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IAS® Standard 41 Agriculture

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IAS® Standard 41 Agriculture

Scope and Key Definitions

Agribusiness accounting is a specific area, and the IAS® Standard 41 Agriculture defines its specificity, which is divided into three important aspects – accounting of biological assets, agricultural products and grants. The aim of IAS 41 is to standardise accounting treatment and disclosures for agricultural activities. When it comes to agricultural activities, this Standard should be used to account for the items presented in Figure 1.

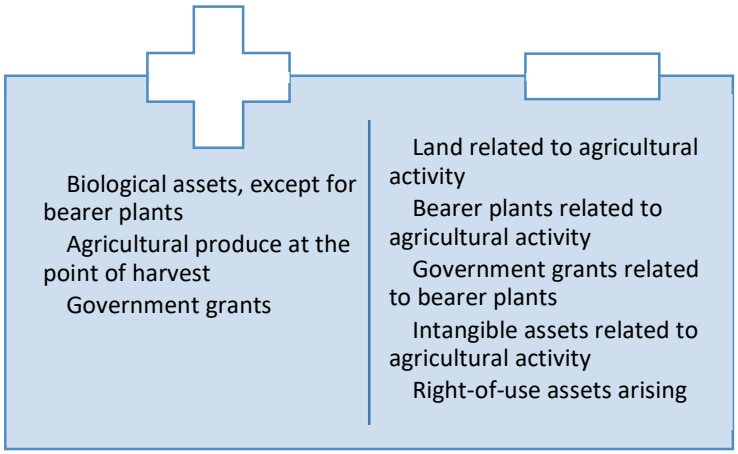

Figure 1. Application of the IAS 41

Even though it seems that in field agriculture, the accounting for non-current assets or accounting for current assets may be implemented in accordance with other IFRS® Standards, it is first necessary to become familiar with IAS 41 as agriculture has a specific comparison with other industries. IAS 41 is applied to the agricultural output that is harvested at the time of harvest of the entity's biological assets. Accordingly, this standard does not apply to post-harvest processing of agricultural output, such as the conversion of apple trees into juice by an apple grower.

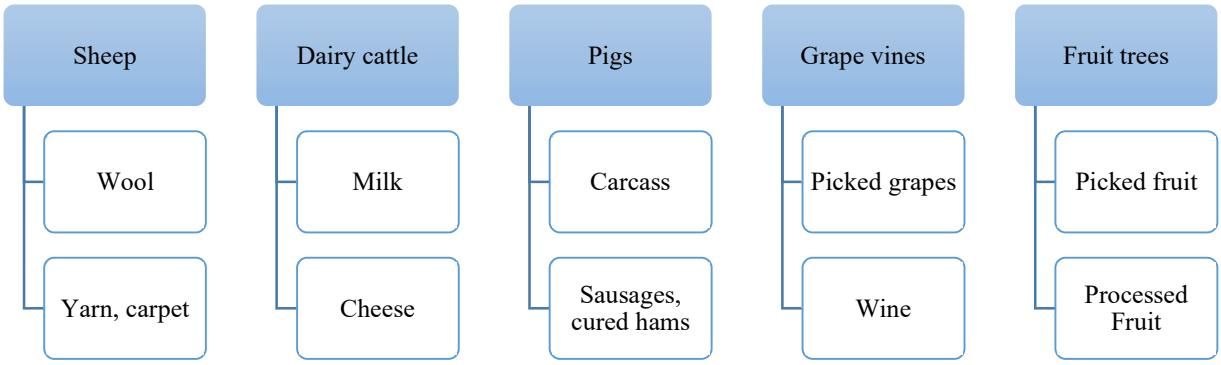

Figure 2. Examples of biological assets, outputs and final products

Figure 2 provides examples of biological assets, agricultural and post-harvest products. Examples of biological assets, agricultural and post-harvest products show biological asset transformation (see Fig. 3), which is one of specific agribusiness as compared to the other sectors of business.

