THE COMPLIANCE OF SOUTH AFRICAN PUBLIC COMPANIES WITH IFRS 13 IN RELATION TO BIOLOGICAL ASSETS

by

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ABSTRACT

This study assesses the compliance of South African JSE-listed companies holding biological assets with the disclosure requirements of IFRS 13, *Fair Value Measurement*. The financial statements of nineteen selected JSE-listed companies with material holdings of biological assets were analysed. These financial statements were for the first reporting periods beginning on or after 1 January 2015, because IFRS 13 was applicable to reporting periods from 1 January 2013 and the amendments to IAS 41 relating to bearer biological assets are applicable to reporting periods from 1 January 2016. This research therefore examines the period between when IFRS 13 first became applicable and before the IAS 41 amendments became applicable. The accounting policy notes to the financial statements of each company were analysed to determine whether they indicated that a particular company had applied IFRS 13 to the valuation of its biological assets, and the biological assets note was analysed to determine whether the valuation technique used by each company for the valuation of its biological assets complied with IFRS 13. The IFRS 13 level 3 disclosure requirements were listed and checked against each set of annual financial statements in order to assess the extent of their compliance with these disclosure requirements. The biological assets of the companies whose financial statements were analysed were categorised into bearer plants, consumable plants, bearer livestock, and consumable livestock. It was found that all companies but one stated that they had applied IFRS 13, and that all companies used level 3 inputs to value their biological assets. In terms of the valuation methods used, the results indicate that, while most companies favoured a cost approach for their bearer plants and an income approach for their consumable plants, the market approach was used most consistently for both bearer and consumable livestock. The results of the analysis of the disclosure revealed that, while all of the companies with consumable plants had complied with 60% or more of the compulsory disclosures and 80% of the companies with bearer plants had complied with 50% or more of the disclosures, none of these companies had recorded realised and unrealised gains or losses separately and only one company with both bearer and consumable plants had provided a detailed description of the valuation process used. Similarly 78% of companies with bearer livestock and 88% of companies with consumable livestock had complied with 60% or more of the compulsory disclosures and only one company with both bearer and consumable

livestock had complied with all ten disclosures. This study concludes that, while most JSE-listed companies with biological assets have gone to great lengths since January 2013 when the application of IFRS 13 became mandatory, only one of the nineteen companies whose financial statements were analysed was fully compliant with IFRS 13. Further research may be able to identify the reasons why the remaining eighteen companies are not yet fully compliant with IFRS 13 in relation to their holdings of biological assets. This study contributes to the existing body of research on the financial reporting of entities with biological assets and agricultural produce in South Africa. While the agricultural sector is not as big as it used to be, it is still a significant contributor to the South African economy and improved compliance will result in increased comparability both within the agricultural sector as well as with other sectors.

Key words: Agriculture, biological assets, fair value, IAS 41, IFRS 13.

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List of Acronyms and Abbreviations

GDP	**Gross Domestic Product**
IASB	**International Accounting Standard Board**
IASC	**International Accounting Standards Committee**
IFRS	**International Financial Reporting Standard**
JSE	**Johannesburg Stock Exchange**

CHAPTER 1

INTRODUCTION

1.1 Background

In May 2011 the International Accounting Standard Board (IASB) issued International Financial Reporting Standard 13 (IFRS 13), *Fair Value Measurement*. IFRS 13 provides guidance on how to determine the fair value of assets and liabilities by relying firstly on observable inputs and if observable inputs are not available, unobservable inputs are used (IASB, 2011). IFRS 13 is applicable in all situations where a specific International Accounting Standard (IAS) or an International Financial Reporting Standard (IFRS) requires an entity to measure assets or liabilities at fair value (IASB, 2011). Among others, IFRS 13 is applicable to entities that are required to apply IAS 41, *Agriculture*, to the fair value measurement of their agricultural activity.

Agriculture is the foundation of developing economies. As one of these economies, South Africa needs to ensure a healthy agricultural industry that contributes to the country's gross domestic product (GDP), food security, social welfare, job creation and ecotourism, while adding value to raw materials (Goldblatt, 2010). The sector's contribution to the economy can be evaluated according to five main themes: the role of the sector as provider of food, earner of foreign exchange, employment provider, source of capital and buyer of goods or provider of inputs to the manufacturing sector (Greyling, 2015). The agricultural sector represented approximately 10% of the economy in 1960 and it currently represents less than 2,5%, this is low considering that it uses more than 80% of available land and around 60% of available water (Greyling, 2015).

IAS 41 was issued by the International Accounting Standards Committee in February 2001 and was adopted by the IASB in April 2001 (IASB, 2001). IAS 41 provides guidance on how to account for, present and disclose agricultural activity for the purpose of financial reporting (IASB, 2001). Agricultural activity relates to the management by an entity of the biological transformation and harvest of biological assets for sale or for conversion into agricultural produce or into additional biological assets (IASB, 2001, par 5).

IAS 41 requires entities to measure biological assets at initial and subsequent recognition, and agricultural produce at point of harvest, at fair value less costs to sell. When IAS 41 was issued it contained guidance on how the fair value of biological assets should be determined. IAS 41 encourages entities to use prices from active markets, if they exist, to measure their fair value. For cases where market prices are not available, the use of the most recent market prices, market prices for similar items or sector benchmarks are recommended. Fair value movements are required to be accounted for in profit or loss. From 1 January 2013 the fair value requirements contained in IFRS 13 have replaced those in IAS 41.

IFRS 13 encourages entities to maximise the use of observable and relevant inputs from the market and minimise the use of unobservable inputs. It does this by creating a hierarchy of fair value inputs with three distinct levels. level 1 gives highest priority to unadjusted, quoted market prices for identical assets, level 2 inputs reflect prices for similar assets observable from the market, and level 3 inputs are unobservable inputs (IASB, 2011).

IFRS 13 recommends that entities use any of the three different valuation techniques, namely the market approach, which is more aligned with levels 1 and 2, and the cost and income approaches, which are both more aligned with level 3.

IFRS 13 and IAS 41 are not the only IASB standards affecting entities in the agricultural sector. In June 2014 the IASB issued a paper entitled “Agriculture: Bearer Plants” as an amendment to IAS 16, *Property, Plant and Equipment* (IASB, 2003) and IAS 41 (IASB, 2014). The amendment is intended to remove bearer plants from the scope of IAS 41 and place them within the scope of IAS 16 (IASB, 2014). Companies are required to apply these amendments to their financial statements for financial periods beginning on or after 1 January 2016 (IASB, 2014).

1.2 Research problem

Previous studies have focused on the compliance of entities holding biological assets with the disclosure requirement of IAS 41 in various countries. Studies were conducted in France by Elad and Herbohn (2011), in the United Kingdom by Butler (2001), in Spain by Argilés, García-Blandon and Monllau (2011), in New Zealand by Fisher,

Mortensen and Webber (2010), and in South Africa by Baigrie and Coetsee (2016). Yet to date no studies have looked at the compliance of companies holding biological assets with the disclosure requirements of IFRS 13. This is therefore the research problem that this dissertation will attempt to address.

1.3 Research objectives

Following on from the research problem discussed above, the research question that arises relates to the extent to which South African JSE-listed companies with material holdings of biological assets are applying IFRS 13 to the measurement and disclosure of these assets in their annual financial statements. The research question therefore is: "To what extent are South African public companies with material holdings of biological assets complying with the valuation and disclosure requirements of IFRS 13 in relation to these assets?" This leads us to the aim of this research, which is to provide evidence of whether and how the South African JSE-listed companies selected for this research have managed to comply with the fair value guidance provided in IFRS 13, specifically in relation to the valuation, measurement and disclosure of their biological assets.

