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Implementing fair value accounting in the agricultural sector

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FOREWORD

Fair value accounting is a controversial topic but the focus is usually on fair valuing financial instruments. This report takes a different perspective by investigating fair value accounting in the agricultural sector. The international financial reporting standard on agriculture (IAS 41) requires that biological assets be measured at fair value, a significant departure from the traditional historic cost model. However, the standard does allow entities to use historic cost accounting if they can rebut the presumption that fair values can be determined reliably and there are also a range of surrogates for fair value allowed under the standard.

This report investigates the implications of IAS 41 for international harmonisation of farm accounting practices and the issues and practical problems associated with implementation of IAS 41. The study is based on a survey and an analysis of annual reports in the UK, France and Australia.

The report identifies that agricultural entities in all three countries are using a variety of valuation methods under IAS 41and that there is also a lack of comparability of disclosure practices. Survey respondents generally stated that the costs of measuring and reporting biological assets at fair value outweigh the benefits. The authors argue that there is a need for the IASB to revisit IAS 41.

This project was funded by the Scottish Accountancy Trust for Education and Research (SATER). The Research Committee of The Institute of Chartered Accountants of Scotland (ICAS) has also been happy to support this project. The Committee recognises that the views expressed do not necessarily represent those of ICAS itself, but hopes that the project will add to the debate about fair value accounting and assist standard setters and those working in the agricultural sector.

Michelle Crickett
ICAS Director of Research
January 2011

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Executive Summary

The past decade has witnessed a proliferation of accounting pronouncements that indicate accounting standard setters around the world are progressively abandoning the traditional historical cost model and actively embracing the fair value approach. Walter Schuetze, a founding member of the US Financial Accounting Standards Board (FASB), and former Chief Accountant of the Securities and Exchange Commission (SEC), has used the phrase 'True North of Financial Reporting' to describe this recent shift from historical cost accounting to the fair value paradigm, commenting that since everyone knows where the North lies on a compass, the mission of accounting is to navigate towards it (Scheutze, 2001). IAS 41, the first-ever international financial reporting standard on agricultural activity, represents the most comprehensive and far-reaching departure from historical cost accounting to date, provoking a broad range of theoretical and practical problems that might hamper its widespread adoption (Elad, 2004). Accordingly, the purpose of this study is to carry out an empirical investigation of the implications of IAS 41 for the harmonisation of farm accounting practices in Australia, France, and the UK.

Purpose of the study and research approach

The objectives of this study are:

- To assess the role of IAS 41 in fostering the international harmonisation of farm accounting practices.
- To investigate the perceived merits, demerits, and potential implementation bottlenecks of the fair value accounting model prescribed by IAS 41 from the standpoint of accountants, farm managers, and auditors of agricultural businesses.

- To investigate the feasibility of implementing IAS 41 in small, medium-sized, and large agricultural entities.
- To examine some practical problems associated with the audit of fair value data and ancillary disclosures.

The research method involved:

- A questionnaire survey designed to ascertain the perceptions of valuation consultants, accountants, and auditors of agricultural businesses in Australia, France, and the UK regarding the impediments to the implementation of IAS 41.
- An analysis of measurement and disclosure practices in the annual reports of entities in Australia, France, and the UK that are required by law to adopt IAS 41.

Key findings

- Although historical cost is the most common valuation basis for biological assets, a variety of proxies for fair value are used, such as net present value, independent/external valuation, net realisable value, and market price, both within and across countries. As such, IAS 41 has failed to enhance the international comparability of accounting practices in the agricultural sector.
- Nine out of the 17 French companies that are required by law to adopt IAS 41 rebut the presumption that fair values can be determined with reliability, thus justifying the use of historical cost and circumventing the onerous valuation requirements of the standard. By contrast, the present value of future net cash flows is used by many entities in the UK and Australia, often involving independent external valuers, notably in the forestry and plantation agriculture sectors. To some extent, these findings can be explained

in terms of cultural influences. For example, the observation that most French companies value their biological assets conservatively at historical cost, whereas the fair value method is more commonly used in Australia and the UK, is consistent with Gray's (1988) classification of the three countries based on the concept of conservatism as a construct of culture.

- These results are consistent with the argument by Nobes (2006, 2008a, 2008b) that international differences in financial reporting persist despite the growing adoption of International Financial Reporting Standards (IFRS) as a global set of accounting standards and that there are systematic differences in the way in which countries have responded to IFRS.

- There is also a lack of comparability of disclosure practices. The overall extent of compliance with the mandatory disclosures for entities that adopt historical cost under IAS 41 (most of which are domiciled in France) is extremely poor at only 36%. In general, Australian companies disclose more than 60% of the required items while UK companies provide only half of the mandatory disclosures. French companies had the lowest disclosure scores of the three countries. Again, this pattern of results is consistent with Gray's (1988) argument that French accountants are likely to have a much stronger affinity for secrecy than their UK and Australian colleagues.

- The level of compliance with the disclosure requirements of IAS 41 is higher in Australia than in the UK and France. This can be explained by the fact that Australian agricultural entities were required to use AASB 1037, a national accounting standard which contains broadly similar requirements to those of IAS 41, for several years prior to the publication of IAS 41 in 2001. This finding supports the hypothesis by Nobes (2006, p. 243) that pre-IFRS differences between national practices have a significant effect on IFRS financial statements.

- The role of auditors in policing the application of the standard varies across countries. A number of cases were identified where open disagreements occurred between company directors and auditors, illustrating that the criteria to assess directors' estimates and assumptions vary from auditor to auditor. The results appear to indicate that French auditors are less inclined to issue qualified reports than their UK and Australian counterparts, even in cases where they admit that the estimates and assumptions used by management in determining fair value are unreliable. However, given the limited number of cases examined in this study, further research is needed to confirm or reflect this finding. These international differences in the attitude of auditors towards IAS 41 seem to support Zeff's (2007, p.293) observation that there are different auditing cultures across countries; in some European countries, an audit qualification may not be given because of the sensitivity or anxiety arising over an auditor publicly questioning a major company for its choice of financial reporting methods.

- There has been strong opposition to IAS 41 in the plantation and forestry sectors. Leading practitioners from these sectors have expressed their misgivings and concerns in various ways, including openly declaring their resolve not to comply with it or lobbying policy makers for a less onerous version. This is consistent with the survey results in chapter five which reveal:

  - a high level of agreement amongst all groups of respondents that the costs of measuring and reporting biological assets at fair value outweigh the benefits; and
  - strong agreement amongst accountants and auditors that the fair value accounting model prescribed by IAS 41 increases the volatility of earnings.

- The selection of an appropriate discount rate for use in valuing biological assets involves subjective judgement and assumptions.

In particular, it is difficult to establish the risk free rate in countries with less developed capital markets. In all countries, it is difficult to ascertain the risk premium for forestry assets. Some UK and Australian forestry companies provide a range of estimates for the discount rate and sensitivity analysis relating to the value of the biological assets. These discount rates are normally established by external independent valuers.

Conclusion and implications

This study has a number of implications for the harmonisation of corporate farm accounting practices within and across countries. First, it provides evidence supporting Nobes' (2006, 2008a, 2008b) observation that systematic international differences of practice might exist amongst companies that have adopted IFRS. This lack of comparability of accounting practices for agricultural activity could in turn lead to international differences in the quality of earnings in this sector. Although IAS 41 is based upon the 'by nature' income statement model, which lends itself to the measurement of farm production and farm value added, it would be virtually impossible to implement it in the context of individual company accounts in Francophone countries, barring a major overhaul of the framework of the *Plan Comptable Général*. The continued use of historical cost under IAS 41 by nine out of the 17 French companies in this study indicates that the standard has not had a major impact and that the *Plan Comptable Général Agricole* remains the authoritative accounting guide for all agricultural entities in France. Furthermore, in Australia, the UK, and many other countries around the world, IAS 41 is unlikely to have a significant impact on accounting in small and medium-sized agricultural entities because of the option to use historical cost when fair value cannot be determined reliably. Even the IASB itself recommends that small and medium-sized agricultural entities use fair value only when it is readily determinable without undue cost or effort. There is a need for the IASB to revisit IAS 41, not only

because it has failed to change farm accounting practice, but also because it creates an illusion of comparability, at least in view of the range of options allowed under the standard.

Second, far from being an accounting panacea, the fair value model in IAS 41 has some ideological overtones in that its successful implementation may promote social conflict in tropical countries where stakeholder advocacy organisations have argued that fair values established by market forces do not reflect the real value of agricultural commodities such as coffee, tea, banana, or cocoa. Not all stakeholders accept that the fair value (or world market price) of these plantation crops is a fair price that fully reflects their value. For example, the fair trade movement seeks to address the fair value-fair price problem by bringing the plight of disadvantaged farmers in tropical countries to the attention of altruistic consumers in industrialised countries who demonstrate empathy and solidarity by their willingness to pay a price premium (above the conventional market price) to alleviate the inequities of free trade.

Similarly, the application of IAS 41 in Europe will require reporting entities to forge a tight link between the value of biological assets and heavily subsidised 'market' prices under the European Union's Common Agricultural Policy (CAP). Distorted CAP prices mean biological assets will be valued by reference to artificial or politically mediated market prices, highlighting the ideological role of fair value accounting in an unequal exchange. European farmers received substantial subsidies which amounted to 41 billion Euros in 2009 (over 40 per cent of the EU's budget) despite recent attempts at reforming the CAP. As a result, farm products are exported to developing countries at prices which are substantially below production costs. Such protectionist policies may undermine the fair value model enunciated in IAS 41.

Finally, a fear that policy makers might use the fair value model as a basis for taxation appears to have strengthened opposition to IAS 41 in some jurisdictions.

1 Introduction

This study seeks to evaluate the role of IAS 41 in fostering the harmonisation of farm accounting practices in Australia, France, and the UK in the context of country-specific strategies for the convergence of domestic accounting principles with international accounting standards. IAS 41 is highly controversial, not only because it prescribes a full-fledged fair value accounting model for agricultural entities, but also because it heralds the most comprehensive and radical departure from historical cost accounting to date, thus provoking a broad range of theoretical and practical problems that might affect its widespread adoption. Elad (2004) diagnosed some of the problems of mark-to-market accounting for biological assets in different national settings. The main objective of the present study is to build on this earlier work by carrying out an empirical investigation of the potential impediments to the implementation of IAS 41 along with an evaluation of recent proposals for making the standard amenable to the exigencies of small and medium-sized enterprises that dominate the agricultural sector.

Background to the study

In the late 1990s, the International Accounting Standards Committee (IASC) broke new ground by issuing a draft statement of principles and an Exposure Draft on accounting in the agricultural sector (IASC, 1996, 1999). Having secured some financial support from the World Bank for this project, the IASC proceeded unwaveringly to issue the final standard on agriculture (IAS 41) in February 2001 amid strong opposition from many agricultural enterprises, accounting practitioners, and the major professional accountancy bodies in the UK, USA, Australia and Canada (IASC, 1998, 2000, 2001).

IAS 41 defines agricultural activity as 'the management by an enterprise of the biological transformation of biological assets for sale, into agricultural produce, or into additional biological assets' (IASC, 2001, p.11). In this context, biological transformation comprises the processes of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset. IAS 41 requires that the fair value of these physical changes be recognised in the income statement for the period in which they occur irrespective of whether or not the assets are sold. There is a rebuttable presumption that fair values can be determined for all agricultural assets. If an active market for a biological asset does not exist, the most recent market transaction price, or market price for similar assets, can be used in determining fair values. However, if market-determined prices are not available, an enterprise may use the present value of expected net cash flows from the asset in determining its fair value. Historical cost is permitted in cases where fair values cannot be determined reliably.

The most contentious aspect of IAS 41 is the requirement that increments or decrements in the fair value of biological assets, less estimated point-of-sale costs, be recognised as revenues or expenses in the income statement for the financial year in which the increments or decrements occur. Many commentators on the IASC Draft Statement of Principles on Agriculture (hereafter, DSOP) vehemently opposed this practice as evidenced by the following excerpts from comment letters:

> *Agriculture is not an appropriate type of business for introducing earlier recognition of profit, before it is recognised through sale of the product, in place of the present, more prudent, historical cost approach.* (Institute of Chartered Accountants in England and Wales in IASC, 1998)

> *We do not wish to see the Principles as set out in the Draft by the Steering Committee on Agriculture put into practice since they would do little to help the Bank. They could well have an adverse*

> *effect on many of our farming customers' businesses by making them bear additional and unnecessary valuation costs and laying them open to tax liability on notional profit which might never be realised.* (Barclays Bank plc in IASC, 1998, page 175)

> *We believe that in proposing the measurement at fair value the DSOP foreshadows a significant change from the present historical cost accounting model. The recommendation that unrealised biological gains and losses be recognised in the profit and loss account is of particular concern. This concern is based on the fact that recognition of unrealised gains or losses, which may not be realised for many years, in profit or loss will create a presumption on the part of equity shareholders that they are available for the payment of dividends.* **We strongly believe that this may provide misleading information to users of general purpose financial reports, particularly as to whether these profits are available for dividends.** *...the Group of 100 considers the model proposed does not appropriately distinguish between increases in value and profit.* (Group of 100 Inc, Australia, in IASC, 1998, page 157. Emphasis in the original.)

It would be recalled that before the IASC metamorphosed into the IASB in the late 1990s, it was struggling to assert its authority and independence when it formulated IAS 39, a highly controversial accounting standard, which mandated fair value accounting for financial instruments and derivatives. Many continental European financial institutions protested against the application of fair value accounting in the banking sector on the grounds that it would increase the volatility of reported income, particularly the marking of derivative hedge positions to market (see e.g. Bignon *et al.*, 2004). But unlike the agricultural undertakings which also protested against the introduction of the fair value model, the large European banks (mainly French and Italian) had a

much stronger capacity to lobby and bring pressure to bear on accounting regulators in order to secure some concessions and ultimately avoid the perceived undesirable economic consequences of IAS 39. This episode in European accounting regulation provides a good insight into some of the socio-political influences on the development of international financial reporting standards.

Prior to the publication of IAS 41 in February 2001, the most comprehensive standard on accounting in the agricultural sector worldwide was the Australian standard AASB 1037 on Self-Generating and Regenerating Assets (SGARA). This standard contains similar requirements to those of E65 and IAS 41. Indeed, the following passages from a comment letter on E65 from Southcorp Holdings Ltd, the largest vineyard operator in Australia, and one of the world's top ten wine companies, encapsulate the pertinent issues:

> *As you are aware the Australian Accounting Standards Board (AASB) issued a new standard AASB 1037 'Self Generating and Regenerating Assets' which although based on the 'Draft Statement of Principles on Agriculture' by the IASC was universally condemned by the wine industry and other agriculturally based industries. It was viewed as an academic approach that would burden the industry with standards somewhat removed from commercial reality...* (Southcorp in IASC, 2000, CL45, page 1)

> *Southcorp strongly recommends that the IASC undertake extensive and focused field studies as part of the due process before a standard is released. The IASC indicated in the July 1999 Update that a field test was to be conducted during the exposure period. We understand that the Group of 100 in Australia has made several inquiries as to what this means and to date has had no response. Southcorp and other Australian wine companies would be very pleased to participate in those field studies to identify the practicality of the proposals. The outcome of the field studies*

> *would be invaluable to your understanding of the concerns and difficulties we have in implementing the requirements of the proposed standard.* (Southcorp in IASC, 2000, CL45, pp. 1-2)

The authors requested further details on the nature of the field studies and were informed by IASB staff that the field test alluded to in the above passage was in fact based on a postal questionnaire survey rather than on actual observation of the implementation process in an organisational setting. As such, further research that is designed to address these matters is warranted.

Aims and objectives

IAS 41 requires that biological assets be marked to market prices at the end of each financial year. Any resulting holding gains or losses are taken to income. One noteworthy criticism of the standard relates to the contrasts between the idealised notion of fair value and the watered-down versions of it that are being implemented on pragmatic grounds. For example, in cases where fair values cannot be determined reliably, IAS 41 recommends the use of surrogates for market value, such as the market price for similar assets, sector benchmarks, independent professional valuation, and the present value of future net cash flows that the asset will generate. This means that, in practice, fair value accounting in the agricultural sector is likely to involve considerable subjective judgement, and may be more subject to bias and manipulation than historic cost-based information. Furthermore, the leeway for exercising subjective judgement when ascertaining fair values, or estimates thereof, might undermine the prospects for harmonisation, thus subverting the raison d'être of IAS 41 which was designed to promote global convergence of farm accounting practices. Hence, there is a need to investigate the potential impediments to implementation of the standard.

In order to keep the scope of the study within manageable bounds, the inquiry into these matters is conducted in three countries, namely

Australia, France, and the UK, which have different farm accounting traditions and regulatory frameworks that also offer convenient platforms for interrogating the issues at stake. For example, a fair value accounting model that is broadly similar to IAS 41 was developed in Australia in the late 1990s and was used until 2004 when Australia's Financial Reporting Council sanctioned the adoption of International Financial Reporting Standards (IFRS) for reporting periods after January 2005 (Alfredson, 2003; Howieson and Langfield-Smith, 2003). But, unlike the recent European legislation which requires listed companies to adopt IFRS in their consolidated accounts, the Australian convergence project has a far wider scope in that it covers all reporting entities and IFRS have now replaced all the previous domestic standards (AASB, 2004). This means that Australia not only offers a unique setting for studying the experiences of a broad range of agricultural businesses that have actually adopted mark-to-market accounting for over four years, but also a sound basis for evaluating the prospects for successful application in other countries.

Having regard to the fact that IFRSs are now mandatory for the consolidated accounts of listed companies in Britain, the ASB has declared its intention to formulate a new UK standard on agriculture that is based on IAS 41 (ASB, 2004, p. 27). However, since most agricultural entities are small owner-managed businesses, it was envisaged that an abridged version of this new standard will be incorporated into a redeveloped Financial Reporting Standard for Smaller Entities (FRSSE) with a view to alleviating the burden of excessive regulation on small and medium-sized companies (ASB, 2004, pp. 40-41). But the recently updated FRSSE, which was published in 2008 (ASB, 2008), did not incorporate any aspect of IAS 41. Nor did it offer helpful guidance on accounting for agricultural activity despite the dominance of small and medium-sized enterprises in this sector. Presumably, the ASB was awaiting the outcome of the IASB's project on this topic which was commissioned in June 2004 (IASB, 2004) and completed in July 2009 with the publication of an International Financial Reporting Standard for Small and Medium Sized Entities (IASB, 2009).

Furthermore, although the French Plan Comptable Général Agricole (PCGA) is exclusively devoted to accounting principles for the agricultural sector (Conseil National de la Comptabilité, 1990), all listed agricultural companies in France are required to adopt IAS 41 in their consolidated accounts for reporting periods after 1st January 2005. However, Elad (2004) has argued that the design of the PCGA is incompatible with the main principles that underpin IAS 41, and that it would be virtually impossible to implement fair value accounting in the French agricultural industry in the absence of a fundamental revision, if not complete abandonment, of the Plan Comptable Général (the Plan Comptable Général is explained in detail in chapter 3).

The foregoing features of the three countries suggest different vantage points from which the implications of IAS 41 for the harmonisation of farm accounting practices can be assessed. This study will address the following research questions:

RQ1. Will the fair value of some types of biological asset, or estimates thereof, only be determined at excessive costs?

RQ2. Are the perceived costs of tracking, monitoring, and recording physical and price changes in a biological asset, at the end of each financial year, or each interim reporting period, likely to outweigh the benefits to all types of agricultural concerns?

RQ3. Will the recognition of unrealised holding gains or losses, arising from physical or price changes in a biological asset, in conformity with IAS 41, result in high volatility in the reported income of some types of agricultural entities?

RQ4. To what extent is IAS 41 likely to foster the harmonisation of farm accounting practices given that: (i) it allows companies that rebut the presumption that fair values can be determined reliably to use historic cost accounting; and (ii) it allows a broad range of estimates of fair value such as net present value (NPV), sector benchmarks, recent market transaction price, or market price for similar assets?

RQ5. Which criteria are adopted in selecting one of the surrogates for fair value that IAS 41 permits in cases where an active or a liquid market for a biological asset does not exist?

RQ6. How do companies that use net present values as surrogates for fair values determine an appropriate discount rate commensurate with the risks associated with expected future net cash flows that will be generated by a biological asset?

RQ7. How do companies that use net present values as surrogates for fair values forecast the pattern of expected future net cash flows that will be generated by a biological asset?

RQ8. Is it likely that some agricultural enterprises will actively use the option to rebut the presumption that fair values, or estimates thereof, can be determined reliably, as a strategy for justifying non-compliance with IAS 41 in order to avoid the perceived undesirable economic consequences of the standard?

RQ9. What criteria do auditors adopt when assessing: (i) directors' decisions regarding fair value estimates; and (ii) directors' rebuttal of the presumption that fair values can be determined reliably?

Summary

This chapter has introduced the aims of this report and the rest of the report is structured as follows. Chapter two reviews the development of farm accounting in the UK and also provides an analysis of the structure of the agricultural industry. Chapter three looks at the evolution of accounting in the agricultural sector in France. Chapter four examines the development of accounting in the agricultural sector in Australia. Chapter five presents the methodology and results of a questionnaire survey of the perceptions of accountants and auditors regarding the merits and demerits of the measurement and disclosure requirements

of IAS 41. Chapter six focuses on an analysis of the annual reports of Australian, French, and UK companies that are actually implementing IAS 41. Finally chapter seven sums up the entire report and explains how the research questions have been addressed.

2 Accounting in the UK Agricultural Sector

Introduction

This chapter reviews the accounting practices that are currently used in the agricultural sector in the UK, paying special attention to three main issues. First, it begins by analysing the structure of the UK farming industry. It then reviews some external financial reporting requirements in the context of farm business surveys that are undertaken on a biennial basis by the Department for Environment, Farming and Rural Affairs (DEFRA) on behalf of the European Commission. Subsequent sections examine the notion of Standard Gross Margin, which has a long history in UK agriculture, dating back to the inter-war years. In particular, the way in which the Standard Gross Margin concept dovetails into the European Union's Farm Accountancy Database, and the value added approach that underpins IAS 41, are explained. Finally, some matters relating to taxation and rural business finance are considered, notably a requirement by the HM Revenue & Customs that, under certain circumstances, agricultural undertakings can use the 'deemed costs' based upon fair values in preparing their accounts for tax purposes.

Structure of the UK agricultural sector

Agriculture is a significant industry in Britain and Northern Ireland which employs over half a million people. Generally speaking, the annual output in this sector depends on weather conditions and is vulnerable to plant and livestock diseases. Although the agricultural labour force has declined by 30 per cent since 1990, the following statistics, gleaned from Defra (2009), highlight the importance of the UK farming industry:

- About 75 per cent of the land area of the UK is farmed.
- The UK is estimated to be 73 per cent self-sufficient in indigenous type food and 59 per cent self-sufficient in all food.
- Agriculture contributes 0.6 per cent to Gross Value Added and 1.74 per cent to national employment.
- The total output from UK farms is estimated to be £19.3 billion.
- The main commodities produced in the UK in value terms are: milk, beef, wheat, poultrymeat and sheepmeat.
- The agri-food sector provided 3.6 million jobs in the third quarter of 2009, equivalent to 14 per cent of employees in the UK.

Each agricultural entity in the UK is assigned a 'Holding Number' by Defra which has overall responsibility for all matters relating to farming. A holding is defined under Article 2(2) of Directive 93/23/EEC as 'a technical-economic unit under a single management engaged in agricultural production'. The size of holdings is expressed in European Size Units (ESU) based upon their standard gross margins: for example, 1 ESU is equal to a standard gross margin of €1,200.

Table 2.1 UK crop areas and livestock numbers

		2007	2008	2009
Crop areas (thousand hectares)				
Total area of arable crops		4,271	4,565	4,523
of which:	wheat (a)	1,830	2,080	1,814
	barley	898	1,032	1,160
	oats	129	135	131
	oilseed rape	674	598	581
	Linseed	13	16	29
	potatoes	140	144	149
	sugar beet (not for stockfeeding)	125	120	116
	peas for harvesting dry and field beans	161	148	233
	maize	146	153	166
Total area of horticultural crops (thousand hectares)		169	170	172
of which:	vegetables grown outdoors	121	122	124
	orchard fruit (b)	23	24	24
	soft fruit & wine grapes	10	10	10
	outdoor plants and flowers	13	13	12
	glasshouse crops	2	2	2
Livestock numbers (thousand head)				
Total cattle and calves (c)		10,304	10,107	10,025
of which:	dairy cows	1,954	1,909	1,857
	beef cows	1,698	1,670	1,626
Total sheep and lambs		33,946	33,131	32,038
of which:	ewes and shearlings	16,064	15,616	14,912
	lambs under one year old	16,855	16,574	16,177
Total pigs		4,834	4,714	4,724
of which:	sows in pig and other sows for breeding	398	365	396
	gilts in pig	57	55	50
Total poultry		167,667	166,200	159,288
of which:	table fowl	109,794	109,859	102,759
	laying fowl	27,321	25,940	26,757
	growing pullets	8,936	9,313	8,356
	fowls for breeding	11,461	9,068	9,609
	turkeys, ducks, geese and all other poultry	10,154	12,019	11,807

Notes:

(a) Includes crops grown on set-aside land for England for 2006 and 2007.

