES LIMITED

37 COMPARATIVE FIGURES				
The comparative figures have been restated upon the adoption of Amendments to FRS 16 and FRS 41 Agriculture: bearer plants which took effect from 1 January 2016 as disclosed in Note 2.2 and some reclassifications to conform to full year's presentation. The impact to the Group's financial statements line items from the retrospective application and reclassifications are per below:				
	As restated FY15	As previously Reported FY15		
Statement of comprehensive income	Rp million	Rp million		
Cost of sales	(10.866.885)	(10.484.949)		
Other operating income	110.147	131.828		
Other operating expenses	(160.556)	(185.424)		
Financial income	121.401	140.848		
Gain/ (loss) arising from changes in fair market values of biological assets	9.338	(19.851)		
Income tax expense	(292.140)	(398.977)		
	As restated 31/12/2015	As previously Reported 31/12/2015	As restated 01/01/2015	As previously reported 01/01/2015
Balance Sheet	Rp million	Rp million	Rp million	Rp million
Non-current assets				
Biological assets	360.802	15.878.940	305.299	15.060.646
Property, plant and equipment	21.401.503	11.496.484	20.478.282	11.026.669
Deferred tax assets	1.378.386	1.390.334	1.141.028	1.152.977
Current assets				
Biological assets	191.994	-	232.165	-
Non-current liabilities				
Deferred tax liabilities	773.739	2.140.966	719.283	1.999.124
Equity				
Revenue reserves	7.613.506	10.743.482	7.642.884	10.666.852
Other reserves	473.237	452.154	640.116	615.829
Non-controlling interests	8.898.992	9.855.945	8.284.458	9.088.455

TABLE 4.10 NOTES TO THE FINANCIAL STATEMENTS FOR BIOLOGICAL ASSETS AT KENCANA AGRI LIMITED

21 Biological assets	Group	
	2016	2015
Movement in fair market value:	US\$'000	US\$'000
At beginning of the year	288.424	297.169
Impact on change in accounting policies (Note 39)	(283.262)	(285.367)
Restated beginning of the year	5.126	11.802
Foreign currency alignment		(991)
Fair market value less estimated point-of-sale costs (Note 7)	4.726	(5.685)
At end of the year (Level 3)	9.965	5.126
There was no change in the level during the year. The group's oil palm plantations are located in Indonesia.		
Biological assets comprise of un-harvested fresh fruit bunch ("FFB") growing on oil palm trees (bearer plants). The group measures its biological assets at fair market value less cost to sell at the point of harvest, which require use of accounting estimates and assumptions. Significant components of fair market value measurement were determined using assumptions and estimates such as the yield of oil palm trees, annual discount rate, and projected selling prices of FFB. Any changes in fair market values of these biological assets would affect the group's profit and carrying value of the biological assets. It is impracticable to disclose the extent of the possible effects. It is reasonably possible, based on existing knowledge, that outcomes within the next reporting year that are different from assumptions could require a material adjustment to the carrying amount of the balances affected.		

TABLE 4.11 BIOLOGICAL ASSET DISCLOSURE

Biological Asset	Bumitama Agri Limited	First Resources	Golden Agri-Resources	Indofood Agri Resources	Kencana Agri Limited	Olam Limited	Wilmar International Limited
Definition	Available	Available	Not Available	Available	Available	Not Available	Not Available
Fair Value							
Gain/Loss	Available	Available	Not Available	Available	Available	Not Available	Available
Volume	Available	Not Available	Not Available	Available	Available	Available	Not Available
Plant Area	Available	Not Available	Not Available	Available	Not Available	Available	Available
FFB Price	Available	Available	Not Available	Available	Not Available	Available	Not Available
Loan	Not Available	Not Available	Available	Not Available	Available	Not Available	Available

d) *Productive Plants*

Table 4.12 shows the notes to the financial statements for productive crops at Golden Agri-Resources Limited. The presentation on Golden Agri-Resources is done with two columns of figures in 2016 and restated 2015. They were separated between cost and accumulated depreciation until net book value is finally obtained. Bumitama Agri Limited displayed the classification of productive crops as adult, immature and nursery plants, adding insurance, securities and capitalized costs. First Resources displays the number of areas planted with oil palm, insurance and guarantees in addition to movement of productive crop balances. At

Indofood Agri Resources, productive crops are shown as part of property, plant and equipment with additional capitalization of borrowing costs. Kencana Agri Limited shows the movement of productive crops by showing the beginning of the year, the impact of changes in accounting policies, the depreciation of productive crops and the influence of foreign exchange rates. In Olam Limited, productive crops are also shown as part of property, plant and equipment. The analysis of productive crops, both grown and immature, is shown in the notes on productive crops at Wilmar International Limited.