To address this research question and the aim thereof, the following analyses were undertaken:

- an analysis of the annual financial statements of these companies to identify whether or not they have indicated that they have applied IFRS 13 to their biological assets;
- an analysis of the valuation techniques used by these companies for the recognition and measurement of these biological assets; and
- an analysis of their compliance with the disclosure requirements of IFRS 13 applicable to the level at which their biological assets were classified.

1.4 Research methodology

The methodology used to address the objectives of this study is a content analysis of the annual financial statements of the nineteen JSE-listed companies selected for

study. For the purposes of producing detailed results, the analysis divides the biological assets of these companies into four discrete categories, namely bearer plants, consumable plants, bearer livestock, and consumable livestock.

The content analysis is done in four phases, the first being to determine whether each company has indicated compliance with IFRS 13 in relation to their biological assets, the second being to determine the valuation technique used by the company to value these assets, the third being to identify the level at which each company has classified their various holdings of biological assets, and the last being an analysis of their compliance with the disclosure requirements of IFRS 13 applicable to the level at which they have classified their various holdings of biological assets.

1.5 Motivation

Research on the financial reporting of companies with biological assets and holding of agricultural produce has increased in recent years. In South Africa, a number of studies have been conducted in recent years on the financial reporting of companies in the agricultural industry, such as those of Baigrie and Coetsee (2016), Philander (2016) and Van Biljon (2016).

IAS 41 requires companies to measure their biological assets at fair value less cost to sell both at initial recognition and for subsequent measurement. IFRS 13 provides guidance on how to measure fair value and what needs to be disclosed in the financial statements for assets measured at fair value.

Prior to the issuing of IFRS 13, studies were conducted on the advantages and disadvantages of measuring biological assets at fair value, as required by IAS 41. One of the advantages mentioned by Lefter and Roman (2007) is that recognising fair value movements in profit or loss can be of great relevance to the user's decision-making process. Elad and Herbohn (2011) found that the disadvantage that was mentioned by auditors and accountants was the increased volatility of earnings if fair value accounting is applied to the measurement of biological assets.

Some writers such as Elad (2004) looked at the cost versus benefit of valuing biological assets at fair value. Elad (2004) raised that there could excessive cost incurred in

trying to obtain the fair value while historical cost could easy be obtained. Nevertheless, the problem of comparability persisted due to the fact that IAS 41 contained so many alternative valuation options for the measurement of the fair value of biological assets and agricultural produce at point of harvest. IFRS 13 aims to provide users with greater consistency – and therefore comparability – in relation to the fair-value measurement of various assets, including biological assets.

1.6 Limitations

This study is limited to companies listed on the JSE. There are more companies with material holdings of biological assets that are not listed on the JSE, but are still required by the Companies Act (South Africa, 2008) to prepare financial statements according to IFRS requirements. Due to time constraints, those companies do not form part of this research, because their annual financial statements are either not easily accessible or unavailable.

This dissertation looks at financial statements prior to the June 2014 amendments to IAS 41, which require bearer plant holdings to be accounted for according to IAS 16. It therefore does not take these amendments into account.

1.7 Ethical considerations

This research analyses the annual financial statements of public companies that are listed on the JSE. It therefore relies solely on secondary data. Although the research involves neither humans nor any form of primary data, ethical clearance has been obtained from the University of Johannesburg's School of Accounting's Research and Ethics Committee.

1.8 Chapter layout

The rest of the chapters of this dissertation are structured as follows:

Chapter 2 – Literature review

This chapter will look at recent academic journal articles dealing with accounting for biological assets. It looks specifically at the themes of relevance and faithful representation as they relate to biological assets, which are the two fundamental qualitative characteristics of useful financial information according to the Conceptual Framework (IASB, 2018: para. 2.5).

Chapter 3 – Research methodology

This chapter will explain the methods that were used in this research and the process used to select the financial statements of the companies that were studied. Detail is provided of the various steps taken in the research process. The IFRS 13 disclosure requirements are tabled, as well as the processes followed to test the compliance of the selected financial statements with these requirements.

Chapter 4 – Results and discussion

In this chapter the results of the research conducted are presented. Firstly, the results of the analysis of the application of IFRS 13 and the valuation techniques used by the selected companies are discussed, followed by a discussion of the extent of their compliance with the IFRS 13 disclosure requirements.

Chapter 5 – Conclusion

This chapter provides a summary of the research and the conclusions drawn from it. Areas for further research are also discussed.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

There has been a great deal of international research on financial reporting by entities engaged in agricultural activities in various part of the world, but since the introduction of IFRS 13 in January 2013 there has not been much research on how this standard impacts on entities with biological asset holdings. This study focuses specifically on the extent of compliance by selected South African JSE-listed companies holding biological assets with the disclosure requirements of IFRS 13.

This chapter looks at prior research relating to the financial reporting of the fair value of biological assets. The objective of financial reporting is to provide the users of an entity's annual financial statements with useful financial information about the entity (IASB, 2018: para. 1.2). The Conceptual Framework states that *"If financial information is to be useful, it must be relevant and faithfully represent what it purports to represent. The usefulness of financial information is enhanced if it is comparable, verifiable, timely and understandable"* (IASB, 2018: para. 2.4). The objectives of the Conceptual Framework apply to all the accounting standards, including IFRS 13 and IAS 41.

According to the Conceptual Framework, therefore, relevance and faithful representation are the two fundamental qualitative characteristics of useful financial information. This research looks at the compliance by entities holding biological assets with the disclosure requirements of IFRS 13 as an indication of the increased standardisation and comparability of and, by extension, increased usefulness of the financial statements of agricultural entities.

IFRS 13 encourages the use of observable inputs and discourages the use of unobservable inputs with the aim of reducing fair value measurement variability and subjectivity (IASB, 2013: para. IN10). Baigrie and Coetsee (2016) raise the question of whether IFRS 13 will achieve the objective of reducing subjectivity in fair value measurement by improving comparability among financial statements. This chapter looks at the extent to which the existing literature on the fair value reporting of

biological assets addresses these fundamental qualitative characteristics, as well as whether researchers believe that the introduction of IFRS 13 will improve the comparability and standardisation of financial information.

2.2 Relevance of fair value reporting of biological assets

Financial information is relevant when it can be used to predict future outcomes and when it gives feedback to users about previous evaluations (IASB, 2018: paras. 2.6-2.9). Relevant information is also determined by how material a particular piece of information is to those using it. If misstating or omitting this information will have an impact on the decisions that will be taken by its users regarding the reporting entity, that information is material and therefore also relevant (IASB, 2018: para. 2.11).

Goncalves and Lopes (2015), in their study evaluating the measurement practices of 324 listed firms holding biological assets worldwide, find that most firms are using historical cost to account for these assets, because they believe that this is the best way to measure them. Furthermore, they find that companies need to consider many factors when valuing their biological assets, because these factors have a significant impact on the assets' fair values. These factors are firm-level drivers, biological asset intensity and potential growth, firm size, listing status, regulation expertise, and industry sector.

Argilés-Bosch, Miarons, García-Blandon, Benavente and Ravenda (2018), in their empirical analysis of the relevance of accounting information when biological assets are measured at fair value as compared to historical cost, find that the fair value valuation of biological assets is more reliable when predicting future cash flows. This is because the proportion of biological assets to total assets increases compared to historical cost valuations. However, they find that this does not apply to bearer plant holdings.

