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THE THEORY OF ECONOMICS AND ORGANIZATION OF AGRICULTURAL FARMS IN THE CONTEXT OF NATIONAL ACCOUNTING STANDARD NO.12. "AGRICULTURAL ACTIVITIES"

Key words: accounting, standards, agricultural activity, fair value, economics, finance

ABSTRACT. The main purpose of the article is to present a critical assessment of the regulations in (National Accounting Standard) NAS No. 12 Pertaining to „Agricultural activity" against the background of the theory of economics and organization of agricultural enterprises (farms). The key issue concerns the compliance of concepts and categories regarding the measurement of the achievements of these agricultural enterprises (farms). The biological character of agricultural production casts doubt over the effectiveness of the traditional accounting model based on the historical cost principle and the principle of implementation, as it fails to properly reflect the effects of economic events related to agricultural activity (biological transformation). In particular, this applies to profit or loss arising at the time of initial recognition of the biological assets' component at fair value (farm-gate price). A result which is established in such a way is, in other words, a profit or loss resulting not from sales but from production. This, however, is the right approach as far as agricultural activity is concerned, due to the fact that the categories of production are key measurements for the assessment of farm performance. Unfortunately, draft NAS No. 12 concerning „Agricultural Activity" fails to take this important fact into account which means that fair value is omitted during the valuation process. It introduces subjective methods of determining the costs of production of agricultural products, which violate the principle of „information economics" and its usefulness („the principle of the advantage of content over form") and prevents the construction of a consistent system of concepts and categories in agriculture.

INTRODUCTION

The science of economics and organization of agricultural enterprises (farms) developed at the turn of the Twentieth Century. Its shape was influenced by both practice and theory. The subject of this science is the agricultural entity and its aim is to become familiar with the farm, its individual departments, branches, and activities, but also the surrounding natural and economic environment. Due to the biological nature of production, its management is based on providing living plant and animal organisms with an environment which is conducive to development. As Alicja Jarugowa [1996] states: „The

source of the specifics of agriculture is, therefore, the control of biological growth, the innate ability of animals and plants to grow"[1].

Economics and organization are closely related. Together with the idea of sustainable development, they define the most important principles of good agricultural practice. They are also connected with the broadly understood term - economic registry (accounting). Professor Ryszard Manteuffel in the preface to the manual of Paul Meimberg „Agricultural Accounting" notes that according to the author of the work "accounting records are an important tool for making optimal decisions regarding farm management. Therefore, if conducted properly, they help the farmer obtain better production and financial results. (...) Bookkeeping and the more widely understood term accounting should be used primarily by entrepreneurs or – if I may add something from myself here – the enterprise". He further states "P. Meimberg also speaks in favour of not treating accounting records as „an art form". One should choose such an accounting system that will ensure that the tasks they involve are completed without unnecessary encumbrance when applying means and effort" [Meimberg 1971, p. 10]. On this basis, it is paramount to ensure compliance of concepts and categories used in the field of farm economics and organization, as well as agricultural accounting. Understanding them and their correct interpretation is the key to building an integrated system of economic registry supporting management processes in agriculture.

In Poland, agriculture had always been treated as a side-issue in the mainstream of accounting considerations. In the Act of 29 September 1994 on accounting [Journal of Laws, 1994.121.591] agriculture was omitted and in principle agricultural enterprises adopted their own solutions. The work on the draft of the national accounting standard concerning „Agricultural activity" undertaken by the Accounting Standards Committee should be considered a very valuable initiative[2]. However, the creation of a national standard should be preceded by a broad discussion on the past achievements of agricultural accounting. In particular, the achievements of economic theory and organization of farms/agricultural enterprises and the principles and provisions of International Accounting Standard No. 41. pertaining to „Agriculture" whilst also considering the dominant role of family farms[3]. It is very important that the solutions created for family farms could be of benefit to them and that they are consistent with the existing proposals as well as the theory of farm economics and organization. The experiences accumulated during the implementation of the Unified Farm Accountancy System (ZSRGR) and the Farm Accountancy Data Network (FADN) System should also have been applied. However, this failed to be the case and

[1] This fact is noticed by many agricultural economists, among others Ryszard Manteuffel in the work entitled *Philosophy of Agriculture* [1987].

[2] „The purpose of this National Accounting Standard (CRS), hereinafter referred to as the standard, is to clarify the main accounting principles (policy) applied to agricultural activity in accordance with the Act of 29.09.1994 on accounting [Journal of Laws, 2016.1047], hereinafter referred to as the Act, in particular defining the principles of valuation and recognition of biological assets and agricultural products, determining the income and costs of agricultural activities and determining the scope of information on agricultural activities, presented and disclosed in the financial statements" [Journal of Laws, 2018.78].