TABLE 4.12 NOTES TO THE FINANCIAL STATEMENTS FOR PRODUCTIVE PLANTS AT GOLDEN AGRI-RESOURCES LIMITED

25 Bearer Plants	Note	(Restated)	
		2016 US\$'000	2015 US\$'000
Cost			
Balance at the beginning of the year as previously reported		-	-
Effect of adoption of amended IAS 16 and 41		2,333,604	2,200,786
Balance at the beginning of the year as restated		2,333,604	2,200,786
Additions		13,176	33,967
Disposal		(2,308)	(4,269)
Write off		(2,755)	-
Transfer from land clearing		1,833	103,120
Acquisition of a subsidiary	39a	18,986	-
Balance at the end of the year		2,362,536	2,333,604
Less: Accumulated depreciation			
Balance at the beginning of the year as previously reported		-	-
Effect of adoption of amended IAS 16 and 41		1,105,820	972,811
Balance at the beginning of the year as restated		1,105,820	972,811
Charge for the year	6	159,447	134,801
Disposal		(1,705)	(1,792)
Write off		(2,400)	-
Balance at the end of the year		1,261,162	1,105,820
Net book value		1,101,374	1,227,784

TABLE 4.13 PRODUCTIVE PLANT DISCLOSURE

Bearer Plant	Bumitama Agri Limited	First Resources	Golden Agri-Resources	Indofood Agri Resources	Kencana Agri Limited	Olam Limited	Wilmar International Limited
				*combined with PPE		*combined with PPE	*combined with BA
Definition	Not Available	Not Available	Not Available	Available	Not Available	Available	Not Available
Measurement	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Insurance	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Insurance Value	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Plant Area	Available	Available	Not Available	Not Available	Not Available	Not Available	Available
Depreciation	Available	Not Available	Not Available	Not Available	Available	Not Available	Not Available
Loan	Available	Available	Available	Available	Available	Available	Available

TABLE 4.14 METHOD OF PRODUCTIVE PLANT RECOGNITION

	Bearer
	Plant Method
Bumitama Agri Limited	Cost
First Resources Limited	Cost
Golden Agri-Resources	Cost
Indofood Agri Resources Limited	Cost
Kencana Agri Limited	Cost—Initial Recognition
Olam Limited	Cost—Fair Value at
	December 31, 2014
Wilmar International Limited	Cost

D. Changes in the value of biological assets in the financial statements from 2014, 2015 and 2016 changes

In 2014–2015, changes in the company’s biological assets averaged -6.1% except for Olam Limited which decreased by 25%.

In 2015, after the amendment, there was a decline in total biological assets and productive crops from 2015 before the amendment. The largest decrease, especially at Golden Agri-Resources Limited, was -83.68%.

In 2016, most biological assets increased by 13.145% except for Olam Limited and Wilmar International Limited which decreased by -4% and -25%. While productive crops only rose or fell by -2% to 19%.

TABLE 4.15 CHANGES IN BIOLOGICAL ASSETS 2014–2015

(In millions of US\$)	December 31, 2014		December 31, 2015		Change
	Biological Asset		Biological Asset		
Bumitama Agri Limited*	US\$	601	US\$	588	-2%
First Resources Limited	US\$	961	US\$	969	1%
Golden Agri-Resources Limited	US\$	7.902	US\$	7.839	-1%
Indofood Agri Resources Limited*	US\$	1.205	US\$	1.138	-6%
Kencana Agri Limited	US\$	297	US\$	288	-3%
Olam Limited	US\$	1.108	US\$	1.387	25%
Wilmar International Limited	US\$	1.861	US\$	1.795	-4%
*Exchange rate December 31, 2015 = 13.640					
*Exchange rate December 31, 2014 = 12.502					

TABLE 4.16 CHANGES IN BIOLOGICAL ASSETS AND PRODUCTIVE PLANTS BEFORE AND AFTER THE AMENDMENT TO IAS 41

(In millions of US\$)	2015					
	Before Amendment		After Amendment			
	Biological Assets		Biological Assets		Bearer Plants	
Bumitama Agri Limited*	US\$	588	US\$	17	US\$	447
First Resources Limited	US\$	969	US\$	11	US\$	599
Golden Agri-Resources Limited	US\$	7.839	US\$	51	US\$	1.228
Indofood Agri Resources Limited*	US\$	1.138	US\$	26	US\$	726
Kencana Agri Limited	US\$	288	US\$	5	US\$	156
Olam Limited	US\$	1.387	US\$	336	US\$	995
Wilmar International Limited	US\$	1.795	US\$	65	US\$	742
*Exchange rate December 31, 2015 = 13.640						

