

Agriculture (IAS 41)

Table of Contents

1. Objective and background
2. Scope of IAS 41
3. Key definitions
4. Recognition of biological assets and agricultural produce
5. Measurement of biological assets
6. Inability to measure fair value reliably (exceptional circumstances)
7. Agricultural produce at the point of harvest
8. Bearer plants and produce on bearer plants
9. Gains and losses
10. Government grants
11. Disclosure requirements
12. Presentation and interaction with other standards
13. Illustrative examples of agricultural activity
14. Summary and exam style focus points
15. 20 Multiple-Choice Questions
16. Comprehensive Question Bank (with Solutions)

1. Objective and background

IAS 41 *Agriculture* prescribes the accounting treatment and disclosure requirements for agricultural activity. Its core focus is on:

- **Biological assets** (living animals and plants) related to agricultural activity.
- **Agricultural produce** at the point of harvest.
- **Certain government grants** related to biological assets.

The standard is distinctive because, unlike most non-financial assets, biological assets are generally measured at **fair value less costs to sell**, with changes in fair value recognised in profit or loss.

IAS 41 does **not** deal with the processing of agricultural produce after harvest (for example, grapes into wine, wool into yarn, logs into lumber). Those later stages are covered by other standards such as IAS 2 *Inventories* and relevant manufacturing guidance.

2. Scope of IAS 41

2.1 Items within the scope

IAS 41 applies to the following when they relate to agricultural activity:

- **Biological assets** (except bearer plants).
- **Agricultural produce** at the point of harvest.
- **Government grants** related to biological assets, as specified in IAS 41.

2.2 Items outside the scope

IAS 41 does **not** apply to:

- **Land** related to agricultural activity
 - Land is accounted for under IAS 16 *Property, Plant and Equipment* or IAS 40 *Investment Property*, depending on its use.
- **Bearer plants** related to agricultural activity
 - Bearer plants are accounted for under IAS 16. IAS 41 applies only to the produce growing on those bearer plants.
- **Processing of agricultural produce after harvest**
 - For example, processing harvested sugarcane into sugar, or coffee cherries into roasted coffee beans.

Key point: IAS 41 focuses on the biological transformation and harvest stage, not on subsequent industrial processing.

3. Key definitions

3.1 Agricultural activity

Agricultural activity is the management of the *biological transformation* of biological assets and the harvest of those assets for:

- **Sale**, or
- **Conversion into agricultural produce**, or
- **Conversion into additional biological assets**.

Biological transformation includes:

- **Growth** (increase in quantity or quality).
- **Degeneration** (decline in condition or productivity).
- **Production** (yield of produce, e.g. milk, fruit).
- **Procreation** (reproduction, e.g. breeding livestock).

3.2 Biological asset

A **biological asset** is a living animal or plant. Examples:

- **Animals**: cattle, sheep, pigs, poultry, fish in a fish farm.
- **Plants**: trees in a plantation forest, sugarcane, maize crops, grape vines (but note bearer plant distinction below).

3.3 Agricultural produce

Agricultural produce is the harvested product of the entity's biological assets. Examples:

- Wool shorn from sheep.
- Milk from dairy cattle.
- Harvested maize, wheat, or sugarcane.
- Logs harvested from plantation trees.

Agricultural produce is within IAS 41 **only at the point of harvest**. After that, IAS 2 or other standards apply.

3.4 Harvest

Harvest is the detachment of produce from a biological asset or the cessation of a biological asset's life processes. Examples:

- Cutting sugarcane.
- Felling trees in a plantation.
- Picking fruit from trees.
- Milking cows.

3.5 Bearer plants

A **bearer plant** is a living plant that:

- Is used in the production or supply of agricultural produce.
- Is expected to bear produce for more than one period.
- Has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.

Examples:

- Mature grape vines used to produce grapes.
- Oil palm trees used to produce palm fruit.
- Rubber trees used to produce latex.

Bearer plants are accounted for under IAS 16 (as property, plant and equipment), while the **produce growing on them** (grapes, palm fruit, latex) is accounted for under IAS 41.