In another study by Goncalves and Lopes (2015), they find that, in general, there is value relevance when firms measure their biological assets at fair value and exhibit high disclosure levels. They further state that, for consumable biological assets, it is

easy to find value in the market, so there is no need for companies to disclose a great deal of information about consumable biological assets. But, with bearer biological assets, investors really rely on information that firms disclose, hence the value relevance of higher levels of disclosure.

In line with Goncalves and Lopes (2015), Da Silva, Rezende and Braunbeck (2016) conducted an experiment with market professionals from the executive MBA and students from the graduation course in accounting at the University of São Paulo in Brazil. They conclude that the use of the fair value measurement of biological assets is more relevant than historical cost. They also point out that reliability is still a concern because of the different approaches used to determine the fair value of assets when there is no active market.

2.3 Faithful representation of biological assets

The usefulness of financial information is enhanced by its faithful representation. To satisfy the qualitative characteristic of faithful representation, information needs to be complete, neutral and free from error (IASB, 2018: para. 2.13). Elad (2004) states that the value of biological transformation is better reflected when net market value is used, which faithfully represents a biological asset's future economic benefits.

It is worth mentioning that Abdullatif (2016), who researched the issues faced by external auditors in Jordan, finds that auditors were concerned that companies took advantage of fair value estimates to overvalue their assets, which would make fair value information less reliable.

Filip, Hammami, Huang, Jeny, Magnan and Moldovan (2017), in their literature review analysis after the application of IFRS 13, conclude that:

- the application of the IFRS 13 fair value hierarchy will benefit capital market participants (investors and analysts);
- the fair value hierarchy is not sufficiently stable at levels 2 and 3; and
- the use of level 3 allows managers to manipulate financial information.

The Conceptual Framework states that "*although a single economic phenomenon can be faithfully represented in multiple ways, permitting alternative accounting methods for the same economic phenomenon diminishes comparability*" (IASB, 2018: para. 2.29). One of the main reasons for the introduction of IFRS 13 in 2013 was to increase comparability through greater consistency in fair value measurement and disclosure (IASB, 2013).

2.4 Comparability of financial statements

The IASB states that information reported in financial statements "*is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period or another date*" (IASB 2018: para. 2.24). Baigrie and Coetsee (2016) state that if entities with similar assets, liabilities and income sources are comparable, comparability is achieved. Nobes (2006) finds that the fact that a number of accounting standards allow for a choice between the use of a benchmark treatment or alternative measurement methods has resulted in a significant reduction in comparability, even among entities in the same sector.

Elad and Herbohn (2011) state that IAS 41, instead of enhancing comparability and changing accounting practices, created an illusion of comparability. This is because, prior to the implementation of IFRS 13, IAS 41 provided too many alternative valuation methods and allowed for too much estimation by management. These authors conclude that it is almost impossible for the application of IAS 41 to improve comparability unless entities within the same industry agree to use similar valuation methods. The research conducted as part of this dissertation seeks to assess the extent to which the application of IFRS 13 addresses this problem.

Comparability is compromised by allowing different accounting methods to be used by entities in the same industry (IASB, 2018: paras. 2.26-2.27). Van Biljon (2016) states that the use of IAS 41 on its own leads to financial statements that cannot be usefully compared, because the standard does not have a detailed valuation method. Van Biljon (2016) also states that because a number of alternative valuation methods are permitted in IAS 41, comparability will be directly affected by which method a particular

entity uses. She highlights the fact that the valuation methods in IAS 41 allow for the extensive use of estimates, and that this will impact on the credibility of the information produced, because inconsistences in estimates among entities will also impair comparability.

The consensus to date seems to be that IAS 41 has completely failed to enhance comparability among agricultural entities. While Baigrie and Coetsee (2016) suggest that entities in the same economic sectors need to agree to apply similar valuation methods for biological assets if they want to increase comparability, it remains to be seen whether the introduction of IFRS 13 and its application to agricultural entities have resolved this problem.

Philander (2016: 16) argues that "*usefulness can be measured as the degree or extent to which financial information provides a sound basis to make informed decisions*". A greater emphasis on the standardisation of disclosure should lead to the increased usefulness of financial information.

2.5 Standardisation of disclosure

The aim of standardised disclosure is to make financial statements more easily understandable by diverse users across the globe. An increase in the standardisation of disclosure requirements will make it easier for users to know what to expect and how to read and interpret the financial information of any entity, which in turn will enable them to make more informed decisions about an entity whose financial information they are examining.

While IFRS 13 and IAS 41 have encouraged entities to disclose more information about their biological assets, Goncalves and Lopes (2015) state that additional disclosure on consumable biological assets has no value relevance, which means that the additional disclosure in this context is unnecessary. Hou (2015), on the other hand, suggests that the standardisation of disclosure of forest assets enhances the value of the disclosure and provides more technical information, which will in turn improve comparability.

Van Biljon (2016) states that most organisations face challenges such as the cost of obtaining valuations, a lack of understanding of the valuation model, and issues relating to the measuring of the age and condition of plants and bearer livestock. She further states that most companies struggle with the valuation of biological assets because they only perform such a valuation once a year. She suggests that if valuations were done more frequently, it would enhance the skills and experience required to perform these valuations, which would in turn make fair value reporting more accurate and less burdensome.

A correlation between compliance with IFRS 13, on the one hand, and the size of the both the firm and its auditors, on the other hand, was also identified.

This research confirmed the earlier findings of Clavano (2014) who states that, while there is a positive correlation between firm size and the valuation methods used, it is the perceived importance of any required disclosure by the audit firm that determines whether or not the disclosure is included in the entity's financial statements.

These findings are also consistent with those by Baigrie and Coetsee (2016), who found greater consistency in disclosure between companies in the same industry sector. This concludes that standardisation of disclosure is intended to improve the comparability of financial statements of different entities, and that "*the hope is that the inclusion of more extensive compulsory disclosures in the accounting standards will lead to greater standardisation of disclosure and therefore to greater comparability within economic sectors and across economic regions"* (Baigrie & Coetsee, 2016: 835).

2.6 Conclusion

The conceptual framework seeks to achieve that users of financial information have more confidence in the information, which will be achieved if the information is relevant and faithfully reported. It believed that, if so, it will improve capital markets' functioning, which in turn will lead to a decrease in the cost of capital for the entire economy (IASB, 2018: para. 2.41). It is hoped that the introduction of IFRS 13, through increased comparability of disclosure and more accurate use of fair value in financial statements, will enhance the qualitative characteristics of relevance and faithful representation.

In relation to biological assets, companies should ensure that they consider all factors affecting the biological asset in question in determining its fair value. Increased disclosure relating to the valuation methods used will achieve value relevance for many different types of biological assets, particularly those like forests and plantations, which require several inputs in order to arrive at a fair value. Companies with biological assets will need to achieve a balance between over-disclosure and under-disclosure. This can be done by disclosing more technical information about biological assets when market values are not available. The increased frequency of valuation calculations should also make it easier for companies to produce standardised information that is both relevant and faithfully represented.

