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Analysis of Biological Asset Accounting Treatment of PT. FAP Agri Tbk

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ABSTRACT

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This study aims to determine the application of biological asset accounting (recognition, measurement, and disclosure) at PT. FAP Agri Tbk based on PSAK 69. Data obtained using content analysis method (content analysis) on the financial statements of PT. FAP Agri Tbk in 2021. The research results show that PT. FAP Agri Tbk, although it has just been registered on the IDX, its biological accounting reporting is in accordance with PSAK 69. The company recognizes biological assets based on their type, namely Immature Plants and Mature Plants. The measurement of biological assets uses the fair value basis according to market prices that were circulating that year. Biological assets are presented in the statement of financial position section in the fixed assets and current assets sections. Companies are also required to disclose details regarding the total assets up to accumulated depreciation as a whole.

INTRODUCTION

The Financial Accounting Standards Board (FASB) defines "Assets are future economic benefits that may be obtained or controlled by a particular entity as a result of past transactions or events." There are two types of assets according to their convertibility, namely current assets and non-current assets. IAS 41 defines that "Biological assets (living plants and animals) into agricultural produce (harvested product of the entity's biological assets)" or broadly speaking biological assets are "living animals or plants". One of the main characteristics of biological assets is the biological transformation in the form of growth, degeneration, production, and procreation that causes qualitative or quantitative changes in biological assets. A

special characteristic of biological assets is the process of biological change or transformation of these assets until they are consumed or managed by the entity. Agricultural companies need to pay attention from the nursery period of plants or animals, the breeding period, to the production or harvest period.

Agriculture in Indonesia includes five sub-sectors: the smallholder agriculture sub-sector, the plantation sub-sector, the forestry sub-sector, the livestock sub-sector and the fisheries sub-sector (Rachmawati et al., 2019). The majority of Indonesia's population makes a living as farmers and agricultural activities. Besides that, it is also supported by export activities, namely international trade activities, which have become growth engines for developing countries and can increase foreign exchange and income per capita (Ustriaji, 2017). The number of types and agricultural plants in Indonesia can be a treasure or a valuable asset for state revenue. PSAK No. 69 explains that agricultural activities or activities are the management of biological transformation to harvesting biological asset products by entities for sale or conversion into agricultural products or additional biological assets (Himawan, 2022).

Indonesia's agricultural sector significantly contributes to Gross Domestic Product (GDP). There are around 24 agricultural companies that have been listed on the Indonesia Stock Exchange (IDX) by the end of 2022 (IDX, 2022). Among them, almost 80% of companies focus on the plantation sub- sector among the number of listed companies. However, this number is not large, considering that Indonesia is an agricultural country. That is because managing an agricultural company is not easy. There are lots of threats that occur if we decide to run it, starting from threats during the production process to having an impact on the company's financial statements. One of the many threats is when the maintenance process occurs by fire, the prices of various commodities often fluctuate, and fraudulent practices or fraud in the food distribution chain to capital (Dr. Firmansyah & Anwar, 2020). So, companies need to understand how to treat biological assets correctly according to PSAK so that if there is a loss or technical error, it can be identified from the financial reports and can make decisions for the future.

In Indonesia, there is a standard for accounting for biological assets, which follows PSAK No. 69, which is the result of an adaptation of IAS 41, which has been adapted to conditions in Indonesia. IAS 41 (2014) is effective for conservation companies' annual financial reports commencing on January 1, 2016. Then the Financial Accounting Standards Board issued PSAK No. 69 "Agriculture" adopted from IAS 41 on December 16, 2015, and applied to the Annual Financial Statements after January 1, 2018. PSAK No. 69 generally stipulates that biological assets or agricultural products can be recognized when they meet the same criteria as the asset recognition criteria. Meanwhile, IAS 41 explains the necessity of valuing biological assets where there is no fair value calculation (*fair value*) reliable in the absence of a market so that alternative valuation methods can be used. Companies engaged in the livestock or plantation sector also have special treatment for their biological assets. However, PSAK No. 69 treatment only stops until it is maintained (agricultural products). When it is harvest time or after production, it is included in business inventories ready for sale.

