AGRICULTURE
(IAS 41 and IAS 16)

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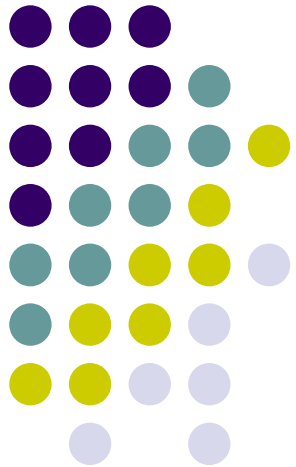
Learning Objectives

At the completion of studying this chapter, you will be able to:

- *Explain key terms in IAS 41 & IAS 16 agriculture activities*
- *Indicate measurement and recognition of agricultural activities*
- *Show the subsequent accounting treatment of agricultural activities*
- *Identify the disclosure requirements for agricultural activity*
- *Distinguish between the accounting treatment of agricultural activity under US GAAP and IFRS*



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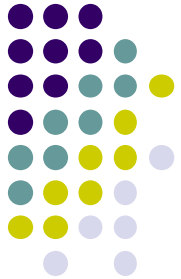
Outline

- Overview
- Applicable standards
- Objectives of the standards
- Definition of key terms
- Types of biological assets
- Exclusions
- Recognition
- Measurements
- Presentations
- Disclosures
- US GAAP VS IFRS

1. Overview



- IAS 41 and IAS 16 *Agriculture* sets out accounting for agricultural activity – the transformation of biological assets (living plants and animals) into agricultural produce (harvested product of the entity's biological assets).

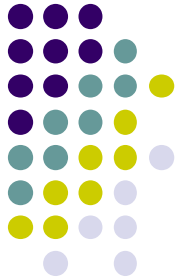
2. Applicable Standards

- IAS 41 – Biological Assets
- IAS 16 – Property, Plant and Equipment
- IAS 20 – Government grants

3. Objective

- The objective of IAS 41 & IAS 16 is to establish standards of accounting for agricultural activity .

3. Definitions of Key Terms (in accordance with IAS 41)



- **Agricultural activity** is the management by an enterprise of the biological transformation of biological assets for sale, into agricultural produce or into additional biological assets.
- **Biological assets.** Living plants and animals.
- **Agricultural produce.** The product of the entity's biological assets, for example, milk and coffee beans.
- **Biological transformation.** Relates to the processes of growth, degeneration, and production that can cause changes of quantitative or qualitative nature in a biological asset.

