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International Accounting Standards Board

This document is provided as a convenience to observers at IASB meetings, to assist them in following the Board's discussion. It does not represent an official position of the IASB. Board positions are set out in Standards.
These notes are based on the staff papers prepared for the IASB. Paragraph numbers correspond to paragraph numbers used in the IASB papers. However, because these notes are less detailed, some paragraph numbers are not used.

INFORMATION FOR OBSERVERS

Board Meeting:	**18 July 2007, London**
Project:	**Annual Improvements**
Subject:	**Replanting obligations – proposed solutions (Agenda paper 5B)**

1. The Board considered a proposed Annual Improvement at the June 2007 Board meeting relating to the accounting for replanting obligations. The issue relates to the interaction of the requirements of IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, and IAS 41, *Agriculture*. The measurement of biological assets at fair value means that profit is recognised in respect of such assets as they grow rather than at the point of harvest and sale. IAS 41 requires that the calculation of fair value is not reduced by future replanting costs. A provision for replanting and the associated costs is recognised at the point of harvest where there is a legal obligation to replant in accordance with IAS 37. The cost is recognised as an expense at the point of harvest leading to a net expense when the crop is harvested. An equivalent fair value gain is recognised in the income statement when the replanting takes place. Some constituents are troubled by the accounting mismatch in the income statement when the time gap between harvest and replanting straddles the end of a reporting period.

2. The Board discussed three alternative approaches to the issue and asked the staff to prepare some example accounting entries to illustrate these approaches. These are presented in the Appendix to this paper.

Background

3. Three alternative approaches to this accounting issue were discussed by the Board in June. The staff has also discussed the issue further and identified a fourth possible view. All four views are summarised below.

View 1: Require the cost of compulsory replanting to be reflected in the calculation of fair value of the preceding crop as a reduction in that crop's value. When the provision is recorded for replanting, the cost associated with it is included in the cost of the crop just harvested.

View 2: Require the cost of compulsory replanting to be recognised as an asset at the time the liability is recognised.

View 3: Require the cost of compulsory replanting to be recognised as a component of the inventory cost of the crop just harvested.

View 4: Do not recognise a provision for replanting when the previous crop is harvested. The obligation to replant is an executory contract that is not onerous. The entity will receive an asset (the new crop) of equal value to the cost to replant when its obligation is fulfilled.

4. The illustrations of all four views are presented in the Appendix. The summary income statements and balance sheets of each view are presented on page 13 (view 1), page 16 (view 2), page 19 (view 3) and page 22 (view 4).

5. The appendix also includes an illustration of the current accounting that is giving rise to the issue. This is illustrated as view 0 and summarised on page 10.

Staff analysis of alternative views

6. The staff's analysis of the advantages and disadvantages of the four views is presented below.

Analysis of view 1

7. The advantages of view 1 are that it largely solves the troublesome income statement effect and links the cost of replanting to the action that triggers it, which is the harvesting of the current crop.

8. The disadvantage of view 1 is that it links the measurement of the existing crop to a condition that arises from the land on which the crop is growing. It is not reflecting a condition of the crop itself. View 1 also values the land on initial recognition at an amount higher than it would be recorded at if there was no replanting obligation as a result of the way the consideration paid has been allocated to the relative fair values of the land and the crop.

Analysis of view 2

9. The advantages of view 2 are that it solves the troublesome income statement effect. It also does not affect the fair value measurement of the crop in the way that view 1 does.

10. The disadvantages of view 2 are that it recognises an asset for a crop that has not yet been planted. It would have to be described as a 'crop to be planted' as it does not meet the definition of a biological asset.

Analysis of view 3

11. The advantages of view 3 are that is does not affect the fair value measurement of the crop in the way view 1 does, nor does it require the recognition of an asset that has yet to be planted as required in view 2.