In research conducted by Maghfiro (2017) at PTPN XII Surabaya, biological assets are classified into two types: immature and mature. Mature plantations are recorded at the accumulated gain from the reclassification of mature plantations. Plants are recognized as non-current assets and agricultural products as inventories; likewise, with research conducted by Farida (2011), biological assets at PT.PN VII Lampung has recognized and measured biological assets by applicable SAK. However, their biological assets are recognized as inventories and valued at a lower cost and net realizable value (*Net Realizable Value*), which differs from IAS 41. In the livestock sector, according to Nafila's research (2018) at PT Tabassam Jaya Farm, the biological assets of chickens are recognized as fixed assets. Valued at the contract price/purchase price plus the cost of feed and medicine when the chickens are one day - 26 weeks old. Depreciation is measured using the straight-line method. And on a CV. Sumber Blessing, biological assets are recognized at cost and added to the capitalization of direct costs. As well as the company also recognizes the depreciation expense on biological assets to recognize the use of economic benefits

derived from maintaining these assets. Its the result of research conducted by (Listyawati et al., 2018).

PT. FAP Agri is one of the agricultural companies listed on the IDX in 2021. This company is the first issuer to list its initial shares through a public offering or stock offering scheme *Initial Public Offering* (IPO) (Ulfah, 2021). It has a planted area of 87,684 hectares at the end of 2020 and will increase in 2021 to 88,752 hectares. The area of planted land owned by the company includes the area of mature plantations, the area of immature plantations and the area of oil palm plantations. PT. FAP Agri is a national private company that manages and produces palm oil in Indonesia and is managed and developed sustainably. The company started operating in 1994 with a concession permit for more than 110 thousand hectares. Products managed by the company PT. FAP Agri includes fresh fruit bunches, crude palm oil, palm kernel, palm kernel oil and palm kernel cake. Because the company is still a relatively new go- public, the research data regarding the company is still very large, and the researcher wants to further analyse the accounting treatment of biological assets at PT. FAP Agri based on PSAk 69 guidelines.

LITERATURE REVIEW

Assets

According to (PSAK No. 19, 2018: 08), "Assets are resources controlled by the entity as a result of past events from which future economic benefits are expected to flow to the entity". In general, assets are one of the important elements in the entity's financial statements that display the side of the resources owned by the entity and used in the entity's business activities. Assets according to (PSAK No.1, 2018: 54), in the statement of financial position, the presentation of assets includes fixed assets, current assets and intangible assets. Current assets are cash and other assets that are expected to be converted into cash or consumed within one year or in one operating cycle. (Kieso, 2010: 181). Examples of current assets are inventories, cash and cash equivalents, equipment, and others

Biological Assets

According to PSAK 69 (2018), it is explained that biological assets are in the form of living animals or plants such as sheep, dairy cows, cotton plants, sugar cane, tobacco plants and so on. A group of biological assets is a combination or group of similar living animals or plants. At the same time, agricultural products themselves are products belonging to entities that are harvested from biological assets. Biological assets have different characteristics from other assets because there are growth, degeneration, production and procreation processes, so there are qualitative or quantitative changes in biological assets. This process is called biological transformation in PSAK 69. In research conducted by Monica (2018), IAS 41 classifies biological assets into two types, namely Bearer Biological Assets (BBA) and Consumable Biological Assets (CBA). CBA is defined as a biological asset that will be harvested as agricultural produce or sold as a biological asset. Meanwhile, those that are not harvested as agricultural products or sold as biological assets are included in the BBA type.

Biological Asset Measurement

PSAK 69 explains the measurement of biological assets at initial recognition and the reporting date at fair value less estimated costs to sell unless a fair value cannot be measured reliably. Agricultural produce should be measured at fair value with fewer costs to selling at the point of harvest. Regarding agricultural products, the measurement at harvest is reduced to fair value and has fewer costs to sell. Such measurements are costs as of the date when applying PSAK14: inventories or other applicable statements. If there is an active market for a biological asset or crop, then the quoted market price is the basis for determining the asset's fair value. The fair value of the asset is based on location, a condition which reflects the current market price less transportation and other costs to get the asset to market).