TABLE 4.17 CHANGES IN BIOLOGICAL ASSETS AND PRODUCTIVE PLANTS 2015–2016

millions of US\$)	December 31, 2015				December 31, 2016				Changes	
	Biological Asset		Bearer Plant		Biological Asset		Bearer Plant		Biological Asset	Bearer Plant
Bumitama Agri Limited*	US\$	17	US\$	447	US\$	19	US\$	520	13%	16%
First Resources Limited	US\$	11	US\$	599	US\$	25	US\$	623	119%	4%
Golden Agri-Resources Limited	US\$	51	US\$	1.228	US\$	85	US\$	1,101	66%	-10%
Indofood Agri Resources Limited*	US\$	14	US\$	977	US\$	34	US\$	1,035	145%	6%
Kencana Agri Limited	US\$	5	US\$	156	US\$	10	US\$	161	94%	3%
Olam Limited	US\$	336	US\$	995	US\$	324	US\$	1,188	-4%	19%
Wilmar International Limited	US\$	65	US\$	742	US\$	49	US\$	727	-25%	-2%
*Exchange rate December 31, 2016 = 13.640										
*Exchange rate December 31, 2015 = 13.503										

V. CONCLUSIONS AND SUGGESTIONS

A. *Conclusions*

The amendments to IAS 41 that took effect in 2016 have a material impact on agricultural enterprises. This has an impact on the presentation of biological assets and productive crops. The company has restated its financial statements for the previous period in its financial statements for 2016. This has been done by plantation agriculture companies, especially those listed in Singapore. The restatement presentation is done by including comparative figures, whether incorporated in financial statement records or presented separately—in its disclosure it is generally uniform with differences in some places. Disclosures include definition, measurement, capitalization, impairment, depreciation, disposal and review of the useful life of the productive crop.

The auditor on the samples taken mainly comes from Ernst & Young's KAP. During the period there was no change in KAP despite several partners being changed. The Auditor reveals the IAS 41 Amendment to the Matter Key Audit by explaining the definitions and measurements in its opinion report after previously revealing its amendment method. Changes are made in its restatement with the presentation of comparative figures. The auditor also discloses the audit procedures pursuant to the application of amendment 41.

Disclosure of biological assets uses several assumptions. Most use income method but some also use actual harvest data. The discount rate used also varies, although it is not too different. Some companies presented sensitivity analyzes to illustrate the magnitude of the changes that can occur when different inputs are used.

Changes in biological assets were insignificant in 2014–2015. The biggest change was experienced by Olam Limited. Changes may occur as a result of changes in the fair market value or production amount. In 2015, before and after the IAS 41 amendment, the largest decrease in Golden Agri-Resources was –83.68%. In 2016, most biological assets

increase by 13.145% except for Olam Limited and Wilmar International Limited which decreased by –4% and –25%. While productive crops only rose or fell by –2% to 19%.

B. *Limitations of Research*

This research was only done by taking samples from plantation agriculture companies in Singapore, and none from Indonesia, as the basis for a limited number of nations. The study did not obtain a detailed explanation of the acquisition of the value of costs at the time of transition or the method of calculating the decline in the value of productive crops although depreciation data are generally reliable. The computation of fair market value by the method of income is also not described in detail.

C. *Suggestions*

Indonesia will implement the IAS 41 Amendment by 2018. It would be better if the research samples were of plantation agriculture companies based in Indonesia. Moreover, the number of samples will be larger than those this study that only takes seven samples. More in-depth research on how valuation based on the income method is also recommended.

REFERENCES

- [1] Indra, Haviz Ivander. Fair Value, 2017. Downloaded at November 15th, 2017, <http://akunzero.blogspot.co.id>.
- [2] Farkas, Artificial Intelligence in Agriculture 2001 1st Edition, Pergamon, Oxford: 2001.
- [3] S. Henderson, G. Person, and K. Herbohn. Issues in Financial Accounting. Australia. Pearson Education Australia, 2008.
- [4] Huffman, Adrienna. Matching Measurement to Asset Use: Evidence from IAS 41, 2014. Downloaded at November 15th, 2017, <https://business.lsu.edu>.
- [5] Martani, Dwi. Dampak Implementasi IFRS bagi Perusahaan, 2017. Downloaded at November 15th, 2017, <http://www.academia.edu>. Ikatan Akuntan Indonesia. Standar Akuntansi Keuangan. Jakarta: Salemba Empat, 2009.
- [6] Martani, Dwi. 2011. Standar Akuntansi Keuangan Entitas Tanpa Akuntabilitas Publik (SAK-ETAP). <http://staff.blog.ui.ac.id>.
- [7] IFRS, US GAAP versus IFRS The Basic, Building a better working world, 2013.