MUHANDISLIK & IQTISODIYOT

ijtimoiy-iqtisodiy, innovatsion texnik, fan va ta'limga oid ilmiy-amaliy jurnal

2025 oktyabr

TOSHKENT SHAHRIDAGI TURIN POLITEXNIKA UNIVERSITETI

Xalqaro ilmiy-amaliy onlayn konferensiya materiallari to'plami

"GLOBAL RAQAMLI INTEGRATSIYALASHUV: 2030-YILGACHA YASHIL IQTISODIYOTGA O'TISHDA TEXNOLOGIK VA INDUSTRIAL SANOATNI RIVOJLANTIRISH ORQALI MIKRO VA MAKROIQTISODIY BARQAROR O'SISHNI TA'MINLASH DOLZARBLIGI"

"GLOBAL DIGITAL INTEGRATION: THE RELEVANCE OF ENSURING MICRO AND MACROECONOMIC SUSTAINABLE GROWTH THROUGH TECHNOLOGICAL AND INDUSTRIAL DEVELOPMENT IN THE TRANSITION TO A GREEN ECONOMY BY 2030"

«ГЛОБАЛЬНАЯ ЦИФРОВАЯ ИНТЕГРАЦИЯ: АКТУАЛЬНОСТЬ ОБЕСПЕЧЕНИЯ УСТОЙЧИВОГО МИКРО- И МАКРОЭКОНОМИЧЕСКОГО РОСТА ЧЕРЕЗ РАЗВИТИЕ ТЕХНОЛОГИЧЕСКОЙ И ИНДУСТРИАЛЬНОЙ ПРОМЫШЛЕННОСТИ В ПЕРЕХОДЕ К ЗЕЛЁНОЙ ЭКОНОМИКЕ К 2030 ГОДУ»

7-MAXSUS SON

74-91 xalqaro daraja

ISSN: 2992-8982

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Elektron nashr.
2025-yil, oktyabr.

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05.01.00 – Axborot texnologiyalari, boshqaruv va kompyuter grafikasi
05.01.01 – Muhandislik geometriyasi va kompyuter grafikasi. Audio va video texnologiyalari
05.01.02 – Tizimli tahlil, boshqaruv va axborotni qayta ishlash
05.01.03 – Informatikaning nazariy asoslari
05.01.04 – Hisoblash mashinalari, majmualari va kompyuter tarmoqlarining matematik va dasturiy ta'minoti
05.01.05 – Axborotlarni himoyalash usullari va tizimlari. Axborot xavfsizligi
05.01.06 – Hisoblash texnikasi va boshqaruv tizimlarining elementlari va qurilmalari
05.01.07 – Matematik modellashtirish
05.01.11 – Raqamli texnologiyalar va sun'iy intellekt
05.02.00 – Mashinasozlik va mashinashunoslik
05.02.08 – Yer usti majmualari va uchish apparatlari
05.03.02 – Metrologiya va metrologiya ta'minoti
05.04.01 – Telekommunikasiya va kompyuter tizimlari, telekommunikasiya tarmoqlari va qurilmalari. Axborotlarni taqsimlash
05.05.03 – Yorug'lik texnikasi. Maxsus yoritish texnologiyasi
05.05.05 – Issiqlik texnikasining nazariy asoslari
05.05.06 – Qayta tiklanadigan energiya turlari asosidagi energiya qurilmalari
05.06.01 – To'qimachilik va yengil sanoat ishlab chiqarishlari materialshunosligi
05.08.03 – Temir yo'l transportini ishlatish
05.09.01 – Qurilish konstruksiyalari, bino va inshootlar
05.09.04 – Suv ta'minoti. Kanalizatsiya. Suv havzalarini muhofazalovchi qurilish tizimlari
10.00.06 – Qiyosiy adabiyotshunoslik, chog'ishtirma tilshunoslik va tarjimashunoslik
10.00.04 – Yevropa, Amerika va Avstraliya xalqlari tili va adabiyoti
08.00.01 – Iqtisodiyot nazariyasi
08.00.02 – Makroiqtisodiyot
08.00.03 – Sanoat iqtisodiyoti
08.00.04 – Qishloq xo'jaligi iqtisodiyoti
08.00.05 – Xizmat ko'rsatish tarmoqlari iqtisodiyoti
08.00.06 – Ekonometrika va statistika
08.00.07 – Moliya, pul muomalasi va kredit
08.00.08 – Buxgalteriya hisobi, iqtisodiy tahlil va audit
08.00.09 – Jahon iqtisodiyoti
08.00.10 – Demografiya. Mehnat iqtisodiyoti
08.00.11 – Marketing
08.00.12 – Mintaqaviy iqtisodiyot
08.00.13 – Menejment
08.00.14 – Iqtisodiyotda axborot tizimlari va texnologiyalari
08.00.15 – Tadbirkorlik va kichik biznes iqtisodiyoti
08.00.16 – Raqamli iqtisodiyot va xalqaro raqamli integratsiya
08.00.17 – Turizm va mehmonxona faoliyati