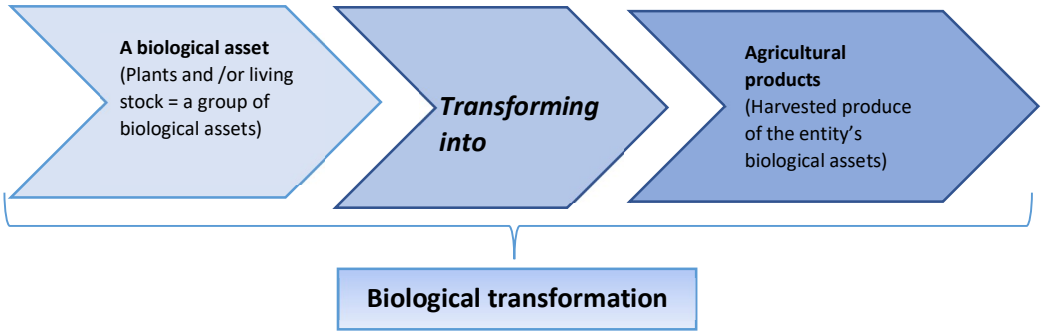

Figure 3. The concept of biological transformation

Figure 3 presents outcomes of biological transformation: an asset changes through growth, degeneration, procreation. Raising cattle, forestry, annual or perennial crops, producing orchards and plantations, floriculture, and aquaculture are all examples of agricultural activity (including fish farming). Within this variety, there are certain commonalities: capability to change, management of change.

Key definitions (IAS 41.5-8):

- Agricultural activity is the management of the biological transformation and harvest of the biological assets by an entity for sale or transformation into agricultural produce or more biological assets.
- A bearer plant is a living plant that can be used in the production or supply of agricultural produce; the output is expected to be for more than one period, except for the infrequent sale of scrap, it is unlikely to be sold as an agricultural commodity.
- Costs to sell means incremental costs, excluding finance costs and income taxes, form the additional costs related to the sale of an asset.
- Harvest is a process, in which the agricultural outputs are obtained from the biological assets without either the interruption of their vital functions (e.g. milk) nor by the cessation of the vital functions (e.g. carcass).
- The carrying amount is the amount at which an asset is recognised in the statement of the financial position.
- Fair value is the price that would be received for the sale of an asset or paid for liability in an orderly transaction between market participants at the measurement date (See IFRS Standard 13 Fair Value Measurement).

Fundamental Issues: Recognition

A biological asset or agricultural output is recognised by an entity only if:

- It is a result of prior events; the entity has control over the asset.
- Future economic gains linked to the asset are likely to flow to the entity.
- The asset's fair value or cost may be measured reliably.

IAS 41 paragraphs 12-13 specifies for biological assets and agricultural outputs to apply the method of fair value less costs to sell. However, according to IAS 41 paragraph 30, if a biological asset for which quoted market prices are not available and for which alternative estimates of fair value are clearly unreliable, then that biological asset must be valued using the cost method (see Table 1).

Table 1. Examples of recognition of agricultural outputs at cost and fair value

Recognition of agricultural outputs	Examples
By cost	It is known that raw materials (seeds, fertilisers, fuel) were used to grow wheat for CU10,000, labour costs were CU3,000, and machinery costs (depreciation, repairs) were CU2,000. The total cost of growing wheat is CU15,000. It is known that the wheat harvested was 100 tons. Therefore, agricultural production (wheat) will be recorded at a cost of 100 tons at CU150.
By fair value	It is known that the entity produced 10 tons of wheat. The price of wheat on the principal market on the valuation day was found to be CU140 per tonne. Therefore, wheat will be recorded at fair value of 10 tonnes for CU140 at a total value of CU14,000

As shown in Table 1, the method chosen for recognizing biological assets or agricultural outputs may affect the value of the assets presented in the statement of the financial position.

Fundamental Issues: Measurement

Control may be demonstrated in agricultural activities by the legal ownership of cattle and the branding or other marking of the cattle at the time of purchase, birth, or weaning. In most cases, the future advantages are estimated by assessing the important physical characteristics. Except in the instance mentioned in paragraph AIAS 41.30, when the fair value cannot be reliably measured, a biological asset is valued at its fair value less expenses to sell on initial recognition and at the end of each reporting period. Agricultural product collected from an entity's biological assets is valued at fair market value less selling costs at the time of harvest (see fig. 4). The fair value of biological assets and agricultural produce may be determined more easily by classifying them in accordance with the significant characteristics.

Entities often enter into contracts to sell their biological assets or agricultural produce on a future date. Fair value indicates the current market conditions, under which market participant buyers and sellers would enter into a transaction; thus, contract pricing is not always applicable when determining fair value. As a result, due to the existence of a contract, the fair value of a biological asset or agricultural output is not adjusted. A contract for the sale of a biological asset or agricultural produce, as described in IAS Standard 37 Provisions, Contingent Liabilities and Contingent Assets, may be a one-time contract in specific situations.