(b) Includes non-commercial orchards.

(c) The cattle figures were sourced from the Cattle Tracing System (CTS) in England and Wales, the equivalent APHIS system in Northern Ireland, and survey data in Scotland.

Source: Table 3.1 in Defra June Surveys/Census of Agriculture at: http://www.defra.gov.uk/evidence/statistics/foodfarm/general/auk/latest/excel/index.htm (accessed July, 2010).

Recent UK agricultural census data for crops and livestock indicate that the largest proportion of the total crop area is dedicated to wheat production: i.e. about 1.8 million hectares or 42 per cent of available crop area. As Table 2.1 shows, other significant crop areas were given to barley, oilseed rape, peas, beans, maize, potatoes, sugar beet, and horticulture.

The livestock census data shows that in 2009, there were 32 million sheep and lambs and 10 million cattle and calves. Dairy herd comprised 1.9 million cows whilst beef herd numbered 1.6 million cows. Furthermore, there were 4.7 million pigs and 159 million fowls.

Structure of agricultural holdings

Agricultural holdings can be classified in terms of ownership structure as being either 'sole holder' holdings or limited company/institution holdings. In general, each sole holder holding is deemed to be owned by one individual. One major inference that can be drawn from the UK farm structure survey data, shown in Table 2.2, is that barely 5 per cent of all farm holdings over the period 1993-2003 were limited liability companies or other incorporated organisations and groups. More recent data for 2007 in Table 2.3 indicate that the pattern of ownership has not changed over time since only 5.3 per cent of all farms were formally incorporated as legal persons (Martins, 2009, page 4). This means that the bulk of farm holdings in the UK are small family undertakings. But it is important to note also that the largest 2.3 per cent

of farm holdings (mostly limited companies or similar entities) account for around 25 per cent of all UK agricultural activity (Markham, 1996, p. 2).

Table 2.2 Structure of agricultural holdings in the United Kingdom

Year	'Sole holder' holding				Other: limited holdings (c)
	Holder is manager	Holder is not manager			
		Manager is spouse of holder	Manager is other member of holder's family	Manager is not a member of holder's family	
1993	201,223	8,610	12,383	5,933	15,319
1995	197,419	7,774	11,797	7,952	9,558
1997	199,072	6,617	9,810	7,371	10,278
2000	199,972	11,554	8,327	4,048	11,025
2003 (a)	195,864	9,239	8,327	4,171	9,390
2003 (b)	243,993	13,140	8,843	4,550	10,100
2005	244,471	15,127	10,112	4,334	12,703
2007	251,388	16,702	9,691	5,611	16,428

Notes:

(a) In England and Wales, data for 1990 to 2000 are for main holdings only. In 2001, there was a change in the farm register meaning there was no longer a distinction made between main and minor holdings. This estimate for 2003 excludes an estimate for English and Welsh minor holdings to produce comparable data with earlier years.

(b) Includes data for all holdings in England and Wales.

(c) Limited companies and institutions are deemed to be run by a manager and not a holder. Details on group holdings were required separately in 2000 but proved difficult to accurately collect

(d) These figures are sourced from the EU Farm Structure Survey (1993 to 2007). This survey runs 4 times per decade, with the next one in 2010. Data from this survey is still being collected and results will not be published until late 2011. A publication date will appear on the statistics part of the Defra web site closer to the time of publication.

Source: Defra (2005, page 5)

Table 2.3 Structure of agricultural holdings in the United Kingdom in 2007

Size of the farms	Agricultural areas (hectares)				All farms	Livestock (livestock units)			
	<20	20≤50	50≤100	≥100		0*	0≤50	50≤100	≥100
No. of holdings (thousands)	70.6	39.8	33.7	38.9	183.0	28.8	91.6	22.8	39.8
Holdings by legal personality of the holder (percentage):									
Sole holder	96.3	96.9	95.7	88.8	94.7	85.4	97.3	97.1	94.2
Legal person	3.7	3.1	4.3	11.2	5.3	14.6	2.7	2.9	5.8
Group holders	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

* '0.0' means less than half of a unit or nil.

Source: Adapted from Martins (2009, page 4)

Incorporated agricultural companies and the adoption of IAS 41

Agricultural undertakings operating as registered entities or companies, which are likely to fall within the ambit of IAS 41, can be classified broadly into four categories, namely: (i) public limited companies that are listed on the London Stock Exchange; (ii) Alternative Investment Market or AIM-listed companies; (iii) 'Off Exchange' or OFEX-listed companies; and (iv) Friendly and provident societies. Whereas IAS 41 is mandatory for the consolidated accounts of all companies that are listed on the London Stock Exchange, and for European companies on the AIM market, it is not compulsory for the less regulated OFEX over the counter market. Nonetheless, all farming businesses that are incorporated as friendly societies are permitted to adopt IAS 41 pursuant to the friendly societies Act 1992 (International

Accounting Standards and Other Accounting Amendments) Order 2005. For example, Farmcare Ltd, one of the UK's largest agricultural undertakings, is now part of a friendly society known as the Co-operative Group, and is permitted to adopt International Financial Reporting Standards.

The European Union Regulation which mandates the adoption of International Financial Reporting Standards in the consolidated statements of listed companies also gives member states the option to permit or require non-listed companies to prepare their accounts in accordance with EU-adopted IFRS. Whilst such entities are currently permitted to use either IFRS or UK GAAP, the Accounting Standards Board (ASB) has declared that there can be no case for maintaining differences between the principles underlying UK accounting standards and IFRS (see ASB 2005, 2006). Accordingly, the ASB embarked on a strategy for convergence with IFRS that is based on a phased approach under which domestic UK GAAP will be progressively brought into line with international standards over a three-year period.

It is noteworthy that the ASB has tentatively extended the range of companies that need to adopt IFRS in the near future using the IASB's concept of 'public accountability' which is defined as follows (ASB, 2006, p. 1):

An entity has public accountability if:

(a) there is a high degree of outside interest in the entity from non-management investors or other stakeholders, and those stakeholders depend primarily on external financial reporting as their means of obtaining financial information about the entity; or

(b) the entity has an essential public service responsibility because of the nature of its operations.

In operationalising this notion of public accountability, the ASB (2006, p. 1) outlined the following proposals for adoption of IFRS in the UK:

1. *All UK Public Quoted and other publicly accountable companies would be required to apply full IFRS, irrespective of turnover and whether they present group accounts or not. This would mean that approximately another 1,000 to 1,500 companies would be required to report under IFRS.*

2. *The use of the ASB's Financial Reporting Standard for Smaller Entities (FRSSE), which enables small entities to take advantage of simplified requirements, would be extended beyond small companies to include medium-sized entities. This would mean that approximately another 30,000 companies would be able to use the FRSSE.*

3. *UK subsidiaries of group companies that apply full IFRS would also be required to apply full IFRS in respect of measurement and recognition, but with reduced disclosure requirements (yet to be defined). This would affect approximately 14,000 companies.*

4. *There has not yet been a decision on companies that do not fall within 1, 2 or 3 above. There are approximately 7,000 companies in this 'gap'. The alternatives seem to be: (i) extend the application of the FRSSE further; (ii) apply IFRS to more companies; (iii) maintain UK GAAP for them; or (iv) some combination of these three alternatives.*

Notwithstanding the foregoing developments, the recent Financial Reporting Standard for Smaller Entities (FRSSE) issued by the ASB (2008) did not incorporate any aspect of IAS 41. The ASB is still considering these proposals and in August 2009, it published a consultation paper seeking views on the future of UK GAAP (ASB, 2009).

However, the ASB's use of the concept of public accountability in determining the type of entities that need to adopt IFRS can be extended to include public sector organisations. Indeed the Financial Reporting Advisory Board (FRAB), which oversees the Treasury's standard-setting activities and reports independently to Parliament, declared in 2006 that it expected public sector organisations to be ready to adopt IFRS no later than 2009 (FRAB, 2006, chapter 5). Although the FRAB stated in a report to the House of Commons (FRAB, 2006) that the public sector should prepare for a 'big bang' convergence with international standards no later than January 2009, this deadline was extended by the Government when it announced in the 2008 Budget that the transition to IFRS originally scheduled for 2008-2009 would be delayed until 2009-2010. This means that many public sector organisations that are engaged in agricultural activity or the management of biological assets such as forests, fisheries, horticulture, farms, and plantations will have to adopt IAS 41.

Accounting in the UK agricultural sector

Under UK GAAP, financial statements are prepared using the historic cost convention as modified by the revaluation of certain tangible fixed assets. However, Tables 2.2 and 2.3 show that less than 5 per cent of UK agricultural holdings operate as incorporated businesses which are required to file GAAP-based annual financial statements with the Registrar of Companies. Indeed, most UK agricultural undertakings are small family-operated units that are not required by law to prepare general purpose financial statements. But they have come under increasing pressure in recent years from government agencies and banks to prepare accounting reports when they seek state subsidies or debt capital. Furthermore, taxation is arguably the most important reason why many unincorporated or small agricultural undertakings keep books of account that can also be used to prepare basic financial statements. In view of their importance in farming businesses, the accounting

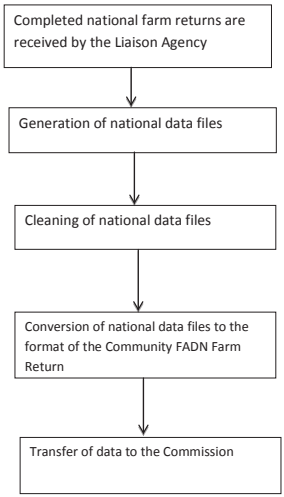
requirements of government agencies and the HM Revenue & Customs are now considered under separate subheadings.

Standard Gross Margin and European Union farm structure surveys

In all member states of the European Union, the Farm Accountancy Database Network (FADN) is used as a template for collecting accounting data from farms, thus serving as an instrument for determining the income of agricultural holdings and for evaluating the impact of the Common Agricultural Policy. It was launched in 1965 under Council Regulation 79/65 and each member state has a liaison agency that carries out annual farm surveys and collects accounting data on behalf of the European Commission. In the UK, the liaison agency responsible for the operation of the FADN and the collection of survey data from a sample of agricultural holdings following the quality control procedures set out in Figure 2.1 is Defra. But it is important to note that these farm surveys do not cover all agricultural holdings and that only those holdings which, due to their size, could be considered commercial, are required to complete FADN farm returns. Interestingly, size in this context is defined in terms of Standard Gross Margins.

The Standard Gross Margin (SGM) of a crop or livestock item is defined as the value of output from one hectare, or from one animal less the cost of variable inputs required to produce that output. As in traditional management accounting, variable costs are the costs that vary in approximately direct proportion to the scale of production (e.g. seed, fertiliser and feed).

Figure 2.1 Quality control procedures implemented by EU liaison agencies



Source: FADN Annex at http://ec.europa.eu/agriculture/rica/annex001_en.cfm (accessed July 2010)

Since SGMs are calculated per hectare of crop and per head of livestock, they can readily be used to derive the total SGM for any farm by multiplying the scale (i.e. total farm area in hectares or total number of animals) of each enterprise by the appropriate SGM coefficient.

But in view of the fact that it is not practicable to determine the actual gross margins of individual farms, standardised SGM coefficients are calculated by liaison agencies for each major type of crop and livestock in different geographical areas, taking into account location-specific differences in financial performance, and reflecting what might be expected on the average farm under 'normal' conditions (i.e. no disease outbreaks or adverse weather). SGMs are normally calculated as a three-year average, for example, over the period 2005-2007. Hence, separate SGMs are calculated for all major crops and livestock in the

three EU regions of England (North, West, and East), and for those in Wales, Scotland, and Northern Ireland.

Furthermore, farm size is measured in European Size Units (ESU), where one ESU is defined as €1,200 (previously European Currency Units) of SGM. Over time, the number of €/ECU per ESU has changed slightly to reflect inflation as shown in Table 2.4.

Table 2.4 Value of European size units

Year of SGM	Value of 1 ESU in €/ECU
1984-2004	1,200
1982	1,100
1980	1,000

Source: Farm Accountancy Database Network

In England and Wales, the threshold for inclusion in farm business surveys is 8 ESU. Typical farm sizes expressed in terms of SGM and ESU are outlined in Table 2.5.

Table 2.5 Size of agricultural holdings

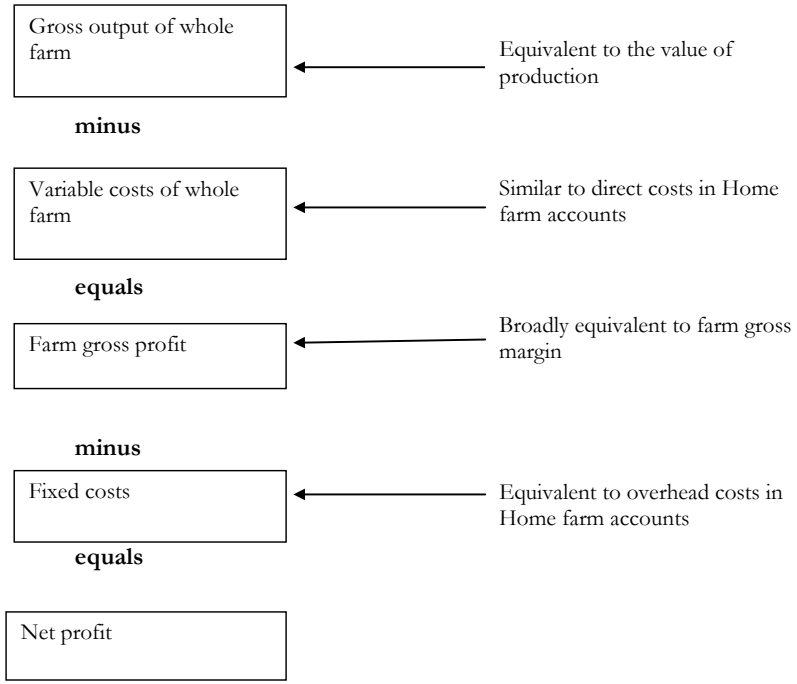
Size of holding	Standard Gross Margin (Euros)	European size units
Very small	less than 9,600	less than 8
Small	9,600 < 48,000	8 < 40
Medium	48,000 < 120,000	40 < 100
Large	120,000 < 240,000	100 < 200
Very large	24,000 +	200 +

Thus far, the notion of Gross Margin has been examined only in the context of the external reporting requirements of the European Union's liaison agencies that are responsible for farm structure surveys. However, it is also very useful for internal farm management purposes. Indeed, Curry (2004, p. *v*) draws attention to a report which shows that the government encouraged farm businesses to improve their performance by using benchmarking and peer reviews:

> *The Report on the Policy Commission on the future of Farming and Food in England noted the 'striking range in performance in farming' and the need for a 'stronger and more comprehensive benchmarking drive to help poorer performers identify reasons why they are falling behind'. In similar vein A Forward Strategy for Scottish Agriculture emphasised that farm businesses should review their cost structures and use benchmarking and peer review to test their own businesses against the best elsewhere in Scotland and abroad.* (Curry, 2004, p. *v*)

The views articulated in the above passage are evidently irreconcilable with the observations of Jack (2006) when she pointed out that the usefulness of Gross Margins, from the standpoint of educated entrepreneurial farmers, is doubtful. By contrast, proponents of this technique would argue that farmers will readily be able to compare or benchmark their own Gross Margins with an appropriate Standard Gross Margin for farms of similar type and size derived from Farm Business Survey data. To assist farmers in this task, Defra has published two glossy texts entitled 'Figures for a Farming Future' which explain farm accounting procedures. An extract from one of these texts (written by Florey, Adams, and Robinson, 2004) which explains the calculation of Farm Gross Margin is shown in Figure 2.2.

Figure 2.2 Farm accounts



Source: Florey, Adams, and Robinson (2004, p. 8)

At first sight, one might think that Figure 2.2 represents conventional managerial accounting concepts of marginal costing and contribution analysis. However, a closer examination will reveal that it actually represents a production oriented form of value added accounting that is widely used by national statisticians and macroeconomic planners in some continental countries. Whilst this point will be explained in detail in chapter three, it is important to highlight, for example, that in conventional accounting, gross profit is the difference between sales and

cost of sales. However, in Figure 2.2, it is the difference between gross output and 'whole farm' variable costs, where gross output is defined thus:

Gross output = sales + subsidies + closing valuation + sundry revenue – opening valuation – cost of livestock purchases

Indeed, it will be shown in chapter three that both the above equation and the statement in Figure 2.2 take an approach that is reminiscent of the long established French tradition of classifying costs by nature rather than by functional cost centre. More fundamentally, chapter four will demonstrate that this 'by nature' approach also underpins the design of IAS 41.

Farm stock valuation and taxation

It is interesting to note that a form of fair value accounting, referred to as the 'deemed cost' method, is widely used in the UK agricultural industry (for pragmatic reasons) as a valuation benchmark in cases where it is not feasible to ascertain historical costs of production from farm records. Indeed, the Inland Revenue (now HM Revenue & Customs) endorsed this practice when it issued an authoritative statement on this topic in March 1993, known as Business Economic Note 19 (now help sheet IR232) (hereafter, BEN 19), which spelled out the methods of valuation of farm stock for income tax and corporation tax purposes. BEN 19 pre-dates IAS 41 and was intended to assist farmers and their professional advisers in preparing tax returns. It was issued after consultation between the Inland Revenue, the Central Association of Agricultural Valuers, the Institute of Chartered Accountants in England and Wales, the Institute of Taxation, the Royal Institution of Chartered Surveyors, the Country Landowners Association and the National Farmers Union (Inland Revenue, 1993). In general, deemed cost is arrived at by taking a percentage of the fair value of an animal, or a

harvested crop, as being equal to its cost of production (see e.g. Section 7.2.1 of BEN 19; Markham, 1996, p. 77).

Deemed cost valuation

Deemed cost is an estimate that is determined by taking a percentage of the fair value or the open market value of a biological asset as being equal to the cost of production. This is only allowed in cases where it is not possible to ascertain the actual costs from a farmer's records. The appropriate deemed cost percentages in the case of livestock are:

- cattle - 60% of open market value
- sheep and pigs - 75% of open market value

However, Sections 7.2.3 – 7.2.6 of BEN 19 set out the following conditions regarding the use of deemed cost for livestock:

> *7.2.3 Deemed cost valuations are only valid for home-bred or home-reared stock or stock acquired some time before maturity and matured on the farm.*
>
> *7.2.4 It is preferable for deemed cost to be fixed at maturity but Inspectors will accept valuations at deemed costs based on open market value at the balance sheet date if that method has been used consistently. Farmers should be aware that using deemed cost at each balance sheet date may result in profits coming into tax earlier.*
>
> *7.2.5 The valuation of immature and unweaned animals using deemed cost methods based on the open market value of animals of a similar age and type is acceptable to the Inland Revenue except in the situation described in paragraph 7.2.6 below. If it*

is appropriate to value mother and progeny together because that is the market unit, this should be done.

7.2.6 The method at 7.2.5 above is not appropriate where the mother is on the herd basis and where there is no market or a very limited market in unweaned progeny (for example unweaned lambs at foot). In this situation failure to recognise the young stock at all in the valuation is not acceptable. The costs of producing the progeny should be carried forward to be set against the eventual sale price.

Production cost: livestock and crops

Under BEN 19, livestock is valued on an animal-by-animal basis. Nonetheless, it is acceptable for farmers to value animals of a similar type and quality together, or classified according to age, possibly distinguishing between home-bred animals and those which were bought in.

In cases where it is possible to determine production costs, only direct costs are taken into account. However, the inclusion of overheads, or indirect costs, is optional except where they have been included in the past and omitting them can be viewed as a violation of the consistency principle. Direct costs are defined in BEN 19 as:

Costs which are directly attributable to buying producing and growing the livestock or crops... Such costs will consist not only of the expenses of acquiring the 'raw materials' e.g. seeds, but also of any expenses which directly relate to producing or rearing the stock in question.

Typical examples of direct costs for crops and livestock identified in BEN 19 are:

Livestock

- Purchase costs.
- Insemination costs plus additional maternal feed costs in excess of maintenance.
- Costs of rearing to the valuation date or maturity if earlier including:
  - Feed costs including forage.
  - Veterinary fees and drugs.
  - Drenches and other medicines.
  - Ringing, cutting and dehorning.
  - Supervisory employee or contract labour costs.

Crops

- Seeds.
- Fertilisers.
- Beneficial sprays (the term beneficial sprays includes preventative sprays and means any sprays which are not applied to remedy a particular infestation or crop deficiency).
- Seasonal licence payments (e.g. short term hire of land to grow a particular crop) but not normal farm rents.
- Drying and storage.
- Employee (including director) or contract labour and direct machinery costs (e.g. fuel, servicing, rental, spares and the reduction in value due to wear and tear caused by actual usage for the activity concerned) incurred on:
  - Cultivations.
  - Crop working.

Summary

This chapter analyses the structure of the UK farming industry and the typical accounting practices that are used by agricultural undertakings. Although only a small percentage of agricultural holdings are legally incorporated entities, they account for a disproportionate share of UK farm output, and the number of companies that will adopt IAS 41 in the near future is likely to increase as a direct consequence of the ASB's strategy for the convergence of UK GAAP with IFRS. The requirement for farmers to provide external farm survey data predates the UK's accession to the European Community, at least given that annual agricultural censuses have been carried out in England since 1866 (MAFF, 1968), and that the national Farm Business Survey was established in 1936. Similar arrangements were mandated in the (then) European Economic Community in 1965 when the FADN was established. Interestingly, the notion of Standard Gross Margin which was introduced by Government-sponsored Farm Management Liaison Officers in the UK during the 1960s (see e.g. Jack, 2006) is remarkably similar to the continental European FADN model.

Notwithstanding these developments, Jack (2006) argues that the concept of Gross Margin is generally perceived to be of limited value to farmers and that its entrenched status in UK agriculture is attributed to the ideological role played by its leading exponents (notably agricultural consultants and Farm Management Liaison Officers) in legitimating and perpetuating it.

By contrast, the agricultural concept of Standard Gross Margin might be useful to farmers who, for whatever reason, are unable to ascertain their financial position or farm yield in monetary terms. Moreover, the Gross Margin concept is not only consistent with the macroeconomic notion of value added, but it also underpins the 'by nature' income statement format that inspired the design of IAS 41. These matters will be explored further in the next chapter.

3 Accounting in the Agricultural Sector in France

Introduction

This chapter builds on chapter two by explaining the way in which the macroeconomic concept of value added, which is implicit in the idea of agricultural gross margin, has influenced the design of the French Plan Comptable, the European Union's Farm Accountancy Database Network, and the model income statement in the IASC's Draft Statement of Principles on Agriculture. The exposition begins with a review of the structure of the agricultural industry in France and then goes on to consider technical accounting issues in subsequent sections.

France has the largest agricultural sector in Europe, accounting for more than 20 per cent of the EU's farm output. The total agricultural area of metropolitan France is estimated at 33 million hectares, of which 3 million hectares are uncultivated. This means that the utilised agricultural area is about 30 million hectares, representing approximately 60 per cent of the national territory (Vial, 2001; Martins and Spendlingwimmer, 2009). There are significant variations in regional climate and soils which have enhanced France's capacity to produce a diversity of crops and livestock, for example: wheat and cereal crops in the Bassin Parisien which extends beyond Ile-de-France in the North; dairy products, pork, poultry and apple in the West, particularly Brittany and Pays de la Loire; sheep, goat, and cattle farming in mountainous areas; whilst vineyards, fruit and vegetable farms are located mainly in the Southern and Mediterranean regions (Aumand *et al.*, 2006). Furthermore, some French Overseas Departments and Territories (départements d'outre-mer and territoires d'outre-mer or DOM-TOM) produce substantial quantities of tropical agricultural commodities, such as sugar cane, fruits, bananas, and flowers. Currently, France is self-sufficient in most foods

and is a net exporter of farm products, attracting about €10 billion of agricultural subsidies in 2009, which makes the country the largest recipient of Common Agricultural Policy funds.

Farm structure in France

Farm structure surveys have been conducted on a biennial basis in member states of the European Union since 1966 using the Farm Accountancy Database Network. As mentioned in chapter two, each member state has a liaison agency that carries out the census of agricultural production. In France, the liaison agency responsible for farm surveys is the Central Statistics Department of the Ministry of Agriculture known as the Service Central des Enquêtes et Etudes Statistiques (SCEES), The survey data for 2007 reveal that 83 per cent of all agricultural land in France are in farms of 50 hectares or more which also produce 70 per cent of the country's livestock. Overall, there were 491,100 agricultural holdings with an economic size of at least one European Size Unit which Martins and Spendlingwimmer (2009, p. 1) analyse further thus:

- 18 per cent of the holdings specialised in cereals, oil seed and protein crops;
- 13.8 per cent of French farms were vineyard holdings;
- 13 per cent specialised in cattle rearing and fattening;
- 11 per cent of the holdings were engaged in various dairy farming;
- 9 per cent of the holdings specialised in sheep, goats and other grazing livestock;
- 44 per cent of the agricultural area was in less favoured or mountain areas;
- 2 per cent were organic farms.