12. The disadvantages of view 3 are that the costs of the provision that are included in inventory are immediately written off through impairment of the inventory. The inventory impairment will be reduced or avoided however if further processing of the inventory will be performed before it is sold. Another disadvantage of view 3 is that there is a day 1 gain recognised on planting the new crop. Therefore if the harvesting of the crop and its sale to a third party take place in different periods (as illustrated in the appendix) the troublesome income statement effect remains.

Analysis of view 4

13. The advantages of view 4 are that it solves the troublesome income statement effect. It also does not affect the fair value measurement of the crop in the way that view 1 does nor does it require the recognition of an asset that has yet to be planted as required in view 2.

14. The disadvantages of view 4 are that it relies on the conclusion that the obligation to replant is an executory contract and thus no provision is required. This conclusion might be valid in the circumstances described in the appendix when the entity has 90 days from the date of harvest in which to replant the crop, but this is a specific assumption used for illustrative purposes which may not be valid in every case.

Staff recommendation

15. The staff continues to believe that view 1 provides the most satisfactory solution to the troublesome income statement effect of the interaction of IAS 41 and IAS 37 and the benefits of this outweigh the disadvantages of this approach. The staff therefore recommends that IAS 41 be amended as proposed in paragraph 17 to require that compulsory replanting costs that are triggered by the harvesting of a crop be reflected in the measurement of the fair value less costs to sell.

16. **Does the Board agree?**

Drafting

17. The staff recommends that IAS 41 should be amended as follows:

Recognition and measurement

…

22 An entity does not include any cash flows for financing the assets, taxation, or re-establishing biological assets after harvest (for example, the cost of replanting trees in a plantation forest after harvest)<u> except for cash flows for re-establishing biological assets which the entity is legally obligated to incur as a result of harvesting the current biological assets</u>.

Basis for Conclusions on Proposed Amendments to IAS 41 *Agriculture*

This Basis for Conclusions accompanies, but is not part of, the draft amendments.

Recognition and measurement

BC1 The Board identified an apparent practical issue that arises when an entity that has biological assets also has a legal obligation to replant such assets after harvest.

BC2 The practical issue relates to the interaction of the requirements of IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*, and IAS 41, *Agriculture*. The measurement of biological assets at fair value means that profit is recognised in respect of such assets as they grow rather than at the point of harvest and sale. IAS 41 requires that the calculation of fair value is not reduced by future replanting costs. A provision for replanting and the associated costs is recognised at the point of harvest where there is a legal obligation to replant in accordance with IAS 37. The cost is recognised as an expense at the point of harvest leading to a net expense when the crop is harvested. An equivalent fair value gain is recognised in the income statement when the replanting takes place.

BC3 The Board decided to address this practical issue by amending IAS 41 to require the cost of compulsory replanting to be reflected in the calculation of fair value of the preceding crop.

Appendix – Illustrative example

Background data for illustrative example

Entity A purchased land on 1 January 20X5, on which a crop had just been planted. Attached to the land is a statutory replanting obligation for this crop. Entity A must replant the crop that grows on the land within 90 days of harvest. The cost of the land with the newly planted crop was CU10,000. It is assumed that the purchase represented an asset purchase and not a business combination.

The crop has a three-year life-cycle. The planting cost is (including materials) CU1,000 and remains unchanged throughout the time period of the example. A newly planted crop is assumed to have a fair value of CU1,000. There is no market price available for a part-grown crop, and so fair value is derived from using a discounted cash flow analysis. The fair values less costs to sell of the crop calculated on this basis, without taking account of replanting costs, are:

At 1 January 20X5:	CU1,000
At 31 December 20X5:	CU2,500
At 31 December 20X6:	CU4,200
At 30 December 20X7:	CU6,600

The annual maintenance costs are CU250 and the cost of harvesting is CU450.

Entity A harvests the crop on 31 December 20X7 and transfers it to inventory. It plans to (and does) replant the crop on 1 January 20X8. The harvested crop is sold on 1 January 20X8 for CU7,050 (CU6,600 + CU450).