4. Recognition of biological assets and agricultural produce

4.1 Recognition criteria

A biological asset or agricultural produce is recognised when:

- **Control:** The entity controls the asset as a result of past events.
- **Future economic benefits:** It is probable that future economic benefits associated with the asset will flow to the entity.
- **Reliable measurement:** The fair value or cost of the asset can be measured reliably.

These criteria are consistent with the general asset recognition principles in the Conceptual Framework and IAS 8.

4.2 Initial recognition

- **Biological assets:** Initially recognised at **fair value less costs to sell** at the date of acquisition or when the entity first controls the asset.
- **Agricultural produce:** Recognised at **fair value less costs to sell at the point of harvest**. This amount becomes the **cost** for subsequent accounting under IAS 2 or other applicable standards.

5. Measurement of biological assets

5.1 General measurement principle

The central principle of IAS 41 is:

Biological assets are measured at **fair value less costs to sell**, both on initial recognition and at each reporting date, except in limited circumstances where fair value cannot be measured reliably.

Fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. **Costs to sell** include commissions, levies, transfer taxes and duties, but exclude transport and other costs necessary to get the asset to market.

5.2 Fair value less costs to sell

Measurement formula:

$$\text{Carrying amount} = \text{Fair value} - \text{Costs to sell}$$

- **Fair value:** Usually based on quoted market prices in an active market for the asset, or for similar assets.
- **Costs to sell:**
 - Include: broker commissions, regulatory levies, transfer taxes.
 - Exclude: transport costs, storage costs, and other costs necessary to bring the asset to market.

5.3 Changes in fair value

Changes in the fair value less costs to sell of a biological asset are recognised in **profit or loss** in the period in which they arise. This includes:

- **Physical changes:** Growth, weight gain, maturation, reproduction.
- **Price changes:** Changes in market prices for the asset.

This treatment can lead to significant volatility in profit or loss for entities engaged in agricultural activity, because biological assets are remeasured at fair value at each reporting date.

5.4 Example — Livestock measured at fair value

Scenario: An entity owns 100 cattle. At 1 January:

- Fair value per animal: R1 000
- Costs to sell per animal: R50

Initial carrying amount:

$$\text{Carrying amount} = 100 \times (1\,000 - 50) = 100 \times 950 = \text{R}95\,000$$

At 31 December:

- Fair value per animal: R1 200

- Costs to sell per animal: R60

New carrying amount:

$$\text{Carrying amount} = 100 \times (1\,200 - 60) = 100 \times 1\,140 = \text{R}114\,000$$

Change in fair value:

$$\text{Gain} = 114\,000 - 95\,000 = \text{R}19\,000$$

This gain of R19 000 is recognised in profit or loss for the year.

6. Inability to measure fair value reliably

6.1 Exceptional circumstances

IAS 41 allows a **cost model** only in rare cases where fair value cannot be measured reliably on initial recognition. This may occur when:

- There is no active market for the biological asset.
- Alternative fair value measurements (e.g. discounted cash flows) are clearly unreliable.
- The entity has insufficient information to measure fair value.

In such cases, the biological asset is measured at **cost less accumulated depreciation and impairment losses**.

6.2 Subsequent measurement under the cost model

If fair value cannot be measured reliably on initial recognition:

- The entity uses **cost less depreciation and impairment** until fair value becomes reliably measurable.
- Once fair value becomes reliably measurable, the entity switches to **fair value less costs to sell**.

The use of the cost model is intended to be temporary and exceptional. The presumption in IAS 41 is that fair value can normally be measured reliably for biological assets.

6.3 Example — Young plantation with no active market

Scenario: An entity establishes a new plantation of a rare tree species. There is no active market for young trees, and reliable fair value estimates are not available.

- On initial recognition, the entity measures the trees at **cost** (e.g. planting costs, seedlings, directly attributable costs).
- The trees are depreciated (if appropriate) and tested for impairment.

- When the trees mature and a market develops, or when reliable valuation techniques become available, the entity switches to **fair value less costs to sell**.

7. Agricultural produce at the point of harvest

7.1 Measurement at harvest

Agricultural produce harvested from an entity's biological assets is measured at **fair value less costs to sell at the point of harvest**. This amount becomes the **cost** of the produce for subsequent accounting under IAS 2 *Inventories* or other applicable standards.