Cash flows for financing assets or re-establishing biological assets after harvest are not included by an entity in the cost of assets recognised in accordance with IAS 41 (for example, the cost of replanting trees in a plantation forest after harvest).

The cost can amount close to fair value, especially when:

- Since the original cost, little biological transformation has occurred (e. g. seedlings planted just before the end of a reporting period or newly acquired livestock).
- The price impact of the biological transformation is unlikely to be significant (e.g. within the first 30 years of a 30-year pine plantation production cycle).

Biological assets are usually combined with the land (for example, trees in a plantation forest). Even though there may be no independent market for biological assets tied to land, there may be an active market for the combined assets, i.e. biological assets, raw land, and land improvements as a package.

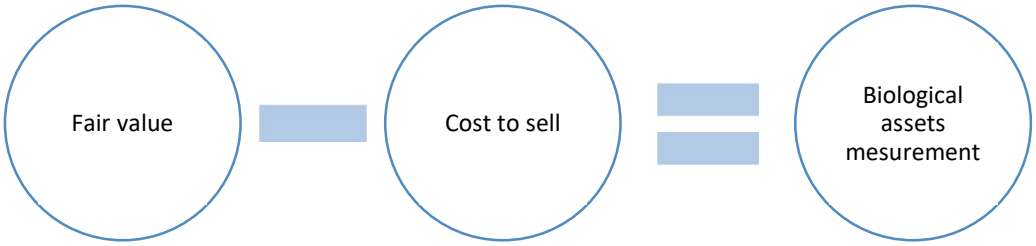

Figure 4. Measurement of biological assets

To measure the fair value of biological assets, an entity might use information on the combined assets. To arrive at the fair value of biological assets, the fair value of raw land and land improvements, for example, may be subtracted from the fair value of the combined assets. To measure the fair value of the biological asset, for e.g., the fair value of uncultivated land and land improvement may be subtracted from the overall asset's fair value. Table 2 presents an example of measurement of biological assets.

Table 2. Example of measurement of biological assets

Situation	**The entity purchases a cow at an auction for CU2,000. The entity knows that the brokers were paid CU200 for the transaction (transaction cost).**
Solution	Given that biological assets in an entity are recognized at fair value in the initial and subsequent evaluation, the biological assets will be accounted at price less transaction costs. Therefore, the fair value of a cow is CU2,000 – CU200 = CU1,800.

It is assumed that the fair value of a biological asset can be measured reliably, but this assumption can only be rebutted on the initial recognition for a biological asset for which the quoted market prices are not available and for which the alternative fair value measurements are clearly unreliable. In this scenario, a biological asset will be measured at its original cost, less any accumulated depreciation and impairment losses. When the fair value of a biological asset is reliably measured, an entity must measure it at its fair value's less selling costs.

Agriculture stands out from other business sectors due to frequent grants from the government. When a government grant is received for a biological asset, it is recognized in the statement of profit or loss and other comprehensive income, once it becomes receivable. Examples of grant recognition are given in Table 3.

Table 3. Examples of grant recognition

Situation	**Examples**

The agricultural entity received CU2,000 grant (direct payments) for infertile crops on 15 August 20x1.	Grant received: Dr. Cash CU2,000 Cr. Revenue CU2,000
The agricultural entity signed an agreement for CU5,000 grant for cattle. Payment in two equal settlements – in March and in July.	1. Signed agreement: Dr. Receivables CU5,000 Cr. Revenue CU5,000 2. Payment in March: Dr. Cash CU2,500 Cr. Receivables CU2,500 3. Payment in July: Dr. Cash CU2,500 Cr. Receivables CU2,500

However, government grants may vary due to longer periods or various other conditions. For example, if a requirement to receive a grant is to carry out agriculture activity for no less than five years, then the grant is recognized in the statement of profit or loss after this five year. Other provisions are set out in IAS Standard 20 Accounting for Government Grants and Disclosure of Government Assistance.