Assume the relevant discount rate is 8%. The present value of the replanting costs at each balance sheet date is:

At 1 January 20X5:	CU794
At 31 December 20X5:	CU857
At 31 December 20X6:	CU926
At 30 December 20X7:	CU1,000

The effects of tax have been ignored in these examples for simplicity.

Illustrative accounting under view 0
View 0 reflects the current accounting that is providing a troublesome result.

Relative fair values of the land and the crop are:

Crop (1,000)	CU1,000	10%
Land (9,000)	CU9,000	90%
Total	CU10,000	100%

Accounting entries required are:

	Dr	Cr
At 1 January 20X5		
Dr Crop (10% x 10,000)	1,000	
Dr Land (90% x 10,000)	9,000	
Cr Cash		10,000
Being purchase of the crop when land purchased		
Year ended 31 December 20X5		
Dr Crop (2,500 – 1,000)	1,500	
Cr Gain from change in fair value of biological assets		1,500
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Year ended 31 December 20X6		
Dr Crop (4,200 – 2,500)	1,700	
Cr Gain from change in fair value of biological assets		1,700
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		

<u>Year ended 31 December 20X7</u>		
Dr Crop (6,600 – 4,200)	2,400	
Cr Gain from change in fair value of biological assets		2,400
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Dr Inventory (6,600 + 450)	7,050	
Cr Crop		6,600
Cr Cash		450
Dr Operating costs	1,000	
Cr Provision		1,000
Being harvesting of crop and recognition of provision for replanting		
<u>At 1 January 20X8</u>		
Dr Provision	1,000	
Cr Cash		1,000
Dr Crop	1,000	
Cr Gain from change in value of biological assets		1,000
Dr Cash	7,050	
Cr Revenue		7,050
Dr Cost of sales	7,050	
Cr Inventory		7,050
Being replanting of crop and sale of inventory		

Summary balance sheet and income statement (View 0)

	1/1/X5	31/12/X5	31/12/X6	30/12/X7	31/12/X7	1/1/X8
Crops	1,000	2,500	4,200	6,600	0	1,000
Land	9,000	9,000	9,000	9,000	9,000	9,000
Inventory	0	0	0	0	7,050	0
Cash	5,000	4,750	4,500	4,250	3,800	9,850
Provision to replant	(0)	(0)	(0)	(0)	(1,000)	(0)
Net assets	15,000	16,250	17,700	19,850	18,850	19,850
Share capital	15,000	15,000	15,000	15,000	15,000	15,000
Retained earnings	0	1,250	2,700	4,850	3,850	4,850
Total equity	15,000	16,250	17,700	19,850	18,850	19,850

	y/e 31/12/X5	y/e 31/12/X6	364 d/e 30/12/X7	1 d/e 31/12/X7	1 d/e 1/1/X8
Sale of crop	0	0	0	0	7,050
Cost of sales					(7,050)
Gain from change in fair value of biological assets	1,500	1,700	2,400	0	1,000
Operating costs	(250)	(250)	(250)	(1,000)	(0)
Net profit	1,250	1,450	2,150	(1,000)	1,000

1,150

No gain/loss on sale because crop was measured at fair value before harvest

The loss at 31/12/X7 arises from recognition of replanting provision. The gain at 1/1/X8 arises from a day 1 replanting gain.

Illustrative accounting under view 1

View 1 requires the cost of compulsory replanting to be reflected in the calculation of fair value of the preceding crop.