Ma'lumot uchun, OAK Rayosatining 2024-yil 28-avgustdagi 360/5-son qarori bilan "Dissertatsiyalar asosiy ilmiy natijalarini chop etishga tavsiya etilgan milliy ilmiy nashrlar ro'yxati"ga texnika va iqtisodiyot fanlari bo'yicha "Muhandislik va iqtisodiyot" jurnali ro'yxatga kiritilgan.

Muassis: "Tadbirkor va ishbilarmon" MChJ

Hamkorlarimiz:

1. Toshkent shahridagi G.V.Plexanov nomidagi Rossiya iqtisodiyot universiteti
2. Toshkent davlat iqtisodiyot universiteti
3. Toshkent irrigatsiya va qishloq xo'jaligini mexanizatsiyalash muhandislari instituti" milliy tadqiqot universiteti
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IMPROVING ACCOUNTING AND FINANCIAL REPORTING FOR BIOLOGICAL ASSETS AND AGRICULTURAL PRODUCE IN ACCORDANCE WITH INTERNATIONAL STANDARDS

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Abstract. This paper examines improvements in accounting for biological assets, agricultural produce, and products resulting from processing after harvest in accordance with International Accounting Standard (IAS) 41 “Agriculture.” It distinguishes between biological assets and agricultural produce, considers the recognition and measurement of harvested produce, and examines the application of cost and market approaches, as well as accounting policy and disclosure requirements.

Keywords: biological assets, agricultural produce, processed products, fair value, recognition, disclosure, IAS 41.

Annotatsiya. Mazkur maqolada “Qishloq xo‘jaligi” nomli 41-son Buxgalteriya hisobining xalqaro standarti (BHXS 41) talablariga muvofiq biologik aktivlar, qishloq xo‘jaligi mahsulotlari hamda hosil yig‘ib olingandan keyin qayta ishlash natijasida olinadigan mahsulotlar hisobini takomillashtirish masalalari o‘rganilgan. Biologik aktivlar va qishloq xo‘jaligi mahsulotlari o‘rtasidagi farqlar yoritilgan, yig‘ib olingan mahsulotlarni tan olish va baholash tartibi ko‘rib chiqilgan. Shuningdek, xarajat va bozor yondashuvlarini qo‘llash, hisob siyosati hamda axborotni oshkor etish talablari tahlil qilingan.

Kalit so‘zlar: biologik aktivlar, qishloq xo‘jaligi mahsulotlari, qayta ishlangan mahsulotlar, haqqoniy qiymat, tan olish, axborotni oshkor etish, BHXS 41.

Аннотация. В статье рассматриваются вопросы совершенствования учёта биологических активов, сельскохозяйственной продукции и продуктов, полученных в результате переработки после сбора урожая, в соответствии с Международным стандартом финансовой отчётности (МСФО) IAS 41 «Сельское хозяйство». Раскрываются различия между биологическими активами и сельскохозяйственной продукцией, рассматриваются порядок признания и оценки собранной продукции, а также применение затратного и рыночного подходов, требования к учётной политике и раскрытию информации.

Ключевые слова: биологические активы, сельскохозяйственная продукция, переработанная продукция, справедливая стоимость, признание, раскрытие информации, МСФО IAS 41.

INTRODUCTION

IAS 41 “Agriculture” establishes the accounting principles for biological assets, the requirements for financial reporting, and the procedures for their presentation in financial statements. Under IAS 41, biological assets and agricultural produce at the point of harvest are recognised and measured separately. Products resulting from processing after harvest fall within the scope of IAS 2 or other applicable standards. The continued alignment of the financial accounting system with international standards highlights the importance of improving the recognition, measurement, and disclosure of these objects in national practice.