METHODS

The research approach is classified based on the purpose and level of naturalness (natural setting) of the object being studied. Research methods can be classified based on objectives into objective basic research, applied research and research and development (Sugiyono, 2013). This study uses qualitative research by

presenting detailed information from a broad perspective. Presentation of research using content analysis approach to the financial statements of PT. FAP Agri Tbk in 2021. The content analysis method is understanding context content as a symbolic symptom, not just a collection of unrelated stories or events (Rahardjo Mudija, 2019). Financial reports are obtained from the company's website or on the Indonesia Stock Exchange. The research subjects in this study were PT. FAP Agri Tbk and the object under study is the Treatment of Biological Assets.

This research is guided by the company's financial statements published on the company's official website or on the IDX. Researchers will further analyze the report regarding treating biological assets. The first thing researchers will do is look at the recognition of biological assets in the statement of financial position. Next, the measurement of biological assets up to their disclosure. After all the data is collected, the researcher matches the data results with PSAK 69, which is a reference for recording the treatment of biological assets in companies.

RESULTS

PT. FAP Agri Tbk Profile

PT. FAP Agri Tbk, is a national private company established on December 28, 1994 under the name PT Fangiono Agro Plantation based on deed No.27 of Notary P. Sutrisno A. Tampubolon, SH. The establishment deed was authorized by minister of justice of the Republic of Indonesia in Decree No. C2-3.402 HT.01.01.Th.95 dated March 14, 1995. The company continued to grow until it made its first investment at PT. KHL (Nunukan Regency), and launched the Plasma Pattern (a partnership pattern made between the company and farmer groups) which planted first besides the core (including the earliest companies to apply in Indonesia) in 1998. This program is aimed at local indigenous people not transmigrants, especially residents around Kalimantan. PT. FAP Agri is an agricultural company that focuses on the management and production of palm oil. Based on Article 3 of the Articles of Association, the company's line of business includes wholesale trading of agricultural products, wholesale trading of agricultural food and beverage ingredients, Holding Company activities, Head Office activities, and other management consulting.

Recognition of Biological Assets on PT. FAP Agri

Biological assets owned by PT. FAP Agri Tbk in the form of palm oil. Recognition of biological assets at PT. FAP Agri Tbk, in the company's financial statements for 2020-2021, are grouped into two, namely biological assets presented in current assets and biological assets presented in non-current assets. Grown agricultural products such as oil palm trees and Fresh Fruit Bunches (FFB) are recognized as current biological assets in the company's financial statements. Meanwhile, mature and immature plantations are recognized as non-current biological assets in the company's financial statements. Immature estate crops consist of oil palm plants not yet three years old. When they are 3 to 4 years old, they are recognized as mature plantations which can generally produce Fresh Fruit Bunches (FFB) with an average of four to six tonnes of fruit per hectare in one year. Products from mature plantations will be reprocessed until they become ready-to-sell goods which are recognized as company inventory.

Recognition of biological assets is the main step of the company that must be considered if you want no errors to occur until the end. The company has recognized its biological assets in accordance with what is described in PSAK 69. The benefit of the company distinguishing the recognition of biological assets is to prevent differences in value between those in the field and in the report, and make it easier for the company to know the amount of assets it has. However, not all agricultural products from PT FAP Agri are included in biological assets, only fresh fruit bunch products are included in biological assets, and other products are included in inventory. Because, according to PSAK 69, what is included in biological assets is agricultural products from the harvest of biological assets without any further conversion process. Agricultural products such as palm oil and palm oil cake still have to go through further production processes, therefore they are not included in the classification of biological assets.

Biological Assets Measurement on PT. FAP Agri Tbk

Biological assets owned by PT. FAP Agri Tbk, measured according to the balance at the end of the previous year, fewer losses from changes in fair value, fewer costs to selling or plus profits arising from changes in fair value and fewer costs to selling. In short, biological assets are measured at fair value less cost to sell. Immature

plantation crops are measured at the cost of the nursery to the maintenance process plus borrowing costs for one period, if any. Immature plantations do not include depreciation costs, but there are reclassification costs or costs for transferring accounts to other accounts. This reclassification fee will later impact the calculation of the final balance of mature plantations. Measurement of mature plantations are stated at acquisition cost when reclassified plus the initial balance and then depreciated using the straight-line method at the end of the current period and prior periods with a description of the estimated useful lives of 20 years.