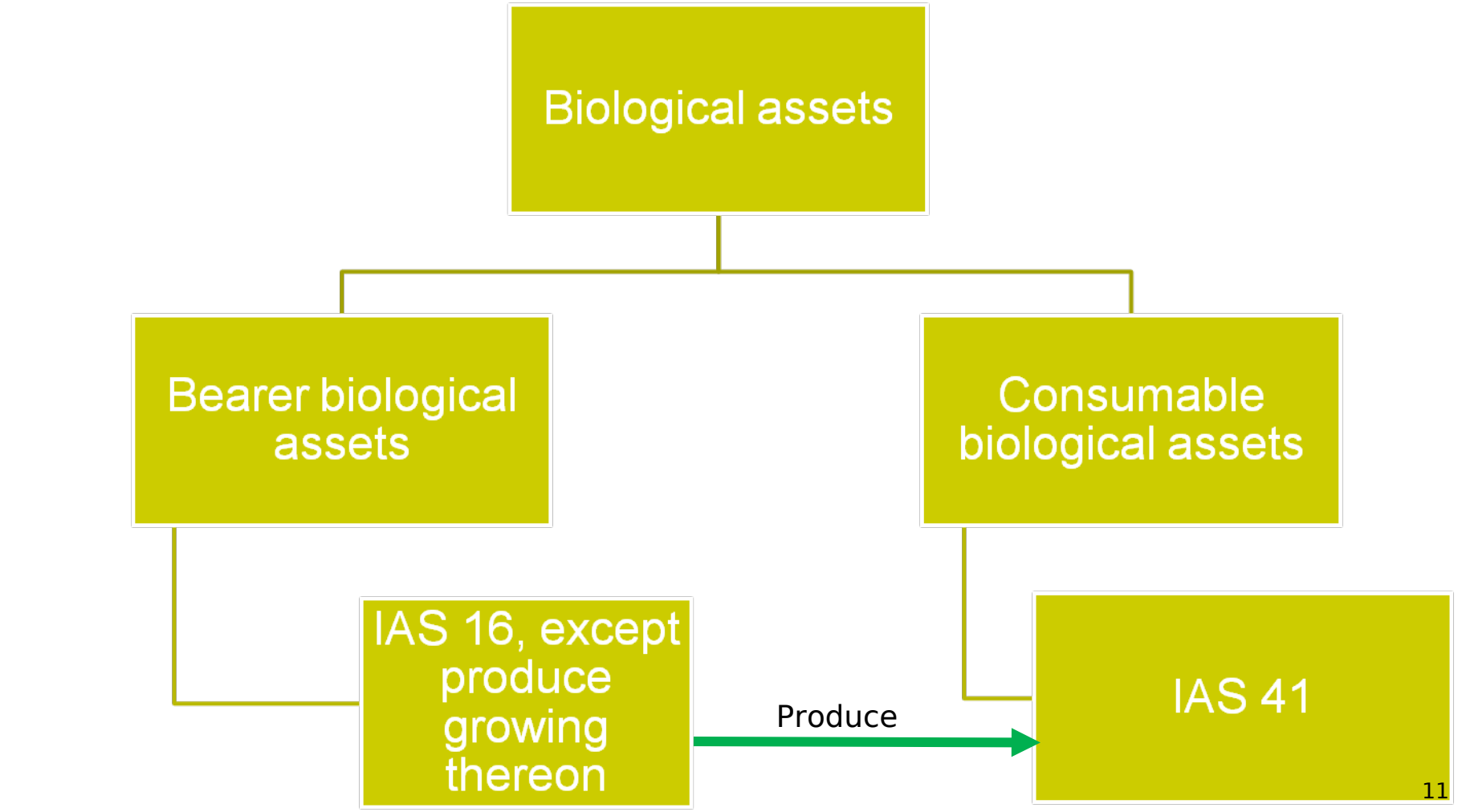
Definitions Con’td….

- **Biological transformation leads to various different outcomes.**
- ✓ **Asset changes:**
  - Growth: increase in quantity and/or quality
  - Degeneration: decrease in quantity and/or quality
- ✓ **Creation of new assets:**
  - Production: producing separable non-living products
  - Procreation: producing separable living animals

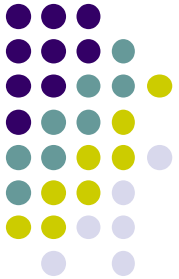
Examples of Biological Assets

Biological Asset	Agricultural Produce	Products that are the result of processing after harvest
Sheep	Wool	Yarn, carpet
Trees in a plantation forest	Logs	Lumber
Plants	Cotton, harvested cane	Thread, clothing, sugar
Dairy cattle	Milk	Cheese
Pigs	Carcass	Sausages, cured hams
Bushes	Leaf	Tea, cured tobacco
Vines	Grapes	Wine
Fruit trees	Picked fruit	Processed fruit

4. Types of Biological Assets



Types of Biological Assets (cont'd)

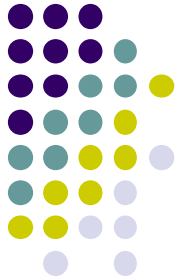


- Bearer biological assets:

Bearer plants are defined in IAS 41as a plant that meets **all** the following criteria:

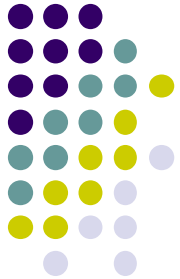
- It is used in the production or supply of agricultural produce
- It is expected to bear produce for more than one period
- It is not intended to be sold as a living plant or harvested as agricultural produce, except for incidental scrap sales (i.e. for firewood at the end of the plants productive life).