1. Differences between Biological Assets, Agricultural Produce, and Products Resulting from Processing after Harvest

According to IAS 41, agricultural produce is the harvested product obtained from an entity’s biological assets. Biological assets undergo biological transformation, including growth, degeneration, production, and procreation, which results in qualitative or quantitative changes. Costs to sell include incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes. The interrelationship among these three objects is presented in Table 1.

Table 1.
Biological Assets, Agricultural Produce, and Products Resulting from Processing after Harvest[1]

Biological assets	Agricultural produce	Products resulting from processing after harvest
Sheep	Wool	Yarn and carpets
Trees in a timber plantation	Felled trees	Logs and lumber
Cotton plants	Harvested cotton	Yarn and clothing
Dairy cattle	Milk	Cheese
Grapevines	Grapes	Wine
Fruit trees	Harvested fruit	Juice and dried fruit

2. Recognition and Measurement at the Point of Harvest

At initial recognition and at each reporting date, biological assets are measured at fair value less costs to sell. Agricultural produce harvested from biological assets is also recognised and measured on the same basis at the point of harvest. Budget Accounting Standard No. 5, "Agriculture," regulates the accounting procedures in this area. In the limited circumstances in which the fair value of a biological asset cannot be measured reliably at initial recognition, the asset is measured at cost less accumulated depreciation and impairment losses. The choice of measurement method affects the entity's accounting policy under national GAAP. According to Argilés and Slof, the historical cost measurement method is widely used in the European Union. Changes in the value of biological assets arising from initial recognition at fair value less costs to sell and subsequent changes in fair value are immediately recognised in profit or loss.

As a result of biological transformation, the physical and qualitative characteristics of biological assets may change, leading to either an increase or a decrease in their value. The growth of young animals and perennial crops, their attainment of maturity, and the transition to the productive stage lead to an increase in their biological value. Therefore, the point of harvest, such as milking, wool shearing, fruit picking, or crop harvesting, must be clearly determined, and fair value must be measured precisely on that date. In current national accounting practice, biological assets are not always recognised separately. Therefore, biological assets should be classified as current or non-current assets in accordance with the applicable classification criteria, while harvested agricultural produce should be recognised as a separate asset based on its intended use.

3. Valuation Methods

Three methods are used to determine the fair value of assets. The choice of a particular method depends on the biological characteristics of the asset and the availability of relevant data (Table 2).

Table 2.
Methods for Valuing Biological Assets and Conditions for Their Application[2]

Valuation method	Description	Conditions for application
Market approach	Uses prices and other relevant information generated by market transactions involving identical or comparable assets	Applied when relevant observable market information is available
Cost approach	Reflects the amount currently required to replace the service capacity of an asset	Applied when current replacement cost provides an appropriate basis for valuation
Income approach	Converts expected future amounts, such as cash flows or income and expenses, into a single present value	Applied when future cash flows and relevant assumptions can be estimated reliably

Disclosure Requirements in Accounting Policy

To enhance the reliability and transparency of accounting information, the accounting policy should clearly disclose the methods used to measure biological assets, the underlying assumptions, applicable discount rates, active market data, and other relevant information sources. General ledger and analytical accounting records should be maintained systematically for biological assets. Clearly defining the procedures for their recognition, measurement, and recording in the accounting policy will support consistent accounting practices and improve the quality of financial reporting.

The main information to be disclosed includes the following: the groups of biological assets and their measurement methods; the basis and assumptions used to determine fair value; the results of changes arising from biological transformation; the volume and value of harvested agricultural produce; and gains or losses resulting from changes in fair value. The disclosure of such information enhances the transparency, usefulness, and comparability of financial statements for users.

1 *Source: Compiled by the author based on IAS 41 "Agriculture" and IAS 2 "Inventories".*
2 *Source: Compiled by the author based on IFRS 13 "Fair Value Measurement".*

Compliance with disclosure requirements can enhance investors' confidence and support informed investment decision-making. Biological assets are recognised when the entity controls the asset as a result of past events, future economic benefits are probable, and the fair value or cost of the asset can be measured reliably. Maintaining well-organised general ledger and analytical accounting records in accordance with these criteria facilitates the timely collection of operational and analytical information on biological assets, changes in their value, and the agricultural produce obtained from them.

The separate recording of income, expenses, and fair value changes related to biological assets contributes to the reliability, accuracy, and transparency of information presented in financial statements. Accordingly, the effective integration of general ledger and analytical accounting records can improve the quality of disclosures concerning biological assets.