However, Table 3.1 shows clearly that a small percentage of the 491,100 agricultural holdings in France are formally incorporated legal entities; i.e. only 20.2 per cent are legal persons or incorporated entities, and 8.9 per cent are groups, whereas 70.9 per cent are sole holder farms run by natural persons or individuals.

Table 3.1 Structure of agricultural holdings in the EU

Country	Sole holdings (%)	Legal entities (%)	Group holdings (%)
France	70.9	20.2	8.9
United Kingdom	94.7	5.3	0.0
Germany	92.3	1.4	5.3
Greece	99.9	0.1	0.0
Italy	98.9	1.1	0.0
Ireland	99.9	0.1	0.0
Belgium	92.0	8.0	0.0
Netherlands	93.0	5.2	1.8
Spain	94.5	5.5	0.0
Sweden	92.3	7.7	0.0
Portugal	96.7	3.3	0.0

Source: compiled from various Farm Structure Survey data, for each of the countries in 2007, published by Eurostat.

The data in Table 3.1 indicate that this pattern is not mirrored in other European countries where more than 90 per cent of agricultural units are sole holder farms. Whilst the foregoing analysis suggests that a very large proportion of European agricultural holdings are unincorporated entities, which have no legal obligation to prepare general purpose financial statements using International Financial Reporting

Standards, it should also be noted that the small percentage of holdings that are incorporated entities may account for a significant share of the total agricultural production of some countries.

But not all incorporated undertakings in France are required to adopt international financial reporting standards. Indeed, only a very small proportion of the legal entities shown in Table 3.1 are listed on a stock exchange and ipso facto required to adopt IAS 41.

Nonetheless, all foreign companies that are listed on the NYSE-Euronext in Paris fall within the regulatory framework of accounting in France and will be required by law to adopt international financial reporting standards.

Most of the foreign companies that need to adopt IAS 41 by virtue of their listing on the NYSE-Euronext market in Paris are engaged in plantation agriculture and have long histories dating back to colonial times: for example, tea, rubber, cocoa, coffee, banana, oil palm, cotton, and tropical fruit plantations which were established primarily as a source of raw material for metropolitan France (see Table 3.2). Another important trend, illustrated in Table 3.2, is that a significant number of French listed companies that are required to adopt IAS 41 are major wine producers that operate vineyards in the South of France.

Table 3.2 Listed agricultural companies in France (2007)

	Company	Agricultural activity
1	Axa Millésimes	Vineyards
2	Christian Dior	Vineyards
3	Compagnie Agricole de la Crau SA	Farming; management of farmlands
4	Compagnie des Caoutchoucs de Padang	Growing of crops; animal breeding
5	Compagnie du Cambodge	Growing of cereals and other crops
6	Compagnie Francaise des Ets Gaillard	Forestry and logging
7	Cottin Frères	Vineyards
8	Duc	Poultry farming
9	Evialis	Animal breeding; feed for farm animals
10	Financière de l'Odet	Tropical plantations: rubber, oil palm, cotton, peanuts, corn
11	Groupe Boizel Chanoine Champagne	Vineyards
12	Groupe Bolloré	Plantation agriculture
13	Groupe Henri Maire	Vineyards
14	Groupe Rougier	Forestry and logging
15	JeanJean SA	Vineyards
16	La Forestière Equatoriale	Plantations, tropical crops, fruits and timber,
17	Laurent Perrier SA	Vineyards
18	LVMH Louis Vuitton Moët Hennessy SA	Vineyards
19	Pernod Ricard SA	Vineyards
20	Plantations des Terres Rouges	Oil palm plantations
21	Société Africaine Forestière Agricole	Rubber tree and palm plantations
22	Société Internationale de Plantations d'Hévéa	Rubber tree plantation
23	Vallourec SA	Forest plantations
24	Vilmorin et Cie	Growing of vegetable, horticulture, seed and nursery products
25	Vranken Pommery Monopole	Vineyards

Accounting in the French agricultural sector

One distinctive feature of French accounting is that it is largely structured around a uniform accounting plan, known as the Plan Comptable Général (PCG), which was first published by the national accounting council (Conseil National de la Comptabilité) in 1947 and subsequently revised in 1957, 1982, and 1999. Essentially, the PCG is a comprehensive chart of accounts which also spells out double entry bookkeeping rules, income measurement and asset valuation principles, ledger account codes, standardised terminology, and the format of financial statements. It was designed to facilitate the work of national statisticians, macroeconomic planners, taxation authorities, and company accountants. In particular, it offers a valuable template for recording accounting transactions, drawing up financial statements, and filling in tax returns since its income measurement rules are broadly identical to tax law requirements.

In general, the accounting principles applicable to individual companies in civil law countries have a strong macroeconomic, legalistic, and fiscal orientation, whereas the Anglo-American accounting model that is used in common law countries lays emphasis on financial reporting standards that are intended to protect equity shareholders and stock market investors.

Given the importance of the agricultural sector in France, the Conseil National de la Comptabilité formulated the Plan Comptable Général Agricole (PCGA), a special chart of accounts that is entirely devoted to agricultural operations, in 1986 (Conseil National de la Comptabilité, 1990). The major difference between this sector-specific PCGA and the main PCG relates to the introduction of new classification codes and valuation rules for crops, livestock and other biological assets (see e.g. Lejet and Arnold, 1998).

The French PCG and all its country-specific and sector-specific variants share a common underlying philosophy that is founded on the macroeconomic notion of value added, which, interestingly, is also

a cornerstone of the European Union's Farm Accountancy Database Network and the concept of Gross Margin reviewed in chapter two. This underlying macroeconomic notion of value added also underpins the IASC's Draft Statement of Principles on Agriculture and the design of IAS 41. As a prelude to the next section, Table 3.3 highlights these features of French accounting in terms of recent aggregate data on agricultural production and components of value added, in a format that is similar to that of the 'by nature' income statement prescribed by the PCG, and the concept of Gross Margin illustrated in Table 2.5 in the preceding chapter. The farm production data in Table 3.3 were collated at the national level by the Institut National de la Statistique et des Études Économiques, the French National Institute for Statistics and Economic Studies.

Table 3.3 French agricultural production and value added (2008)

	Billion euros	
Crop production		
Cereals	10.7	
Oil seeds and protein crops	2.4	
Sugar beet	0.8	
Other industrial crops[(a)]	0.3	
Fruit, vegetables, potatoes	7.3	
Wine	9.4	
Feed crops, plants, flowers	7.3	
Total crop production		**38.2**
Animal production		
Livestock	10.9	
Poultry, eggs	4.5	
Milk and other animal products	9.9	
Total animal production		**25.3**
Agricultural services[(b)]		**3.4**
Total production excluding subsidies		**66.9**
Subsidies on products		2.5
Production at basic prices		**69.4**
Intermediate consumption		**(42.2)**
Gross value added		**27.2**
Fixed capital consumption		**(10.5)**
Net value added		**16.7**

Notes:

(a) Tobacco, fibre flax, hops, sugar cane, etc.

(b) Production of farm-labour enterprises, cooperatives for the use of agricultural equipment, exchange of services between farmers, agro-tourism, etc.

Source: Adapted from INSEE (2009)

French income statements and the concept of value added

The traditional French income statement has a macroeconomic orientation which requires that costs be grouped according to their nature (e.g. depreciation, raw materials, personnel, etc.) whereas the Anglo-American 'by function' format classifies costs according to functional cost centre: i.e. production, administration, or distribution (see Tables 3.4 and 3.5). However, when the results of the entire enterprise are collated, the 'by nature' income statement will only indicate total costs such as total personnel expenses, total depreciation, or total purchases, as opposed to components of these costs that relate to a specific product or cost centre. Hence, unlike the 'by function' approach, it does not allow the calculation or disclosure of 'cost of goods sold'.

Table 3.4 Abridged model income statement in France (adapted from the système developpé)

Commercial margin[a]	X
Production sold[b]	X
Production added to inventory[c]	X
Production capitalised	X
Total production for period	XX
Less intermediate consumption:	
Raw materials & other consumables	(X)
Value added	XX
Less	
Operating expenses	(X)
Depreciation & provisions	(X)
Personnel expenses	(X)
Tax	(X)
Operating profit after tax	XX

Notes:

(a) This is the gross profit relating to goods purchased from external sources for resale.

(b) Sales of finished goods and services.

(c) This relates to the change in inventory of finished goods and work in progress.

Table 3.5 Structure of income statements: international differences

Country	Shape	Cost classification
France	Two-sided[(a)]	By Nature
Spain	Two-sided	By Nature
Germany	Vertical	By Nature
Australia	Two-sided	By function
United Kingdom	Vertical	By function
United States	Vertical	By function
Japan	Vertical	By function

Note:

(a) Except that some French groups use a vertical format.

Source: Adapted from Nobes (2010, p. 50)

The rationale behind the 'by nature' approach is the need to measure an entity's total production and value added for a given financial year. It is important to note that 'commercial margin' in Table 3.4 is actually the gross profit derived from goods purchased from external sources for resale, and that it does not relate to a company's internal production. Hence, if we ignore this item, it could readily be seen that corporate value added in Table 3.4 is the difference between output (i.e production sold, production added to inventory, and production capitalised) and input (i.e. raw materials and other intermediate consumption for the reporting period).

Currently, French companies are allowed to adopt the Anglo-American style 'by function' format in preparing consolidated income statements in conformity with Law No. 85-11 of 3 January 1995. This law, together with a number of statutes that precede the arrêté of 9 December 1986, updated the French PCG by introducing a chapter on consolidation in accordance with the EU Seventh Directive. However, although this legislation allows two formats for the consolidated income statement, one 'by nature' and one 'by function', the latter approach is rarely used in France and has not altered French practice. Hoarau (1995, p. 227) echoes this point:

> *The additional options available for consolidated accounts have made it possible for France to align itself with international standards without disturbing the architecture of the existing accounting system. The legislation also permits two types of profit and loss accounts, one by nature and one by function. Classification of revenues and expenses by purposes or function, which is not allowed for individual company accounts is drawn from the Anglo-Saxon model. Based on management accounting principles the profit and loss account by function seems a more effective instrument than the profit and loss account by nature for evaluating trends in a company's costs, particularly cost of sales...*

Hoarau (1995, p. 229) goes on to state further that:

> *On the whole, France's choice to limit international harmonization to domestic standards for consolidated accounts, which concern only a few companies, has to a certain extent allowed it to resist Anglo-Saxon influence and, at least on the face of it, to avoid upsetting the structure of the existing accounting system. As a result, international harmonisation has not challenged the connections between accounting and taxation...*

Unlike the 'by function' approach, the 'by nature' model does not allow the calculation or disclosure of 'cost of goods sold'. Indeed, Collette and Richard (2000, p. 120) point out that the concept of 'cost of goods sold' is alien to French accounting and that it is impossible to derive it from any income statement which is based on the French PCG.

Another important feature of the 'production' (or macroeconomic) orientation of the 'by nature' income statement is that it incorporates some technical terms that do not have precise equivalents in the French and English languages. Also, even a cursory review of any of the standard textbooks that seek to explain accounting principles to an international audience (e.g. Collette and Richard, 2000; Nobes and Parker, 2010; or Stolowy and Lebas, 2002) will readily reveal technical terms that have different conceptual meanings and contextual significance within the French and Anglo-American accounting traditions. Such linguistic and terminological difficulties pose major challenges to professional translators, international financial analysts, and other users of financial statements.

For example, the term 'gross profit' (or 'commercial margin' as presented in Table 3.4) has a different meaning in French accounting in that it only relates to the margin on goods purchased from external sources for resale. It does not relate to a company's internal production, which are reported directly as 'production sold' and 'production added to inventory'. The PCG does not require companies with exclusively manufacturing activities to calculate or disclose a gross profit. Interestingly, Corre *et al.* (1971, p. 28) observe that the concept of 'gross profit' had been introduced in the OCAM (Organisation Commune Africaine, Malagache et Mauricienne) PCG, a forerunner to the 1982 French PCG, as a major innovation which had hitherto only been recognised in French managerial accounting (see also, Most, 1971, p. 21; Elad, 2000).

A second example of a technical term in the income statement prescribed by the French PCG that is not normally used in Anglo-American financial accounting (although it is widely used in national income accounting) is 'intermediate consumption'. Both the United

Nations System of National Accounts and the European System of National and Regional Accounts define intermediate consumption as: 'the value of goods and services consumed as inputs by a process of production excluding the consumption of fixed assets which is recorded as the consumption of fixed capital' (European Commission, 2005). The use of this term in Table 3.3 and Table 3.4 reflects the macroeconomic and national income accounting roots of the French concept of value added.

Another component of the 'by nature' income statement which has different connotations in the French and Anglo-American accounting systems is value added. The concept of value added that was introduced in the UK by The Corporate Report (ASSC, 1975) is fundamentally different from the version that is embodied in Tables 3.3 and 3.4 because income and, where appropriate, value added, are derived from sales in Anglo-Saxon countries and not from production as in the 'by nature' model. This point was highlighted by Gray and Maunders (1980) and Elad and Gray (1991) when they drew attention to the contrasts between the French 'production' approach to value added accounting and the UK 'sales' approach to value added accounting. Interestingly, some French authors have likewise recognised these differences: for example, Richard (1996, p. 126) highlights the distinction between the French valeur ajoutée produite (production oriented value added) and the UK valeur ajoutée vendue (sales oriented value added).

However, a major shortcoming of the income statement format in Table 3.4, from the standpoint of value added accounting, relates to the requirement that 'production added to inventory' be valued at production cost and 'production sold' at selling price. This practice is likely to distort the measurement and meaning of value added in cases where there is a substantial difference between production costs and selling price. Incidentally, this deficiency in the format of French income statements had also been recognised and acknowledged by some leading members of the French Conseil National de la Comptabilité (Corre *et al.* 1971, p. 37) who provided technical advice on the design of the OCAM PCG. Corre *et al.* concede that there is an 'inevitable lack of

accounting rigour' concerning the treatment of 'production stocked' (i.e production added to inventory) because it is based on macroeconomic and national accounting definitions which require that it be valued at cost whereas production sold is valued at selling price. Hence Corre *et al.* (1971, p. 37) urge users of financial statements to be mindful of this 'heterogeneity' in the valuation of production output when analysing financial statements and ratios.

But IAS 41 could, to some extent, resolve this problem of heterogeneity in valuation because the valuation of both sold and unsold production would be based upon fair value. However, such a valuation basis might be unacceptable to national accountants and statisticians because the notion of value added in Francophone countries is based on actual production cost rather than on current cost.

The discussion thus far in this chapter would suggest that successful implementation of IAS 41 in all types of agricultural undertakings could signal the demise of the French PCG model because it is not possible to incorporate the notion of fair value into the PCG without fundamentally disrupting its underlying philosophy and implicit conceptual framework. In particular, valuation of both sold and unsold production at fair value could result in a completely different notion of income and value added which may not be acceptable to national statisticians, especially in countries where accounting and taxation are closely linked.

IAS 41 and the 'by nature' French income statement

At the inception of the IAS 41 project, the Steering Committee charged with developing the standard issued the first-ever Draft Statement of Principles (DSOP) on Agriculture. Principle 15 of this DSOP stipulates inter alia that the 'by nature' income statement format ties in well with the key concepts that will underpin the eventual IAS 41:

> *An enterprise with significant agricultural activities is encouraged to present on the face of the income statement an analysis of the*

> *income and expenses used in determining profit from operating activities using a classification based on the nature of income and expenses.* (IASC, 1996, p. 47, Principle 15, paragraph 82)

> *The Steering Committee believes that the nature of expense method provides more useful information about an agricultural enterprise...* (IASC, 1996, p. 47, paragraph 83)

Despite the IASC's declaration in the passages cited above, and the fact that a preference for the 'by nature' model was stated unequivocally in Exposure Draft E65 (see IASC, 1999, p. 10), IAS 41 permits both the 'by nature' and the 'by function' approaches. This observation could be explained in terms of numerous comment letters on E65 that emphasised the need for the final standard to avoid a conflict with IAS 1 which permits the two income statement formats.

Although the EU Fourth Directive also permits the two income statement approaches, only the 'by function' model is universally used in the UK and other common law countries (see Table 3.5 or Alexander and Nobes, 2002, p. 121; Nobes, 2010, p. 50). Notwithstanding the IASC's nominal endorsement of the 'by function' approach as one of the income statement formats that can be used by agricultural enterprises, all model financial statements contained in the DSOP on Agriculture, E65, and IAS 41, along with suggested examples of how the standard might be implemented, are based on the 'by nature' approach (see Table 3.6 and IASC, 1996, p. 66; 1999, p. 52; and 2001, p. 31).

Table 3.6 Model income statement in IAS 41

XYZ Dairy Ltd Income statement	Notes	Year ended 31 December 20X1
Fair value of milk produced		518,240
Gains arising from changes in fair value less estimated point-of-sale costs of dairy livestock		39,930
		558,170
Inventories used		(137,523)
Staff costs		(127,283)
Depreciation expense		15,250)
Other operating expenses		(197,092)
		(477,148)
Profit from operations		81,022
Income tax expense		(43,194)
Net profit for the period		37,828

The 'by nature' income statement in Table 3.4 is generally in line with the spirit of IAS 41 because it lays emphasis on value added and the total production output for an accounting period. In this regard, it is noteworthy that biological transformation is a value added event that causes qualitative and quantitative changes in a living animal or plant through the processes of growth, degeneration, production or procreation. IAS 41 requires that the entire production output arising from biological transformation during an accounting period be included in the income for that period. This provision of IAS 41 is illustrated in Table 3.6, which shows that both the fair value of milk produced, and the gains arising from changes in fair value less estimated point-of-sale costs of dairy livestock, are included in the profit for the year. In this

example, XYZ Dairy Ltd has reported a net profit of £37,828 for the year ended 20X1 which includes some unrealised holding gains.

In summary, it could be inferred from Table 3.4 and Table 3.6 that, generally speaking, the approach adopted in IAS 41 is similar to the French model which seeks to measure: (i) the total production of an accounting period (i.e. output in terms of production sold, production added to inventory, and production capitalised); (ii) the intermediate consumption for the period (i.e. input in terms of raw materials and services consumed); and (iii) value added for the period (i.e. output less input). However, the valuation of output stocked at fair value, and the recognition of related unrealised holding gains in the income statement prescribed by IAS 41, signal a major departure from the French PCG model that is widely used in some Continental European countries (e.g. France and Spain) and many Francophone African states.

The European Farm Accountancy Database Network

Another income statement which is conceptually similar to that prescribed by the French PCG shown in Table 3.4, and the notion of Gross Margin in Table 2.5 of chapter two, is the Farm Accountancy Data Network (FADN) that was established by the European Commission in 1965 as a means to monitor the financial performance of farms in the context of its common agricultural policy. The FADN's underlying logic is reflected in the value added equation of the French PCG discussed earlier. Indeed, Argilés and Slof (2001, p. 367) point out that, by and large, FADN's reporting framework has developed to 'a level of complexity and comprehensiveness comparable to the national accounting plans of countries like France or Spain'. It is evident from Table 3.4 and Table 3.7 that the FADN income statement has a production orientation and a strong emphasis on farm value added. Indeed, Argilés and Slof (2001, p. 372) highlight this point thus:

> *As far as revenue recognition is concerned, FADN takes an unusual approach, since revenues (called 'output') are accounted for based on production... Both sold and unsold production is therefore counted as revenue. This is clearly contradictory with traditional GAAP, that normally only recognize revenues when a sales transaction has taken place, but IAS 41 makes a similar proposal, considering that biological transformation is by itself a significant event that should be recognised in the net profit or loss in the period in which it occurs.*

As mentioned in the above passage, the inclusion of unrealised gains or losses arising from biological transformation in the income statement accords with the 'by nature' approach wherein the income statement seeks to portray a company's value added in a given period and the profit derived from it. However, it is important to note that French PCG-based income statements do not permit measurement at fair value and the recognition of any resultant unrealised holding gains or losses in income.

Table 3.7 Structure of the European FADN income statement

Total output (by type of production)

\+ Subsidies on production and costs

\- Intermediate consumption:

(a) Specific costs:
seeds and plants
fertilizers
crop protection
other crop-specific costs
feed grazing livestock
feed pigs and poultry
other livestock specific costs

(b) Overheads:
machinery and building costs
energy
contract work
other direct inputs

\- Taxes and VAT balance
= Gross farm income

\- Depreciation
= Farm net value added

+ Investments grants and subsidies
\- External factors:
wages paid
rent paid
interest paid

= Family farm income

Source: Argilés, J and E Slof (2001, p. 376)

The international differences in the structure of farm income statements set out in Table 3.8 reveal a dichotomy between the features of IAS 41 and AASB 1037, on the one hand, and those of the European FADN and country-specific variants of the French PCG - i.e. OCAM (Organisation Commune Africaine, Malagache et Mauricienne), SYSCOA (Système Comptable Ouest Africain), and OHADA (l'Organisation pour l'Harmonisation en Afrique du Droit des Affaires) - on the other. The first five columns in Table 3.8 show clearly that the latter models portray identical features such as: adoption of a 'by nature' format; use of historic cost; inclusion of production oriented value added data within the income statement; and the valuation of production stocked at cost.

By contrast, the farm income statements prescribed by IAS 41 and the Australian AASB 1037 suggest a markedly different approach in that they allow changes in the fair value or market value of biological assets, and any resultant holding gains/losses, to be included in income for the period in which the changes arise. Since this practice is incongruent with the design of PCGs, as the data in Table 3.8 indicate, and is not permitted by tax authorities in France and most Francophone countries, it seems unlikely that IAS 41 will foster the international harmonisation of farm accounting practices for individual companies in the absence of a major overhaul of the Plan Comptable.

Table 3.8 The structure of farm income statements: some international differences

	French PCG Agricole	OCAM PCG	SYSCOA PCG	OHADA PCG	European Union FADN	Australian AASB 1037SGARA	IAS 41
Presentation format	By nature	By nature	By nature	By nature	By nature	None specified	By nature or by function
Basis of valuation for biological assets	Historic cost	Historic cost	Historic cost	Historic cost	Market value	Net market value	Fair value
Production oriented value added data incorporated into income statement	Yes	Yes	Yes	Yes	Yes	No specific requirement	Yes
Production stocked shown in income statement at cost	Yes	Yes	Yes	Yes	No	No	No
Unrealised holding gains/ losses relating to production stocked included in income	No	No	No	No	Yes	Yes	Yes
Change in fair value of biological assets less estimated point-of-sale costs taken to income for the period in which it arises	No	No	No	No	No	Yes	Yes

Source: Elad (2004, p. 630)

Summary

This chapter shows that although IAS 41 is based upon the 'by nature' income statement model, which lends itself to the measurement of farm production and farm value added, it would be virtually impossible to implement it in the context of individual company accounts in Francophone countries, barring a major overhaul of the framework of the Plan Comptable Général.

Whereas the concept of Gross Margin has a long and well documented history in the UK farming industry (see e.g. Jack, 2006; 2009, p 20) it is not widely appreciated that it shares common features with the notion of value added, the European FADN, and the PCG. Whilst some underlying conceptual commonalities between the idea of Gross Margin, the Plan Comptables, the European FADN, and IAS 41 are brought to bear, a number of significant differences between these models are also highlighted in Table 3.8. In particular, the measurement of unsold production under IAS 41 at fair value rather than at cost would result in a notion of value added that is fundamentally different from the macroeconomic approach enunciated by the PCG.

4 Accounting in the Agricultural Sector in Australia

Introduction

The policy of convergence and harmonisation adopted by standard setters in Australia committed Australia to the adoption of Australian equivalents of International Financial Reporting Standards (IFRS) for annual reporting periods beginning on or after 1 January 2005. In large, this has meant abandoning existing Australian accounting standards and adopting the wording and content of IFRS in their place. In terms of accounting for agricultural activity, Australian reporting entities must now comply with the Australian standard AASB 141 'Agriculture' which is equivalent to IAS 41 'Agriculture'. An interesting aspect of the Australian experience is that, unlike most countries, an accounting standard on agricultural activity – AASB 1037 'Self-generating and regenerating assets' – had been operative since 2001. Since there are significant similarities between the requirements of AASB 1037 and AASB 141, the AASB 1037 reporting experiences can be used to provide insights into the problems and prospects of IAS 41, not only for Australia but also for other countries pursuing convergence with IFRS.

This chapter provides an overview of the Australian agricultural sector and the prevailing regulatory framework of financial reporting. Reporting experiences with AASB 1307 are then outlined and an analysis of the problems and prospects of AASB 141 is given in the final section.

Background on the Australian agricultural sector

Agricultural activity in Australia is categorised as 'Agriculture, Forestry and Fishing' in the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993. In this context, the term

agriculture is used in the broadest sense to include the breeding, keeping or cultivation of all kinds of animal or vegetable life except forestry and fishing. Forestry includes afforestation, harvesting and gathering of forest products. Fishing includes the catching, gathering, breeding and cultivation of marine life from ocean, coastal and inland waters. Each activity is discussed in turn.