Fundamental Issues: Procedures

A gain or loss resulting from the first recognition of a biological asset at fair value less costs to sell, as well as a change in fair value less costs to sell, must be included in profit or loss for the period in which it occurs (IAS 41.26). A gain or loss resulting from the initial recognition of agricultural produce at fair value minus selling costs is included in profit or loss for the period in which it occurs. The initial recognition of agricultural produce as a result of harvesting may result in a gain or loss. Examples are given in Table 4.

Table 4. Examples of gain or loss from recognition at fair value

Situation	Record
Calves were purchased for CU6,000. It is known that the cost of sales was CU500.	Dr. Biological assets CU5,500 Dr. Loss on fair value CU500 Cr. Cash CU6,000
During the period established, calves (previously purchased) are known to have incurred livestock costs for the year at CU2,000. And the fair value of the calves at the end of the period was set at CU8,200. The gain was estimated to be equal to CU700 (CU8,200 - CU5,500 - CU2,000).	Dr. Biological assets CU2,700 Cr. Livestock costs (working in progress) CU2,000 Cr. Gain on fair value CU700
In the autumn, the value of the winter crop (wheat) was set at CU6,000, taking into account the crop costs incurred. After an assessment in the next spring it was found that some crops were freezing and that their fair value was set to CU5,200.	1. Recognition of crops: Dr. Biological assets CU6,000 Cr. Crops costs (working in progress) CU6,000 2. Fair value estimate in spring: Dr. Loss on fair value CU800 Cr. Biological assets CU800

Disclosures

An entity shall disclose any gain or loss on the initial recognition of biological assets and agricultural products for the current period, as well as the change in fair value minus expenses to sell the biological assets, for the current period. An entity is encouraged to provide a quantitative description of each group of biological assets by category (e.g. animals by age and sex or plants by maturity).

An entity shall disclose the information presented in Table 5 with the financial statements.

Table 5. The information is disclosed with the financial statements

Information to be disclosed (IAS 41.46)	Information to be disclosed (IAS 41.49):
● The nature of its activities involving each group of biological assets. ● Non-financial measures or estimates of the physical quantities:. ○ At the end of the period, each group of the entity's biological assets. ○ Output of agricultural produce during the period.	● The presence and carrying amounts of biological assets with restricted title, as well as the carrying amounts of biological assets pledged as the collateral for liabilities. ● The amount of commitments for the development or acquisition of biological assets. ● Strategies for managing financial risks associated with the agricultural industry.

A reconciliation of changes in the carrying amount of biological assets between the beginning and conclusion of the current period should be presented by an entity. The reconciliation must include the following items (IAS 41.50):

- The gain or loss arising from changes in fair value less costs to sell;
- Increases due to the purchases;
- Reductions attributed to the sales of biological assets categorised as held for sale in line with IFRS Standard 5 Non-current Assets Held for Sale and Discontinued Operations;
- Decreases as a result of harvest;
- Increases resulting from business combinations;
- Net exchange differences resulting from financial statement translations into a different presentation currency, as well as the translation of a foreign business into the reporting entity's presentation currency;
- Other.

An entity shall disclose information about biological assets in accordance with the accounting policies used (see Table 6).

Table 6. Disclosure of biological assets

Method of accounting for biological assets	Disclosure
Biological assets are measured at cost less accumulated depreciation and accumulated impairment losses (IAS 41.54).	● A description of the biological assets; ● An explanation of why fair value cannot be measured reliably; ● If possible, the range of estimates within which fair value is highly likely to lie; ● The depreciation method used; ● The useful lives or the depreciation rates used; and ● The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period.
Biological assets are measured at cost less any accumulated depreciation and any accumulated impairment losses during the current period, the entity shall disclose any gain or loss recognised on disposal of such biological assets, and the reconciliation required by IAS41.50 should separately disclose amounts related to such biological assets. In addition, the reconciliation should include the following values from this biological asset's profit or loss (IAS41.55).	● Impairment losses; ● Reversals of impairment losses; ● Depreciation.
If the fair value of biological assets previously measured at cost, less any cumulative depreciation and any accumulated impairment losses, becomes reliably measurable within the current period, an entity must disclose (IAS 41.56).	● A description of the biological assets. ● An explanation of why fair value has become reliably measurable. ● The effect of the change.

As presented in Table 6, disclosure information depends on these factors – whether the biological asset has been measured at cost, depreciated or measured at fair value.

Examples

Example No. 1

The main activity of the entity is crop production activities. The entity grows wheat, and the cost of crop production was CU3,000. The harvest was 20 tonnes of wheat with a fair value of CU170 per tonne.