Relative fair values of the land and the crop are:

Crop (1,000 – 794)	CU206	2%
Land (10,000 – 1,000)	CU9,000	98%
Total	CU9,206	100%

Accounting entries required are:

	Dr	Cr
At 1 January 20X5		
Dr Crop (2% x 10,000)	200	
Dr Land (98% x 10,000)	9,800	
Cr Cash		10,000
Being purchase of the crop when land purchased		
Year ended 31 December 20X5		
Dr Crop (2,500 – 200 – 857)	1,443	
Cr Gain from change in fair value of biological assets		1,443
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Year ended 31 December 20X6		
Dr Crop (4,200 – 1,643 – 926)	1,631	
Cr Gain from change in fair value of biological assets		1,631
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		

Year ended 31 December 20X7

Dr Crop (6,600 – 3,274 – 1,000)	2,326	
Cr Gain from change in fair value of biological assets		2,326
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Dr Inventory (5,600 + 450)	6,050	
Cr Crop		5,600
Cr Cash		450
Dr Inventory	1,000	
Cr Provision		1,000
Being harvesting of crop and recognition of provision for replanting with cost included in inventory value		

At 1 January 20X8

Dr Provision	1,000	
Cr Cash		1,000
Dr Crop (1,000 – 794)	206	
Cr Gain from change in value of biological assets		206
Dr Cash (6,600 + 450)	7,050	
Cr Revenue		7,050
Dr Cost of sales	7,050	
Cr Inventory		7,050
Being replanting of crop and sale of inventory		

Summary balance sheet and income statement (View 1)

	1/1/X5	31/12/X5	31/12/X6	30/12/X7	31/12/X7	1/1/X8
Crops	200	1,643	3,274	5,600	0	206
Land	9,800	9,800	9,800	9,800	9,800	9,800
Inventory	0	0	0	0	7,050	0
Cash	5,000	4,750	4,500	4,250	3,800	9,850
Provision to replant	(0)	(0)	(0)	(0)	(1,000)	(0)
Net assets	15,000	16,193	17,574	19,650	19,650	19,856
Share capital	15,000	15,000	15,000	15,000	15,000	15,000
Retained earnings	0	1,193	2,574	4,650	4,650	4,856
Total equity	15,000	16,193	17,574	19,750	19,650	19,856

	y/e 31/12/X5	y/e 31/12/X6	364 d/e 30/12/X7	1 d/e 31/12/X7	1 d/e 1/1/X8
Sale of crop	0	0	0	0	7,050
Cost of sales					(7,050)
Gain from change in fair value of biological assets	1,443	1,631	2,326	0	206
Operating costs	(250)	(250)	(250)	(0)	(0)
Net profit	1,193	1,381	2076	0	206
			$\underbrace{\qquad\qquad}_{2,076}$		
Comparison with View 0	1,250	1,450	2,150	(1,000)	1,000

A day 1 replanting gain still remains but is reduced because of the deduction of the present value of the next replanting cost. The gain that is recognised reflects the discount in the present value. Note: the longer the time period to the next replanting, the greater this gain will be.

Illustrative accounting under view 2

View 2 requires the cost of compulsory replanting to be recognised as an asset at the time that the liability is recognised.

Relative fair values of the land and the crop are:

Crop (1,000)	CU1,000	10%
Land (9,000)	CU9,000	90%
Total	CU10,000	100%

Accounting entries required are:

	Dr	Cr
At 1 January 20X5		
Dr Crop (10% x 10,000)	1,000	
Dr Land (90% x 10,000)	9,000	
Cr Cash		10,000
Being purchase of the crop when land purchased		
Year ended 31 December 20X5		
Dr Crop (2,500 – 1,000)	1,500	
Cr Gain from change in fair value of biological assets		1,500
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Year ended 31 December 20X6		
Dr Crop (4,200 – 2,500)	1,700	
Cr Gain from change in fair value of biological assets		1,700
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		

<u>Year ended 31 December 20X7</u>		
Dr Crop (6,600 – 4,200)	2,400	
Cr Gain from change in fair value of biological assets		2,400
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Dr Inventory (6,600 + 450)	7,050	
Cr Crop		6,600
Cr Cash		450
Dr Asset: Crop to be planted	1,000	
Cr Provision		1,000
Being harvesting of crop and recognition of provision for replanting		
<u>At 1 January 20X8</u>		
Dr Provision	1,000	
Cr Cash		1,000
Dr Crop	1,000	
Cr Asset: Crop to be planted		1,000
Dr Cash	7,050	
Cr Revenue		7,050
Dr Cost of sales	7,050	
Cr Inventory		7,050
Being replanting of crop and sale of inventory		