Faithful representation is enhanced when financial information is comparable and disclosed in a standardised way. Prior to the implementation of IFRS 13, IAS 41 made it difficult to compare financial information across entities, because it allowed for the use of many different valuation methods (Baigrie & Coetsee, 2016). It is hoped that IFRS 13, with its increased emphasis on the use of market-based valuations combined with greater disclosure requirements when other valuation methods are used, will lead to an increase in the standardisation of disclosure. However, there is a concern that disclosing too much information will not always be value relevant and it is hoped that standardised disclosure can be achieved through the use of minimal but relevant information.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The research that forms part of this study involved a content analysis of the financial statements of South African JSE listed companies holding biological assets in their statements of financial position. In terms of IAS 41, entities with biological assets are required to measure these assets at fair value at the end of every reporting period. Previous research (Baigrie & Coetsee, 2016) looked at the compliance of South African companies with material holdings of biological assets with the disclosure requirement of IAS 41. Subsequent to this research, the IASB issued IFRS 13 *Fair Value Measurement*, which requires entities that hold assets and liabilities which must be carried at fair value to apply the valuation and additional disclosure requirements of this standard (IASB, 2011). This study looks at the compliance of JSE listed companies with holding biological assets with the disclosure requirements of IFRS 13.

3.2 Research methodology

As indicated in Chapter 1, the methodology used in this study is a content analysis of the annual financial statements of the nineteen JSE-listed companies selected for study. Krippendorff (2004) states that the term “content analysis” first appeared in Webster’s Dictionary of the English Language in 1961, when it was described as “analysis of the manifest and latent content of a body of communicated material through classification, tabulation and evaluation of its key symbols and themes in order to ascertain its meaning and probable effect” (Krippendorff, 2004: xvii).

Shaw (2006) indicates that, while significant disagreement exists among researchers as to what constitutes “content analysis”, examples of content analysis “can involve the use of numbers to quantify some aspect of text” (Shaw, 2006: 3). Krippendorff describes content analysis as an “empirically grounded method” used to examine data or printed matter, among other sources, in order to understand their meaning as well as what they enable or prevent” (Krippendorff, 2004: xviii). While he questions the

usefulness of the distinction between qualitative and quantitative research, he qualifies this by stating that “all reading of texts is qualitative, even when certain characteristics of a text are later converted into numbers” (Krippendorff, 2004: 16). Shaw too refers to the distinction between qualitative and quantitative research as problematic and suggests that “Conceiving of different tendencies between closely related methods as cultural preferences rather than absolute distinctions helps us to reinterpret text analysis methods as a set of practices selected from a continuum of ‘quantitative’ and ‘qualitative’ practices.” (Shaw, 2006: 6).

Content analysis as a methodology varies from a simple quantification of text to complex analysis of text involving highly specialised procedures, facilitated by the use of computer coding and specialised software packages used to analyse the data. As the research that forms part of this study is exploratory in nature, a simple content analysis was considered to be the most appropriate methodology to use.

The analysis divides the biological assets of the selected companies into four discrete categories, namely bearer plants, consumable plants, bearer livestock, and consumable livestock. The content analysis is done in four phases, the first being to determine whether each company has indicated compliance with IFRS 13 in relation to their biological assets, the second being to determine the valuation technique used by the company to value these assets, the third being to identify the level at which each company has classified their various holdings of biological assets, and the last being an analysis of their compliance with the disclosure requirements of IFRS 13 applicable to the level at which they have classified their various holdings of biological assets.

3.3 Research question

The research question addressed by this research is: “To what extent are South African public companies with material holdings of biological assets complying with the valuation and disclosure requirements of IFRS 13 in relation to their biological assets?”

To address this research question, the following analyses were undertaken:

- an analysis of the annual financial statements of the selected companies to identify whether or not they indicated that they applied IFRS 13 to their biological assets. This was done by checking whether the accounting policy notes mentioned the application of IFRS 13 to biological asset as well as checking the biological assets note to see if there is any mention of compliance with IFRS 13;
- an analysis of the valuation techniques used for the recognition and measurement of these biological assets, which was done by categorising the valuation techniques referred to in the biological asset note according to the valuation techniques prescribed in IFRS 13; and
- an analysis of the compliance of these companies' with the disclosure requirements of IFRS 13 applicable to the level at which their biological assets were classified. This was done by creating a disclosure checklist based on the IFRS 13 compulsory disclosures and comparing the IFRS 13 disclosure requirements for the level at which the companies had classified their various holdings of biological assets against what was actually disclosed in their annual financial statements.

3.4 Population and sample

The research was limited to the financial statements of JSE-listed South African public companies with holdings of biological assets. It is a JSE listing requirement that all JSE-listed companies comply fully with IFRS. The financial statements selected were for the reporting periods beginning on or after 1 January 2015. Since IFRS 13 is applicable for reporting periods from I January 2013 and the amendments to IAS 41 relating to bearer biological assets are applicable for reporting periods from 1 January 2016, this research analyses financial statements compiled during the period after which IFRS 13 first became applicable and before the IAS 41 amendments became applicable. A list of JSE-listed companies was carefully scrutinised to identify companies with holdings of biological assets in their statements of their respective financial positions. Table 3.1 contains a list of the financial year ends of the nineteen companies that were selected for this study.

Table 3.1 Financial year ends of companies selected

Year end	Companies
Dec-15	3
Feb-16	2
Mar-16	3
Jun-16	5
Aug-16	1
Sep-16	5

Source: own analysis

3.5 Research method

A content analysis of the accounting policies and biological assets notes to the financial statements of the selected companies was conducted. The results were collected and analysed using Microsoft Excel. For the purposes of this analysis, companies were divided into those with plants as biological assets and those with livestock as biological assets. A further sub-division within the category of plants was made between bearer plants and consumable plants, and in the category of livestock between bearer livestock and consumable livestock.

Of the nineteen companies selected, it was found that thirteen had plants as biological assets and nine had livestock. Some companies therefore had both plants and livestock as biological assets and were included in both categories. Table 3.2 shows the number of companies found to hold the different categories of biological assets used in this study.

Table 3.2 Breakdown of companies according to categories of biological assets

Plants		Livestock	
Bearer	Consumable	Bearer	Consumable
10	11	9	8

Source: own analysis

IFRS 13 requires entities to categorise assets or liabilities held at fair value into one of three categories in what it describes as a fair value hierarchy. IFRS 13 favours the use of level 1 inputs, which are quoted prices in active markets, followed by level 2 inputs, which are either directly or indirectly observable inputs, followed by level 3 inputs,

which consist of unobservable inputs (IASB, 2011). Depending on the level at which the assets are categorised, IFRS 13 requires different levels of disclosure.

IFRS 13 requires all companies that measure assets or liabilities at fair value to disclose the fair value measurement at the end of the reporting period, as well as the level of the fair value hierarchy at which the fair value measurements are categorised (IASB, 2011). An initial analysis of the financial statements of the selected companies showed that most companies categorised their biological assets at level 3 of the IFRS 13 fair value hierarchy. Where the fair value measurement method is categorised at level 3 of the fair value hierarchy, Table 3.3 provides a summary of the IFRS 13 disclosure requirements.

From the requirements listed in Table 3.3, an analysis of the financial statements was undertaken to ascertain whether companies with biological assets are complying with these requirements.

Table 3.3 IFRS 13 level 3 disclosure requirements

Paragraph	IFRS 13 requirement
91(a)	Identification of valuation technique and inputs used
91(b)	Effect on profit or loss for the period
93(a)	Fair value at the end of the period
93(b)	Level in fair value hierarchy
93(d)	Description of valuation techniques and inputs used
93(d)	Quantitative details of significant unobservable inputs used and their impact on fair value
93(e)	Total gains or losses recognised in profit or loss and the line item in which those gains or losses are recognised
93(e)	Reconciliation of opening to closing balances showing purchases and sales
93(f)	Total gains and losses attributable to unrealised gains and losses in profit or loss
93(g)	Detailed description of valuation processes used

Source: IASB (2011), adapted

Chapter 4 lays out the results of this research.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the analysis of the financial statements of the nineteen JSE-listed companies selected for this study is discussed. The study assesses whether the companies that are applying IAS 41 to their biological assets are also applying IFRS 13 to the measurement and disclosure of these assets.