Table 1. Calculation of Final Balance Biological Assets PT. FAP Agri Tbk 2021

	2021	2020
Beginning balance (from last year)	89.387.062.303	86.673.873.834.264
Profit from the changes of fair value deducted by selling cost recognized in profit or loss	86.908.233.324	2.713.228.039
Ending balance	176.295.295.627	89.387.062.303

Source: Financial Statement Pt. FAP Agri Tbk 2021

Table 2. Calculation of Final Balance of Inmature PT. FAP Agri Tbk 2021

Immature plantations	275.551.222.014
addition	87.234.776.244
	362.785.998.258
reclassification	(29.483.214.359)
Ending Balance	333.302.783.899

Source: Financial Statement Pt. FAP Agri Tbk 2021

Table 3. Calculation of Final Balance of Mature PT. FAP Agri Tbk 2021

Mature plantations	4.742.740.918.510
Reclassification	29.483.214.359
	4.772.224.132.869
Accumulated depreciation	(1.320.586.567.894)
Addition cost	(241.293.823.098)
Total	3.210.343.741.877

Source: Financial Statement Pt. FAP Agri tbk 2021

Disclosure of Biological Assets PT. FAP Agri Tbk

After becoming a public company, the company must carry out a series of complete financial disclosures, from recognition and measurement to disclosure. After the recognition and measurement are clear and appropriate, it is necessary to take the next step, namely disclosure. In the biological asset account, disclosure is in the statement of financial position. Biological assets are disclosed in the company's financial statements in the fixed assets and current assets sections.

RESULT OF DISCUSSION

According to PSAK 69, an entity recognizes a biological asset or product when:

- the entity controls the biological asset as a result of the past
- the economic benefits of biological assets flow to the entity, and
- the fair value or cost of biological assets can be measured reliably.

When the company purchases seeds, nursery and maintenance is one evidence of control over past events. Then, the benefits of biological assets flow to the company, whose income comes from the sale of biological assets and biological asset agricultural products such as palm oil, fresh fruit bunches, and others. The fair value of the biological assets of oil palm in the company PT. FAP Agri tbk can be measured reliably. The company measures fair value based on market price less cost.

Based on PSAK 69, companies must distinguish consumable biological assets and productive biological assets (bearer biological assets) or between biological assets generated (mature) and immature biological assets (immature). The company recognizes biological assets that are less than three years old as immature plantations (immature plantations), and biological assets aged 3-4 years are recognized as mature plantations (mature plantations). The average mature plantation can produce 4 to 6 tonnes of fresh fruit bunches per hectare in one year.

The basis of Biological measurement assets is measured at initial recognition and the end of each reporting period at fair value with fewer costs to selling, except for companies whose fair value cannot be measured reliably. PT. FAP Agri Tbk records biological assets equal to the fair value of products that grow by the estimated market selling price during the current period, with fewer costs incurred during harvesting and selling. According to the author, this is by PSAK 69 policy in paragraph 30 "biological assets are measured at cost less accumulated depreciation and accumulated impairment losses when fair value measurement cannot be measured reliably". This is the same as the treatment of fixed assets on land, which is measured using the acquisition cost, but still different in the standards used.

The FAP Agri company has been in the form of company that follows the policies based on the relevant PSAK regarding preparing its financial statements. So the company is required to disclose several things as follows based on PSAK 69:

- a. Disclose the existence and amount of biological assets used as collateral for credit
- b. Total commitment to development of biological assets
- c. Financial risk management strategy related to biological assets and agricultural products

Description of the accounting treatment of biological assets at PT. FAP Agri Tbk will be presented in the following table regarding the similarities and differences with PSAK 69 Agriculture:

Table 4. Comparison Accounting Treatment of Biological Assets Between PT. FAP Agri Tbk with PSAK 69

No	Indicator	Based on PT. FAP Agri Tbk	Based on PSAK 69	Analysis
1	Disclosure	The company calculates biological assets from the nursery and harvesting processes to the finished agricultural products.	Regulates the treatment of agricultural accounting activities at harvest	Already in accordance, PSAK 69 is used during harvest only and does not include product management
		Biological assets have future economic benefits in the form of products from palm oil for the company.	There is a high likelihood of future economic benefits flowing to the entity	It follows PSAK 69
		Grouping Biological assets are divided into Plants Immature and Yielding plants meanwhile, biological assets included in non current plantation (Mature and Immature Plantations)	Entities are required to classify biological assets by type and age of their biological assets	It follows PSAK 69