5. Accounting for Long-Term Biological Assets and Bearer Plants

Long-term biological assets require careful classification because their accounting treatment depends on their characteristics. Bearer plants are accounted for under IAS 16 and are subject to depreciation after reaching maturity. Other biological assets remain within the scope of IAS 41 and are generally measured at fair value less costs to sell. Therefore, accounting policies should clearly distinguish bearer plants from other biological assets.

Certain methodological aspects related to depreciable amounts, depreciation methods, and differences between accounting and tax treatment may benefit from further clarification within the applicable accounting framework. Clearly defining the procedures for depreciating bearer plants, applying periodic revaluation where appropriate, consolidating accounting information, and recognising the resulting changes in the accounting policy can support consistent accounting practice and improve the quality of financial reporting. The procedures for recognising, measuring, and presenting different types of biological assets in financial statements are summarised in Table 3.

Table 3.
Recognition, Measurement, and Presentation of Biological Assets in Financial Statements[3]

Type of asset or change	Measurement basis	Presentation in financial statements
Bearer plants	Cost or revalued amount less accumulated depreciation and impairment losses under IAS 16	Presented within property, plant and equipment
Other non-current biological assets	Fair value less costs to sell under IAS 41	Presented within non-current assets
Current biological assets	Fair value less costs to sell	Presented within current assets
Agricultural produce	Fair value less costs to sell at the point of harvest	Recognised as inventories
Changes in the value of biological assets	Changes in fair value less costs to sell	Recognised immediately in profit or loss for the reporting period

Comparative Analysis of Traditional and International Accounting Standards

In national accounting practice, biological assets may be classified within fixed assets or inventories. In contrast, IAS 41 generally requires biological assets to be recognised separately and measured at fair value less costs to sell. Further harmonisation with international standards can contribute to more consistent recognition, measurement, and presentation in financial statements. The main differences between these two approaches are presented in Table 4.

Table 4.
Comparative Analysis of Accounting under IAS 41 and Traditional National Practice[4]

Criterion	International standard—IAS 41	Traditional national practice
Recognition	Recognised as a separate accounting object	Recognised within fixed assets or inventories
Measurement basis	Fair value less costs to sell	Initial (historical) cost
Recognition of changes in value	Recognised immediately in profit or loss for the reporting period	Not always recognised separately
Level of disclosure	Extensive disclosure of methods, assumptions, and information sources	Limited disclosure
Extent of disclosure	More extensive and standardised	Generally more limited

3 *Source: Compiled by the author based on IAS 41 "Agriculture" and IAS 16 "Property, Plant and Equipment".*
4 Source: Compiled by the author based on IAS 41 and applicable national accounting standards.

As shown in Table 4, the application of international accounting standards can contribute to greater accuracy, transparency, and reliability in financial reporting. In this context, further alignment of accounting practices for biological assets and agricultural produce with IAS 41 and applicable national standards may support more consistent recognition, measurement, and disclosure in accounting policies.

Conclusion and Suggestions

Based on the research, the differences among biological assets, agricultural produce, and products resulting from processing after harvest were identified, and the need for their appropriate recognition and measurement under the applicable accounting standards was substantiated. Agricultural produce should be measured at fair value less costs to sell at the point of harvest. In the limited circumstances in which the fair value of a biological asset cannot be measured reliably at initial recognition, the asset should be measured at cost less accumulated depreciation and impairment losses.

The comprehensive disclosure of valuation methods, underlying assumptions, and other relevant information in accounting policies can enhance the transparency and reliability of financial statements. It is recommended that these proposals be considered by the relevant ministries, professional organisations, accounting standard-setting bodies, and agricultural enterprises when improving accounting practices.

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fan va ta'limga oid ilmiy-amaliy jurnal

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Sahifalovchi va dizayner: Iskandar Islomov

2025

"Muhandislik va iqtisodiyot" jurnali 26.06.2023-yildan Oʻzbekiston Respublikasi Prezidenti Adminstratsiyasi huzuridagi Axborot va ommaviy kommunikatsiyalar agentligi tomonidan №S–5669245 reyestr raqami tartibi boʻyicha roʻyxatdan oʻtkazilgan. **Litsenziya raqami: №095310**.

Manzilimiz: Toshkent shahri Yunusobod tumani 15-mavze 19-uy