7.2 Example — Harvested wheat

Scenario: An entity harvests 1 000 tonnes of wheat.

- Market price at harvest: R200 per tonne.
- Costs to sell (commission, levies, etc.): R10 per tonne.

Measurement at harvest:

$$\begin{aligned}\text{Fair value less costs to sell per tonne} &= 200 - 10 = \text{R}190 \\ \text{Total carrying amount of inventory} &= 1\,000 \times 190 = \text{R}190\,000\end{aligned}$$

This R190 000 becomes the **cost of inventories** under IAS 2. Subsequent changes in value (e.g. due to storage or price changes) are accounted for under IAS 2, not IAS 41.

8. Bearer plants and produce on bearer plants

8.1 Accounting for bearer plants

Bearer plants (e.g. mature grape vines, oil palm trees, rubber trees) are accounted for under IAS 16 *Property, Plant and Equipment*:

- Measured at **cost less accumulated depreciation and impairment losses**, or
- Under the **revaluation model** if the entity chooses.

IAS 41 does **not** apply to bearer plants themselves.

8.2 Accounting for produce on bearer plants

The **produce growing on bearer plants** (e.g. grapes, palm fruit, latex) is a **biological asset** within the scope of IAS 41 and is measured at **fair value less costs to sell**.

8.3 Example — Vineyard

Scenario: An entity owns a vineyard:

- **Grape vines** (bearer plants) — accounted for under IAS 16.
- **Grapes growing on the vines** — biological assets under IAS 41.

At reporting date:

- The vines are measured at cost less depreciation (or revalued amount) under IAS 16.
- The grapes are measured at fair value less costs to sell under IAS 41.
- At harvest, the grapes become agricultural produce and are measured at fair value less costs to sell; this amount becomes the cost of inventories (e.g. grapes to be sold or processed into wine).

9. Gains and losses

9.1 Types of gains and losses

IAS 41 requires recognition in profit or loss of:

- **Gains or losses on initial recognition** of biological assets at fair value less costs to sell.
- **Gains or losses on initial recognition** of agricultural produce at fair value less costs to sell at harvest.
- **Changes in fair value less costs to sell** of biological assets between reporting dates.

9.2 Presentation in profit or loss

Entities typically present:

- **Fair value gains** (e.g. due to growth or price increases) as part of operating profit or a separate line item related to agricultural activity.
- **Fair value losses** (e.g. due to disease, drought, price decreases) similarly.

Because biological assets are remeasured at fair value each reporting date, profit or loss can be volatile, reflecting both physical and price changes.

9.3 Example — Plantation forest

Scenario: An entity owns a plantation forest. During the year:

- Trees grow in volume (physical change).
- Market prices for timber increase (price change).

At year-end, the fair value less costs to sell of the forest increases from R5 million to R6 million.

$$\text{Gain} = 6\,000\,000 - 5\,000\,000 = \text{R}1\,000\,000$$

This R1 000 000 is recognised in profit or loss as a fair value gain on biological assets.

10. Government grants

10.1 General approach

IAS 41 contains specific guidance on **government grants** related to biological assets measured at fair value less costs to sell. The treatment differs from IAS 20 *Government Grants* in some respects.

10.2 Unconditional government grants

For **unconditional grants** related to biological assets measured at fair value less costs to sell:

- The grant is recognised as **income** when it becomes **receivable**.

Example:

- The government pays R100 per hectare to encourage tree planting.
- Once the entity meets the eligibility criteria and the grant is receivable, it recognises the grant income.

10.3 Conditional government grants

For **conditional grants** (e.g. grants that require the entity to meet certain conditions such as maintaining the plantation for a specified period):

- The grant is recognised as **income** only when the conditions are **met**.

Example:

- A grant requires the entity to maintain a plantation for five years.
- The grant is recognised as income over the period as the conditions are satisfied, or when the conditions are fully met, depending on the grant terms.

10.4 Grants related to assets measured at cost

If a biological asset is measured at **cost** (because fair value cannot be measured reliably), government grants are accounted for under **IAS 20**, not IAS 41.