IAS 41 requires companies to recognise biological assets at fair value less costs to sell both on initial recognition as well as at the end of each reporting period. IFRS 13 in turn defines fair value and provides preparers of financial statements with guidance relating to the valuation of these assets. It also provides additional disclosure requirements, depending on the methods or inputs used in the valuation process.

Out of the nineteen companies selected for this study, only one provided no indication of whether or not it applied IAS 41 to the valuation of its biological assets. A first step in this analysis was to identify which companies had indicated that they applied IFRS 13 to the valuation of their biological assets.

4.2 Application of IFRS 13 to the measurement of biological assets

The annual financial statements of the nineteen JSE-listed companies with material holdings of biological assets were analysed to see which of the companies were applying IFRS 13 to their biological assets. It was found that only one of the listed companies gave no indication of whether or not it applied IFRS 13 to its biological assets. The remaining eighteen companies, making up 95% of those selected, indicated that they applied IFRS 13 to their biological assets.

Further analysis was carried out to identify the various categories of biological assets held by each company and to identify the valuation techniques used by these companies for the valuation of their biological assets. Table 4.1 provides an indication of the categories of biological assets held by the selected companies.

Table 4.1 Number of companies with biological assets

Categories	No.
Bearer plants	10
Consumable plants	11
Bearer livestock	9
Consumable livestock	8

Source: own analysis

The analysis that follows uses the categories listed in Table 4.1. The results from the analysis are presented and structured according to these categories, where a percentage of companies that complied with an IFRS 13 requirement in question are expressed as a proportion to total number of companies within the category. The following section analyses the valuation techniques used by the selected companies in the valuation of their biological assets.

4.3 Analysis of valuation techniques

Paragraph 61 of IFRS 13 requires entities to use valuation techniques that maximise the use of observable inputs and minimise the use of unobservable inputs. IFRS 13 identifies three valuation techniques that may be used to establish fair value, namely the market approach, the cost approach, and the income approach. These valuation techniques are defined as follows (IASB, 2011: paras. B5-B11):

- The *market approach* uses information from transactions of similar or identical assets and liabilities in the market to establish fair value.
- The *cost approach* uses current replacement cost to establish fair value.
- The *income approach* uses discounted future cash flows to estimate current fair value.

An analysis of the different valuation techniques applied by the companies to the measurement of their biological assets was conducted, the results of which are shown in Table 4.2. One of the companies used different measurement approaches to sub-divide its bearer plant holdings, namely replacement cost for banana plants and deciduous and macadamia trees, and amortised cost for sugarcane roots. This company has been listed under the cost approach in Table 4.2.

Table 4.2 Valuation techniques applied to biological assets

	Market approach	Cost approach	Income approach	Amortised cost
Bearer plants	10%	50%	20%	20%
Consumable plants	27%	18%	55%	0%
Bearer livestock	67%	11%	0%	22%
Consumable livestock	75%	12.5%	0%	12.5%

Source: own analysis

The first three approaches listed in Table 4.2 are fair value approaches as defined in IFRS 13. The last classification, amortised cost, is not a fair value measurement and does not form part of IFRS 13. There is no broad definition of amortised cost in any of the IFRS statements except for the definition relating to financial assets and financial liabilities in IFRS 9 and the definition of amortisation contained in IAS 38 *Intangible Assets* which defines amortisation as *"the systematic allocation of the depreciable amount of an asset to profit or loss over its useful life"* (IASB, 2010: para. 8). The analysis in Table 4.2 shows that amortised cost is used by certain companies to measure their biological assets. These companies are therefore not compliant with IAS 41.

The results show that, for companies with bearer plant holdings, only 10% used the market approach to value these assets, while 50% used the cost approach and 20% used the income approach. The remaining 20% measured these assets at amortised cost and are therefore not fully compliant with IAS 41.

Companies with consumable plant holdings are fully compliant with IAS 41 and IFRS 13 in terms of the measurement of their biological assets. Of these companies, 27% used the market approach, 18% used the cost approach and 55% used the income approach.

The analysis found further that 22% of companies with bearer livestock holdings were non-compliant, electing to measure their biological assets at amortised cost, while 67% indicated that they measured their biological assets using the market approach and 11% used the cost approach.

The majority of companies with consumable livestock holdings measured their biological assets by using the market approach, with 75% using this method. Of the balance, 12.5% used the cost approach and 12.5% used amortised cost.

It is clear from these results that companies with different categories of biological assets use different valuation techniques. While there is very little consistency across the different categories, there is relative consistency within each category. It may still be, however, that each company is using the approach that it finds the most practical, regardless of what is seen as the best measure within the industry sector in question.

4.4 IFRS 13 fair value measurement disclosure requirements

Using the steps described in section 3.2, a further analysis was carried out on the compliance of the selected companies with the IFRS 13 disclosure requirements. The results of this analysis are shown in Tables 4.3 and 4.4.

Table 4.3 IFRS 13 disclosures by companies with plant holdings

Paragraph	IFRS 13 requirement	Bearer	Consumable
91(a)	Identification of valuation technique and inputs used	100%	100%
91(b)	Effect on profit or loss for the period	80%	100%
93(a)	Fair value at the end of the period	80%	100%
93(b)	Level in fair value hierarchy	80%	100%
93(d)	Description of valuation techniques and inputs used	80%	100%
93(d)	Quantitative details of significant unobservable inputs used and their impact on fair value	40%	55%
93(e)	Total gains or losses recognised in profit or loss and the line item in which those gains or losses are recognised	50%	73%
93(e)	Reconciliation of opening to closing balances showing purchases and sales	80%	100%
93(f)	Total gains and losses attributable to unrealised gains and losses in profit or loss	0%	0%
93(g)	Detailed description of valuation processes used	10%	9%

Source: own analysis

As seen in Table 4.3, all of the companies with bearer and consumable plants identified the valuation techniques used to measure these assets. While 80% of companies with bearer plant holdings provide five of the ten compulsory disclosures required by IFRS 13. In relation to the other IFRS 13 disclosure requirements, 50% of the companies disclosed total gains or losses recognised in profit or loss and the line item in which those gains or losses are recognised, 40% disclosed quantitative details of significant unobservable inputs used and their impact on fair value, 10% provided a description of the valuation process in detail and none of the companies with bearer

plants disclosed the total gains and losses attributable to unrealised gains and losses in profit or loss. The remaining 20% of the companies with bearer plant holdings did not comply with nine of the ten IFRS 13 disclosure requirements. This is because they used amortised cost, which is not a measure of fair value.

All of companies with consumable plant holdings were fully compliant with 60% of the disclosure requirements of IFRS 13. The three disclosures with which such companies were less compliant were those relating to the total gains or losses recognised in profit or loss and the line item in which those gains or losses are recognised, which had a 73% compliance, the quantitative details of significant unobservable inputs used and their impact on fair value had 55% compliance and detailed description of valuation processes used which only one company with consumable plant holdings was compliant. Same as companies with bearer plants, none of the companies with consumable plants disclosed the total gains and losses attributable to unrealised gains and losses in profit or loss.