Agriculture

The major agricultural commodities produced in Australia are crops and livestock and livestock products. Table 4.1 provides an overview of the major agricultural commodities and their gross value for the period 2007-2009. Cereals for grain such as wheat and barley were the largest component of crops in 2009 (A$7,662 million) followed by grapes (A$1,129 million) and the composite categories of other fruit and nuts (A$2,270 million) and other vegetables (A$2,269 million). Livestock slaughtering of cattle, sheep, pigs and poultry amounted to a gross value of A$12,752 million for the 2009 financial year and livestock products including wool, milk and eggs produced a gross value of A$6,206 million for the year.

Table 4.1 Gross value of agricultural commodities produced in Australia

Year ended 30 June Millions of Australian dollars (A$m)	2007 A$m	2008 A$m	2009 A$m
Crops			
Cereals for grain			
Barley	1 038.9	2 244.0	1 767.4
Grain sorghum	273.7	977.4	550.1
Oats	180.5	422.5	254.5
Rice	55.0	7.3	35.5
Wheat	2 618.5	5 291.9	5 894.4
Canola	227.2	658.6	1 026.2
Cotton[(b)]	506.7	227.3	623.0
Fruit			
Apples	484.4	487.6	529.1
Grapes	1 137.8	1 693.6	1 128.8
Other fruit and nuts[(c)]	3 014.7	2 270.0	2 270.0
Hay[(d)]	1 618.6	2 817.9	1 665.6
Lupins for grain	124.9	221.5	201.5
Nursery production[(e)]	1 447.9	1 432.8	1 297.6
Sugarcane cut for crushing	1 221.4	861.0	983.0
Vegetables			
Potatoes	514.4	689.0	502.4
Tomatoes	296.0	404.6	277.5
Other vegetables[(c)]	2 354.2	2 269.2	2 269.2
All other crops[(c)]	762.3	842.1	842.1
Total crops	17 877.1	23 818.2	22 117.9
Livestock slaughtering and other disposals			
Cattle and calves	7 987.9	7 353.3	7 451.7
Sheep and lambs[(f)]	2 057.1	2 167.9	2 492.1
Pigs	943.6	901.7	894.9
Poultry	1 294.1	1 636.6	1 861.5
Total livestock slaughtering and other disposals[(g)]	12 335.9	12 103.6	12 752.3
Livestock - Livestock products			
Wool[(h)]	2 281.6	2 309.0	1 805.8
Milk	3 177.6	4 571.7	3 987.6
Eggs	387.6	467.6	412.9
Total livestock products	5 846.8	7 348.3	6 206.3
Total agriculture	36 059.7	43 270.2	41 076.5

Notes:

(a) Estimates for 2007 and 2008 are final; estimates for 2009 are preliminary and may be subject to revision.

(b) Includes cotton lint and cotton seed.

(c) Estimates for 2009 for these commodities cannot be produced at the preliminary estimates stage due to the unavailability of source data. The 2008 values have been used to provide an 'order of magnitude' estimate only of the contribution of these commodities to the 'Total agriculture' gross value for 2009.

(d) Includes pastures, cereals and other crops cut for hay.

(e) Includes nurseries, cut flowers and cultivated turf.

(f) Excludes value of wool on skins.

(g) Includes value of other livestock.

(h) Includes value of dead wool and wool on skins.

Source: Australian Bureau of Statistics (2010a, p. 5)

The 2003-2004 Agricultural Survey conducted by the Australian Bureau of Statistics found that the number of farms in Australia for the year ended 30 June 2004 totalled 131,000. The beef cattle farming industry was the largest in terms of farm numbers, with approximately 27 per cent of all farms. The mixed farming sector (grain-sheep/beef cattle) was the next largest with approximately 12 per cent of all farms, followed by the grain sector with 11 per cent of farms. The median estimated value of agricultural operations of all farms was approximately A$123,000 for the 2003-2004 financial year. Table 4.2 provides a summary of the distribution of values of establishments with agricultural activity. Approximately 15 per cent of all farms (20,200 farms) had an estimated value of agricultural operations below A$22,500, while at the other end of the scale, 14 per cent (18,000 farms) had an estimated value of agricultural operations above A$500,000.

Table 4.2 Establishments with agricultural activity by estimated value of agricultural operations for the year ended 30 June 2004

Range (A$) of estimated values	Number of establishments with agricultural operations in 2004
$0-$22,499	20,166
$22,500-$49,999	18,352
$50,000-$99,000	20,339
$100,000-$149,999	14,005
$150,000-$199,999	10,434
$200,000-$349,999	19,248
$350,000-$499,999	9,957
$500,000-$999,999	11,727
$1,000,000-$1,999,999	4,658
$2,000,000 and more	1,639
Total	130,526

Notes:

(a) Count of establishments with estimated value of agricultural operations of A$5,000 or more.

(b) At the time of writing, this 2004 survey has not been updated by the Australian Bureau of Statistics.

Source: Australian Bureau of Statistics (2005, p. 2)

Forestry

Australia's native forests and plantations provide the basis for its forest industries. The total area of native forests as at November 2008 is estimated at 147 million hectares, which is approximately 20 per cent of Australia's land area. Table 4.3 provides an overview of tenure of Australian forest resources. Some 103.2 million hectares (i.e. 70% of native forests) are under private management either as freehold or

leasehold title. The combined resource of standing planted forests is 2 million hectares planted to December 2008. A diverse range of ownership arrangements exists in the plantation industry, including a variety of joint venture and annuity schemes between public and private parties.

Table 4.3 Tenure of Australian native forests

Type of tenure	'000 ha
Public	
Multiple use forest[(a)]	9,408
Nature conservation reserve[(b)]	22,371
Other Crown land[(c)]	10,862
Leasehold[(d)]	65,132
Total	107,773
Private (freehold)	38,099
Unresolved tenure	1,524
Total	147,397

Notes:

(a) Publicly owned land managed for multiple use including wood production.

(b) Public land on which wood production is excluded (national parks etc.).

(c) Reserved areas of educational, scientific and other public institutional land including easements, defence land and other minor tenure classifications.

(d) Crown land where the right to harvest of clear land must be approved by state/territory governments. Often known as pastoral leases.

Source: Australian Bureau of Statistics (2010b, p. 513)

Farm forestry is increasingly becoming adopted as part of farm management planning and integrated into existing land uses, not only to supply wood but also to provide a range of benefits such as environmental

protection and increased agricultural production. The approximate area for farm-forestry plantations – that is, plantations owned outright by individuals having total estates less than 1,000 hectares – was 67,000 hectares in the year 2000, which is nearly 5 per cent of Australia's total plantation estate (Australian Bureau of Statistics, 2006, p 444). But in 2009, 26 per cent of Australia's native forest areas were on privately-owned land and a further 44 per cent was on leasehold land (Australian Bureau of Statistics, 2010b, p. 515).

Australia's wood and paper industries include hardwood and softwood sawmilling, plywood and panels manufacturing, woodchip production and export and the pulp and paper industries. An overview of the production of wood and wood products is provided in Table 4.4. In 2008, sawn grown timber accounted for most products (5,371,000m^3) followed by packaging and industrial paperboard (1,933,000 tonnes) and particle board (957,000m^3). The importance of these three wood products can be illustrated as follows. The value of exports of forest products in 2007-2008 totalled A$2.5 billion, of which 43 per cent were woodchips and 26 per cent paper and paperboard products.

Table 4.4 Production of wood and selected wood products in Australia

Commodity		2005-6	2006-7	2007-8
Sawn Australian-grown timber				
Coniferous	'000 m^3	3,821	4,012	4,263
Broadleaved	'000 m^3	1,211	1,152	1,109
Total	'000 m^3	5,032	5,163	5,371
Plywood	'000 m^3	145	130	134
Particle board	'000 m^3	1,002	933	957
Medium-density fibreboard	'000 m^3	798	680	710
Paper and paperboard				
Newsprint	'000 t	415	411	456
Printing and writing	'000 t	663	693	706
Household and sanitary	'000 t	203	190	186
Packaging and industrial	'000 t	1,926	1,907	1,933

Source: Australian Bureau of Statistics (2010b, p. 516)

Fishing

Australia's major commercially accessed species of fisheries products are prawns, rock lobster, abalone, tuna, other finfish, scallops and edible and pearl oysters. The gross fisheries production (including aquaculture) is shown in Table 4.5.

Table 4.5 Fisheries production in Australia – Gross production and gross value for 2007-8

Fisheries product		2007-08 '000 tonnes	2007-08 A$ million
Finfish			
	Tuna	14.7	210.0
	Other	141.3	723.8
	Total	155.9	933.8
Crustaceans			
	Prawns	22.4	267.5
	Rock lobster	13.8	406.7
	Crab	5.8	53.9
	Other	0.9	16.5
	Total	42.9	744.7
Molluscs			
	Abalone	5.3	188.5
	Scallops	10.3	32.7
	Oysters	12.5	89.1
	Pearls(a)	-	114.3
	Other	6.8	37.7
	Total	34.9	462.4
Other fisheries production		2.0	46.0
Total		235.7	2,186.8

Note:

(a) Production rounded to zero.

Source: Australian Bureau of Statistics (2010b, p. 519)

The gross production for the year 2007-2008 totalled 235,700 tonnes of which prawns were the largest single contributor (22.4 thousand tonnes) followed by tuna (14.7 thousand tonnes) and rock lobster (13.8 thousand tonnes). Rock lobster was the species contributing the most (A$406.7 million) to gross value, followed by prawns (A$267.5 million) and tuna (A$210 million).

In Australia very little processing of fish products is undertaken which adds value to the product. Much of the value that is added to the catch is due to correct handling and rapid delivery by air to local or overseas markets such as Japan, Hong Kong and the United States of America.

Aquaculture is developing as an alternative to harvesting naturally occurring fish stocks. The main emphasis of the industry is on producing high value species in near-shore or land-based sites within the coastal zone. In 2007-2008, the gross value of Australian aquaculture production totalled A$868.4 million.

Financial reporting by entities in the agricultural, forestry and fishing sector

Australia has a system of differential financial reporting implemented through Corporations Legislation (the First Corporate Law Simplification Act 1995 (Cwth) and the Australian conceptual framework (Statement of Accounting Concepts SAC1 'Definition of the Reporting Entity'). There is some degree of overlap between Corporations Law and SAC1. However, the joint effect is that only entities that meet certain criteria are required to prepare general purpose financial reports.

Specifically, under the Corporations Act 2001, small proprietary companies are excluded from preparing general purpose financial reports that comply with all accounting standards and relevant regulation. These are companies that fail to meet at least two of the following tests:

- the annual consolidated gross operating revenue for the company and the entities it controls (if any) is A$10m or more;
- the value of the consolidated gross assets at the end of the financial year of the company and the entities it controls (if any) is A$5m or more; and
- the company and the entities it controls (if any) have 50 or more employees at the end of the financial year.

Under SAC1, reporting entities are required to prepare general purpose financial reports in accordance with accounting standards and relevant regulation. A reporting entity is an entity for which:

> *...it is reasonable to expect the existence of users dependent on general purpose financial reports for information which will be useful to them for making and evaluation decisions about the allocation of scarce resources.* (para. 40, SAC1)

Examples of non-reporting entities include family trusts, partnerships, sole traders and wholly owned subsidiaries of Australian reporting entities. Although SAC1 does not have legislative backing, professional accountants in Australia are bound by the requirements of SAC1.

The implication of differential reporting is that many entities within the agriculture, forestry and fishing sector are not reporting entities under Corporations Law or SAC1. Thus, they do not have to prepare financial reports that comply with accounting standards on agricultural activity. To illustrate, in terms of for-profit entities only 34 listed companies were identified by Herbohn (2006) as complying with AASB 1037 'Self-generating and Regenerating Assets' in a study of the effects of compliance with the standard between 1999 and 2004.

An additional implication is that Australian not-for-profit entities such as Federal, State and Territorial Governments and Local governments are considered to be reporting entities. Thus, any not-for-profit entities with material holdings of assets in the agriculture, forestry and fishing sector are required to comply with accounting standards on agricultural activity. For example, there are six states and two territories in Australia. Each state or territory government has a department with responsibility for managing natural resources that is a reporting entity and therefore required to prepare general purpose financial reports in accordance with all accounting standards and legislation. The natural resources managed by these departments typically comprise some livestock holdings, timber plantations and native forests managed for commercial timber production.

Regulatory framework of accounting and convergence with IFRS

The present arrangements for accounting standard setting in Australia involve the Financial Reporting Council and three bodies under its aegis, namely: Consultative Group, Australian Accounting Standards Board, and Urgent Issues Group. The Financial Reporting Council (FRC) reports directly to the Federal Treasurer and provides advice on the Australian accounting standard setting process. The FRC has responsibility for oversight of the Australian Accounting Standards Board (AASB) and its role includes appointing members to the AASB, approving and monitoring AASB priorities, budgets and staffing, and promoting a greater role for international financial reporting standards (IFRS) in Australia. The main role of the AASB is to make accounting standards – known as AASB accounting standards – and to participate in and contribute to the development of a single set of accounting standards for worldwide use. The Urgent Issues Group (UIG) provides timely guidance in the form of UIG Interpretations on issues that are not dealt with explicitly in accounting standards prepared by the AASB.

The Consultative group provides a forum for the AASB to consult with representatives of different constituent groups to obtain input on major technical issues, its work program, project priories and to receive feedback on its activities (Henderson, Peirson and Herbohn, 2006). In July 2005, the FRC announced that it had formalised its support for the adoption by Australia of IFRS by 1 January 2005. This policy applies to all reporting entities previously defined above.

In practice, the adoption of Australian equivalents of IFRS has resulted in the AASB adopting the content and wording of IASB standards except where words need to be changed to accommodate Australian legislation or where the AASB requires additional disclosures. These exceptions are identified in AASB accounting standards by the use of 'Aus' paragraphs. At present, the AASB standards equivalents are based on IASB standards on issue as at 31 March 2004. The AASB is committed to ensuring that AASB equivalents are issued as the IASB makes changes to those standards and issues new ones over time.

The Australian accounting standard AASB 141 'Agriculture' applies to annual reporting periods beginning on or after 1 January 2005. Since the majority of Australian entities have a 30 June reporting date, the first annual financial reports in compliance with AASB 141 encompass the reporting period 1 July 2005 to 30 June 2006. Australian entities that comply with AASB 141 are simultaneously held to be in compliance with International Accounting Standard 41 (IAS 41) 'Agriculture'. The standard AASB 141 replaces the existing accounting standard AASB 1037 'Self-generating and Regenerating Assets' that was operative for annual reporting periods beginning on or after 30 June 2001. Since AASB 141 and its predecessor AASB 1037 contain similar requirements, the implementation experiences with AASB 1037 are informative when considering the prospects and problems of AASB 141. The implementation experiences are reviewed below.

Implementation of AASB 1037 'Self-generating and Regenerating Assets'

Prior to the release of AASB 1037, a variety of measurement and revenue recognition techniques were used for agricultural assets. For example, Roberts, Staunton and Hagan (1995) reviewed the accounting polices used by Australian reporting entities for livestock and forestry operations up until 1990. They found a mixture of valuation practices for forest assets that included historical cost, replacement cost and market value bases used singly or in a variety of combinations. For livestock operations, the bases used included current market values, average net realisable value, average cost or directors' valuation. Annual changes in the value of either forest assets or livestock assets were variously recognised as revenue or expense in operating profit, as part of reserves or were ignored until the point of sale.

Clearly, any accounting standard on agricultural activities that was issued was likely to introduce significant change to the existing variety of accounting policies. Before considering the extent of change initiated by AASB 1037, its major requirements are reviewed.

The requirements of AASB 1037

The standard AASB 1037 'Self-Generating and Regenerating Assets' applied to non-human living assets held for profit. When biological change could no longer take place, a living asset was deemed to be non-living and no longer a self-generating and regenerating asset (SGARA) for the purposes of AASB 1037. For example, while grape vines were considered to be SGARAs, any harvested grapes were non-living and therefore not SGARAs for the purposes of AASB 1037.

SGARAs were to be measured at net market value at each reporting date (para. 5.2). This is the amount that could be expected from the disposal of the SGARA in the ordinary course of business (para. 10.1).

If there was no active and liquid market the best indicator of net market value was appropriate. These included (para. 5.3.2):

(a) the most recent net market value of the same or similar assets;

(b) the net market value of related assets;

(c) the net present value of cash flows expected to be generated by the SGARAs discounted at a current market-determined rate which reflects the risks associated with the assets; or

(d) cost.

The valuation of SGARAs at cost was permitted if little biological change had taken place since the costs were incurred and there was no evidence that cost was not the best indicator of net market value. It was also allowed where the uncertainties associated with a SGARA rendered other indicators of net market values so unreliable that, on balance, cost was more relevant and reliable.

Any changes in the net market value of the SGARAs were to be recognised as revenues or expenses in the income statement for the financial year in which the increments or decrements occurred (para. 5.4). The point of revenue realisation for a SGARA occurred when it was sold or non-living produce was harvested and sold (paragraph 5.5.1). Since AASB 1037 required SGARAs to be revalued to net market value in each reporting period, including immediately prior to disposal, no gains or losses arose on the disposal of SGARAs (para. 5.5.2).

The harvest of non-living produce from a SGARA gave rise to two further adjustments to profit. First, the harvest of non-living produce typically resulted in a reduction in the net market value of the underlying SGARA, which was to be recognised as an expense (revenue) in the income statement (para 5.5.2). Second, any difference between the net market value of non-living produce extracted and the costs of extraction such as fruit picking or slaughtering costs was to be recognised as revenue

in the financial year in which the produce was extracted (para 5.5). From the point of harvest, the extracted non-living produce was accounted for as inventory and AASB 1037 was no longer applicable.

The Impact of AASB 1037

The initial reaction of affected constituents to AASB 1037 'Self-Generating and Regenerating Assets' was not positive. For example, Southcorp Chairman Mr Rick Allert commented that he was annoyed that Australia would the only country to use the AASB 1037 system, which seemed 'ridiculous' (Shield, 1999). Even after its adoption, opposition to AASB 1037 continued. Doubt about the ability of reporting entities to implement the requirements of AASB 1037 by the operative date of 30 June 2000 led to a deferral of its application by the AASB for one year. The review of pre-AASB 1037 measurement methods by Dowling and Godfrey (2001) provided preliminary support for this delay. They found that, on average, compliance would require significant changes in the way that firms measured their SGARA holdings. Dowling and Godfrey (2001) examined the measurement methods used in the 1999 financial statements of Australian entities with material holdings of SGARAs. They found that one of the least-preferred measurement methods for SGARAs was net market value, which is required by AASB 1037. In contrast, historical cost was the most preferred which is only allowed under AASB 1037 in restricted circumstances.

Exposure draft

As part of the due process underlying the development of an AASB standard, public submissions are invited on a proposed standard. A total of 45 submissions were received on the draft of AASB 1037 – 12 from public sector entities such as the commercial forestry arms of State Governments and State Treasury and Finance Departments, 11 from public companies, eight from business and professional associations,

seven from accounting firms, three from universities, two from individuals, and two from private companies. Of these constituents, 21 held or represented interests in SGARAs that included forests (ten respondents), grapevines (six respondents), livestock (two respondents), crops (two respondents) and orchards (one respondent).

An analysis of these submissions by Herbohn (2006) revealed two main issues of concern. They were:

- the income statement effect of recognising changes in the carrying amounts of SGARAs and the net market value of non-living produce less the costs of extraction at the point of harvest as income or expense; and
- the valuation methods applied to holdings of SGARAs and any associated disclosures.

Concerns about the income statement effect of recognising unrealised gains and losses were raised in over half of the submissions (23 out of 42), and it was the one issue that attracted the strongest language in the submissions. For example, it was common in a submission that raised this issue to discuss the requirement in both covering letter and the actual submission. In addition, it was not unusual for the submission to state that the organisation was strongly opposed (with the word strongly in bold and underlined).

Three basic concerns were raised. First, the unrealised profits may not be realised on a timely basis. For example, profits would be realised through the sale of wine for up to three years and in some instances four to ten years for fortified wines, while the long production cycle of forests would mean that realization would feasibly not be for between 20 to 40 years. Consequently, financial statements users can develop unrealistic expectations of distributable profits, creating pressure for entities to declare and pay dividends for which no funds are available.

Second, additional volatility was introduced into reported profits. The value of many SGARAs can be impacted by changes in the world economy, changes in government policies, volatility in world commodity prices and natural events such as rain, hail, insects, drought, flooding and disease. For SGARAs such as cotton crops, wheat crops, grapevines and livestock with shorter production cycles this volatility was considered unnecessary and misleading.

A third concern was that allowing recognition of estimates in income statements could result in significant adjustments in subsequent periods. This it was argued allowed greater opportunities for companies to massage their accounts in any financial year, depending on whether they wished to show higher or lower earnings.

Valuation of SGARAs at net market value was the second most common area of concern (i.e. 18 out of 42 submissions). Two main issues were raised. First, there was perceived practical difficulty in valuing SGARAs for which there are no active and liquid markets, particularly since SGARAs were to be valued separately from related assets such as the land on which they are located. Holders of grapevines argued that with a vineyard there is never an intention to sell the vines separately from the land, and even if a market existed for grapevines it would not make economic sense. Further, there are difficulties determining net market value for grapevines because the value of a vineyard depends on many factors beyond the number and types of vines planted such as geographical location, water access, irrigation methods, trellis method, vine spacing and topographical and climatic aspects.

Second, holders of forest assets were concerned with the subjectivity of estimates, and the potential for manipulation of values. This would be possible since the net market value of forests would likely be based on the net present value of the volume of merchantable timber. As one holder of forest assets explains:

> *We also have concerns with the ability to manipulate assumptions in determining net market value. The sensitivity of the discount*

> *rate is just one thing that can have a significant impact on the valuation of net market value and also a significant impact on the annual profit and loss statement as the movement year on year is allocated there.* (AASB, 2005)

Impact of AASB 1037

Despite the publicity surrounding the standard, there have been only two examinations by Booth and Walker (2003) and Herbohn (2006) of the impact of AASB 1037 on reporting entities. The first by Booth and Walker (2003) considers the valuation of SGARAs in the Australian wine industry, focusing on five public companies and two smaller listed companies that dominate the wine-making industry. Collectively, the five public companies account for more than 60% of Australia's wine production and they concluded that:

> *[t]he application of AASB 1037 results in false or misleading statements and a reduction in the presentation of relevant financial information.* (p. 59)

The specific impacts extracted from the 2000/2001 accounts of the reporting entities that they surveyed are as follows.

- For three of the entities, the effect of applying AASB 1037 was to increase reported profit by as much as 33 per cent (Southcorp), 43 per cent (Cranswick) and 198 per cent (Pipers Brook).
- Due to the subjectivity involved in determining net market values for grape vines for which there is no active and liquid market, the values attributed to vines ranged from A$7,000 per hectare to A$39,000 per hectare.

- Despite the requirements of AASB 1037 to disclose significant assumptions made in determining net market values, most of the reporting entities simply advised that they had adopted 'certain assumptions' without providing further explanation.
- The entities surveyed based their assessment of net market values of vines on the basis of net present values of prospective future cash flows that were at directors' valuation (i.e. based on in-house analysis rather than external valuations).

The second study by Herbohn (2006) focused on the impact of compliance with AASB 1037 for listed companies between 1999 and 2004. A total sample of 34 companies complying with AASB 1037 was identified. Fourteen of this sample held grape-vines, eight had timber assets, four held livestock, three had crops, two had mixed crops, livestock and orchards, one had orchards, one had live finfish and one held oyster beds for pearl production.

A review of their financial statements revealed that the standard had a significant impact on reported net profits. The median SGARA revenue expressed as a percentage of reported profits ranged from 14 per cent in the year of compliance, through 20 per cent one year after compliance, to 18 per cent three years after compliance. In some cases, companies with material holdings of crops, grapevines, livestock and finfish reported annual aggregate SGARA revenues that were many times larger than the reported net profit or net loss for the period. For example, Ridley Corporation reported an increment in the value of livestock of A$91.48m and a net profit of A$12.09m in the year of compliance, and an increment in livestock of A$58.06m and net profit of A$32.20m in the year after compliance. Also, Chiquita Brands South Pacific reported total SGARA revenue from crops of A$60.95m (year of compliance), A$70.22m (one year after compliance) and A$25.95m (three years after compliance), while reporting operating losses of A$12.21m, A$18.51m and A$6.41m respectively.

There has also been volatility in the reported SGARA revenues over the four-year window since first compliance with AASB 1037. The coefficient of variation for the four years was high for crops (107.78%), timber (91.40%), grapevines (75.14%) and livestock (53.12%).

There is also variability in the methods used to determine the net market values of SGARAs, that in turn influences the amount of the unrealised revenues or expenses included in profit. Only six out of 34 companies reported SGARAs valued at net market values observed in active and liquid markets. Of these six companies, three held livestock, one company held standing crops of sugar cane, another held finfish, and one held timber. The majority of companies reported the best available indicator of net market value. These included net present values, insured amounts of the SGARAs, and the difference between the net present values of the expected cash flows from the SGARA and the net market value of the land (and any improvements) on which it is located. Interestingly, while six companies noted that SGARAs were reported at net market value, the valuation method used was not disclosed. Directors undertook most of the valuations of SGARAs not based on prices observed in active and liquid markets (20 out of 27 companies). The disclosure of significant assumptions necessary to determine net market values was cursory in most cases.