11. Disclosure requirements

IAS 41 requires extensive disclosures to help users understand the nature, extent, and financial effects of agricultural activity.

11.1 General disclosures

Entities must disclose:

- **Description of biological assets:**
 - Nature of activities (e.g. livestock farming, forestry, crop production).
 - Quantitative information (e.g. number of animals, area of plantations).
- **Measurement basis:**
 - Whether fair value less costs to sell is used.
 - If cost is used, reasons why fair value cannot be measured reliably.
- **Methods and assumptions:**
 - Techniques used to determine fair value (market prices, discounted cash flows, etc.).
 - Key assumptions (discount rates, growth rates, price forecasts).

11.2 Reconciliation of carrying amount

Entities must present a **reconciliation of changes in the carrying amount** of biological assets, showing:

- Opening balance.
- Increases due to purchases.
- Gains or losses from changes in fair value less costs to sell.
- Decreases due to sales or harvest.
- Other changes (e.g. business combinations, foreign exchange differences).
- Closing balance.

11.3 Disclosures when fair value cannot be measured reliably

If fair value cannot be measured reliably and the cost model is used, the entity must disclose:

- A description of the biological assets.
- The reason why fair value cannot be measured reliably.
- The range of estimates within which fair value is highly likely to lie (if possible).
- Depreciation and impairment recognised.

11.4 Government grants disclosures

For government grants related to biological assets:

- Nature and extent of grants.
- Unfulfilled conditions and contingencies.
- Accounting policy adopted (IAS 41 vs IAS 20, where relevant).

12. Presentation and interaction with other standards

12.1 Interaction with IAS 16 and IAS 40

- **Land** used in agricultural activity:
 - IAS 16 if used as owner-occupied property.

- IAS 40 if classified as investment property (e.g. land held for rental or capital appreciation).
- **Bearer plants:**
 - IAS 16 (property, plant and equipment).
- **Biological assets attached to land** (e.g. trees in a plantation forest):
 - Measured separately from the land under IAS 41.

12.2 Interaction with IAS 2

- Agricultural produce at harvest:
 - Measured at fair value less costs to sell under IAS 41.
 - This amount becomes the **cost of inventories** under IAS 2.
- Subsequent measurement:
 - IAS 2 applies (lower of cost and net realisable value).

12.3 Interaction with IFRS 13

IFRS 13 *Fair Value Measurement* provides the framework for measuring fair value:

- Emphasis on **market-based measurement**.
- Use of **observable inputs** where possible.
- Hierarchy of inputs (Level 1, 2, 3).

Entities measuring biological assets at fair value less costs to sell must apply IFRS 13's guidance on valuation techniques and disclosures.

13. Illustrative examples of agricultural activity

13.1 Livestock farming

Assets:

- Cattle, sheep, pigs, poultry (biological assets).
- Milk, wool, eggs, meat (agricultural produce).

Accounting:

- Livestock measured at fair value less costs to sell.
- Milk at harvest measured at fair value less costs to sell; then treated as inventory.
- Fair value changes in livestock recognised in profit or loss.

13.2 Plantation forestry

Assets:

- Trees in a plantation forest (biological assets).
- Logs harvested from trees (agricultural produce).

Accounting:

- Trees measured at fair value less costs to sell.
- Logs at harvest measured at fair value less costs to sell; then treated as inventory.
- Land accounted for under IAS 16 or IAS 40.

13.3 Crop production (non-bearer plants)

Assets:

- Annual crops such as wheat, maize, sugarcane (biological assets).
- Harvested grain or cane (agricultural produce).

Accounting:

- Growing crops measured at fair value less costs to sell.
- Harvested produce measured at fair value less costs to sell at harvest; then as inventory.

13.4 Fruit orchards and vineyards (bearer plants)

Assets:

- Fruit trees or grape vines (bearer plants), IAS 16.
- Fruit or grapes growing on the plants (biological assets), IAS 41.
- Harvested fruit or grapes (agricultural produce), IAS 2.

Accounting:

- Bearer plants: cost or revaluation model under IAS 16.
- Produce growing on bearer plants: fair value less costs to sell under IAS 41.
- Harvested produce: fair value less costs to sell at harvest; then as inventory.