Table 4.4 IFRS 13 disclosures by companies with livestock holdings

Paragraph	IFRS 13 requirement	Bearer	Consumable
91(a)	Identification of valuation technique and inputs used	89%	88%
91(b)	Effect on profit or loss for the period	78%	88%
93(a)	Fair value at the end of the period	78%	88%
93(b)	Level in fair value hierarchy	78%	88%
93(d)	Description of valuation techniques and inputs used	78%	88%
93(d)	Quantitative details of significant unobservable inputs used and their impact on fair value	56%	63%
93(e)	Total gains and losses in profit or loss per line item	78%	88%
93(e)	Reconciliation of opening to closing balances showing purchases and sales	78%	88%
93(f)	Total gains and losses attributable to unrealised gains and losses in profit or loss	11%	13%
93(g)	Detailed description of valuation processes used	11%	13%

Source: own analysis

As seen in Table 4.4, Only one company of the companies with bearer livestock that that could not identify the valuation technique and inputs used, while 78% of companies with bearer livestock holdings disclosed six of the ten disclosures required by IFRS 13. The three disclosures with which these companies were less compliant were those relating to the quantitative details of significant unobservable inputs used and their impact on fair value, which had a 56% compliance, and those relating to total gains and losses attributable to unrealised

gains and losses in profit or loss and a detailed description of valuation processes used, with which only one company with bearer livestock holdings was compliant. The remaining 22% of the companies with such holdings did not comply with any of the IFRS 13 disclosure requirements. These companies also used amortised cost for their bearer livestock, which is not a measure of fair value.

Of the companies with consumable livestock holdings, 88% disclosed seven of the minimum disclosures required by IFRS 13. The three disclosures with which companies with consumable livestock holdings were less compliant were those relating to the quantitative details of significant unobservable inputs used and their impact on fair value, which had 63% compliance and only one company of those with consumable livestock disclosed total gains and losses attributable to unrealised gains and losses in profit or loss and detailed description of valuation processes used

These results show that most of the nineteen JSE-listed companies selected for this study complied with most of the disclosure requirements of IFRS 13, and that the only ones that were completely non-compliant with the disclosure requirements were not using a fair value measurement for their biological assets and are therefore compliant with neither IAS 41 nor IFRS 13. The one disclosure with which 90% of the companies were non-compliant relates to providing a detailed description of the valuation process used in arriving at the level 3 valuations of their biological assets.

4.5 Conclusion

This chapter has discussed the results of the research conducted on the annual financial statements of the nineteen JSE-listed companies selected for this study. The purpose of this research was to assess the extent to which these companies applied IFRS 13 to their biological assets, as well as the extent of these companies' compliance with the disclosure requirements of IFRS 13 in their annual financial statements.

Of these nineteen companies, six used amortised cost to value at least one category of biological assets. Three companies used amortised cost to value their bearer plant holdings, two used amortised cost to value their bearer livestock holdings, and one used amortised cost to value its consumable livestock holdings. In contrast, all

companies with consumable plant holdings used one of the fair value measures contained in IFRS 13 to value these assets.

The majority of companies with bearer plant holdings used a replacement cost approach for the valuation of their holdings, while the majority of companies with consumable plant holdings used an income approach to measure these assets. However, three companies still used amortised cost to measure their bearer plant holdings, while none of the companies used amortised cost to measure its consumable plant holdings. As long as companies in the same industry continue to use different valuation techniques to measure the fair value of their holdings, a comparison of companies for decision-making purposes will remain difficult.

There is greater consistency among companies with livestock holdings, with the majority of companies with both bearer and consumable livestock holdings using a market approach to value these assets. However, two companies still used amortised cost, one to measure its bearer livestock holdings only and the other to measure both bearer and consumable livestock holdings. Comparison among companies with livestock holdings for decision-making purposes is therefore more reliable than among companies with plant holdings.

In terms of the IFRS 13 minimum disclosure requirements, all of the companies that used one of the methods for assessing fair value advocated in IFRS 13 complied with the majority of the standard's disclosure requirements. Disappointingly, only 10% of companies with bearer plant holdings, 9% of companies with consumable plant holdings, 11% of companies with bearer livestock holdings, and 13% of companies with consumable livestock holdings complied with the IFRS 13 disclosure requirement to provide a detailed description of the valuation process applied to arrive at the level 3 valuation used.

The discussion in this chapter has shown that the JSE-listed companies with material holdings of biological assets selected for this study are, with a few exceptions, applying IFRS 13 to their biological assets and are compliant with most of the standard's disclosure requirements. The conclusion, which follows, will discuss the extent to which the application of IFRS 13 has addressed the themes of relevance, faithful representation, comparability and standardisation of disclosure identified in the literature review in Chapter 2.

CHAPTER 5

CONCLUSION

5.1 Introduction

As stated in Chapter 1, the IASB issued IFRS 13 in May 2011 to provide further guidance on how to apply fair value measurement in the preparation of annual financial statements. IFRS 13 encourages the use of observable inputs with the aim of reducing fair value measurement variability and subjectivity. It favours the use of level 1 inputs, which are quoted prices in active markets; followed by level 2 inputs, which are either directly or indirectly observable inputs; followed lastly by level 3 inputs, which consist of unobservable inputs.

IAS 41 requires entities with biological assets to measure both their biological assets and their agricultural produce at fair value on initial recognition and at the end of each financial reporting period. Therefore, with effect from 1 January 2013, all entities holding biological assets are required to apply IFRS 13 to the measurement of these assets.

The objective of this study was, firstly, to assess whether South African JSE-listed companies with material holdings of biological assets were applying IFRS 13 to the valuation and measurement of their biological assets, secondly, to determine the valuation technique that they were applying to these assets and, thirdly, to further assess the compliance of these companies with the minimum disclosure requirements in IFRS 13 for the level at which they classified their biological assets in terms of the IFRS 13 fair value hierarchy.

This concluding chapter summarises the findings of the literature review before continuing to look at the research methodology applied in the study and the resulting findings. The chapter concludes by indicating the limitations of this study and suggesting areas for further research.

5.2 Literature review

The literature review in Chapter 2 reviewed prior research relating to both the financial reporting of biological assets and issues around fair value reporting. The literature was analysed to specifically determine the extent to which prior research reported on the qualitative characteristics of relevance and faithful representation as they relate to the disclosure of biological assets and the measurement of certain assets at fair value. It also discussed the themes of comparability in relation to financial reporting and the standardisation of disclosure. It was found that most authors came to the conclusion that fair value is more value-relevant and reliable when compared to historical cost, especially for consumable biological assets

Authors also raised concerns that fair value measurement has the potential to impair the faithful representation of financial information, especially at IFRS 13 levels 2 and 3, because managers now have an opportunity to manipulate financial statements by choosing to use fair value measurement in a way that will work in their favour for those assets that are not traded in an active market. This may not be in the best interests of all stakeholders. Users will have more confidence in a company's financial statements if they are assured that the company's financial information is relevant and faithfully presented.

In relation to biological asset holdings, companies should ensure that they consider all factors affecting the biological asset in question in determining its fair value. Increased disclosure of the valuation methods used will achieve value relevance for many different types of biological assets, particularly those, like forests and plantations that require several inputs in order to arrive at a fair value. Companies with biological assets will need to attain a balance between over-disclosure and under-disclosure. This balance can be achieved by disclosing more technical information about biological assets if market values are not available. More frequent valuation calculations may also make it easier for companies to produce standardised information that is both relevant and faithfully represented.

Increased standardisation of disclosure is a pre-requisite for increased comparability between entities within the same industry sector. Faithful representation is enhanced when financial information is comparable and disclosed in a standardised way. It is hoped that IFRS 13, with its increased emphasis on the use of market-based

valuations, combined with greater disclosure requirements when other valuation methods are used, will lead to increased standardisation of disclosure. However, there is a concern that disclosing too much information will not always be value-relevant, and it is hoped that standardised disclosure can be achieved through the use of minimal but relevant information.