Types of Biological Assets (cont'd)



- Consumable biological assets:
  - Biological assets which do not meet all of the above requirements.
  - All animals

Identify whether each of the following biological assets is bearer or consumable



Biological Asset	Agricultural Produce	Bearer or consumable?
Sheep	Wool	
Trees in a plantation forest	Logs	
Cotton	Cotton	
Sugarcane	Harvested cane	
Dairy cattle	Milk	
Pigs	Carcass	
Bushes	Leaf	
Vines	Grapes	
Fruit trees	Picked fruit	

5. Exclusions

IAS 41does not apply to:

- ✓ Land related to agricultural activity (see IAS 16 Property, Plant and Equipment and IAS 40 Investment Property).
- ✓ Bearer plants related to agricultural activity (see IAS 16). However, IAS 41 applies to the produce on those bearer plants.
- ✓ Government grants related to bearer plants (see IAS 20 Accounting for Government Grants and Disclosure of Government Assistance).

Exclusions (cont'd)

- Intangible assets related to agricultural activity (see IAS 38 Intangible Assets).
- Harvested agricultural produce (IAS 2, *Inventory)*. However, it does apply to produce growing on bearer plants.

Exercise

1. **Entity A raises cattle, slaughters them at its abattoirs and sells the carcasses to the local meat market. Which of these activities are in the scope of IAS 41?**

The cattle are biological assets while they are ***living***.

When they are ***slaughtered***, biological transformation ceases and the carcasses meet the definition of agricultural produce.

Hence, Entity A should account for the live cattle in accordance with IAS 41 and the carcasses as inventory in accordance with IAS 2 *Inventories.*

2. Entity B grows vines, harvests the grapes and produces wine. Which of these activities are in the scope of IAS 41?

The grapevines are ***biological assets*** that continually generate crops of grapes. When the entity harvests the grapes, their biological transformation ceases and they become ***agricultural produce***. The grapevines continue to be living plants and should be recognised as biological assets.

Assets such as wine that are subject to a lengthy maturation period are ***not*** biological assets. These processes are analogous to the conversion of raw materials to a finished product rather than biological transformation. Therefore, the entity should account for the ***grapevines*** in accordance with IAS 41 and the ***harvested grapes and the production of wine***, as inventory in accordance with IAS 2.

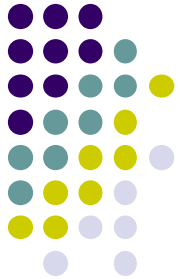
3. An entity on adoption of IAS 41 has reclassified forest as biological assets. The total value of the group's forest assets is $2 million comprising

- Freestanding trees $1,700
- Land under trees..... 200
- Roads in forests 100

Required

Show how the forests would be classified in the financial statements.

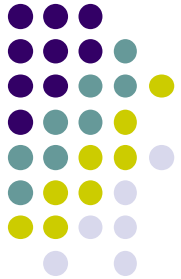
Solution



The forests would be classified as

- Biological assets $1,700
- Noncurrent asset-land 200
- Noncurrent assets—other tangible assets..... 100

6. Recognition



An entity should recognize a biological asset or agricultural produce when :

(a) the enterprise ***controls*** the asset as a result of past events;

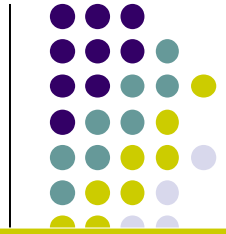
(b) it is ***probable that the future economic benefits*** will flow to the enterprise; and

(c) the fair value or cost can be ***measured reliably***.

7. Measurement

- Any biological asset should be measured initially and at each balance sheet date, at its fair value less estimated point-of-sale costs.
- The only exception to this is where the fair value cannot be measured reliably.
- Agricultural produce should be measured at fair value less estimated point-of-sale costs at the point of harvest.
- According to IAS 41, agricultural produce can always be measured reliably.
- Point-of-sale costs include brokers' and dealers' commissions, any levies by regulatory authorities and commodity exchanges, and any transfer taxes and duties.
- They exclude transport and other costs necessary to get the assets to a market.