14. Summary and exam-style focus points

14.1 Core principles to remember

- **Scope:** Biological assets (excluding bearer plants), agricultural produce at harvest, and certain government grants.
- **Measurement:** Fair value less costs to sell is the default for biological assets and agricultural produce at harvest.
- **Profit or loss:** All changes in fair value less costs to sell of biological assets are recognised in profit or loss.
- **Exceptions:** Cost model only when fair value cannot be measured reliably on initial recognition.
- **Bearer plants:** Accounted for under IAS 16; IAS 41 applies to produce growing on them.

- **Agricultural produce:** Fair value less costs to sell at harvest becomes cost under IAS 2.

14.2 Typical exam questions

- Define **biological asset**, **agricultural produce**, and **harvest**.
- Explain why IAS 41 uses **fair value** rather than cost for biological assets.
- Distinguish between **bearer plants** and other biological assets.
- Describe the accounting treatment for **government grants** related to biological assets.
- Prepare a **reconciliation of biological assets** showing fair value changes.
- Apply IAS 41 to practical scenarios (livestock, forestry, crops, orchards).

15. 20 Multiple-Choice Questions

1. What is the primary measurement basis for biological assets under IAS 41?

- A. Cost
- B. Fair value
- C. Fair value less costs to sell
- D. Net realisable value

➤ **Answer: C**

2. Agricultural produce is measured at fair value less costs to sell at which point?

- A. Initial recognition
- B. Point of harvest
- C. Year-end
- D. Sale date

➤ **Answer: B**

3. Which of the following is *not* a biological asset under IAS 41?

- A. Dairy cattle
- B. Maize crops
- C. Land used for farming
- D. Plantation trees

➤ **Answer: C**

4. Bearer plants are accounted for under which standard?

- A. IAS 41
- B. IAS 16
- C. IAS 2
- D. IFRS 13

➤ **Answer: B**

5. Which of the following is an example of agricultural produce?

- A. A living sheep
- B. Wool shorn from sheep
- C. Land used for grazing
- D. A tractor used for harvesting

➤ **Answer: B**

6. Changes in fair value of biological assets are recognised in:

- A. Other comprehensive income
- B. Equity
- C. Profit or loss
- D. Deferred income

➤ **Answer: C**

7. Costs to sell exclude:

- A. Broker commissions
- B. Transfer taxes
- C. Transport costs
- D. Levies

➤ **Answer: C**

8. Which of the following is *not* considered agricultural activity?

- A. Managing livestock
- B. Growing crops
- C. Processing harvested wheat into flour
- D. Harvesting fruit

➤ **Answer: C**

9. When fair value cannot be measured reliably on initial recognition, the biological asset is measured at:

- A. Net realisable value
- B. Cost less accumulated depreciation and impairment losses
- C. Cost only
- D. Historical cost adjusted for inflation

➤ **Answer: B**

10. Which of the following is a bearer plant?

- A. Wheat crop
- B. Sheep
- C. Grape vine
- D. Harvested grapes

➤ **Answer: C**

11. After harvest, agricultural produce is accounted for under:

- A. IAS 41
- B. IAS 16
- C. IAS 2
- D. IFRS 15

➤ **Answer: C**

12. Fair value measurement for biological assets must follow the guidance in:

- A. IAS 2
- B. IFRS 13
- C. IAS 20
- D. IFRS 15

➤ **Answer: B**

13. Which of the following is an example of biological transformation?

- A. Selling livestock
- B. Growth and reproduction of animals
- C. Processing milk into cheese
- D. Transporting harvested crops

➤ **Answer: B**

14. Unconditional government grants related to biological assets measured at fair value less costs to sell are recognised:

- A. When received
- B. When receivable

- C. When conditions are met
- D. At year-end

➤ **Answer: B**

15. A conditional government grant is recognised:

- A. Immediately
- B. Only when conditions are met
- C. When cash is received
- D. When the biological asset is sold

➤ **Answer: B**

16. Which of the following must be disclosed for biological assets?

- A. Reconciliation of carrying amounts
- B. Depreciation schedules
- C. Inventory turnover ratios
- D. Segment revenue