5.3 Research methodology

A content analysis of the financial statements of the nineteen South African JSE-listed companies with biological asset holdings was undertaken to assess whether they applied IAS 41 and IFRS 13 to their biological assets and, if they did, the extent of their compliance with the minimum disclosure requirements listed in IFRS 13.

The accounting policy notes to the financial statements of each company were analysed to determine whether they indicated that the company had applied IFRS 13 requirements to the valuation of its biological assets. The biological assets note to the financial statements for each company was then analysed to determine the valuation technique used for the valuation of its biological assets. In addition to the three valuation techniques indicated in IFRS 13 paragraph 62, namely the market approach, cost approach and income approach, companies were also found to be applying amortised cost to certain biological assets. For the purposes of this analysis, the biological assets held by each company were divided into four categories, namely bearer plants, consumable plants, bearer livestock, and consumable livestock.

Because all the companies that were applying an IFRS 13 fair valuation technique indicated that they were using level 3 inputs to value their biological assets, the IFRS 13 level 3 disclosure requirements were listed and checked against the annual financial statements of the nineteen selected companies in order to assess the extent of their compliance with these disclosure requirements.

The financial statements that were analysed were the first set of annual financial statements for the financial reporting periods beginning on or after 1 January 2015.

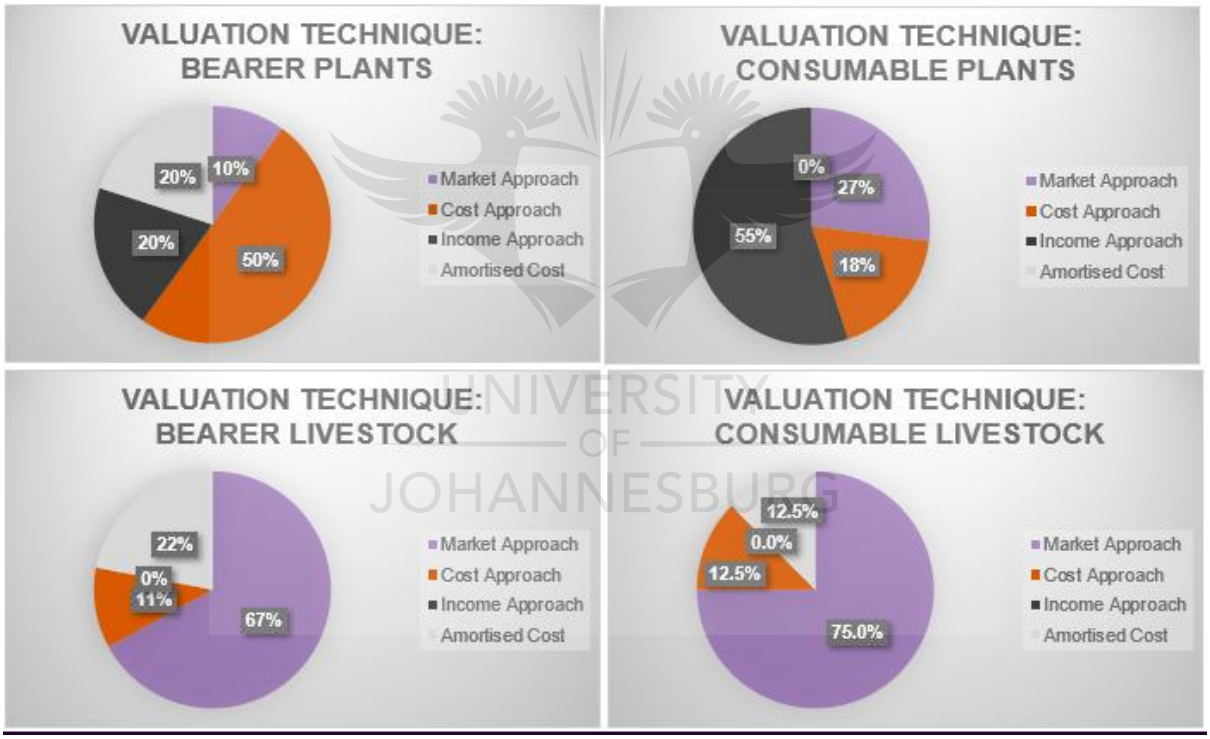
In this concluding chapter, the result and discussion section will be discussing the results in summary and will also be discussing the interpretation and implication of the

results. Further on the discussion of the results, a deeper interpretation will be discussed in relation to the conceptual framework's qualitative characteristics of relevance, faithful representation, comparability, and standardisation of disclosure, specifically in relation to the usefulness of the financial information of agricultural entities.

5.4 Results and discussion

Chapter 4 of this dissertation presents the results of this study and the discussion of these results.

Figure 5.1 Summary of finding: Valuation techniques



Source: own analysis

Figure 5.1 shows the different valuation techniques applied by the companies to their biological assets. It can be seen that, for companies with bearer plant holdings, 10% used a market approach, 50% used replacement cost, 20% used an income approach and the remaining 20% measured their biological assets at amortised cost.

This shows that 80% of companies with bearer plants have used a valuation technique prescribed by IFRS 13 which has made the values in the financial statements more future predictive and more confirmatory of the past prediction, as a result improving the relevance of the financial information presented by agricultural entities. This has also improved comparability.

Seeing that 50% of companies used the same approach (replacement cost), this has improved the understandability of financial statements which results in improved standardisation of disclosure. Further to that, when different companies use the same valuation technique it becomes easy for the users the compare the financial performance and position of those companies, thus being able to make informed decision about the companies.

For companies with consumable plant holdings as shown in Figure 5.1, all companies applied a fair value approach, with 27% using a market approach, 19% using the cost approach and 55% using an income approach. The financial information of these companies is highly relevant because all of them have used fair value approaches which produces high degree of predictive and confirmatory value. Without a doubt these companies financial statements have a high degree of comparability because users will find it easier to compare financial information which was produced using prescribed and known valuation techniques.

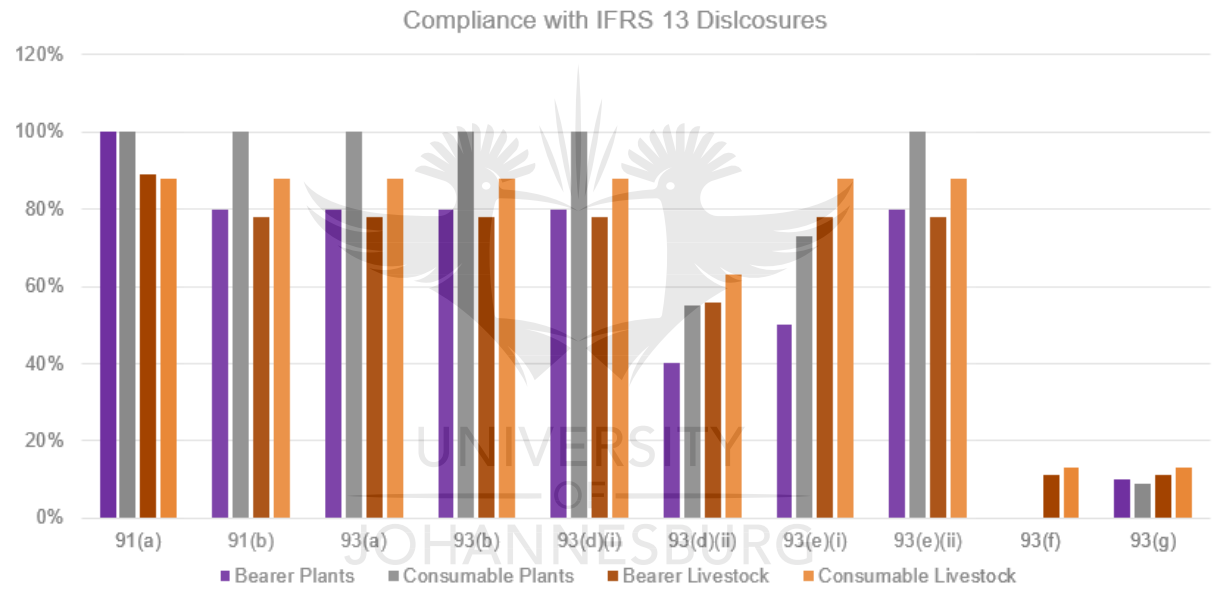
For companies with bearer livestock holdings, Figure 5.1 reveals that 67% used a market approach, 11% used the cost approach and the remaining 22% measured their biological assets at amortised cost. The majority of companies with bearer livestock use the same approach (market approach), this has improved the understandability of financial statements which results in improved standardisation of disclosure. The use of the same valuation technique by the majority of companies in this category makes it easier for users to compare the financial performance and position of these companies, which enables users to make informed decisions.