In summary, evidence of the impact of AASB 1037 on the financial statements of reporting entities from Booth and Walker (2003) and Herbohn (2006) suggests the following:

- Compliance with AASB 1037 has resulted in the inclusion of significant amounts of unrealised income in reported profits (very few reporting entities report net expenses from SGARAs). Also, there has been significant volatility in the reported income from SGARAs over the four-year period since compliance with the standard.
- There has been subjectivity in estimating net market values where there are no active and liquid markets for the SGARAs. Specifically, a range of valuation methods have been used, in-house valuations in

the form of directors' valuations has dominated and there has only been cursory disclosure of any necessary assumptions.

AASB 141 'Agriculture': problems and prospects

The practical experiences with AASB 1037 previously outlined provide insights into the issues surrounding the implementation of AASB 141. To place these experiences in context, the requirements of AASB 141 are now compared with those of AASB 1037, and a consideration of the potential problems and prospects of AASB 141 follows.

The requirements of AASB 141 'Agriculture'

The scope of AASB 141 is similar to AASB 1037. The standard AASB 141 applies to biological assets – that is living animal and plants – that are held as part of agricultural activity. Agricultural activity is defined in paragraph 5 as 'management by an entity of the biological transformation of biological assets for sale, into agricultural produce, or into additional biological assets'.

The required measurement of biological assets in AASB 141 is also comparable with AASB 1037. The latter standard specified measurement at net market value, which was the amount that could be expected from the disposal of the SGARA in the ordinary course of business, while the former specifies measurement at fair value less estimated point-of-sale costs on initial recognition. Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Similar to AASB 1037, alternate valuation methods are permitted under AASB 141 if an active market does not exist for a biological asset. Fair value can be determined with reference to the most recent market transaction price (para. 18), market prices for similar assets (para. 18), sector benchmarks (para. 18), or the present value of expected net cash flows (para. 20). In circumstances where there is little biological

transformation, or the impact of biological transformation on price is not expected to be material, cost can be used to approximate fair value (para. 24).

One difference between AASB 1037 and AASB 141 is that AASB 1037 operated under the presumption that net market values of SGARAs are always reliably measurable. In contrast, AASB 141 allows an entity to rebut the presumption that fair value can be measured reliably upon initial recognition of a biological asset. Since this is allowed only upon initial recognition, Australian companies that have already applied AASB 1037 to existing SGARAs at their date of transition to International Financial Reporting Standards have not been able to avail themselves of this provision in AASB 141. Rebuttal is possible if market-determined prices are not available, and alternative estimates of fair value are clearly unreliable (para. 30). In this situation, the biological asset is measured at cost less accumulated depreciation and impairment losses. When fair value can be reliably measured, an entity is required to switch from cost to fair value, which will be maintained as a measurement base until the disposal or retirement of the biological asset concerned.

As was the case with AASB 1037, unrealised income and expenses are included in reported profit in accordance with the requirements of AASB 141. Specifically, AASB 141 requires that gains or losses on initial recognition and from a change in fair value of a biological asset are to be included in profit or loss for the period in which it arises (para. 26). In addition, gains or losses on initial recognition of agricultural produce harvested from a biological asset less point-of-sale costs are to be included in profit or loss for the period in which they arise (para. 28).

Finally, AASB 141 requires additional disclosures to AASB 1037 that explain changes in the value of biological assets held over the period. Entities are required to present a reconciliation of changes in the opening and closing carrying amounts of biological assets that includes the gain or loss from changes in the fair value, increases due to purchases, decreases due to sales, decreases due to harvest, increases from business combinations, net exchange differences arising from financial statement translation, and other changes.

Problems and prospects of AASB 141 'Agriculture'

It is clear that reporting entities with material holdings of biological assets such as grapevines, livestock, crops and timber were not supportive of the requirements of AASB 1037 prior to its implementation. The issues that were raised regarding the inclusion of unrealised income in reported profit or loss, and the subjectivity and practical difficulties associated with estimating net market values of many biological assets have not been resolved after four years of compliance with AASB 1037.

There are many similarities between the requirements of the current standard AASB 141 and its predecessor AASB 1037. Thus, despite maintained opposition to AASB 1037, there is little doubt that Australian reporting entities will be able to readily comply with the requirements of AASB 141. There will be few problems with implementation bottlenecks. Instead, the critical issue for Australian reporting entities will be whether the outcomes of reporting on agricultural activity under AASB 141 are desirable. That is, does this reporting provide users of financial statements with relevant, reliable, decision-useful information?

To illustrate, consider the reporting experience of the Australian company Ridley Corporation that has material livestock holdings and has complied with AASB 1037 since 30 June 2001. A key issue is whether statement users were provided with more relevant information if net biological asset revenue of A$91.48m was reported in the year of compliance with AASB 1037 when the operating profit was A$12.09m whereas three years from compliance the reported SGARA revenue was equal to A$19.40m and the operating profit was A$31.30m? Does this type of agricultural accounting practice allow the financial statements to reflect the inherent risk of an investment in livestock faced by the company – that is, the underlying economic substance of an investment in biological assets? Does the use of net market value provide a relevant basis for assessment of the management of Ridley Corporation by indicating the effects of the decisions to buy, sell or hold biological assets over the three-year period considered? Alternatively, does the volatility in the reported unrealised revenue arising from increments in the net

market value of livestock held by the company act to confuse external financial statement users?

A further question is whether the choice of valuation methods available to directors of reporting entities where there are not active and liquid markets for the biological assets is appropriate. Drawing from the Australian experiences, will statement users be more informed if a reporting entity such as Foster's Group discloses the following in its annual report?

> *The net market value of grapevines has been determined as the difference between the net present value of cash flows expected to be generated by the vines associated with the vineyards and the net market value of the land on which the vines are growing. In determining the net market value the Directors have made certain assumptions regarding the market price of vintage 2002 grapes and the growth and quality of grapes on the vines at reporting date.* (Foster's Group, Annual Report, Note 15, p. 29)

Alternatively, does the variety of methods used to determine net market value/fair value when active and liquid markets do not exist for a biological asset simply reflect the diversity of biological assets that can fall within the scope of AASB 141? Such questions will be investigated in the next two chapters.

5 Methodology and Results: Questionnaire Survey

Introduction

As mentioned in chapter one, a number of agricultural entities, banks, and professional accountancy bodies around the world were very vocal in their opposition to the proposals in the Exposure Drafts which preceded IAS 41. But there were also many proponents of the standard who argued that fair value accounting for biological assets is superior to the historical cost model. For example, the Australian Accounting Research Foundation published a discussion paper on this topic in May 1995 (Roberts, Staunton, and Hagan, 1995), which pre-dates the IASC's pronouncements on agriculture, and can, in retrospect, be seen as a blueprint for IAS 41. This chapter investigates some of the perceived merits, demerits, and potential implementation bottlenecks of the fair value accounting approach prescribed by the standard from the perspective of accountants and auditors of agricultural businesses.

This study uses a questionnaire survey and analysis of archival records, in order to address the research questions. A questionnaire was designed and administered to accountants and auditors who are actually involved in the implementation of IAS 41. The questionnaire elicited their perceptions regarding the measurement and disclosure provisions of the standard. In addition, an analysis of annual reports of agricultural entities in the UK, France and Australia, was undertaken. The results of the questionnaire survey are presented in this chapter while chapter six is largely devoted to the analysis of annual reports.

Sampling

The sample of companies for the survey comprised 40 in-house company accountants and 40 independent accountants or auditors of agricultural entities in each of the three countries. Company accountants were drawn from entities that are currently required by law to adopt IAS 41 or are likely to do so in the near future if recent proposals to make the standard applicable to small and medium sized entities are approved.

Australian auditors and independent accountants were selected randomly from the Certified Public Accountants' online directory of member firms (CPA Australia) that specialise in farm accountancy services. The French sample of accountants and auditors included members of l'Union Nationale des Experts-Comptables Agricoles (UNECA) who are listed in the online regional register of the Association Régionale des Experts-Comptables Agricoles (ARECA). Similarly, 40 potential UK respondents were drawn randomly from the UK200 group's online directory of agricultural accountants and the membership register of the Institute of Chartered Accountants in England and Wales' farming and rural business special interest group.

Questionnaire

Two questionnaires were designed for this study, one for in-house accountants and the other for external auditors and independent accountants. The English version of the questionnaires was translated by a London-based firm of translators, and then reviewed by a bilingual accountant, before the final French language version was produced. Each questionnaire was divided into four parts. Part A elicited general information about the nature of biological assets. Part B focused on valuation methods that are appropriate for each type of asset. Part C contained 10 questions on the fair value measurement model prescribed by IAS 41, while Part D related to 15 mandatory disclosure items.

The questionnaires were mailed to 80 potential respondents in each of the three countries during the summer of 2008. Out of 240 questionnaires, 60 responses were returned, making a response rate of 25%. These included 23 from Australia, 7 from France, and 30 from the UK. Although the response rate for France was very low, many French respondents returned their uncompleted questionnaires along with notes, or follow up telephone calls, or email messages, explaining the reasons why there were unable to fill out the questionnaire.

These reasons fall into three broad categories. First, most of the non-respondents stated that they could not participate in the survey because their companies are not required by law to adopt fair value accounting for biological assets. In this regard, it is important to note that, under current European regulations, IFRS are only mandatory for the consolidated accounts of listed companies. Agricultural entities in France that do not have subsidiaries are not required to adopt IFRS.

Second, a significant number of non-respondents admitted candidly that they could not fill out the questionnaire because they were not conversant with IAS 41 and none of their clients were using it. The third category of reasons given for not completing the questionnaire was that the respondent's company (or client companies) are agricultural undertakings that fall within the scope of the French Plan Comptable Général Agricole which is totally incompatible with the fair value model enshrined in IAS 41.

Analysis of results

Valuation methods for biological assets

In parts A and B of the questionnaire, in-house accountants were asked to indicate the valuation basis of up to three significant biological assets possessed by their organisation. External auditors and independent accountants were asked to state the most common valuation basis for up

to three biological assets with which they were familiar from professional experience.

Given the low response rate, it was not possible to carry out statistical analysis in terms of each category of respondent: e.g. company accountant, external auditor, or independent accountant. A summary of the results presented in Table 5.1 shows that the historical cost model is still the most widely used valuation basis for biological assets in all the three countries. France had the highest percentage of biological assets that are valued on a historical cost basis at 67% compared to the UK (44%) and Australia (32%). This means that the level of adoption of the fair value method, and the surrogates for fair value shown in Table 5.1, is relatively high in Australia (68%) than in the UK (56%) and France (33%).

However, since only seven French questionnaires were returned, probably also reflecting the very small number of entities in France that fall within the scope of IAS 41, the degree of international harmonisation was assessed involving only Australia and the UK using the chi-square test as shown in Table 5.2. The low frequencies for net realisable value, recent market price, and price for similar asset, were re-coded as 'other methods'.

Table 5.1 Methods of valuing biological assets

Valuation method	Country			Total
	Australia n=40	France n=9	UK n=57	
Historic cost	13 (32%)	6 (67%)	25 (44%)	44 (42%)
Independent valuation	5 (13%)	0 (0%)	15 (26%)	20 (19%)
Net realisable value	5 (13%)	0 (0%)	8 (14%)	13 (12%)
Net present value	5 (13%)	0 (0%)	6 (11%)	11 (10%)
Fair value	8 (20%)	1 (11%)	1 (2%)	10 (9%)
Market price for similar assets	3 (7%)	1 (11%)	2 (4%)	6 (6%)
Recent market transaction price	1 (2%)	1 (11%)	0 (0%)	2 (2%)
Total	40	9	57	106

Table 5.2 Comparing Australian and UK methods of valuing biological assets

Valuation method	Country		Total
	Australia n=40	UK n=57	
Historic cost	13	25	38
Fair value	8	1	9
Independent valuation	5	15	20
Net present value	5	6	11
Other methods	9	10	19
Total	40	57	97

Note:

Chi-square = 11.76, df =4, p = 0.019.

The results indicate that there is a statistically significant difference at the 5% level between the methods of valuing biological assets adopted by Australian and British respondents (Chi-square =11.76, df =4, p=0.019) implying a clear lack of international comparability.

In summary, these findings suggest that although historical cost is the most common valuation basis for biological assets, a variety of proxies for fair value are used, such as net present value, independent/external valuation, net realisable value, and market price, both within and across countries.

Furthermore, the high level of convergence on the historical cost method in all three countries, shown in Table 5.1, could actually be a form of protest against the onerous requirements to value biological assets at fair value at the end of each accounting period. For example, some entities may simply invoke the clause in IAS 41 that requires valuation at historical cost in cases where fair values cannot be determined with reliability, as a means of circumventing the irksome provisions of the standard. The next section considers an assessment of the merits and demerits of IAS 41 from the perspective of practitioners who are called upon to implement it.

Assessing the merits and demerits of IAS 41

Part C of the questionnaire contains 10 questions, based on a 5 point Likert scale, which were designed to ascertain respondents' perceptions regarding the merits and demerits of IAS 41. A summary of the results is presented in Table 5.3 with the items listed in rank order according to overall mean scores. The Mann-Whitney test was used to compare the views of Australian and UK respondents.

Table 5.3 Merits and demerits of IAS 41

		Australia	UK	France	Overall	Australia *vs* UK
		n=23 Mean	n=30 Mean	n=7 Mean	n=60 Mean	Mann-Whitney two-tailed test p-value
1	The fair value accounting model prescribed by IAS 41 increases the volatility of earnings.	3.78	3.80	4.40	3.84	0.884
2	The income statement format which classifies expenses by nature is more appropriate than the income statement format which classifies expenses by functional cost centre	3.41	3.50	3.40	3.45	0.600
3	There is an active and liquid market for the biological asset.	3.30	3.33	3.40	3.33	0.955
4	Costs of measuring and reporting the asset at fair value, in conformity with IAS 41, outweigh the benefits.	3.13	3.38	3.20	3.26	0.466
5	Fair value of biological assets can be measured reliably at the end of each financial year.	3.26	3.13	2.60	3.14	0.814
6	Biological assets that are physically attached to land can be measured at their fair value separately from the land.	3.00	3.27	2.80	3.12	0.434
7	The fair value accounting model prescribed by IAS 41 is superior to the historic cost approach.	3.35	2.53	3.80	2.97	0.005*
8	Holding gains or losses arising from physical or price changes in a biological asset should be recognised in the income statement	3.09	2.73	3.60	2.95	0.324
9	Gains or losses arising from physical or price changes in a biological asset should be taken to the Statement of Recognised Income and Expenses.	3.00	2.43	3.80	2.78	0.084
10	Gains or losses arising from physical or price changes in a biological asset should be included directly in equity through a statement of changes in equity.	2.68	2.23	2.20	2.40	0.088

Note:

Mean scores based on a 5-point scale (1=strongly disagree to 5=strongly agree).

* Perceptions of Australian and UK respondents were significantly different.

The results reveal a number of interesting points. First, there is no statistically significant difference between Australian and UK respondents for nine out of the ten questions in Table 5.3; item seven is the only question with a Mann-Whitney p-value less than 0.05, indicating that the perceptions of Australian respondents were significantly different from those of their UK counterparts. This means that Australian accountants and auditors display relatively strong support for the view that the fair accounting model prescribed by IAS 41 is superior to the historic cost approach.

Second, there is broad agreement amongst all groups of respondents that the three most undesirable features of the standard are:

- The fair value accounting model prescribed by IAS 41 increases the volatility of earnings (item 1 in Table 5.3).
- The costs of measuring and reporting assets at fair values, in conformity with IAS 41, outweigh the benefits (item 4 in Table 5.3).
- Holding gains or losses arising from physical or price changes in a biological asset should be recognised in the income statement (item 8 in Table 5.3).

Third, the three most important features which might facilitate the adoption of IAS 41 can be seen in terms of the level of agreement amongst respondents that:

- The income statement format which classifies expenses by nature is more appropriate than the income statement format which classifies expenses by functional cost centre (item 2 in Table 5.3).
- There is an active and liquid market for the biological asset (item 3 in Table 5.3).
- Fair value of biological assets can be measured reliably at the end of each financial year (item 5 in Table 5.3).

However, UK and Australian agricultural companies that have non-agricultural lines of business will find it virtually impossible to use the income statement format which classifies expenses by nature. Indeed, none of the UK and Australian companies whose financial statements are analysed in chapter six used this income statement format whereas nearly all the French companies adopted this approach.

This means that the above results should be interpreted with caution since the survey has a number of limitations. For example, due to sparse data, it was not possible to assess the way in which the unique features of each category of biological asset might affect the results. Also, some valuation methods, such as the net present value method, or the engagement of independent external valuers, are more widely used in the valuation of forests, orchards, rubber plantations, oil palm plantations and grapevines than other types of biological asset. Furthermore, the existence of an active and liquid market varies from asset to asset.

In the final part of the questionnaire, respondents were asked to rate the importance of each of the disclosure items that are required under IAS 41 using a 5 point scale. The Mann-Whitney test results in Table 5.4 indicate that there was no significant difference in the perceived importance of each of the disclosure items from the point of view of UK and Australian accountants.

Table 5.4 Perceived importance of IAS 41 Disclosures

		Australia	UK	France	Overall	Australia *vs* UK
		n=23 Mean	n=30 Mean	n=7 Mean	n=60 Mean	Mann-Whitney two-tailed test p-value
1	Methods and assumptions in determining fair value.	3.45	3.33	4.00	3.44	0.764
2	Reason for not using fair value if historic cost is adopted.	3.55	3.30	3.60	3.42	0.543
3	Biological assets with restricted title or pledged as security for liabilities.	3.14	3.27	3.40	3.23	0.559
4	Depreciation method and useful lives where fair value cannot be determined	3.05	3.23	3.60	3.19	0.549
5	Description of enterprise's activities involving asset	3.17	2.90	3.80	3.09	0.261
6	Description of each group of biological assets	3.00	3.03	3.80	3.09	0.664
7	Reconciliation showing gain or loss from changes in fair value	3.32	3.03	2.40	3.09	0.496
8	Reconciliation showing changes due to purchase, sales, and harvest.	3.32	2.97	2.80	3.09	0.356
9	Financial risk management strategies for agriculture.	3.32	2.73	2.50	2.95	0.050
10	Fair value estimates where fair value cannot be determined reliably.	2.95	2.90	2.60	2.89	0.862
11	Physical quantity of biological assets	2.91	2.67	3.60	2.84	0.480
12	Commitments for the development or acquisition of biological assets.	2.77	2.59	3.60	2.75	0.532
13	Gain or loss arising from change in fair value of asset	2.78	2.67	2.75	2.72	0.764
14	Reconciliation showing increases due to business combination and net exchange differences.	2.77	2.60	2.40	2.65	0.455
15	Physical quantity of output of agricultural produce	2.65	2.53	2.80	2.60	0.516

Note:

Mean scores based on a 5-point scale (1=of very little importance to 5=of utmost importance).

These results show that the four most important disclosures required by the standard are:

- Methods and assumptions in determining fair value.
- If an enterprise rebuts the presumption that fair value can be measured reliably, an explanation of why fair value cannot be measured reliably should be provided in the notes to accounts.
- Information on the existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities.
- Where fair value cannot be measured reliably, and the enterprise measures biological assets at cost less any accumulated depreciation and impairment losses, it should also disclose the method of depreciation along with depreciation rates or useful lives.

The results also reveal that the five least important IAS 41 disclosures, as perceived by respondents, were:

- Non-financial measures or estimates of the physical quantities of output of agricultural produce during the period.
- A reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current accounting period, showing separately: increases resulting from business combinations, and net exchange differences arising on the translation of financial statements of a foreign entity.
- The aggregate gain or loss arising on initial recognition of biological assets and agricultural produce and changes in fair value during a reporting period.
- Commitments for the development or acquisition of biological assets.
- Non-financial measure or estimates of the physical quantities of each group of biological assets at the end of the reporting period.

Summary

This chapter shows that the historical cost model is still the most widely used valuation basis for biological assets in Australia, France and the UK. The questionnaire survey reveals that the perceived costs of measuring biological assets at fair value, in conformity with IAS 41, outweigh the benefits. Furthermore, there is a strong consensus amongst respondents in all three countries that the fair value accounting model prescribed by IAS 41 increases the volatility of earnings. Also, the survey results indicate that there is moderate support for taking gains or losses arising from physical or price changes in biological assets to income and that the respondents are almost indifferent to the proposal to report these gains or losses directly in equity.

The general feeling on the part of accountants and auditors is that the requirement to value biological assets at fair value is unduly burdensome; hence the continued use of historical cost and a variety of proxies for fair value. This means that IAS 41 is unlikely to enhance the comparability of farm accounting and disclosure practices both within and across countries. The next chapter examines actual practices disclosed in the annual reports of agricultural entities in Australia, France and the UK that are required by law to adopt IAS 41.

6 Methodology and Results: An Analysis of Annual Reports

Introduction

This chapter presents the results of an analysis of the annual reports of agricultural entities in Australia, France, and the UK that are required by law to adopt IAS 41. This is interspersed with relevant extracts and citations from annual reports which support the key points. In general, the results show that agricultural entities in all three countries are using a variety of methods under IAS 41 which constitute a major obstacle to comparability and uniformity. Moreover, nine out of 17 French companies in the sample rebut the presumption in IAS 41 that fair values can be determined with reliability, thus justifying the use of historic cost and circumventing the onerous valuation requirements of the standard. Furthermore, French companies disclose less than 40 per cent of the items of information required under IAS 41. By contrast, the present value of future net cash flows is the most commonly used method in Britain and Australia, often involving independent external valuers, particularly in the forestry and plantation agriculture sectors. These findings accord with Nobes' (2006, 2008a, 2008b) observation that differences of practice exist within IFRS usage and that international accounting standards might be applied systematically differently from one country to another.

Some international differences were also apparent in the attitude of auditors towards IAS 41. For example, the results appear to indicate that French auditors are less inclined to issue qualified reports than their UK and Australian counterparts. However, given the limited number of cases examined in this study, further research is needed to confirm or reflect this finding.

Another interesting finding is that there is strong opposition to IAS 41 in UK plantation companies. Indeed, a number of finance directors and accountants claim that the application of the standard in this sector involves highly subjective estimates and assumptions that could yield wildly different values for the same biological asset. In this regard, a major dispute between auditors, company accountants, directors, independent valuers, and accounting regulators was noted over the choice of an appropriate discount rate, commensurate with future cash flows, in the valuation of forestry assets in one company. This dispute is now the subject of a pending court case involving company directors and stock exchange regulators.

This chapter now examines the valuation methods used by UK, French and Australian companies followed by an assessment of the role of auditors in ensuring that financial statements are prepared in conformity with the standard and that management's assumptions and estimates regarding the treatment of biological assets are appropriate. Finally, the extent of compliance with the mandatory disclosures prescribed by IAS 41 is investigated.

Analysis of annual reports

An analysis of the annual reports of entities in Australia, France and the UK that are required by law to adopt IAS 41, or the Australian AASB 141, was carried out using two checklists, one for methods of valuing biological assets, and the other for disclosures prescribed by the standard. The annual reports selected for analysis relate to the financial year ending in 2006-2007. However, following a decision by Her Majesty's Treasury to defer the implementation of IFRS in government bodies until 2009-2010 (see e.g. Heald, 2008), all UK public sector agricultural undertakings were excluded from the study. The final sample comprised 78 entities whose annual reports were readily available: 26 UK, 17 French, and 35 Australian.

The main types of biological asset in the three countries are summarised in Table 6.1. This shows that some entities possess more than one type of asset and that grapevines account for a very large proportion (59%) of the agricultural activities of the French companies. Similarly, a disproportionate number of the UK companies (39%) are involved in plantation agriculture. By contrast, Australian entities are more evenly distributed and also have the highest proportion of forest, aquaculture, livestock, and crop assets of the three countries.

Table 6.1 Type of biological asset by country

Biological asset	Country			Total
	Australia n=35	France n=17	UK n=26	
	Number of entities	Number of entities	Number of entities	
Grapevines	9 (22%)	10 (59%)	2 (6%)	21 (24%)
Livestock	10 (25%)	2 (12%)	6 (20%)	18 (20%)
Plantations	1 (2%)	2 (12%)	12 (39%)	15 (17%)
Forests	8 (20%)	2 (12%)	5 (16%)	15 (17%)
Crops	7 (17%)	1 (5%)	4 (13%)	12 (13%)
Fish farming	5 (12%)	0 (0%)	1 (3%)	6 (7%)
Orchards	1 (2%)	0 (0%)	1 (3%)	2 (2%)
Total	41	17	31	89

Valuation of biological assets

Some of the companies use more than one method to value the same biological asset. For example, the Aquabella Group plc use two methods to value fish, namely the recent market transaction price for harvestable fish that weigh more than 300 grams, and historical cost for other non-harvestable fish whose fair value cannot be determined with reliability. This accounting policy is explained in Note 4 in the company's 2007 annual report:

> *Fair value is determined from the average selling price achieved in the month of valuation less distribution costs. The accounting treatment for the biological stock of live fish under IFRS is governed by IAS 41 'Agriculture'... The Directors consider that fair value can be estimated in accordance with IAS 41 for fish that are harvestable (over 300g). For non-harvestable fish (under 300g) it is the opinion of the Directors that it is not possible to make a reliable estimate of the fair value due to biological uncertainties, price fluctuations and non-saleability of smaller fish. The Directors have therefore decided to use the exemption in IAS 41 paragraph 30 and value these fish at cost. This policy is consistent with the industry's interpretation of IAS 41 and has been used by similar companies which have adopted IFRS.*

The valuation methods adopted by all the companies in this study are summarised in Table 6.2. These results show that historical cost was the dominant approach used by French companies with an overall adoption level of 45%. By contrast, the present value of future net cash flows was the most frequently used method in Australia (41%) and the UK (27%).

