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IAS® Standard 41 Agriculture



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CASE STUDY – IAS 41 AGRICULTURE

Introduction

In entities of agricultural activities, the accounting of biological assets and agricultural production (outputs) has specifics regarding the transformation of biological assets and the conversion of agricultural products. Cost accounting becomes complicated, and costs do not always reflect the value of biological assets as a result of transformation. Irrespectively, users of financial statements must receive relevant information. Therefore, IAS Standard 41 Agriculture determines the application of fair value for biological assets and agricultural production.

Aim of this case study is to encourage students to think about the issues of the preparation of financial statements if an entity's activity is agriculture. The case study addresses the following issues:

- First, it seeks to provide the ability to understand the methods of fair value measure, its meaning and impact on the financial position and performance of the entity.
- Second, it is to provide the ability to make a decision in measuring the fair value of biological assets and agricultural production (output), and make the necessary changes in financial statements.

The Case Information

Green Farm (GF) is an agricultural entity. GF operates in the protected area of the region and is valued for the preservation of rare local animal species. The majority of the management of the GF belongs to the X family, which has managed the entity for 3 generations. The activity of GF is mixed – crop and livestock farming:

- GF had 2 cows and 3 goats at the beginning of the year, the fair values less sales costs were set at CU4,000 for the cows and CU300 for the goats. The number of animals did not change during the period. Accumulated cost of animal husbandry was CU500.
- Crop production was harvested at the end of July of the reporting year – 5 tons of wheat grain and 2 tons of barley grain. The accumulated cost of crop production was CU600 for growing and CU200 for growing barley.

GF operates only in the local market, i.e. agricultural products and livestock are not exported to foreign markets.

GF investors requested to present the financial statements on the 31st of July of the reporting year. The GF must measure the fair value of harvested grain and of livestock on the 31st of July. The accounting manager and the finance director collected the following information:

Information for fair value assessment of livestock	Information for fair value assessment of agricultural production
<p>Taking into account the age, weight and other physiological characteristics of the animals, the following was determined:</p> <ul style="list-style-type: none"> ● In July of the reporting year, the prices between the participants for the transactions were – CU3,800 for the cows and CU420 for the goats in the local market. ● In July of the reporting year, the prices among the participants for the transactions were – CU4,500 for the cows and CU410 for the goats in the foreign market. 	<ul style="list-style-type: none"> ● In order to manage the risks of price change in the market, a contract was concluded with the buyer in March of the reporting year. It stipulated that the following selling price will be applied in July – CU150 per tonne of wheat; CU110 per tonne of barley. ● In July of the reporting year, the prices were as follows: CU140 per tonne of wheat; CU130 per tonne of barley in the local grain exchange market. ● In July of the reporting year, the prices were CU130 per tonne of wheat; CU125 per tonne of barley in the foreign grain exchange market. ● The part of the grain was sold to another buyer on 2 August of the reporting year: <ul style="list-style-type: none"> ✓ 1.5 tonnes of wheat sold for CU135 per tonne; and ✓ 0.5 tonnes of barley sold for CU120 per tonne.

Discussion Questions

1. Based on the information collected by the accounting manager and the finance director, explain which information should be used to determine the fair value of grain and livestock?
2. Estimate what changes will be accounted in the financial accounting due to changes of the fair value of grain and livestock. Explain how this affects the financial statements on July 31? Determine what value of grain and livestock the investors will see in the financial statements?

SOLUTION OF CASE STUDY – IAS 41 AGRICULTURE

Even though GF accounting manager and finance director has collected a variety of information in different markets or under different contracts, not all information will be suitable for determining the fair value of livestock and grain.

Object	Information for fair value assessment	Explanation
Livestock	<p>Taking into account the age, weight and other physiological characteristics of the animals, it was determined:</p> <ul style="list-style-type: none"> ● In July of the reporting year, the prices between the participants for the transactions were – CU3,800 for the cows and CU420 for the goats in the local market. ● In July of the reporting year, the prices between the participants for the transactions were – CU4,500 for the cows and CU410 for the goats in the foreign market. 	<p>Considering that the animals are traded in the local market, the information in the foreign market will not be relevant.</p> <p><i>The fair value determined for animals will be – CU3,800 for the cows and CU420 for the goats.</i></p>
Agricultural production	<ul style="list-style-type: none"> ● In order to manage the risks of price change in the market, a contract was concluded with the buyer in March of the reporting year. It stipulated that the following selling price will be applied in July – CU150 per tonne of wheat; CU110 per tonne of barley. ● In July of the reporting year, the prices were as follows: CU140 per tonne of wheat; CU130 per tonne of barley in the local grain exchange market. ● In July of the reporting year, the prices were CU130 per tonne of wheat; CU125 per tonne of barley in the foreign grain exchange market. ● The part of the grain was sold to another buyer on 2 August of the reporting year: <ul style="list-style-type: none"> ✓ 1.5 tonnes of wheat sold for CU135 per tonne; and ✓ 0.5 tonnes of barley sold for CU120 per tonne. 	<p>IAS41 defines that the contract concluded to sell grain on a future date cannot be used to determine fair value, because the value in the contract does not reflect the current market conditions.</p> <p>Considering that the grain is traded in the local market, the information in the foreign market will not be relevant.</p> <p>Alternative 1. The fair value determined for grain will be –CU140 per tonne of wheat; CU130 per tonne of barley.</p> <p>Alternative 2. If the sales transaction (contract) that took place was not an onerous contract, in this case, the sales prices can be considered the fair value. The fair value determined for grain will be –CU135 per tonne of wheat; CU120 per tonne of barley.</p>

Below is an explanation of the changes that will occur after determining the fair value of livestock and agricultural production (grains). An extract from the statement of the financial position is presented:

Item	On July 31 st (until the adjustment), CU	Alternative 1 On July 31 st (after the adjustment), CU	Alternative 2 On July 31 st (after the adjustment), CU
Biological assets	4,300	4,220	4,220
Agricultural production	-	960	915
Work in process	1,300	-	-
TOTAL	5,600	5,180	5,135

As seen in the statement of the financial position, the value of the biological assets decreased and will be reported as CU4,220 instead of CU4,300. Taking into account the cost of livestock (work in process), GF will incur a loss of CU580 and reduce the profit on the profit (loss) statement. The record for these assessments will be as follows:

Record for the subsequent measurement of the biological assets is as follows:

Dr. Loss in change of fair value	580	
Cr. Biological assets (CU4,300 – CU4,220)		80
Cr. Work in process (livestock costs)		500

For assessing agricultural production (grain), we analyse two alternatives. In this case, both alternatives set the harvested grain at fair value, which is higher as compared to the accrued costs (work in process). In the statement of the financial position, the value of the inventories will increase because of the grain harvest assessed at fair value. Taking into account that the fair value is higher than the accumulated costs (work in process), the profit will increase in the profit (loss) statement. The record for these assessments will be as follows:

Record for the subsequent measurement of the agricultural production is as follows:

Alternative 1:

Dr. Inventories (agricultural production)	960	
Cr. Work in process (crop production costs CU600 + CU200)		800
Cr. Gain in change of fair value (CU960 – CU800)		160

Alternative 2:

Dr. Inventories (agricultural production)	915	
Cr. Work in process (crop production costs CU600 + CU200)		800
Cr. Gain in change of fair value (CU915 – CU800)		115

It should be noted that in the statement of financial position, the total value of inventory after these records will decrease due to the work in process. This is mainly influenced by animal husbandry. In addition, in this example, we have not discussed sales (in August), because it falls in a different accounting period than the financial statements analysed do.