Recognition of 'crops to be planted' asset

Summary balance sheet and income statement (View 2)

	1/1/X5	31/12/X5	31/12/X6	30/12/X7	31/12/X7	1/1/X8
Crops	1,000	2,500	4,200	6,600	0	1,000
Crops to be planted					1,000	
Land	9,000	9,000	9,000	9,000	9,000	9,000
Inventory	0	0	0	0	7,050	0
Cash	5,000	4,750	4,500	4,250	3,800	9,850
Provision to replant	(0)	(0)	(0)	(0)	(1,000)	(0)
Net assets	15,000	16,250	17,700	19,850	19,850	19,850
Share capital	15,000	15,000	15,000	15,000	15,000	15,000
Retained earnings	0	1,250	2,700	4,850	4,850	4,850
Total equity	15,000	16,250	17,700	19,850	19,850	19,850

	y/e 31/12/X5	y/e 31/12/X6	364 d/e 30/12/X7	1 d/e 31/12/X7	1 d/e 1/1/X8
Sale of crop	0	0	0	0	7,050
Cost of sales					(7,050)
Gain from change in fair value of biological assets	1,500	1,700	2,400	0	0
Operating costs	(250)	(250)	(250)	(0)	(0)
Net profit	1,250	1,450	2,150	0	0
			2,150		
Comparison with View 0	1,250	1,450	2,150	(1,000)	1,000

Illustrative accounting under view 3

View 3 requires the cost of compulsory replanting to be recognised as a component of inventory cost of the crop just harvested.

Relative fair values of the land and the crop are:

Crop (1,000)	CU1,000	10%
Land (9,000)	CU9,000	90%
Total	CU10,000	100%

Accounting entries required are:

	Dr	Cr
At 1 January 20X5		
Dr Crop (10% x 10,000)	1,000	
Dr Land (90% x 10,000)	9,000	
Cr Cash		10,000
Being purchase of the crop when land purchased		
Year ended 31 December 20X5		
Dr Crop (2,500 – 1,000)	1,500	
Cr Gain from change in fair value of biological assets		1,500
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Year ended 31 December 20X6		
Dr Crop (4,200 – 2,500)	1,700	
Cr Gain from change in fair value of biological assets		1,700
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		

Year ended 31 December 20X7

Dr Crop (6,600 – 4,200)	2,400	
Cr Gain from change in fair value of biological assets		2,400
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Dr Inventory (6,600 + 450)	7,050	
Cr Crop		6,600
Cr Cash		450
Dr Inventory	1,000[1]	
Cr Provision		1,000
Dr Operating costs (impairment loss)	1,000	
Cr Inventory		1,000
Being harvesting of crop, recognition of provision for replanting and impairment loss recognised against inventory		

At 1 January 20X8

Dr Provision	1,000	
Cr Cash		1,000
Dr Crop	1,000	
Cr Gain from change in fair value of biological assets		1,000
Dr Cash	7,050	
Cr Revenue		7,050
Dr Cost of sales	7,050	
Cr Inventory		7,050
Being replanting of crop and sale of inventory		

[1] Increasing the cost of the inventory by the cost of replanting the next crop will increase the carrying value of the inventory above net realisable value.