Two further inferences can be drawn from the data in Table 6.2 and Table 6.3. First, the variety of valuation approaches used by agricultural entities indicates that IAS 41 has failed to enhance the comparability

of farm accounting practices within each of the three countries. This finding can be explained in terms of the range of proxies for fair value available to companies under the standard, such as: the net present value, independent valuer's recommendation, sector benchmark price, recent market price, or market price for similar assets. Hence, entities that simply state that their biological assets are measured at fair value, without providing further details on how the latter was derived, may conceal useful information that is not taken into account in Table 6.2.

Second, the chi-square test was used to test for differences in the asset valuation methods of UK and Australian agricultural entities. The low frequencies for market price for similar asset, lower of cost and net realisable value, and recent market price, were treated as 'other methods' in Table 6.3. Surprisingly, the results reveal that there is no significant difference ($X^2 = 2.688$, p-value = 0.611) between the methods used in valuing biological assets in Australia and the UK. A three country comparison was not carried out because the low frequencies for France would have invalidated the chi-square test. Nonetheless, the pattern of results show that although there is a high level of between-country comparability for Australia and the UK, most of the French companies used either historical cost (45%) or a vaguely defined fair value approach (25%). This high level of convergence on only two approaches to the valuation of biological assets in France, unlike Australia and the UK, warrants further analysis.

Table 6.2 Valuation of biological assets by country

Valuation basis	Country			
	Australia n=41	UK n=31	France n=17	Total
Net present value	19 (41%)	10 (27%)	1 (5%)	30 (29%)
Historic cost	7 (15%)	8 (21%)	9 (45%)	24 (23%)
Fair value	5 (11%)	7 (19%)	5 (25%)	17 (16%)
Independent valuation	5 (11%)	5 (14%)	3 (15%)	13 (13%)
Market price for similar asset	8 (18%)	5 (14%)	0 (0%)	13 (13%)
Recent market price	1 (2%)	2 (5%)	2 (10%)	5 (5%)
Lower of cost & net realisable value	1 (2%)	0 (0%)	0 (0%)	1 (1%)
Total	46	37	20	103

Table 6.3 Comparison of Australian and UK valuation methods

Country	Valuation method					Total
	Historic cost	Fair value	Independent valuation	Net present value	Other methods	
Australia	7	5	5	19	10	46
UK	8	7	5	10	7	37

Note:

Chi-square = 2.688, df=4, p-value = 0.611

It is noteworthy from Table 6.1 that an overwhelming majority (59%) of entities in France that are required by law to adopt IAS 41 are engaged in viticulture (grape growing), signalling a need for further analysis of the accounting treatment of vineyard assets. One interesting conclusion emerging from a review of the accounting practices in this industry is that most French viticulture companies tend to adopt historical cost under IAS 41 either on the grounds that it is not possible to determine the fair value of grapevines with reliability or simply because there is no significant difference between the fair value and the historical cost of these assets. At the same time, a minority of French companies use the fair value approach in valuing their grapevines. This apparent contradiction points to the conclusion that IAS 41 not only encourages highly subjective valuations, but is also subject to manipulation since companies can readily invoke the option to use historical cost as a means of circumventing the onerous requirements to measure biological assets at fair value.

To evidence this point, the accounting policies of three French companies in the sample claim that the fair value of grapevines is not significantly different from their historical cost (LVMH Moët Hennessy Louis Vuitton, Christian Dior and Boizel Chanoine Champagne) whereas another company in the same industry (Henri Maire) used the fair value method to value its grapevines, as discussed below.

Accounting policies of French agricultural companies

The treatment of biological assets by the LVMH Moët Hennessy Louis Vuitton Group is outlined on page 44 of its 2007 annual report:

> *Vines for champagnes, cognacs and other wines produced by the Group, are considered as biological assets as defined in IAS 41 Agriculture. As their valuation at market value differs little from that recognised at historical cost, no revaluation is undertaken for these assets.* (Company's translation)

Essentially, LVMH uses the argument that the market value of its vines is not substantially different from historical cost to justify non-compliance with the fair value approach enunciated in IAS 41. The company makes no further reference to biological assets in the remainder of its annual report although there is some discussion of the valuation of vineyard land at fair value in conformity with IAS 16. Interestingly, the accounting policy adopted by Christian Dior, another French company with significant vineyard assets, is remarkably similar to that of LMVH. Christian Dior's treatment of biological assets is stated on page 99 of its 2007 annual report thus:

> *Vines or vineyards for champagnes, cognacs and other wines produced by the Group, are considered as biological assets as defined in IAS 41 Agriculture. Since their valuation at market value differs little from that recognised at historical cost, no revaluation is undertaken for these assets.* (Authors' translation)

Again, no further reference was made to IAS 41 elsewhere in Christian Dior's annual report. A third example of a leading French company that uses historical cost because it is not significantly different from fair value is Boizel Chanoine Champagne. This accounting policy is stated on page 69 of the company's 2007 annual report:

> *The vines or vineyards for the Champagnes produced by the Group represent biological assets as per IAS 41 Agriculture. Since their market value is not particularly different from their historical value, these assets are not revalued. The vines cannot be dissociated from the land on which they are grown. For vines to be eligible for the Champagne appellation label, they must be planted on a plot of land that is eligible for this label. Plantation costs incorporate the vines and are depreciated on a straight-line basis over 25 years. These plantations are intended to be dug up at the end of*

> *the depreciation period, and replaced with new plantations. The ageing of plantations generates a decreasing yield.* (Company's translation on pp. 71 and 104 of 2006 Reference Document filed with the Autorité des Marchés Financiers)

But Henri Maire, another major wine producer, breaks ranks with these other three French viticulture companies by stating unequivocally that it has complied fully with the fair value measurement basis prescribed by IAS 41 on page 13 of its 2007 annual report:

> *The financial statements have been prepared on a historical cost basis, except for biological assets which have been valued at fair value less estimated point of sale costs in accordance with IAS 41…*
>
> *The group has adopted the income statement format which classifies costs by nature. Gains or losses arising from changes in the fair value of biological assets are disclosed separately in the income statement. The carrying amount of biological assets is also shown separately on the balance sheet in conformity with IAS 1 and IAS 41.*
>
> *In the absence of an active and liquid market, a valuation method based on recent market transaction prices can be used. In line with this requirement, all vineyards (grapevines and land) possessed by the group or held on a leasehold basis were valued at fair value. The latter was determined by reference to market values published each year by FNSAFER (Fédération Nationale des Sociétés d'Aménagement Foncier et d'Etablissement Rural) which cover all the different appellation labels.*
>
> (Authors' translation)

The fact that Henri Maire was able to value its grapevines at fair value, using recent market prices for different appellation labels published annually by FNSAFER, whereas other French companies valued their grapevines at historical cost, bears testimony to a lack of comparability and harmonisation of accounting practices in this sector. The availability of market prices that are published on a yearly basis by the Fédération Nationale des Sociétés d'Aménagement Foncier et d'Etablissement Rural raises the question as to why other French viticulture companies do not use the fair value approach adopted by Henri Maire.

Furthermore, the general tendency for French companies to use historical cost in lieu of fair values when valuing biological assets is also evident in the forestry sector. For example, while UK and Australian companies typically value forests using net present values as surrogates for fair values, French forestry companies tend to justify the use of historical cost under IAS 41 on the grounds that reliable estimates of fair value are not available. The following extract from page 37 of Vallourec's 2007 annual report illustrates this point:

> ***Biological assets***
>
> *The Group's Brazilian subsidiary V&M Florestal cultivates eucalyptus forests in order to produce charcoal used in V&M do Brasil's blast furnaces. As at 31 December 2007, the company was cultivating about 184,227 hectares of eucalyptus forests compared with 177,413 hectares as at 31 December 2006 and 177,076 as at 31 December 2005.*
>
> *In the absence of a benchmark market for V&M Florestal, which is fully integrated into the production cycle of V&M do Brasil, its main customer, the measurement at fair value required by IAS 41 'Agriculture' is not appropriate. Instead, in accordance with the exemptions provided by IAS 41, the forest is recognised in the consolidated financial statements at its fair value on the acquisition date.*
>
> (Company's translation)

However, Vallourec does not explain why it fails to consider the present value of expected future net cash flows, the most common surrogate for fair value used by Australian and UK companies, to value this forest as required under IAS 41.

A final reason why French companies tend to use historical cost rather than fair value is the scale of the operations involving biological assets relative to other business segments. For example, the following accounting policy adopted by Evialis SA, a company that specialises in the production of animal feed and dietary products bears this out (Evialis Annual Report, 2007, page 100):

> *Some Group subsidiaries own biological assets (animals) in line with Group's policy of vertical integration. These animals are kept for the purpose of being sold. These assets are recognised as inventories, because they are considered to be elements of operating working capital needs. The Group considers that the fair value of such assets is their cost, and the profit or loss on their sale is recognised at the end. This activity is marginal and the amounts involved are not significant for the Group compared with its other activities. Biological assets held for research and development purposes represent a marginal amount.* (Company's translation)

The general tendency for French companies, unlike their UK and Australian counterparts, to value biological assets at historical cost under IAS 41, revealed in Table 6.2, can also be explained in terms of the cultural influences identified by Gray (1988). In particular, Gray argues that the notion of conservatism is a construct of culture which varies according to country 'ranging from a strongly conservative approach in the Continental European countries, such as France and Germany, to the much less conservative attitudes of accountants in the USA and UK' (Gray, 1988, p. 8). Gray defined conservatism as a preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-

taking approach. He goes on to argue that French accountants have a much stronger affinity for conservatism than their Anglo-American and Australian counterparts. Hence, they are likely to prefer the more conservative historical cost basis of valuation as opposed to the fair value approach and its attendant uncertainties. By contrast, Australian and UK accountants are likely to adopt more adventurous valuation strategies under uncertain conditions. In the context of IAS 41, these results provide some support for Nobes' (2006, 2008a, 2008b) claim that different national versions of IFRS practice have emerged in recent years as a new feature of comparative international accounting. This point is now examined in the context of the valuation of agricultural plantations in different national settings.

IAS 41 and the valuation of oil palm, rubber, and forest plantations

As Table 6.1 shows, most of the UK companies that are required by law to adopt IAS 41 own plantation estates in tropical countries which were once British colonies. Many accountants who work in plantation and forestry companies have expressed the view that the application of IAS 41 in these sectors involves highly subjective estimates which inevitably impair comparability across companies and the ultimate goal of international harmonisation and convergence. It is therefore not surprising that the standard was not well received by accountants, company directors, and auditors in plantation and forestry companies where it provoked heated debates and protests.

For example, the directors of New Britain Palm Oil plc, the largest palm oil producer in Australasia with vast expanses of palm plantations, openly declared their resolve not to adopt IAS 41 despite receiving qualified audit reports from their auditors, PricewaterhouseCoopers, for non-compliance over three successive financial years. The directors explained the reason for not adopting IAS 41 on page 32 of their 2006 annual report as follows:

Non-compliance with IAS 41

IAS 41 Agriculture became applicable for accounting periods commencing on or after 1 January 2003. IAS 41 applies to all agricultural activity and, in substance, requires all biological assets and agricultural produce to be measured at fair value. The Directors have resolved not to comply with IAS 41 on the basis that:

- *The adoption of IAS 41 and the fair value measurement basis for biological assets and agricultural produce has not yet become generally accepted practice in the palm oil sector, either in Papua New Guinea or Malaysia, the country where the parent entity is based and where the majority of global palm oil activity takes place.*
- *It is not considered possible to determine variables such as palm oil prices, exchange rates and production yields over the productive life of oil palms with sufficient reliability, particularly in the absence of generally accepted palm oil industry practice.*
- *Without sufficiently reliable variables, the valuation exercise is affected which in turn can lead to significant fluctuations in accounting valuations and profitability whilst bearing no relation to the company's actual financial performance by unnecessarily overstating profit and losses.*
- *The Directors do not believe that presenting the financial statements on the basis of IAS 41 at this time for long term perennial tree crops like oil palm will provide information that is more relevant, useful and understandable to the users of the financial statements than under the current basis of accounting.*

The above extract from New Britain Palm Oil's 2006 annual report was also included in earlier annual reports (2003-2005). However, New

Britain Palm Oil plc finally adopted IAS 41 in 2007 and duly received a clean audit report for the first time in four years.

These developments raise a number of interesting questions: why did the directors of New Britain Palm Oil not invoke the IAS 41 option to use historical cost when fair value cannot be determined reliably? Why did they adopt IAS 41 in 2007, having previously argued over 2003-2006 that it was not possible to determine the fair value of palm plantations with reliability? It is not clear why the directors did not follow the practice of many French companies that justify the use of historical cost under IAS 41 by arguing that the standard allows valuation at cost in cases where fair values cannot be measured reliably. This is precisely the policy adopted by Inch Kenneth Kajang plc, another plantation company operating in the same region. Inch Kenneth Kajang used this approach, thus avoiding the onerous fair value measurement procedures of IAS 41, as stated on page 21 of its 2007 annual report:

> *The Group's biological assets consist of oil palm tree plantations. According to IAS 41 'Agriculture', biological assets should be valued annually at their fair values. The gain or loss in fair value of biological assets is to be included in the income statement.*
>
> *The Group has used IAS 41's cost model to value the biological assets because the Directors believe that fair values cannot be measured reliably as the trees on the plantations are mature (greater than 25 years old). At 31 December 2007 the costs of the biological assets have been fully depreciated. Even though the plantations are still producing income the Directors believe that any attempt to revalue the plantations to their fair values would not be reliable as market-determined prices or values are not readily available and alternative estimates of fair value are unreliable. The biological assets (i.e. the oil palm trees) are therefore carried in the Company's and Group's financial statements at a nil net book value.*

The accounting policy outlined above is clearly debatable because the aging plantations are still generating income and a nil book value might be hard to justify. However, unlike the case of New Britain Palm Oil plc, their auditors apparently concurred with this treatment of biological assets by not issuing a qualified report. In view of the risks and uncertainties associated with the expected future cash flows of palm and rubber plantations, Michael St Clair George, the Managing Director of Société Internationale de Plantations et de Finance (SIPEF), a company with extensive oil palm, rubber, and other tropical plantations, points out (St Clair George, 2007, page 80) angrily that fair value measurement of biological assets is 'making a nonsense' of his company's results. SIPEF values its rubber and oil palm trees using the present value of expected net cash flows. In this regard, Michael St Clair George articulates some of the most commonly held views of directors, accountants, and auditors of plantation companies that are required to adopt IAS 41:

> *As there is no market for these trees, per se, we have had to value them on a discounted cash flow (DCF) basis. This involves selecting a number of variables, including a biological yield depending on the age of the tree, a unit cost, a future commodity selling price, a discount rate and an exchange rate. The annual variation in any of these, either singly or severally, could have a hugely material effect on our results so as to make them totally misleading. In conjunction with our auditors, valuers and other experts, we have endeavoured to select assumptions that measure fair value consistently; but however assiduous we are, the figures are an opinion and lack the certitude of historical cost.* (St Clair George, 2007, page 81)

The above concerns are not confined to plantation agriculture; indeed similar worries were echoed in the forestry sector. For example, as the following annual report extracts indicate, Highland Timber plc, a UK forestry company, wavered on its decision to implement IAS 41

after announcing the imminent adoption of the standard in 2006. The company subsequently deferred implementation because of the perceived enormity of the task, the subjective assumptions and estimates involved, and the need to 'limit any chance of confusion':

> *One principal requirement which will however impact us after this year end is the requirement under IAS 41 Agriculture, to revalue our forests at fair value every year. This is not an easy task. Very few commercial forests have been sold on the open market in recent years and each has its own characteristics of size, location, age and quality, making direct comparisons difficult. In the past we have had the forests valued by professional valuers every three years with management judgments applied in the intervening years. In future they will be valued by outside valuers every year with management judgments only applying at the half year.* (Highland Timber, Annual Report, 2006, page 3)

> *We reported last year that we were considering adopting new IFRS accounting standards during 2007. We have now decided to defer this decision to limit any chance of confusion, particularly during the forest sale process. The difficulty in placing a precise value on the forests during the sale process is clear...* (Highland Timber, Interim Report, 2007, p. 2)

It should be noted, however, that Highland Timber plc sold its forestry assets, and then delisted from the Alternative Investment Market of the London Stock Exchange in December 2007, and was no longer required to adopt International Financial Reporting Standards.

Fair value accounting for biological assets: the perspective of auditors

Auditors play an important role in ensuring that financial statements are prepared in conformity with accounting standards and that management's assumptions and estimates are appropriate. However, Zeff (2007, p.293) observes that there are different auditing cultures across countries, and, in some European countries, there is an inclination not to issue a qualified opinion if the company's financial statements depart from national accounting standards. In particular, he points out that, in some countries, a qualification may not be given because of the touchiness, sensitivity or anxiety arising over an auditor 'publicly questioning a major company for its choice of financial reporting methods'.

To some extent, Zeff's observations are applicable to auditors' attitudes toward the application of IAS 41. Unlike their UK and Australian colleagues, French auditors in this study generally appear to be less inclined to issue a qualified opinion even in cases where they admitted that management's estimates and assumptions used in valuing biological assets at fair value were unreliable. For example, St Clair George (2007, p. 81), a chartered accountant who is also the Managing Director of SIPEF, provides a vivid illustration of this point when he explained the plight of his own company's auditors who actually believed that their IAS 41 accounts were patently unreliable, but nonetheless declined to issue a qualified report:

> *In conjunction with our auditors, valuers and other experts, we have endeavoured to select assumptions that measure fair value consistently; but however assiduous we are, the figures are an opinion and lack the certitude of historical cost. This lack of certainty has led our auditor, one of the Big Four, to include the following statement in their report on our accounts:*

'Without prejudice to the unqualified opinion issued above, we draw attention to the consolidated annual report, with regard to the valuation of the biological assets, referring to the fact that, because of the inherent uncertainty associated with the valuation of the biological assets due to the volatility of the prices of the agricultural produce and the absence of a liquid market their carrying value may differ from their realisable value.'

The fact that our auditors have had to draw the reader's attention to the uncertainty in the accounts caused by this standard is a damning indictment of it. I have yet to meet anyone who disagrees. In view of the widespread uncertainty this has caused, we isolate the effects of IAS 41 in our published figures so that the reader can see the results before and after the effects of this standard. In the interests of industry, commerce and the investing community, let's get some common sense into the debate, starting with the abandonment of the notion of fair value in accounting statements. How this arrant nonsense ever got into print is beyond me. It is just the sort of pseudo-technical tosh that makes the profession a laughing stock.

Interestingly, the audit report of another plantation company, the Société Internationale de Plantations d'Heveas (SIPH), follows a similar format to that of SIPEF analysed in the above passage in that, having issued an unqualified audit opinion, the auditors go on to state further that:

Without prejudice to the unqualified audit opinion issued above, we draw your attention to Note 3-9 'Biological assets' and Note 9 'Fair value measurement of the group's biological assets (rubber plantation)' in conformity with IAS 41. These notes state that, in the absence of a liquid market, fair value was determined on

the basis of the present value of future cash flows and that changes in the market price of rubber, discount rates, and their future trends, are likely to create significant volatility in the value of the rubber plantations. (Authors' translation, SIPH, Annual Report, 2007, p. 133)

In the foregoing extracts from the audit reports, the auditors apparently felt the need to attach health warnings, akin to emphases of matter, to their clean audit opinions which draw the reader's attention to inherent uncertainties regarding the valuation of biological assets under IAS 41. Two further examples in other jurisdictions are used to illustrate some major disagreements between auditors and management over the measurement of biological assets at fair value and the inclination to give a qualified opinion. The first example is the case of the Auditor General of New South Wales, Mr Peter Achterstraat, who, facing similar circumstances as his counterparts in SIPEF and SIPH, did not hesitate to issue a qualification. As the following extracts from his report show, he qualified the accounts of the Department of Primary Industries because he could not confirm management's assumptions that underpin the valuation of native forests:

Qualified Auditor's Opinion

In my opinion, except for the effects of such adjustments, if any, as might have been determined to be necessary had I been able to satisfy myself as to the valuation of the Biological Assets, the financial report presents fairly, in all material respects, the financial position of the Department...

Basis for Qualified Auditor's opinion - Biological Assets

Note 1(l) under the heading Native Forest Timber discloses that there are assumptions and uncertainties relating to the valuation of

> *these forests. Forests NSW has been unable to provide me with all the information that I require to confirm these assumptions. This together with the Forest NSW's ongoing intention to apply a new inventory regime means I am unable to form an opinion on the value of Native Forest Timber included within biological Assets. I have been unable to carry out audit procedures to quantify the possible adjustments to the financial report that might have been necessary had this limitation not existed.*
>
> (Extracts from the Auditor General's Report, 2007 Annual Report, NSW Department of Primary Industries, p. 108)

The second example relates to a major dispute over the correct application of IAS 41 in Touchwood Ltd, a multinational forestry concern in Sri Lanka, involving the company's directors, its auditors (KPMG) and the Sri Lankan Accounting and Auditing Standards Monitoring Board (SLAASMB). According to local newspaper reports, the SLAASMB and the local stock exchange regulatory body launched an investigation into the company's accounting practices because it unexpectedly reported a 103 per cent rise in net profit following its first-time adoption of IAS 41. Sri Lankan regulators argued that the company was not able to provide defensible estimates of discount rates and the future cash flows used in the valuation of its forestry assets. The regulators go on to state that Touchwood's method of valuing biological assets is not in accordance with IFRS and that historical cost is the correct valuation basis under IAS 41 because it is not possible to value the forests reliably at fair value.

Accordingly, Touchwood Ltd was directed by the Securities and Exchange Commission of Sri Lanka, on 9th March 2007, to restate its financial statements for 2005 and 2006 respectively on a historic cost basis. This directive was made at the request of the SLAASMB who argued that the fair value method adopted by Touchwood Ltd was unreliable. But the directors of Touchwood Ltd stood their ground,

asserting that their interpretation of the fair value method was correct and in keeping with IAS 41. They also filed an application in the Court of Appeal against the Sri Lanka Accounting and Auditing Standards Monitoring Board and the Securities and Exchange Commission of Sri Lanka. While the matter was pending, KPMG qualified the accounts for 2006-2007 by issuing the following disclaimer of opinion:

> *The biological assets of the company were valued by an independent Chartered Valuer and an amount of Rs.1,735,480,214 has been recognised in the financial statements as its fair value as at 31.03.2007, based on discounted cash flow method, using a discount rate of 12% and 20% for Mahogany and Vanilla respectively, as more fully disclosed in the note number 11 to the financial statements. However as per International Accounting Standard IAS 41'Agriculture' future cash flows should be discounted using current market-determined pre-tax rate. As per the publications of the Central Bank of Sri Lanka the market determined rate for long term government bonds (risk free rate) applicable to the current year is 14%, and together with the related risk premiums for these biological assets, the discounting rate as per IAS 41 should be 17%. Hence the discounting rate as per IAS 41 should be 17%. Accordingly the fair value of biological assets based on 17% discount rate is estimated at Rs.951,859,183. No adjustment is made in the financial statements to reflect the fair value in accordance with the requirements set out in IAS 41 and hence the revenue, net profit for the year, and the biological assets, as at 31st March 2007 have been overstated by Rs. 783,621,031.*
>
> *Because of the significance of the matters discussed in the preceding paragraph, which have a significant impact on the financial position of the company as at 31st March 2007 and the results of its operations for the year then ended, we do not express an opinion*

on the financial statements. We draw attention to the matters disclosed in note 30 to the financial statements with regard to the litigation faced by the company.

(Extract from Audit Report issued by KPMG Ford, Rhodes, Thornton & Co., in Touchwood Ltd, Annual Report 2007, p. 22)

The directors of Touchwood Ltd disagreed with their auditors' position. They stated emphatically in the company's annual report for 2007 that:

With due respect to our auditors, we wish to state that we are not in agreement with the model and discounting factor proposed by them due to the following reasons:

- *There are no consistent published long term Treasury bond indicators or an established long term risk free rate in Sri Lanka unlike in most of the other countries with highly developed financial markets.*
- *The long term risk free rate of 14%, used by the auditors relates to a one-off secondary market transaction which occurred in the third week of March 2007. Further there has been no other transaction recorded before or after (Source: Central bank of Sri Lanka, Weekly Economic Indicators). Hence, we believe the long term risk free rate should not be based on an isolated transaction, and, in any event, should not be determined by reference to the secondary bond market.*
- *According to the Central Bank of Sri Lanka, Weekly Economic Indicators, the last issue of Treasury bonds of 15 years maturity on 12 -08-2003 was at 7.63% and the 20 year Treasury bonds issued on 20-10-2003 were at 6.08%. There has been no long*

term bonds of 15 or 20 years issued by the government up to the 31st march 2007.