For companies with consumable livestock holdings, as seen in Figure 5.1, 74% used a market approach, 13% used the cost approach and the remaining 13% measured their biological assets at amortised cost. The financial information of these companies is highly relevant because almost all of them have used market approach which produces a high degree of predictive and confirmatory value. These financial

statements also have high degree of comparability because users will find it easier to compare financial information which was produced using the same approach which is prescribed and known.

These results indicate that, while there is little consistency across the different categories of biological assets, there is significant consistency within each category. In turn, this consistency enhances greater adherence to the conceptual framework's qualitative characteristics of relevant and faithful representation of financial information. As a result, it contributes to the usefulness of the annual financial statements on the companies with material holdings of biological assets.

Figure 5.2 Summary of findings: Disclosure



Source: own analysis

In terms of the disclosure requirements of IFRS 13, Figure 5.2 shows that 80% of the companies with bearer plant holdings provided users of their financial statements with five of the ten IFRS 13 level 3 disclosure requirements. Surprisingly, only one company provided all the required disclosures, including a detailed description of the valuation process it used. In relation to the useful financial information, more that 50% of company's bearer plants complied with seven of the ten IFRS 13 disclosure requirements which shows, with space for improvement, a good adherence to standardisation of disclosure because more disclosure makes information more understandable and which will also make financial statements more comparable

because companies has disclosed enough information to compare their results fairly. In the future this increased consistency should enhance faithful presentation with an emphasis on completeness because companies are currently still less descriptive in their disclosures.

Similarly, as seen in Figure 5.1, 100% of the companies with consumable plant holdings provided users with six of the ten IFRS 13 level 3 disclosure requirements, while only one company provided all the required disclosures, including a detailed description of the valuation process used. This shows a good adherence to standardisation of disclosure because more disclosure makes information more understandable and which will also make financial statements more comparable because companies has disclosed enough information to compare their results fairly. In the future this increased consistency should enhance faithful presentation with an emphasis on completeness because companies are currently still less descriptive in their disclosures.

It is worth noting that companies with both bearer and consumable plants could have compromised relevance and faithful presentation by non-disclosure of total gains and losses attributable to unrealised gains and losses in profit or loss, while only one company disclosed a detailed description of the valuation processes used.

Figure 5.2 shows that the results from companies with bearer livestock holdings were similar to that of companies with bearer and consumable plant holdings, with 78% providing users of their financial statements with six of the ten IFRS 13 level 3 disclosure requirements and only one company providing all the disclosures in any detail, including a description of the valuation process used in any detail. In relation to the useful financial information, more than 50% of company's with bearer livestock complied with eight of the ten IFRS 13 disclosure requirements which shows, with space for improvement, a solid adherence to standardisation of disclosure because more disclosure makes information more understandable and which will also make financial statements more comparable because companies have disclosed enough information to compare their results fairly. In the future this increased consistency should enhance faithful presentation with an emphasis on completeness because companies are currently still less descriptive in their disclosures.

Companies with consumable livestock holdings reflected a similar disclosure pattern, as evidenced in Figure 5.2 that 88% are providing financial statement users with five of the ten IFRS 13 level 3 disclosure requirements and only one company providing all the disclosures, including a detailed description of the valuation process it used. More than 63% of companies with consumable livestock complied with eight of the ten IFRS 13 disclosure requirements, which shows a solid adherence to standardisation of disclosure because more disclosure makes information more understandable and which will also make financial statements more comparable because companies has disclosed enough information to compare their results fairly. In the future this increased consistency should enhance faithful presentation with an emphasis on completeness because companies are currently still less descriptive in their disclosures.

Similar to companies with plants as biological assets, most companies with both bearer and consumable livestock could have compromised relevance and faithful presentation by non-disclosure of both total gains and losses attributable to unrealised gains and losses in profit or loss and a detailed description of valuation processes used.

The above results are in line with the findings of Filip, Hammami, Huang, Jeny, Magnan and Moldovan (2017), discussed in Chapter 2, and indicates that the application of IFRS 13 has improved the comparability and standardisation of disclosure of financial statements, which predominantly benefits investors and analysts.

Only one of the companies with both bearer and consumable plant holdings managed to comply with all the disclosure requirements in IFRS 13. While most of the remaining companies appear to have gone to great lengths to comply with as many of the IFRS 13 disclosure requirements as possible, it seems that more research is needed to determine why most companies are struggling to be fully compliant, especially because the financial reporting period studied was not the first to which IFRS 13 applied. Companies with biological assets need to consider putting systems in place that will enable them to produce both quantitative and qualitative data on the unobservable inputs used to value their biological assets, and to document the valuation processes in greater detail. That will also improve the usefulness of financial

information in the agricultural sector. As stated in the conceptual framework, financial information is more useful the more relevant, faithfully presented, comparable and understandable it is.

5.5 Limitations

This study is limited to companies listed on the JSE. There are companies with material holdings of biological assets that are not listed on the JSE but are still required by the Companies Act (South Africa, 2008) to prepare IFRS-compliant financial statements. Due to time constraints, these companies do not form part of the present research, because their annual financial statements are not easily accessible or are unavailable.

This dissertation looks at financial statements prior to the amendments to IAS 41 that removed bearer plant holdings from the scope of IAS 41 and required them to be accounted for according to IAS 16. It therefore does not take these amendments into account.

5.6 Areas for further research

There are a number of areas for possible further research on the issues identified in this dissertation. A qualitative analysis in the form of interviews with those who prepare financial statements in order to determine their views on the usefulness of fair value in relation to biological assets would be informative. It would also be beneficial to determine if they find complying with the disclosure requirements of IFRS 13 onerous or not.

Research involving questionnaires and interviews with the users of financial statements would help to determine whether or not they prefer the application of fair value to historical cost in relation to the valuation of biological assets. It may also be helpful to determine whether such users find the additional IFRS 13 disclosure requirements to be advantageous or not.

In terms of the period since the removal of bearer plant holdings from the scope of IAS 41 in June 2014, which is applicable to financial statements with reporting periods starting on or after 1 January 2016, further research on the measurement, presentation and disclosure of these assets may be useful.

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NOTE: All website citations are accurate as at 31 December 2018.

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