	Depreciation of mature plantations is measured using the straight-line method with an estimated useful life of 20 years	An entity considers PSAK 14: Inventory, PSAK 16: Property, plant and equipment, and PSAK 48; Impairment of Assets to determine the acquisition cost, accumulated depreciation and impairment losses.	It follows PSAK 69
	Reconciliation of carrying amount at the beginning and end of the period	Reconciliation of carrying amount at the beginning and end of the period	It follows PSAK 69

CONCLUSIONS AND SUGGESTIONS

Through this research, researchers can find out that PT. FAP Agri Tbk recognizes biological assets into two groups: biological assets in current assets and plantation crops (biological assets) in non-current assets. Plants aged 3-4 years are recognized as mature plantations, and those under three years are recognized as immature plantations). Meanwhile, oil palm trees and agricultural products owned company is recognized as biological asset. The company measures biological assets at fair value, which is determined based on market prices for the period and fewer costs to selling. Immature plantations are measured at cost and are not depreciated, while mature plantations are measured at cost at the time of reclassification. The fair value of biological assets can be measured reliably according to the size of the plantation area and the market selling price.



Overall, PT. FAP Agri Tbk has carried out the accounting treatment of biological assets by PSAK No. 69. There is no significant difference to affect the results of the company's financial statements. This is also a requirement for companies that have gone public and are registered on the IDX, so companies must present annual financial reports based on the existing PSAK. PSAK No. 69 regulates the treatment of biological assets only up to maintenance, not up to production management. The accumulated depreciation of the company's biological assets is carried out using the straight-line method with an estimated economic life of 20 years which is by the accounting standards of PSAK 69.

It is important for agricultural companies in Indonesia to apply PSAK 69, because if the treatment of biological assets is carried out the same as other current assets, then there is a high probability that the company will experience large losses. Biological assets need to be considered in detail, starting from breeding, classifying mature and immature plants, calculating each biological asset, to disclosure in the financial statements. Let's take an example, if a company does not apply PSAK 69 in the treatment of its biological assets. The calculation of assets is summed up directly into one as a whole, without distinguishing which biological assets are current and which biological assets are not current. Then the company can make the value in the financial statements greater than what is in the field, or even vice versa. This will happen if agricultural companies do not apply PSAK 69 to the accounting treatment of their biological assets.

Researchers suggest that the selection of objects can be more so that the research results will be more numerous and more diverse. The researcher also suggests further research to be more in-depth related to biological assets in sectors other than plantations because the agricultural sub-sector is not only plantations. There are fisheries, livestock, forestry and smallholder agriculture. Researchers can expand the scope of research on the accounting treatment of biological assets in this sub-sector both at existing UD, CV, PT.