- *It also appears from the historical Central Bank data that the longer the maturity period of a Treasury bond the lower the rate.*
- *We may add that our view is further reinforced by the proposed draft of SLAS 43/ IAS 41– Agriculture standard which is being considered; it clearly states under 'Appendix A, Guidance on Implementing SLAS 43' that biological assets should be valued using an independent professional valuer.*

(Touchwood Ltd, Annual Report, 2007, p.11)

In summary, the Touchwood Ltd case reveals a major dispute over the correct application of IAS 41 in valuing forestry plantations from the perspectives of company directors, auditors, and regulators. In particular, the discount rate selected by the company was vigorously contested. The auditors insisted that the discount rate should be 17% while the directors of Touchwood Ltd argued that a relatively low discount rate of 12%, which increases the value of the forest, was appropriate. The regulators had initially issued a directive requiring the company to restate its accounts by adopting the IAS 41 option to value biological assets at cost since they believed that the fair value of the forestry plantations cannot be determined reliably. But since the directors of Touchwood were adamant in pointing out that their interpretation of IAS 41 was sound, the focus of the dispute shifted to the determination of a discount rate that is commensurate with risks associated with expected net cash flows.

Although the evidence from the analysis of annual reports appears to be broadly consistent with Zeff's observation that French auditors are less likely to issue a qualified opinion than their Anglo-American counterparts, there was one extreme case where the auditors of a French agricultural company were left with no option but to qualify

the accounts. The company in question is DUC SA and its principal activity is poultry farming. Its auditors, Synergie-Audit and Mazars & Guérard, stated in their report for the financial year ending 2006 that they felt compelled to qualify the accounts because the company did not put in place effective strategies for assessing future cash flows in the aftermath of an avian influenza epidemic. In view of the uncertainty arising from the outbreak of avian influenza, which severely affected consumer confidence in the safety of poultry products, the auditors stated in their report that they were not in a position to confirm the carrying amounts of the company's livestock assets as valued by an independent external valuer.

These open disagreements between company directors, valuation consultants, and auditors suggest that IAS 41 financial statements can be contested and that the standard is unlikely to promote the comparability and convergence of farm accounting practices both within and across countries. The remainder of this chapter examines the extent of compliance with the disclosures required under the standard.

Compliance with IAS 41 disclosure requirements

A checklist of disclosures prescribed by IAS 41 was used as a basis for assessing the extent of compliance by the companies selected for this study. However, the following disclosure items were excluded from the checklist because they do not apply to all the companies:

- Information on the existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities.
- The amount of commitments for the development or acquisition of biological assets.
- A reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current accounting period, showing separately: increases resulting from business combinations.

- A reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current accounting period, showing separately: net exchange differences arising on the translation of financial statements of a foreign entity.

A further 15 items were excluded from the checklist because they apply only to entities that value biological assets at historical cost. The final checklist comprised 12 items (see Table 6.5) and each company was assigned a score based on the percentage of items disclosed as shown in Table 6.4 and summarised in Tables 6.5 and 6.6. However, this checklist could not be used as a yardstick against which to measure the level of compliance with IAS 41 disclosures by all companies because the standard has separate disclosures that are only mandatory for companies that use historical cost in cases where fair value cannot be measured reliably. The extent of disclosure for companies that adopt historical cost for all or at least one of their biological assets was assessed separately using a different checklist of items shown in Table 6.7. Since 11 out of the 78 companies adopted the historical cost basis for all biological assets under IAS 41, only the overall level of disclosure for the remaining 67 companies was analysed at this stage.

Table 6.4 IAS 41 Disclosure scores

	Company	Country	Disclosure score
1	Auspine Ltd	Australia	100
2	Futuris	Australia	100
3	CDC Group Plc	UK	100
4	Costaexchange Ltd	Australia	92
5	Marine Produce Australia Ltd	Australia	92
6	Great Southern Ltd	Australia	92
7	Tassal Group Ltd	Australia	92
8	Associated British Food Plc	UK	92
9	Genus Plc	UK	92
10	Forestry Tansmania	Australia	92
11	Australia Vintage Ltd	Australia	92
12	Forestry Plantation Queensland	Australia	83
13	Foster's Group	Australia	83
14	Gunns Ltd	Australia	83
15	Asian Citrus Holdings ltd	UK	83
16	Anglo-Eastern Plantation Plc	UK	83
17	REA	UK	75
18	M.P.Evans Group	UK	75
18	Camellia PLc	UK	75
20	Coonawarra Australian Property Trust	Australia	75
21	Atlas South Sea Pearl Ltd	Australia	75
22	Clean Seas Tuna Ltd	Australia	75
23	Maryborough Sugar Factory Ltd	Australia	75
24	Ste Inter. de Plant D`Hevea	France	75
25	Radicle Projects plc	UK	75

Table 6.4 IAS 41 Disclosure scores (Cont.)

	Company	Country	Disclosure score
26	DUC	France	75
27	Animal Resources Authority, WA	Australia	75
28	Groupe Bollore	France	67
29	Diageo	UK	67
30	VicForests	Australia	67
31	Australia Aquaculture	Australia	67
32	NSW Dept of Primary Industries	Australia	67
33	FYFFES Plc	UK	67
34	Tandou Ltd	Australia	67
35	Henri Maire	France	58
36	Timbercorp	Australia	58
37	Australian Agricultural Cllege	Australia	58
38	National Trust of Australia, Victoria	Australia	58
39	Department of Territory & Municipal Services	Australia	58
40	New South Wales Aboriginal Land Council	Australia	58
41	Evans & Tate Ltd	Australia	58
42	Forest Enterprise Australia Ltd	Australia	58
43	GPI Group plc	UK	50
44	Sappi Ltd	UK	50
45	Palandri Ltd	Australia	50
46	Goulburn Valley Water	Australia	50
47	Willmott Forests Ltd	Australia	50
48	Cambium Global Timber plc	UK	42
49	The Co-operative Group	UK	42
50	Melbourne Water Corporation	Australia	42

Table 6.4 IAS 41 Disclosure scores (Cont.)

	Company	Country	Disclosure score
51	Laurent Perrier sa	France	42
52	Aquabella Group Plc	UK	42
53	Anglo-American Plc	UK	42
54	Xstrata Plc	UK	33
55	Cranswick Plc	UK	33
56	Financiere de L`Odet	France	33
57	Perno Ricard SA	France	25
58	Heytesbury Pty Ltd	Australia	25
59	Dept of Corrective Services, Queensland	Australia	25
60	Cottin Frere	France	25
61	LMVH	France	17
62	Department for Correctional Services, SA	Australia	17
63	Wynnstay Plc	UK	17
64	Fountains Plc	UK	8
65	Ruralco Holdings Ltd	Australia	8
66	Highland Timber Plc	UK	8
67	Unilever plc	UK	8

The results in Table 6.5 indicate that only 25 per cent of the companies provide a reconciliation of changes in carrying amounts of biological assets, showing separately decreases due to sale or harvest. Also, barely half of the companies disclosed their financial risk management strategies for agricultural activity. Taken overall, the extent of compliance with the IAS 41 disclosures was 59 percent. However, notwithstanding this low level of compliance, none of the companies received a qualified audit opinion due to insufficient disclosure. Presumably, the auditors adopted a flexible approach that recognises the salience of each item and the individual circumstances of each company when assessing the adequacy of disclosure.

Table 6.5 Extent of compliance with IAS 41 mandatory disclosures

	Mandatory disclosures under IAS 41	Number of companies disclosing item	Percentage compliance (n=67)
1	Description of biological asset	67	100
2	Description of enterprise's activities	59	88
3	Gain or loss arising from changes in fair value	51	76
4	Physical quantity of biological assets	46	69
5	Assumptions in determining fair value	44	66
6	Physical quantity of output	41	61
7	Reconciliation of changes in the carrying amount of biological assets, showing separately the gain or loss arising from changes in fair value	41	61
8	Financial risk management strategies	34	51
9	Fair value of produce harvested	28	42
10	Reconciliation of changes in the carrying amount of biological assets, showing separately increases due to purchase	26	39
11	Reconciliation of changes in the carrying amount of biological assets, showing separately decreases due to sales	17	25
12	Reconciliation of changes in the carrying amount of biological assets, showing separately decreases due to harvest	17	25
	Mean compliance score		59

A breakdown of the disclosure results by country in Table 6.6 reveals that the overall compliance levels were: 66 per cent (Australia), 53 per cent (UK) and 46 per cent (France). Australia has the highest level of compliance with almost half of the companies disclosing more than 70 per cent of the mandatory items under IAS 41. By contrast, France has the lowest compliance scores and nearly half of the French companies provided less than 40 per cent of the required disclosures.

Table 6.6 Analysis of IAS 41 disclosure scores

Score range	Country		
	Australia Mean score = 66 n=35	France Mean score = 46 n=9	UK Mean score = 53 n=23
70-100	16 (46%)	2 (22%)	9 (39%)
60-70	4 (11%)	1 (11%)	2 (9%)
50-60	10 (29%)	1 (11%)	0 (0%)
40-50	1 (3%)	1 (11%)	6 (26%)
Less than 40	4 (11%)	4 (45%)	6 (26%)

As explained earlier, almost all the entities that adopt only the historical cost basis under IAS 41 are French companies. Typical examples include: Christian Dior, Evialis, Groupe Boizel Chanoine, Groupe Rougier, Vilmorin, Vallourec SA, Vranken Pommery, and JeanJean SA.

Also, a number of UK and Australian companies use both historic cost and the net present value for the same asset; for example, some plantation companies value tree nurseries and immature plantations at cost while the net present value method is used for mature plantations and forests. Indeed, 23 out of the 78 companies selected for this study actually used the historical cost basis for at least one biological asset. There are special disclosure requirements for entities that adopt historical cost under IAS 41 as set out in the checklist of items in Table 6.7. Each of the 23 companies that used historical cost was scored against this checklist. The results show that the level of compliance with the mandatory disclosures for entities that adopt historical cost under IAS 41 is extremely poor and the overall extent of compliance is only 36%. It is somewhat surprising that none of the auditors drew attention to this low level of disclosure.

Table 6.7 Extent of compliance with mandatory IAS 41 disclosures for entities that adopt historical cost

	Mandatory disclosures for entities that adopt historical cost	No. of companies disclosing item	Score n=23
1	Description of biological asset	23	100%
2	Description of enterprise's activities	23	100%
3	Physical quantity of biological assets	17	74%
4	Physical quantity of output	12	52%
5	Reconciliation of changes in carrying amounts between the beginning and the end of the current accounting period showing separately any changes in asset value	9	39%
6	Reconciliation of changes in carrying amounts showing increases due to purchase	7	30%
7	Reconciliation of changes in carrying amounts showing separately the decreases due to sales	6	26%
8	Reconciliation of changes in carrying amounts showing separately the decreases due to harvest	4	17%
9	Depreciation method & useful lives where fair value cannot be determined.	4	17%
10	Reason for not using fair value if historic cost is adopted	8	35%
11	Fair value estimates where fair value cannot be determined reliably	4	17%
12	Carrying amount less depreciation where historic cost is used	2	9%
13	Gain or loss on disposal of biological assets, and IAS 41 reconciliations, where historic cost is used	2	9%
14	Reconciliation of changes in carrying amounts between the beginning and the end of the current accounting period showing impairment losses & reversals of impairment losses.	1	4%
15	Reconciliation of changes in carrying amounts between the beginning and the end of the current accounting period showing depreciation	1	4%
	Mean Compliance score		36%

In this regard, it is interesting to note that Groupe Biozel Chanoine Champagne, a French company that used the historical cost basis, was asked to provide additional disclosures on the treatment of biological assets in its financial statement for 2006 by the stock exchange regulatory body known as the Autorité des Marchés Financiers (AMF). Although the company had secured an unqualified audit opinion in the original financial statements which were approved by its board of directors, it was nevertheless asked to make a retrospective disclosure of the missing IAS 41 information in the annual report that it filed with the AMF. Essentially, the stock exchange regulators sought to remedy an incomplete disclosure of information on the treatment of biological assets which the company's statutory auditors had apparently overlooked.

Summary

This chapter has shown that there are systematic differences in the accounting policy choices and disclosure practices of agricultural entities in Australia, France and the UK that have adopted IAS 41. As such, it provides some support for Nobes' (2006, 2008a, 2008b) observation that different national versions of IFRS practice have emerged in recent years as a new feature of comparative international accounting. For example, it was found that the use of historical cost under IAS 41 is more common in France than in Australia or the UK. By contrast, the present value of future net cash flows is the more widely used method in the UK and Australia, often involving independent external valuers, notably in the forestry and plantation agriculture sectors.

The variety of methods of valuing biological assets in conformity with IAS 41 can be seen as an impediment to the comparability of practices within and across countries and sectors. Even companies that operate in the same region use fundamentally different methods under IAS 41 for valuing the same type of biological asset. For example, Henri Maire measures its grapevines at fair value using market prices published annually by the Fédération Nationale des Sociétés d'Aménagement

Foncier et d'Etablissement Rural, whereas most other French viticulture companies (e.g. LVMH Moët Hennessy Louis Vuitton, Christian Dior, and Boizel Chanoine Champagne) use historical cost to value their grapevines on the grounds that fair values cannot be determined reliably or that the difference between historical cost and fair value is not material.

In the forestry sector, the directors of Touchwood Ltd were embroiled in a major dispute with their auditors (KPMG) and the local stock exchange regulators, over the measurement of forestry assets at fair value. The point of contention relates to the ability of the company to value forestry plantations reliably at fair value, particularly the choice of a discount rate that is commensurate with the risks associated with future net cash flows. This matter is the subject of a pending court case involving Touchwood, the Sri Lankan Accounting and Auditing Standards Monitoring Board, and the local stock exchange regulators. Similar concerns over the reliability of the fair value of forestry assets led the Auditor General of New South Wales to qualify the 2007 accounts of the Department of Primary Industries. In general, French auditors appear less inclined than their Anglo-American counterparts to issue qualified reports even in cases where they admitted that the estimates and assumptions that underpin the fair value of biological assets were unreliable. However, given that only a limited number of cases were examined in this study, further studies are required to validate this finding.

It was shown that the use of the fair value model in valuing tropical plantations such as tea, rubber, and oil palm involves many subjective estimates and assumptions. Indeed, the directors of New Britain Palm Oil plc defiantly declared their resolve not to adopt IAS 41 despite receiving qualified audit reports from their auditors, PricewaterhouseCoopers, for non-compliance over three successive financial years. During this time, they reiterated their belief that the application of the standard in tropical plantations involves a broad range of subjective estimates and assumptions that could yield wildly different values. This view was shared by Michael St Clair George, Managing Director of the Société Internationale de Plantations et de Finance, when he derided IAS 41

as making a nonsense of his company's results and causing widespread uncertainty in the valuation of plantation companies in an article which appeared in Accountancy, the practitioner journal of the Institute of Chartered Accountants in England and Wales (St Clair George, 2007).

Finally, the results also show that compliance with the mandatory disclosures under IAS 41 was significantly higher in Australia than in France and the UK. In particular, nearly half of the French companies disclosed less than 40 per cent of the required items. However, there was an extremely poor level of compliance with the mandatory disclosure requirements for entities that adopt historical cost under IAS 41 where fair values cannot be determined reliably. Most of these entities were domiciled in France, thus corroborating the finding that French companies tend not to disclose detailed information on biological assets. The next and final chapter discusses the overall aims and results of this research.

7 Conclusions

This study shows that IAS 41 has failed to foster the international comparability of accounting practices in the agricultural sector. To some extent, the major impediments to the harmonisation of farm accounting practices across the three countries can be explained in terms of cultural influences. For example, the results show that the conservative valuation of biological assets at historical cost under IAS 41 is entrenched in France while the more adventurous fair value approach is commonly used in Australia and the UK. This observation is consistent with Gray's (1988) notion of conservatism as a construct of culture.

The findings also confirm that the extent of compliance with the mandatory disclosures prescribed by IAS 41 is higher in UK and Australian companies than in French companies. Again this pattern of results is consistent with Gray's classification of the three countries based on the notion of secrecy as an accounting value.

Furthermore, there are some international differences in the attitude of auditors towards the interpretation of IAS 41 by directors. For example, the results appear to indicate that French auditors are less inclined to issue qualified reports than their UK and Australian counterparts. However, given the limited number of cases examined in this study, further research is needed to confirm or reflect this finding. This provisional finding seems to support Zeff's (2007, p.293) observation that there are different auditing cultures across countries, and, in some European countries, a qualification may not be given because of the sensitivity arising over an auditor publicly questioning a major company for its choice of financial reporting method.

The continued use of historical cost under IAS 41 by nine of the 17 French companies in this study indicates that the standard has had only a limited impact and that the Plan Comptable Général Agricole

remains the authoritative accounting guide for all agricultural entities in France (small, medium-sized, or large). IAS 41 is likewise unlikely to change accounting practice in small and medium-sized entities in many countries around the world because of the requirement to use historical cost when fair value cannot be determined reliably. Indeed, even the IASB itself used this argument to silence its critics who claimed that the fair value model for biological assets in the IFRS for small and medium-sized entities represents a heavy burden on small agricultural businesses:

> *The Board concluded, both because of the measurement problems in inactive markets and developing countries and for cost-benefit reasons, that SMEs should be required to use the fair value through profit or loss model only when fair value is readily determinable without undue cost or effort. When that is not the case, the Board concluded that SMEs should follow the cost-depreciation-impairment model.* (IASB, 2007, pp. 33-34; 2009, p. 41)

The remainder of this chapter covers: (i) costs versus benefit of fair value accounting for biological assets; (ii) treatment of holding gains and losses; (iii) comparability and harmonisation; (iv) determination of discount rates; (v) the role of auditors in ensuring that directors' estimates and assumptions in the determination of fair value are appropriate; and (vi) some policy implications.

Cost *versus* benefit of fair value accounting

The first research question (RQ 1) for this study addressed whether the fair value of some types of biological asset, or estimates thereof, can only be determined at excessive costs while the second research question (RQ 2) asked whether the perceived costs of tracking, monitoring, and recording physical and price changes in biological assets are likely to outweigh the benefits. The survey results in chapter five reveal a high level of agreement amongst all groups of respondents

that the costs of measuring and reporting biological assets at fair value outweigh the benefits. Companies could have an incentive to rebut the presumption that fair value can be determined reliably if the perceived costs of monitoring and reporting physical and price changes exceed the perceived benefits. This might explain why a significant percentage of biological assets in the UK, Australia, and France are valued at cost as shown in Tables 5.1 and 6.2.

As noted earlier, some preparers and auditors of financial statements have voiced concern over the applicability of the fair value model to small and medium-sized agricultural entities particularly in developing countries with inactive markets (IASB, 2007, p. 33; 2009, p. 41). In response, the IASB re-emphasised its view that this is not a cause for concern because such entities are allowed to use historical cost if the determination of fair value involves undue cost or effort. The IASB's position on this matter is also consistent with the observation that historical cost is likely to be used when the perceived cost of adopting the fair value approach is greater than the perceived benefit.

Recognition of gains and losses

Research question three (RQ 3) examined whether it is likely that the recognition of unrealised holding gains or losses, arising from physical or price changes in a biological asset, in conformity with IAS 41, will result in high volatility in the reported income of some types of agricultural entities. The survey results in chapter five show that there is strong agreement amongst accountants and auditors that the fair value accounting model prescribed by IAS 41 increases the volatility of earnings. This explains why some plantation companies (e.g. New Britain Palm Oil) prepare separate statements and performance ratios which are not based on IAS 41, thereby isolating the effect of revaluing biological assets at fair value.

It is also interesting to note that the recognition of unrealised gains and losses arising from physical or price changes in biological assets

provoked some disquiet in state owned forestry companies in the UK following the Treasury's announcement of the impending adoption of IFRS in the public sector. After a period of consultation with Treasury officials, a proposal for a watered down version of IAS 41 was prepared and submitted to the public sector Financial Reporting Advisory Board (FRAB) for approval. Essentially, this proposal would require unrealised gains on biological assets to be reported directly in equity rather than in income as outlined below:

> *Recognition of unrealised gains and losses in the operating cost statement* [OCS] *increases the volatility of that statement and does not enhance transparency. Both the Forestry Commission and the Department of Agriculture and Rural Development (NI), whose forest assets are held by their respective agencies, reviewed the potential impact of IAS 41 (unadapted) on their accounts. The latter made the point that under IAS 41 'the OCS would be subject to the volatility of market price. As the biological asset value is five times greater than the Net Operating Cost of (the Forest Service), a movement in asset value would have a disproportionate effect on the OCS.' The Forestry Commission in their reply has echoed this view. They estimated that on an IAS 41 basis there would be an unrealised gain of £30.7m going through their 06-07 accounts, an increase of 123% over forecast income. However, they also made the point that there were significant year-on-year falls throughout the 1990s. Forestry is a cyclical business and it is inevitable that falling markets will be encountered again. This could result in matching losses being recognised in later years on the face of the OCS, and gains and losses occurring within the same Spending Review period.*
>
> *The budgetary impact of unrealised gains/losses being sent to the OCS rather than through reserves can be negated by specific budgeting rules for those departments. However, this undermines*

> *the principle of a 'clear line of sight' between the estimating process, resource accounts and national accounts.*
>
> *The Board is therefore asked to consider the proposed adaptation to IAS 41 (set out in Annex A) that a gain on the initial recognition and subsequent changes in fair value of biological assets should be taken to reserves rather than included in net profit or loss for the period in which it arises, unless any loss in value exceeds the amount in the reserve surplus for that same asset (in which case the fall in value shall be recognised as an expense in profit or loss).* FRAB (2007, pp. 5-6)

However, the FRAB rejected the proposal to 'carve out' and not comply with certain requirements of IAS 41 and instead approved the adoption of the standard without adaptation in all public sector entities engaged in agricultural activity.

Although the proposal was rejected, it clearly illustrates some of the concerns of accountants regarding high volatility in reported income occasioned by the recognition of holding gains and losses on biological assets. These developments are also reminiscent of attempts at lobbying standard-setters to secure concessions intended to avoid the perceived undesirable economic consequences of accounting pronouncements which are well documented in the financial accounting literature.

Comparability and harmonisation

RQ 4 asked 'To what extent is IAS 41 likely to foster the harmonisation of farm accounting practices given that: (i) it allows companies that rebut the presumption that fair values can be determined reliably to use historic cost accounting; and (ii) it allows a broad range of estimates of fair value such as net present value, sector benchmarks, recent market transaction price, or market price for similar assets?' Both the survey in chapter five and the analysis of annual reports in

chapter six arrive at the conclusion that IAS 41 is unlikely to enhance the comparability of accounting practices in the agricultural sector. Historical cost is still the most common valuation basis for biological assets in France while a variety of proxies for fair value are used both within and across countries. In particular, nine of the 17 French companies that have adopted IAS 41 value their biological assets at cost whereas most UK and Australian companies use the net present value method and other proxies for fair value. These findings accord with Nobes' (2006) observation that differences of practice exist within IFRS usage and that different national versions of IFRS practice have emerged in some jurisdictions.

There is also a lack of comparability of disclosure practices. For example, the overall extent of compliance with the mandatory disclosures for entities that adopt historical cost under IAS 41 is extremely poor at only 36%. In general, Australian companies disclose more than 60% of the required items while UK companies provide barely half of the disclosures. French companies had the lowest disclosure scores of the three countries.

Two other research questions asked: (RQ 5) which criteria are adopted in selecting one of the surrogates for fair value that IAS 41 permits in cases where an active or a liquid market for a biological asset does not exist? (i.e. net present value, sector benchmark, most recent market transaction price, price of similar assets, directors' valuation or independent third party valuation); and (RQ 8) Is it likely that some agricultural enterprises will actively use the option to rebut the presumption that fair values, or estimates thereof, can be determined reliably, as a strategy for justifying non-compliance with IAS 41 in order to avoid the perceived undesirable economic consequences of the standard?

It is generally difficult to ascertain the criteria used by company directors when selecting an appropriate surrogate for fair value. However, some open disagreements between auditors, directors, and regulators over the choice of valuation methods under IAS 41 clearly suggest that the perceived economic consequences of a particular method, the auditor's

attitude, and the specific circumstances of individual companies, might be relevant.

For example, Inch Kenneth Kajang plc and many French companies are able to rebut the presumption that their biological assets can be measured reliably at fair value, thereby justifying the use of historical cost under IAS 41. Apparently, their auditors concurred with the decision to value biological assets at cost since they did not qualify the accounts. However, when the directors of New Britain Palm Oil Ltd declared their resolve not to adopt IAS 41 on the grounds that it was not possible to value the company's biological assets reliably at fair value, their auditors disagreed and issued a qualified report.

Both Inch Kenneth Kajang plc and New Britain Palm Oil Ltd are oil palm plantation companies. Interestingly, as noted in chapter six, the Managing Director of another oil palm plantation company operating in the same region, the Société Internationale de Plantations et de Finance, endorsed the view expressed by the directors of New Britain Palm Oil when he argued that it is not possible to determine reliable fair values for tropical plantations and that the inherent uncertainty associated with the subjective valuation of these plantations is compounded by the volatility of prices of agricultural produce (St Clair George, 2007).