Measurement: Biological Assets

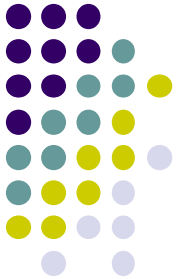


	Consumable Biological Assets	Bearer Biological assets
At initial recognition	• Measured together with any agricultural produce attached (i.e., one unit of account) • Measured at fair value less costs to sell	• Measured separately from any agricultural produce attached (i.e., two units of account) • Measured at cost accumulated until maturity
Subsequent measurement requirements	• Measured together with the agricultural produce until the point of harvest (i.e., one unit of account until the point of harvest) • Measured at the end of each reporting period at fair value less costs to sell, with changes recognised in profit or	Measured at: a)Cost, less any subsequent accumulated depreciation and impairment. b) Fair value at each revaluation date, less any subsequent accumulated depreciation and impairment.

Measurement: Agricultural Produce

	Consumable Biological Assets	Bearer Biological assets
At the end of each reporting period prior to harvest	• Measured together with the bearer plant • Measured at fair value less costs to sell, with changes recognised in profit or loss as the produce grows	Measured separately from the bearer plant at fair value less costs to sell
At the point of harvest	Measured separately from the bearer plant at fair	Measured separately from the bearer plant at fair value

Recognition and Measurements:
Bearer Biological Assets

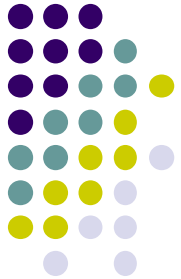


1. **Before maturity**
   - Equivalent to Construction - in - progress
   - Measured at **Accumulated** costs (IAS 16)
   - Entry to record costs incurred:

     Dr. Bearer Immature BA… xxx

     Cr. Cash/Materials etc.. xxx

Bearer Biological Assets (cont'd)



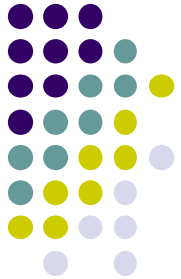
2. **On maturity**

- Accumulated cost transferred to depreciable PPE (IAS 16)
- Entry to record the transfer:

  Dr. Bearer Matured BA… xxx

  Cr. Bearer Immature BA.. xxx

Bearer Biological Assets (cont'd)



3. **After maturity**

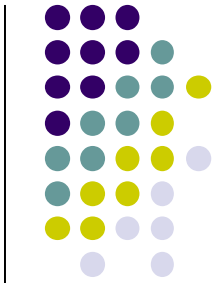
a) Depreciation on matured BA (IAS 16)

- Use acceptable depreciation method as per IAS 16
  - Entry to record depreciation:

    Dr. WIP-BA… xxx

    Cr. Accumulated Depreciation - BA.. xxx

Bearer Biological Assets (cont'd)



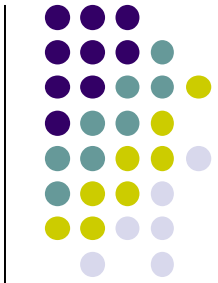
3. **After maturity**

b) Current costs on matured Biological Assets(IAS 16)

- Standard silent on these costs
- **Options:** Capitalize or charge to Cost of Production
  - Entry to record current costs:

Treatment	Entry
Current cost capitalized	Dr. Bearer Matured BA …. xxx Cr. Cash/Materials etc …. xxx
Current cost charged to production	Dr. WIP – BA…….xxx Cr. Cr. Cash/Materials etc …. xxx

Bearer Biological Assets (cont'd)



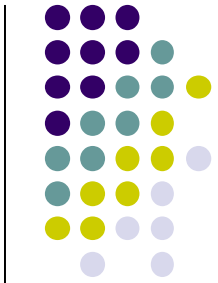
3. **After maturity**

c) Agricultural produce (IAS 41)

- Measured at **fair value** less costs to sell, with changes recognised in profit or loss as the produce grows.