The harvested crop will be recorded in the accounts with the following entry:

Dr. Inventories – agricultural production CU3,400 (20 t. x CU170) Cr. Crop costs (work in progress) CU3,000 Cr. Gain on fair value CU400

Example No. 2

The main activity of the entity is animal husbandry. It is known that the livestock cost of keeping a cow is CU220 per period. A calf born during the period is priced at CU150. During the period, 200 litres of milk were milked. Milk is valued at the cost of production.

It must be taken into account that the calf is priced at CU150, while the cost of milk under the remaining costs is CU70 (CU220 – CU150). Thus, the cost of one litres of milk is CU0.35 (CU70 / 200 litres). The biological assets and agricultural production will be recorded in the accounts with the following entry:

Dr. Inventories – agricultural production CU70 (200 l x CU0.35) Dr. Biological assets - fattening animals CU150 Cr. Livestock costs (work in progress) CU220

Example No. 3

The main activity of an entity is agricultural activities. The entity grows broilers for sale, so broilers are classified as the current assets. Biological assets and agricultural produce are measured at fair value. Imagine that an entity has a simple structured statement of financial position that is presented below.

	01-01-20x1, CU		**01-01-20x1, CU**
Non-current assets	**170,000**	**Equity**	**180,000**
Tractor	*30,000*	*Shares capital*	*100,000*
Farm building	*140,000*	*Retained earnings*	*80,000*
Current assets	**90,000**	**Grant**	**10,000**
Inventories	*40,000*	**Liabilities**	**70,000**
Biological assets	–	*Non-current liabilities*	*40,000*
Cash	*50,000*	*Current liabilities*	*30,000*
Total	**260,000**	**Total**	**260,000**

The following transactions are known to have taken place in January-February 20x1 and have been recorded in the general journal:

- The entity has purchased broiler chicks. It has purchased 10,000 chickens for the total of CU12,000. The transaction costs paid to the dealers are known to have been CU2,000. Therefore, the acquisition is recorded at fair value less transaction costs.

Record of purchase:
Dr. Biological assets CU10,000 Dr. Expenses CU2,000 Cr. Cash CU12,000

- The feed that was fed to farmed broilers for CU30,000.

Record of the write–off of inventories
Dr. Work in progress (livestock costs) CU30,000 Cr. Inventories CU30,000

- Depreciation of the non-current assets is calculated. Depreciation of the tractor for two months is CU1,000 and that of the building is CU3,000. It is also known that the tractor received a grant (subsidy) of 60% of its value.

Record of deprecation	Record of used grant
Dr. Work in progress (livestock costs) CU4,000 Cr. Accumulated depreciation of tractor CU1,000 Cr. Accumulated depreciation of farm building CU3,000	Dr. Grant (CU1,000 x 60%) CU600 Cr. Work in progress (livestock costs) CU600

- At the end of February, 6,000 broilers gained the required weight and were put up for sale. The resulting broiler meat was 7800 kg. The price of broiler meat in the principal market was found to be CU3 per kg. The broiler meat was therefore valued at fair value at CU23,400.

Record of the agricultural output
Dr. Finished products CU23,400 Cr. Work in progress (livestock costs) CU23,400

- It is estimated that 4,000 broilers are still being grown, the fair value of which is calculated on the live weight basis. The price set in the principal market for these 4,000 broilers is CU15,000. This value is considered to be the fair value at the statement of financial position.

Record for the subsequent measurement of the biological assets
Dr. Biological assets (CU15,000 - CU10,000) CU5,000 Dr. Loss in change of fair value CU5,000 Cr. Work in progress (livestock costs) (CU30,000 + CU4,000 – CU600 - CU23,400) CU10,000

The entity's statement of financial position at the end of February will look like the one below.

	28-02-20x1, CU		28-02-20x1, CU
Non-current assets	**166,000**	**Equity**	**173,000**
Tractor	*29,000*	*Shares capital*	*100,000*
Farm building	*137,000*	*Retained earnings*	*73,000*
Current assets	**86,400**	**Grant**	**9,400**
Inventories	*10,000*	**Liabilities**	**70,000**
Finished product	*23,400*	*Non-current liabilities*	*40,000*
Biological assets	*15,000*	*Current liabilities*	*30,000*
Cash	*38,000*		
Total	**252,400**	**Total**	**252,400**