Determination of discount rate

Another research question (RQ 6) addressed how companies that use net present values as surrogates for fair values determine an appropriate discount rate that is commensurate with the risks associated with expected future net cash flows that will be generated by the biological asset. Under IAS 41, entities that use the present value of expected net cash flows as a proxy for fair value are required to use a market-determined pre-tax discount rate. The standard offers the following guidance:

> *The objective of a calculation of the present value of expected net cash flows is to determine the fair value of a biological asset*

> *in its present location and condition. An entity considers this in determining an appropriate discount rate to be used and in estimating expected net cash flows. The present condition of a biological asset excludes any increases in value from additional biological transformation and future activities of the entity, such as those related to enhancing the future biological transformation, harvesting, and selling.* (IASC, 2001, paragraph 21)

In practice, the determination of the discount rate involves subjective judgement and assumptions. New Britain Palm Oil, for example, used the Capital Asset Pricing Model to calculate a pre-tax rate that reflects the risk specific to its biological assets. However, it was seen in chapter six that the choice of a discount rate that is commensurate with the risks associated with the future net cash flows of Touchwood Ltd, a forestry company operating in Sri Lanka, provoked a major skirmish involving its auditors, KPMG, and local stock exchange regulators. The company had valued its forestry assets using a discount rate of 12 %. However, the auditors and the regulators contested this discount rate, pointing out that it was less than the risk free rate on long-term government bonds. A low discount rate would increase the value of the forestry asset and the reported income. Touchwood's discount rate was based on the recommendations of an independent valuation consultant. Nonetheless, the auditors were left with no option but to issue a disclaimer of opinion because they believed that given the risk-free rate of 14%, and the related risk premium for these biological assets, the company should have used a discount rate of 17%. The directors of Touchwood are contesting this matter in a pending court case.

These developments suggest that, in countries with less developed capital markets, the risk free rate might be difficult to establish. However, in all countries, it is difficult to ascertain the risk premium for forestry assets. Some UK and Australian forestry companies provide a range of estimates for the discount rate and sensitivity analysis relating to the value of the biological assets. The discount rates are normally established

by external independent valuers. For instance, the plantations of the Forestry Commission of Scotland are valued at the end of each reporting period by Bidwells Chartered Surveyors.

A further research question (RQ 7) examined how companies that use net present values as surrogates for fair values forecast the pattern of expected future net cash flows that will be generated by a biological asset. In the forestry sector, most companies simply adopt the recommendations of independent external valuation consultants. For example, the Forestry Commission of Scotland uses a country valuation panel comprising John Clegg & Co. Chartered Surveyors, Bidwells Chartered Surveyors, and professionally qualified land agents. But as noted in chapter six, external valuers do not always provide objective estimates and comparability across sectors and regions might be impaired particularly in the context of plantation agriculture. In the latter sector, for example, the following factors need to be determined when forecasting future cash flows: future biological yield taking into account the age of the tree or the type of crop; future commodity selling prices; future exchange rates; and the impact of weather conditions on yield trends. As St Clair-George (2007, p. 81) points out, a high degree of subjective judgement on the part of the valuer is required and annual variations in any of these factors, either singly or severally, could have a hugely material effect, making the results totally misleading.

Role of auditors

The final research question (RQ 9) examined the criteria used by auditors when assessing: (i) directors' decisions regarding fair value estimates; and (ii) directors' rebuttal of the presumption that fair values can be determined reliably.

International differences appear to exist in the attitude of auditors towards IAS 41. The results appear to indicate that French auditors are less inclined to issue qualified reports than their UK and Australian counterparts. However, as only a limited number of cases were examined

in this study, further studies are required to validate this finding. In addition, a number of cases were identified where disagreements occurred between company directors and their auditors which show that the criteria used in assessing directors' estimates and assumptions vary from auditor to auditor. Some French auditors simply attach 'health warnings', akin to emphases of matter, to their clean audit opinions which draw the reader's attention to inherent uncertainties associated with the valuation of biological assets.

Policy implications

The findings of this study have a number of policy implications. IAS 41 was designed to address concerns that international accounting standards do not meet the requirements of agricultural enterprises. However, most entities continue to use historical cost under IAS 41 because the perceived cost of measuring biological assets at fair value is greater than the perceived benefit or in cases where fair value cannot be determined reliably, implying that the standard has had a very limited impact on farm accounting. Ironically, the IAS 41 project was partly sponsored by the World Bank with the aim of making IFRS amenable to the exigencies of agricultural businesses, particularly small and medium sized entities which are prominent in this sector. Indeed the World Bank threw its weight behind the IASB's agenda when it recognised IFRS as one of the international standards and codes that promote good governance, transparency, and public accountability within its market-oriented reform program (IMF, 2003; Elad, 2007). Accordingly, all large corporations, privatised public utilities, and parastatals in developing countries that receive structural adjustment assistance from the World Bank, and the International Monetary Fund, are expected to prepare their financial statements in conformity with IFRS (see e.g. IMF, 1999, 2000). But there is a need for policy makers to revisit this arrangement not only because IAS 41 has failed to change farm accounting practice, but also because it creates an illusion of comparability, at least in view

of the range of options allowed under the standard and the limited capacity on the part of auditors to police its application in different national settings.

Another implication of this study is that the successful implementation of IAS 41 may promote social conflict in some countries where stakeholder advocacy organisations have argued that fair values established by market forces do not reflect the real value of tropical agricultural commodities such as coffee, tea, banana, or cocoa. Hence, by marking elements of financial statements to market values that are substantially less than the minimum fair trade price established by stakeholder advocacy groups and human rights activists, IAS 41 fosters alienation as analysed by Elad (2007). For example, not all stakeholders accept that the fair value (or world market price) of coffee beans is a fair price that fully reflects the value of the commodity; indeed, the whole concept of a 'fair price' can be seen as a contested terrain. This point encapsulates the rationale behind recent global campaigns launched by a diverse group of ethical investors, religious groups, environmental non-governmental organisations, and human rights activists around the world under the auspices of the Fairtrade Foundation. As such, the fair trade movement seeks to reduce alienation by bringing the plight of disadvantaged farmers in tropical countries to the attention of altruistic consumers in industrialised countries who demonstrate empathy and solidarity by their willingness to pay a price premium (above the conventional market price) to alleviate the inequities of free trade.

Similarly, in the context of the European Union's Common Agricultural Policy (CAP), IAS 41 requires that biological assets be valued by reference to artificial and highly subsidised or politically mediated market prices, thus highlighting the ideological role of fair value accounting in legitimating an unequal exchange between Europe and some less developed countries. For example, European farmers receive substantial subsidies which amounted to 41 billion Euros in 2009 (over 40 per cent of the EU's budget), despite recent attempts at reforming the CAP. As a result, farm products are exported to developing countries at prices which are substantially below production costs. Such

protectionist policies undermine the fair value model in IAS 41 which forges a tight link between heavily subsidised market prices and the value of biological assets.

Finally, a fear that policy makers might use the fair value model as a basis for taxation appears to have strengthened opposition to IAS 41 in some jurisdictions. It is noteworthy that the taxation of notional profits that may never be realised was seen by UK practitioners as a potential undesirable economic consequence of current cost accounting during the inflation accounting debate in the 1970s (see Whittington, 1983, p. 9; McKernan and O'Donnell, 1998, p. 595). More recently, some opponents of IAS 41 have pointed out that it may not be a good basis for taxation because it requires management to make subjective estimates and assumptions that can impair international convergence and comparability of the financial statements.

Summary of results

Research question	Summary of findings
RQ1. Will the fair value of some types of biological asset, or estimates thereof, only be determined at excessive costs?	• Most practitioners in plantation companies believe that the fair value of tropical crops such as tea, rubber trees, and oil palm can only be determined at excessive costs. The fair value model provoked widespread disquiet amongst accountants in oil palm plantation companies. • In one such company (New Britain Palm Oil plc), the directors defiantly declared their resolve not to adopt IAS 41 despite receiving qualified audit reports from their auditors, PricewaterhouseCoopers, for non-compliance over three successive financial years. During this time, they reiterated their belief that the application of the standard in tropical plantations involves a broad range of subjective estimates and assumptions that could yield wildly different values.
RQ2. Are the perceived costs of tracking, monitoring, and recording physical and price changes in a biological asset, at the end of each financial year, or each interim reporting period, likely to outweigh the benefits to all types of agricultural concerns?	• The questionnaire survey reveals a high level of agreement amongst all groups of respondent that the costs of measuring and reporting biological assets at fair value outweigh the benefits. • Some companies, notably small and medium sized entities, simply invoke the clause in IAS 41 (paragraph 30) that allows the use of historical cost in cases where fair values cannot be determined with reliability as a means of circumventing the irksome requirements of the standard.
RQ3. Will the recognition of unrealised holding gains or losses, arising from physical or price changes in a biological asset, in conformity with IAS 41, result in high volatility in the reported income of some types of agricultural entities?	• The questionnaire survey shows that there is strong agreement amongst accountants and auditors that the fair value model increases the volatility of earnings. • To alleviate this concern, some plantation companies prepare separate financial statements and performance ratios which are not based on IAS 41, thereby isolating the effect of revaluing biological assets at fair value. • State owned forestry undertakings in the UK requested a watered down version of IAS 41 which would require unrealised holding gains or losses on biological assets to be reported directly in equity rather than in income, thereby reducing the volatility of income. This request was rejected by the public sector Financial Reporting Advisory Board which advises HM Treasury on financial reporting standards and principles.

Summary of results (Cont.)

Research question	Summary of findings
RQ4. To what extent is IAS 41 likely to foster the harmonisation of farm accounting practices given that: (i) it allows companies that rebut the presumption that fair values can be determined reliably to use historic cost accounting; and (ii) it allows a broad range of estimates of fair value such as net present value (NPV), sector benchmarks, recent market transaction price, or market price for similar assets?	• There are systematic differences in the accounting policy choices of agricultural entities that have adopted IAS 41 in Australia, France and the UK. • Historical cost is still the most common valuation basis for biological assets in France while a variety of proxies for fair value are used in Australia and the UK. Nine of the 17 French companies that have adopted IAS 41 value their biological assets at cost whereas the present value of future net cash flows is the more widely used method in the UK and Australia, often involving independent external valuers, notably in the forestry and plantation agriculture sectors. • The level of compliance with the mandatory disclosures prescribed by IAS 41 was significantly higher in Australia and the UK than in France. Nearly half of the French companies disclosed less than 40 per cent of the required items. In general, French companies tend not to disclose detailed information on biological assets. • These findings accord with Nobes' (2006, 2008a, 2008b) observation that differences of practice exist within IFRS usage and that different national versions of IFRS practice have emerged in recent years as a new feature of comparative international accounting.
RQ5. Which criteria are adopted in selecting one of the surrogates for fair value that IAS 41 permits in cases where an active or a liquid market for a biological asset does not exist?	• Although it is generally difficult to ascertain the criteria used by directors when selecting an appropriate surrogate for fair value, instances of open disagreement between auditors, company directors, and regulators over the choice of IAS 41 options were noted in chapter 6. These disagreements suggest that the perceived economic consequences of a particular method, the auditor's attitude, and the specific circumstances of individual companies, might be relevant. • Some companies simply invoke the option to use historical cost (permitted under paragraph 30 of IAS 41) as a means of circumventing the onerous valuation requirements of the standard.
RQ6. How do companies that use net present values as surrogates for fair values determine an appropriate discount rate commensurate with the risks associated with expected future net cash flows that will be generated by a biological asset?	• Discount rates are normally established by independent external valuers. These rates and asset values may differ considerably from valuer to valuer. • Some UK and Australian forestry companies provide a range of estimates for the discount rate and sensitivity analysis relating to the value of biological assets. • Some companies (e.g. New Britain Palm Oil) use the Capital Asset Pricing Model to calculate a pre-tax discount rate that reflects the risk specific to biological assets. • In countries with less developed capital markets, it might be difficult to ascertain the risk free rate and the risk premium specific to biological assets.

Summary of results (Cont.)

Research question	Summary of findings
RQ7. How do companies that use net present values as surrogates for fair values forecast the pattern of expected future net cash flows that will be generated by a biological asset?	• Most of these companies simply adopt the recommendations of independent external valuers. • External valuers do not always provide objective estimates and comparability across sectors and regions might be impaired. • Considerable subjective judgement is required, for example, when determining future biological yield, future commodity selling prices, discount rates and exchange rates. • A number of instances were identified where auditors of agricultural entities were compelled to issue qualified opinions because they could not confirm the highly subjective estimates and assumptions used by management in determining net present values. • It was noted that some French auditors attach 'health warnings', akin to emphases of matter, to their clean audit opinions which draw the reader's attention to inherent uncertainties and subjective assumptions regarding management's forecast of the pattern of expected cash flows generated by biological assets.
RQ8. Is it likely that some agricultural enterprises will actively use the option to rebut the presumption that fair values, or estimates thereof, can be determined reliably, as a strategy for justifying non-compliance with IAS 41 in order to avoid the perceived undesirable economic consequences of the standard?	• About 50 per cent of French companies that are required by law to adopt IAS 41 justify the continued use of historical cost on the grounds that fair value cannot be measured reliably. Even then, these companies have an extremely poor level of compliance with the mandatory disclosures for entities that use historical cost under IAS 41. • Many companies in other jurisdictions also rebut the presumption that fair values can be determined reliably, thus justifying the use of historic cost and avoiding the irksome measurement and disclosure provisions of IAS 41. • IAS 41 is unlikely to change accounting practice in small and medium-sized entities in many countries around the world because of the requirement to use historical cost when fair value cannot be determined reliably. Indeed, even the IASB itself used this argument to silence its critics who claimed that the fair value model for biological assets in the IFRS for small and medium-sized entities represents a heavy burden on small agricultural businesses.

Summary of results (Cont.)

Research questions	Summary of findings
RQ9. What criteria do auditors adopt when assessing: (i) directors' decisions regarding fair value estimates; and (ii) directors' rebuttal of the presumption that fair values can be determined reliably?	• A number of cases were identified where there were major disagreements between company directors and their auditors which show that the criteria used in assessing directors' estimates and assumptions vary from auditor to auditor. • International differences appear to exist in the attitude of auditors towards IAS 41. • Although the results appear to indicate that French auditors are less inclined to issue qualified reports than their UK and Australian counterparts, only a limited number of cases were examined in this study. Accordingly, further studies are required to validate this finding. • This finding seems to support Zeff's (2007, p.293) observation that there are different auditing cultures across countries, and, in some European countries, a qualification may not be given because of the sensitivity arising over an auditor publicly questioning a major company for its choice of financial reporting method. • There appears to be a limited capacity on the part of auditors to police the application of IAS 41 in some national settings.

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APPENDIX 1

Australian agricultural entities

	Entity	Type	Main biological asset
1	Animal Resources Authority, Western Australia	Public sector	Livestock
2	Arrowfield Group Pty Ltd	Non-listed	Horse/equine breeding
3	Atlantic Ltd	Listed	Fish farming
4	Auspine Ltd	Listed	Softwood/pine plantation
5	Australian Agricultural College	Public sector	Livestock & crops
6	Australian Agricultural Company Ltd	Listed	Cattle ranching & farming
7	Australian Food and Fibre Ltd	Non-listed	Horticulture, cotton
8	Australis Aquaculture Ltd	Listed	Fish farming
9	Cell Aquaculture Ltd	Listed	Fish farming
10	Central Highlands Water Authority	Public sector	Forests
11	Choiseul Investment Ltd	Listed	Growing of cereals
12	Clean Seas Tuna Ltd	Listed	Fish farming
13	Colly Cotton Pty Ltd	Non-listed	Cotton, cereal
14	Coonawarra Australia Property Trust	Non-listed	Vineyards
15	Costaexchange Ltd	Listed	Orchards, vegetable
16	Department for Correctional Services, South Australia	Public sector	Livestock, olive groves
17	Department of Corrective Services, Queensland	Public sector	Dairy cattle, sheep & goats
18	Department of Primary Industries & Resources SA	Public sector	Fruit tree 0rchards, vineyards
19	Department of Territory & Municipal Services	Public sector	Softwood plantation
20	Dept of Primary Industry, Fisheries & Mines, NT	Public sector	Fisheries, Livestock, horticulture
21	Earth Sanctuaries Ltd	Non-listed	Animal breeding & wildlife
22	Evans and Tate Ltd	Listed	Vineyards
23	Forest enterprises Australia Ltd	Listed	Forestry plantations
24	Forestry Commission of New South Wales	Public sector	Forests
25	Forestry Plantations Queensland	Public sector	Forest plantation, orchards,
26	Forestry Tasmania	Public sector	Forest plantations
27	Foster's Group	Listed	Vineyards
28	Futuris Corporation Ltd	Listed	Forests & livestock

Australian agricultural entities (Cont.)

	Entity	Type	Main biological asset
29	Goulburn Valley Orchards	Non listed	Fruit trees
30	Goulburn Valley Water	Public sector	Livestock
31	Great Southern Ltd	Listed	Forestry plantations
32	Gunns Ltd	Listed	Forestry plantations
33	Hancock Victorian Plantation Holdings Pty Ltd	Non-listed	Forestry Plantation
34	Hazeldene's Chicken Farm Pty Ltd	Non-listed	Poultry farming
35	Heytesbury Pty Ltd	Non-listed	Cattle ranching & farming
36	Indigenous Land Corporation, ACT	Public sector	Livestock, citrus fruit trees
37	Marine Produce Australia Ltd	Listed	Fish farming
38	Maryborough Sugar Factory Ltd	Listed	Growing of sugar cane
39	McGuigan Simeon Wines Ltd	Listed	Vineyards
40	Melbourne Water Corporation	Public sector	Livestock
41	National Trust of Australia, Victoria	Public sector	Vineyards, livestock, fish
42	New South Wales Aboriginal Land Council	Public sector	Forests
43	New South Wales Dept of Primary Industries	Public sector	Forestry plantation
44	Palandri Ltd	Non-listed	Vineyards
45	Paspaley Pearling Company Pty Ltd	Non-listed	Fish farming
46	Pipers Brook Vineyard Ltd	Non-listed	Vineyards
47	Primary Industries and Resources , SA	Public sector	Livestock
48	Roberts Ltd	Non-listed	Livestock
49	South Australian Forestry Corporation	Public sector	Forest plantations
50	Sun Biomedical Ltd	Listed	Forestry/pine plantations
51	Tandou Ltd	Listed	Growing of cereals, orchards
52	Tassal Group Ltd	Listed	Fish farming, acquaculture
53	Timbercorp	Listed	Forestry plantations, orchards
54	University of Melbourne	Public sector	Livestock, orchards
55	VicForests	Public sector	Forests
56	Wesfarmers Bunnings Ltd	Listed	Forestry plantation
57	Willmott Forests Ltd	Listed	Forestry plantation & nurseries

UK agricultural entities

	Entity	Type	Main biological asset
1	Alba Trees plc	AIM Listed	Tree plantation
2	Anglo-American plc	Listed on London Stock Exchange	Forest plantation
3	Anglo-Eastern Plantation plc	Listed on London Stock Exchange	Palm & rubber plantation
4	Associated British Food plc	Listed on London Stock Exchange	Sugar cane plantation
5	Cambium Global Timber plc	AIM Listed	Pine plantation
6	Camellia plc	Listed on London Stock Exchange	Horticulture, Tea, citrus
7	CDC Group plc	Listed on London Stock Exchange	Rubber & palm plantations
8	Cranswick plc	Listed on London Stock Exchange	Livestock
9	Crown Estate	Public sector	Forest
10	Diageo	Listed on London Stock Exchange	Vineyards
11	Forest Enterprise England	Public sector	Forest
12	Forestry Commission, Scotland	Public sector	Forest
13	Forestry Commission, England	Public sector	Forest
14	Fountains plc	Listed on London Stock Exchange	Forest plantation
15	Fyffes plc	AIM Listed	Fruit tree plantation
16	Forestry Commission, Wales	Public sector	Forest
17	Genus plc	AIM Listed	Livestock
18	Highland Timber plc	AIM Listed	Forest
19	M.P. Evans Group	AIM Listed	Oil palm, cattle
20	PGI Group plc	Listed on London Stock Exchange	Vegetable, tea, nuts
21	Radicle Projects plc	Listed on London Stock Exchange	Horticulture, viticulture, forestry
22	REA Holdings	Listed on London Stock Exchange	Oil palm
23	The Co-operative Group	Provident Society	Crop and livestock
24	Unilever plc	Listed on London Stock Exchange	Oil palm and tea plantations
25	XSTRATA plc	Listed on London Stock Exchange	Cattle
26	Narborough Plantations plc	Listed on London Stock Exchange	Oil palm plantations
27	Inch Kenneth Kajang Rubber plc	Listed on London Stock Exchange	Rubber tree plantations
28	Consentino Signature Wines plc	Listed on London Stock Exchange	Vineyards

UK agricultural entities (Cont.)

	Entity	Type	Main biological asset
29	Wynnstay plc	AIM Listed	Potted plants and shrubs
30	Asian Citrus Holdings Ltd	AIM Listed	Orange tree plantations
32	Acquabella Group plc	AIM Listed	Indoor fish farming
33	Sappi Ltd	Listed on London Stock Exchange	Forestry plantations
33	New Britain Palm Oil Ltd	Listed on London Stock Exchange	Oil palm plantations
34	Mondi plc	Listed on London Stock Exchange	Forestry
35	Gem Biofuels plc	AIM Listed	Jatropha tree plantation
36	Riverview Rubber Estates Berhad	Listed on London Stock Exchange	Rubber, oil palm plantations

French agricultural entities

	Company	Type	Main biological asset
1	Axa	Listed on Euronext Paris	Vineyards (Axa Millésimes)
2	Christian Dior	Listed on Euronext Paris	Vineyards
3	Compagnie Agricole de la Crau SA	Listed on Euronext Paris	Farming; management of farmlands
4	Compagnie des Caoutchoucs de Padang	Listed on Euronext Paris	Growing of crops; animal breeding
5	Compagnie du Cambodge	Listed on Euronext Paris	Growing of cereals and other crops
6	Compagnie Française des Ets Gaillard	Listed on Euronext Paris	Forestry and logging
7	Cottin Frères	Listed on Euronext Paris	Vineyards
8	DUC	Listed on Euronext Paris	Poultry farming
9	Evialis	Listed on Euronext Paris	Animal breeding; feed for farm animals
10	Financière de l'Odet	Listed on Euronext Paris	Tropical plantations: rubber, oil palm, cotton, peanuts, corn
11	Groupe Boizel Chanoine Champagne	Listed on Euronext Paris	Vineyards
12	Groupe Bolloré	Listed on Euronext Paris	Plantation agriculture
13	Groupe Henri Maire	Listed on Euronext Paris	Vineyards
14	Groupe Rougier	Listed on Euronext Paris	Forestry and logging
15	JeanJean SA	Listed on Euronext Paris	Vineyards
16	La Forestière Equatoriale	Listed on Euronext Paris	Plantations, tropical crops, fruits and timber,
17	Laurent Perrier SA	Listed on Euronext Paris	Vineyards
18	LVMH Louis Vuitton Moët Hennessy SA	Listed on Euronext Paris	Vineyards
19	Pernod Ricard SA	Listed on Euronext Paris	Vineyards

French agricultural entities (Cont.)

	Company	Type	Main biological asset
20	Plantations des Terres Rouges	Listed on Euronext Paris	Oil palm plantations
21	Société Africaine Forestière Agricole	Listed on Euronext Paris	Rubber tree and palm plantations
22	Société Internationale de Plantations d'Hévéa	Listed on Euronext Paris	Rubber tree plantation
23	Vallourec SA	Listed on Euronext Paris	Forest plantations
24	Vilmorin et Cie	Listed on Euronext Paris	Growing of vegetable, horticulture, seed and nursery products
25	Vranken Pommery Monopole	Listed on Euronext Paris	Vineyards

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ABOUT SATER

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Further details about SATER and the ICAS research programme can be found from the SATER and ICAS websites: scottishaccountancytrust.org.uk/research.html and icas.org.uk/research.

Nigel Macdonald
Chairman of SATER

January 2011

Fair value accounting is a controversial topic but the focus is usually on fair valuing financial instruments. This report takes a different perspective by investigating fair value accounting in the agricultural sector. The international financial reporting standard on agriculture (IAS 41) requires that biological assets be measured at fair value, a significant departure from the traditional historic cost model. However, the standard does allow entities to use historic cost accounting if they can rebut the presumption that fair values can be determined reliably and there are also a range of surrogates for fair value allowed under the standard.

This report investigates the implications of IAS 41 for international harmonisation of farm accounting practices and the issues and practical problems associated with implementation of IAS 41. The study is based on a survey and an analysis of annual reports in the UK, France and Australia.

The report identifies that agricultural entities in all three countries are using a variety of valuation methods under IAS 41 and that there is a lack of comparability of disclosure practices. Survey respondents generally stated that the costs of measuring and reporting biological assets at fair value outweigh the benefits. The authors argue that there is a need for the IASB to revisit IAS 41 not only because it has failed to change farm accounting practice but also because it creates an illusion of comparability.

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