Summary balance sheet and income statement (View 3)

	1/1/X5	31/12/X5	31/12/X6	30/12/X7	31/12/X7	1/1/X8
Crops	1,000	2,500	4,200	6,600	0	1,000
Land	9,000	9,000	9,000	9,000	9,000	9,000
Inventory	0	0	0	0	7,050	0
Cash	5,000	4,750	4,500	4,250	3,800	9,850
Provision to replant	(0)	(0)	(0)	(0)	(1,000)	(0)
Net assets	15,000	16,250	17,700	19,850	18,850	19,850
Share capital	15,000	15,000	15,000	15,000	15,000	15,000
Retained earnings	0	1,250	2,700	4,850	3,850	4,850
Total equity	15,000	16,250	17,700	19,850	18,850	19,850

	y/e 31/12/X5	y/e 31/12/X6	364 d/e 30/12/X7	1 d/e 31/12/X7	1 d/e 1/1/X8
Sale of crop	0	0	0	0	7,050
Cost of sales					(7,050)
Gain from change in fair value of biological assets	1,500	1,700	2,400	0	1,000
Operating costs	(250)	(250)	(250)	(1,000)	(0)
Net profit	1,250	1,450	2,150	(1,000)	1,000
			1,150		
Comparison with View 0	1,250	1,450	2,150	(1,000)	1,000

Impairment of inventory

Same income statement effect

Illustrative accounting under view 4

View 4 does not recognise a provision for replanting when the previous crop is harvested. This is justified on the basis that the entity will receive an asset of equal value when it performs the replanting, thus the obligation to replant is an executory contract.

Relative fair values of the land and the crop are:

Crop (1,000)	CU1,000	10%
Land (9,000)	CU9,000	90%
Total	CU10,000	100%

Accounting entries required are:

	Dr	Cr
At 1 January 20X5		
Dr Crop (10% x 10,000)	1,000	
Dr Land (90% x 10,000)	9,000	
Cr Cash		10,000
Being purchase of the crop when land purchased		
Year ended 31 December 20X5		
Dr Crop (2,500 – 1,000)	1,500	
Cr Gain from change in fair value of biological assets		1,500
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Year ended 31 December 20X6		
Dr Crop (4,200 – 2,500)	1,700	
Cr Gain from change in fair value of biological assets		1,700
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		

<u>Year ended 31 December 20X7</u>		
Dr Crop (6,600 – 4,200)	2,400	
Cr Gain from change in fair value of biological assets		2,400
Being increase in fair value (net of future replanting costs)		
Dr Operating costs	250	
Cr Cash		250
Being annual maintenance costs		
Dr Inventory (6,600 + 450)	7,050	
Cr Crop		6,600
Cr Cash		450
Being harvesting of crop		
<u>At 1 January 20X8</u>		
Dr Crop	1,000	
Cr Cash		1,000
Dr Cash	7,050	
Cr Revenue		7,050
Dr Cost of sales	7,050	
Cr Inventory		7,050
Being replanting of crop and sale of inventory		

No provision recognised at point of harvest

Summary balance sheet and income statement (View 4)

	1/1/X5	31/12/X5	31/12/X6	30/12/X7	31/12/X7	1/1/X8
Crops	1,000	2,500	4,200	6,600	0	1,000
Land	9,000	9,000	9,000	9,000	9,000	9,000
Inventory	0	0	0	0	7,050	0
Cash	5,000	4,750	4,500	4,250	3,800	9,850
Provision to replant	(0)	(0)	(0)	(0)	(0)	(0)
Net assets	15,000	16,250	17,700	19,850	19,850	19,850
Share capital	15,000	15,000	15,000	15,000	15,000	15,000
Retained earnings	0	1,250	2,700	4,850	4,850	4,850
Total equity	15,000	16,250	17,700	19,850	19,850	19,850

	y/e 31/12/X5	y/e 31/12/X6	364 d/e 30/12/X7	1 d/e 31/12/X7	1 d/e 1/1/X8
Sale of crop	0	0	0	0	7,050
Cost of sales					(7,050)
Gain from change in fair value of biological assets	1,500	1,700	2,400	0	0
Operating costs	(250)	(250)	(250)	(0)	(0)
Net profit	1,250	1,450	2,150	0	0
			2,150		
Comparison with View 0	1,250	1,450	2,150	(1,000)	1,000