➤ **Answer: A**

17. Agricultural produce becomes inventory at:

- A. Initial recognition
- B. Point of harvest
- C. Sale
- D. Delivery to customer

➤ **Answer: B**

18. Which of the following is *not* a cost to sell?

- A. Commissions
- B. Levies
- C. Transport to market
- D. Transfer duties

➤ **Answer: C**

19. Plantation land is accounted for under:

- A. IAS 41
- B. IAS 16 or IAS 40
- C. IAS 2
- D. IFRS 9

➤ **Answer: B**

20. Which of the following is true regarding fair value gains and losses?

- A. They are deferred until sale
- B. They are recognised in OCI
- C. They are recognised in profit or loss
- D. They are capitalised into the asset

➤ **Answer: C**

16. Comprehensive Question Bank (with Solutions)

SECTION A — THEORY QUESTIONS

1. Define “biological asset” according to IAS 41.

Solution: A biological asset is a **living animal or plant**. Examples include cattle, sheep, fish, plantation trees, crops, and fruit growing on trees.

2. What is agricultural produce?

Solution: Agricultural produce is the **harvested product** of an entity’s biological assets. Examples: milk, wool, harvested crops, felled logs.

3. Explain the meaning of “biological transformation”.

Solution: Biological transformation refers to the **processes of growth, degeneration, production, and procreation** that cause changes in biological assets.

4. State the measurement requirement for biological assets.

Solution: Biological assets are measured at **fair value less costs to sell**, both initially and at each reporting date, unless fair value cannot be measured reliably.

5. When is the cost model permitted under IAS 41?

Solution: Only in **rare cases** where fair value **cannot be measured reliably** on initial recognition. Once fair value becomes measurable, the entity must switch to fair value less costs to sell.

6. What is the treatment of agricultural produce at harvest?

Solution: Agricultural produce is measured at **fair value less costs to sell at the point of harvest**. This amount becomes the **cost of inventory** under IAS 2.

7. Distinguish between bearer plants and biological assets.

Solution:

- **Bearer plants:** Used to produce agricultural produce over multiple periods; accounted for under **IAS 16**.
- **Biological assets:** Living animals/plants undergoing biological transformation; accounted for under **IAS 41**.

8. How are changes in fair value of biological assets recognised?

Solution: All changes in fair value less costs to sell are recognised in **profit or loss**.

9. Give three examples of costs to sell.

Solution:

- Broker commissions
- Levies
- Transfer taxes and duties (Transport costs are **excluded**.)

10. What disclosures are required for biological assets?

Solution:

- Description of biological assets
- Measurement basis
- Methods and assumptions used
- Reconciliation of carrying amounts
- Reasons if fair value cannot be measured reliably

SECTION B — SHORT APPLICATION QUESTIONS

11. Give an example of agricultural activity.

Solution: Managing livestock, cultivating crops, or growing plantation forests.

12. Why does IAS 41 use fair value instead of cost?

Solution: Because biological assets undergo **continuous biological transformation**, making cost less relevant and fair value more reflective of economic reality.

13. What happens to harvested produce after initial measurement?

Solution: It becomes **inventory** and is subsequently measured under **IAS 2** (lower of cost and NRV).

14. Why are bearer plants excluded from IAS 41?

Solution: Bearer plants function like **production machinery** and do not undergo biological transformation in a way that affects their value; hence IAS 16 is more appropriate.

15. What valuation standard guides fair value measurement?

Solution: IFRS 13 — Fair Value Measurement.

SECTION C — CALCULATION QUESTIONS

16. Livestock fair value change

An entity owns 50 cattle.

- FV at start of year: R800 each
- FV at year-end: R950 each
- Costs to sell: R40 each (start), R50 each (end)

Required: Calculate the gain or loss.

Solution: Opening carrying amount:

$$50 \times (800 - 40) = 50 \times 760 = 38\,000$$

Closing carrying amount:

$$50 \times (950 - 50) = 50 \times 900 = 45\,000$$

Fair value **gain**:

$$45\,000 - 38\,000 = \mathbf{R7\,000}$$

17. Agricultural produce at harvest

An entity harvests 2 000 kg of apples.