Treatment	Entry
End of year before harvest	Dr. Standing Inventory - BA …. xxx Cr. WIP - BA…. ……. xxx Cr. Gain on Re-measurement …. xxx
Date of harvesting	Dr. Inventory (e.g. Sugarcane)…….xxx Cr. Standing Inventory……. xxx

Bearer Biological Assets (cont'd)

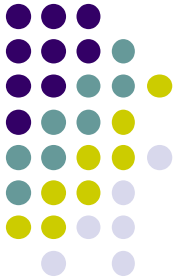


3. **After maturity**

d) Subsequent measurement of BA (IAS 16)

- Measured using either **cost** model or **fair value** model

Consumable Biological Assets (IAS 41)



1. Before maturity

- Measured at **fair value** less costs to sell, with changes recognised in profit or loss as the produce grows.
- Entry to record costs incurred:

Dr. Consumable Biological Assets *xxx*

Cr. Cash/Materials etc *xxx*

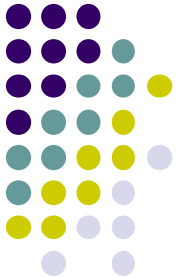
2. On Maturity

- Measured at **fair value less cost to sell**(IAS 41)
- Entry to record change in fair value:

Dr. Consumable Biological Assets *xxx*

Cr. Gain on R-measurement *xxx*

Consumable Biological Assets (IAS 41)



3. After maturity - Harvesting

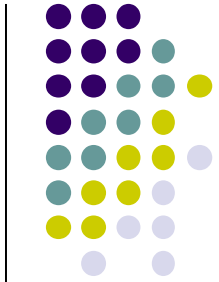
- Measured at **fair value** (IAS 41)
- Entry to record costs incurred:

Dr. Inventory (e.g. Corn) *xxx*

Cr. Consumable BA *xxx*

Cr. Gain on Re-measurement *xxx*

8. Presentation



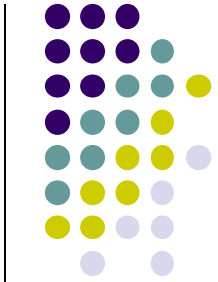
- In the statement of financial position biological assets should be classified as a separate class of assets falling under neither current nor non-current classifications.
- This reflects the view of such assets as having an unlimited life on a collective basis; it is the total exposure of the entity to this type of asset that is important.
- Biological assets should also be sub-classified (either on the face of the statement of financial position or as a note to the accounts).

✓ Class of animal or plant

✓ Nature of activities (consumable or bearer)

✓ Maturity or immaturity for intended purpose

9. Disclosures



- An entity shall disclose the aggregate gain or loss that arises on the initial recognition of biological assets and agricultural produce and from the change in value less estimated point-of sale costs of the biological assets.
- A description of each group of biological assets is also required.
- The methods and assumptions applied in determining fair value should also be disclosed.

Disclosure…

- The fair value less estimated point-of-sale costs of agricultural produce harvested during the period shall be disclosed at the point of harvest
- The existence and carrying amounts of biological assets whose title is restricted and any biological assets placed as security should be disclosed.
- The amount of any commitments for the development or acquisition of biological assets and management's financial risk strategies should also be disclosed.
- A reconciliation of the changes in the carrying amount of biological assets showing separately changes in value, purchases, sales, harvesting, business combinations, and exchange differences should be disclosed.

Disclosure…

- Regarding government grants, disclosures should be made as to the nature and extent of the grants, any conditions that have not been fulfilled, and any significant decreases in the expected level of the grants.

10. Difference between IFRS and US GAAP

Topic	IFRS	US GAAP
Classification	Classified in to bearer and non-bearer ((consumable) and governed by different standards	Classification in to bearer and consumable not common and same standard applied to both categories
Measurement basis of agricultural crops, livestock, orchards, forests	Fair value with value changes recognized in net profit or loss	Historical cost is generally used. However, fair value less costs to sell is used for harvested crops and livestock held for sale.
subsequent expenses relating to agricultural activity	As IAS 41 does not prescribe the treatment of subsequent expenditure, such a treatment would still be permissible under IAS 41	had a policy of capitalizing some of these costs, particularly those relating to the development of immature plants or livestock up to the point they were productive

THANK YOU !