BIBLIOGRAPHY

- Anggraini, D. I. (2022). Penerapan PSAK 69 terhadap perlakuan akuntansi dan deplesi aset biologis. *Jurnal Ilmiah Akuntansi Dan Keuangan*, 4(7).
- Dermawan, M. I., & Warsito. (2019). Pengakuan, Penilaian dan Pengungkapan "Aset" Satwa di Lembaga Konservasi. *Diponegoro Journal of Accounting*, 8, 1.
- DQLab. (2021). *Metode Analisis Data Kualitatif*. <https://Dqlab.Id/Metode-Analisis-Kualitatif-Analisis-Konten>.
- Dr. Firmansyah, A., & Anwar, R. C. (2020). *Ada Apa dengan PSAK 69? (Studi Akuntansi Agrikultur di Indonesia)* (R. A. Qadri, Ed.). CV. Adanu Abimata.
- Dr. Nursapia Harahap. (2020). *Penelitian Kualitatif* (Dr. Hasan Sazali, Ed.). Wal Ashri Publishing.
- Fahmi, M., Harahap, R. U., Muliana, M., Sebayang, B. R., & Sanjaya, S. (2017). *Nilai Wajar Satwa* (Issue 2).
- Fuad, S., & Abdullah, M. W. (2017). *Tinjauan Kritis Aset Biologis PSAK 69 dalam Prespektif Syariah*.
- Harum, D., & Nastiti, D. (t.t.). *Deplesi Aset Biologis pada Peternakan Sapi Perah KUD Kota Boyolali*.
- Hayati, K., & Serly, V. (2020). Pengaruh Biological Asset Intensity, Growth, Leverage, dan Tingkat Internasional terhadap Pengungkapan Aset Biologis (Studi pada Perusahaan Agrikultur yang Terdaftar di BEI Tahun 2015-2018). Dalam *Jurnal Eksplorasi Akuntansi* (Vol. 2, Issue 2). Online. <http://jea.ppj.unp.ac.id/index.php/jea/issue/view/22>
- Himawan, D. R. (2022). *Determinan Pengungkapan Aset Biologis Pada Perusahaan Agrikultur (Studi Empiris pada Anak Perusahaan Holding Perkebunan Nusantara (PERSERO))*. UIN Maulana Malik Ibrahim Malang.
- Khotimah, C., Khadrinur, H., & Putri, M. I. (2022). Analysis of Biological Assets Accounting Treatment Based on PSAK 69. *JUPEA*, 2(3).
- Monica, V. (2018). Perbandingan Aset Biologis Berdasarkan IAS 41 Agriculture dan PSAK 16 Aset Tetap. Dalam *Management & Accounting Expose e-ISSN* (Vol. 1, Issue 1). <http://jurnal.usahid.ac.id/index.php/accounting>
- MY. (2019). *Memahami Aset Biologis dalam Akuntansi - Accounting*. <https://accounting.binus.ac.id/2019/09/16/memahami-aset-biologis-dalam-akuntansi/>
- Nafila, Y. R. (2018). *Perlakuan Akuntansi Aset Biologis Berdasarkan PSAK No.69 Pada PT. Tabassam Jaya Farm*. UIN Maulana Malik Ibrahim Malang.

- Nafila, Y. R. (2018). *Perlakuan Akuntansi Aset Biologis Berdasarkan PSAK 69 pada PT. Tabassam Jaya Farm*. UIN Maulana Malik Ibrahim Malang.
- Nur Aini, L., Ardiana, M., Irian Jaya No, J., Diwek, K., & Jombang, K. (2020). Analisis Perlakuan Akuntansi Aset Biologis Berbasis PSAK 69 (Studi Kasus Pada Peternakan UD Wibowo Farm Kabupaten Blitar). Dalam *JFAS : Journal of Finance and Accounting Studies* (Vol. 2, Issue 2). <https://ejournal.feunhasy.ac.id/index.php/jfas>
- Pratiwi, W. (2017). *Analisis Perlakuan Akuntansi Aset Biologis Berbasis PSAK-69 Agrikultur pada PT.Perkebunan Nusantara XII Kalisenen Kabupaten Jember*. 140–150. *PT Bursa Efek Indonesia*. (t.t.). Diambil 26 Desember 2022, dari <https://idx.co.id/id>
- PT. FAP Agri. (t.t.). *FAP AGRI | Palm Oil*. <https://Fap-Agri.Com/Tentang-Kami/>.
- Rachmawati, Y., Oktariyani, A., & Ermina. (2019). Implementasi Perlakuan Akuntansi Aset Biologis Berbasis PSAK 69 yang Berlaku Efektif 1 Januari 2018 pada Perusahaan Perkebunan (Studi Kasus PT.PP London Sumatera Indonesia, Tbk). *Akuntansi Dan Manajemen*, 14, 130–145.
- Trina, Z. I. (2017). *Analisis Perlakuan Akuntansi dan Depleksi Aset Biologis berdasarkan IAS 41 pada Perusahaan Peternakan*. UIN Maulana Malik Ibrahim Malang.
- Ulfah, Fi. (2021). *Resmi IPO, FAP Agri (FAPA) Jadi Emiten Pertama Melantai di BEI 2021*. <https://market.bisnis.com/read/20210104/192/1338201/resmi-ipo-fap-agri-fapa-jadi-emiten-pertama-melantai-di-bei-2021>