- Market price: R5/kg
- Costs to sell: R0.50/kg

Required: Determine the inventory value at harvest.

Solution: FV less costs to sell per kg:

$$5 - 0.50 = 4.50$$

Inventory value:

$$2\,000 \times 4.50 = \mathbf{R9\,000}$$

18. Plantation trees — fair value gain

- Opening FV less costs to sell: R1 200 000
- Closing FV less costs to sell: R1 450 000

Required: Calculate the gain.

Solution:

$$1\,450\,000 - 1\,200\,000 = \mathbf{R250\,000}$$

19. Cost model scenario

A rare plant species is acquired for R300 000. Fair value cannot be measured reliably. Depreciation for the year: R30 000.

Required: Determine carrying amount.

Solution:

$$300\,000 - 30\,000 = \mathbf{R270\,000}$$

20. Produce on bearer plants

Grapes growing on vines have a fair value of R100 000. Costs to sell: R5 000.

Required: Determine carrying amount.

Solution:

$$100\,000 - 5\,000 = \mathbf{R95\,000}$$

SECTION D — SCENARIO-BASED QUESTIONS

21. Forestry scenario

An entity owns a plantation forest. During the year:

- Trees grow significantly (physical change).
- Timber prices increase (price change).

FV less costs to sell increases from R3.5m to R4.1m.

Required: Explain the accounting treatment.

Solution: The increase of R600 000 is recognised in **profit or loss** as a fair value gain. Both physical and price changes are included.

22. Livestock reproduction

A herd of cattle produces 10 calves during the year. FV less costs to sell of each calf at birth: R300.

Required: Explain recognition.

Solution: Calves are recognised as biological assets at:

$$10 \times 300 = \mathbf{R3\ 000}$$

This is recognised as a **gain** in profit or loss.

23. Conditional government grant

A government grant of R200 000 is receivable only if the entity maintains a plantation for 5 years.

Required: When is the grant recognised?

Solution: The grant is recognised **only when the conditions are met**, i.e., over the 5-year period or at the point the condition is satisfied.

24. Fair value not reliably measurable

A young plantation has no active market, and valuation models are unreliable.

Required: Explain the accounting treatment.

Solution: Use **cost less accumulated depreciation and impairment losses** until fair value becomes reliably measurable. Disclose reasons for using the cost model.

25. Produce on bearer plants

An orange orchard (bearer plants under IAS 16) has oranges growing on trees.

Required: Explain the accounting treatment.

Solution:

- Trees (bearer plants): under IAS 16 (cost or revaluation model)
- Oranges while growing: under IAS 41 (FV less costs to sell)
- Harvested oranges: under IAS 2 (inventory)

SECTION E — EXTENDED APPLICATION QUESTIONS

26. Discuss why IAS 41 results in profit volatility.

Solution: Because biological assets are remeasured at **fair value** each reporting date, reflecting both **physical changes** (growth, reproduction) and **price changes**. These fluctuations directly affect profit or loss.

27. Explain the interaction between IAS 41 and IAS 2.

Solution: IAS 41 applies until **harvest**, measuring produce at FV less costs to sell. After harvest, IAS 2 applies, using **lower of cost (FV at harvest) and NRV**.

28. Describe the disclosure requirements when fair value cannot be measured reliably.

Solution: Entities must disclose:

- Description of the biological assets
- Reasons why fair value cannot be measured reliably
- Range of possible fair values (if determinable)
- Depreciation and impairment recognised

29. Explain how IFRS 13 affects IAS 41 measurement.

Solution: IFRS 13 provides the **framework** for fair value measurement, requiring:

- Market-based valuation
- Use of observable inputs
- Disclosure of valuation techniques
- Classification into Level 1, 2, or 3 inputs

30. Provide three examples of biological assets measured under IAS 41 and explain their measurement.

Solution: Examples:

1. **Cattle** — FV less costs to sell
2. **Plantation trees** — FV less costs to sell
3. **Crops (maize, wheat)** — FV less costs to sell until harvest

All changes in FV less costs to sell are recognised in profit or loss.