[3] „The majority of business units conducting agricultural activity are small, independent family farms focusing on tax settlements and operating on the basis of cash accounting" [LASCF 2004].

the adopted NAS No. 12. concerning „Agricultural activity" by virtue of Resolution No. 10/2018 of the Accounting Standards Committee of March 27, 2018, raises many doubts and reservations [Journal of Laws, 2018.78].

The aim of the study is to present the scope and conditions of the functioning of agricultural accounting and to evaluate the proposals for changes contained in the discussed project in relation to the provisions of (International Financial Reporting System) IFRS 41. concerning „Agriculture" and the theory of economics and organization of farms and agricultural accounting.

In this work, during the study of source materials, analyses and syntheses were used as basic methods, and the deductive method was used at the stage of inference.

RESEARCH MATERIAL – CONDITION AND DIRECTIONS FOR THE DEVELOPMENT OF AGRICULTURAL ACCOUNTING

In Poland, an interest in accounting in small peasant farms has been observed since the mid-nineteenth century. At the end of the 19th century, the main paradigms of the functioning of the accounting system were formulated. The possibilities of building an orderly, structured system of financial and economic information were commonly met with huge optimism amongst economists. Heated discussions concerning the shape of the accounting system were also observed. During this period, there were many works promoting the use of double entry in the farm records. Talks were commenced regarding the choice of the form of accounting appropriate for agricultural holdings (enterprises). Attempts were made to extend the scope of quantitative records and cash transactions[4]. During this period, two opposing schools of thought were formed. One was based on the achievements of traditional agricultural accounting - calculating the result of the activity for the whole farm, the second trying to use the achievements of „merchant" accounting and apply them to the farm - calculating profitability separately for individual departments, branches, and operations. These discussions had a huge impact on the economic calculations applied and the further development of economic theory and organization of farms[5].

Outstanding agricultural economists were aware of the importance of accounting in running a business and tried to transfer the theoretical and practical experience of Western countries to Poland. Professor Ryszard Manteuffel had great achievements in this field. At the turn of 1964 and 65, the book „Agricultural Accounting" volume I and II was published. The first volume was entitled agricultural accounting (systems, methods, technique), while the second described costs, valuation, calculations, and reporting. They constituted a very comprehensive compendium of knowledge on the record of economic activity, valuation of farm assets, as well as modern methods of planning in agriculture.

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[4] „In the broad practice, chamber accounting dominated in agriculture until the end of the nineteenth century, and even now it is quite widespread in some countries in a slightly changed form as neocameral accounting" [Manteuffel 1965, p. 267].

[5] Examples of publications and exchange of views on this subject are articles by: Bohdan Kopcia [1985] entitled *The dispute over unit costs in agriculture,* Wojciech Ziętara and Tomasz Kondraszuk [1986] titled *A doubtful method*, Tomasz Kondraszuk, *Why are unit costs calculated?* [1987a] and calculation *Economic yes – unit costs no!* [1987b].

In general, scientists displayed a lack of interest in dealing with general accounting in the field of agricultural accounting in Poland. The adoption of the Accounting Act (UoR) of 29 September 1994 failed to change the situation. This Act did not take into account the specificity of agriculture, and the form of financial statements did not allow the inclusion of significant accounting categories used on the basis of the economics and organization of agricultural holdings.

An example of a proper approach to the system of economic records in agriculture was observed among the „old" countries of the European Union. In these countries, in order to meet the needs of agricultural policy in 1965, the legal regulation was approved in the EEC, under which a network for gathering information on farm accountancy (Farm Accountancy Data Network – FADN) was organized. The purpose of this network was to collect accounting information needed in particular to determine the incomes of agricultural holdings covered by the study and analysis of the activities of farms. A common information platform was created to assess the income situation concerning broadly understood agricultural activity. This enabled collection and processing according to a uniform data format that could be unambiguously interpreted in all these countries and at the same time allowed for mutual comparisons. In this way, the idea of building accounting as a „common language" to describe economic phenomena in agriculture was implemented.

The accounting (accounting) system requires the construction of a common conceptual platform not only with regard to the economics and organization of farms but also for the needs of generating financial reporting. It is in the interest of every country, as well as of every business entity and institution, to submit to generally applicable rules. Otherwise, communication and cooperation with units and external institutions will be at risk. The challenge is to develop global standards which are in the public interest and that ensure the production of transparent and comparable financial reports. This also applies to agricultural activities and raises many questions that should be answered.

At the global level, an important place in the process of building an integrated accounting information system is fulfilled by the development and subsequent adaptation of International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS), prepared and popularized under the supervision of the International Accounting Standards Committee (IASC). The purpose of the reports is to provide information that will be useful in making decisions while respecting the „information economy" principle. This principle is manifested, inter alia, in the pursuit of introducing simplifications in accounting, which is to reduce the encumbrance associated with keeping records and improve the conditions for the functioning of enterprises[6]. At the beginning of the 1990s, intensive work on the International Accounting Standard „Agriculture" began.

The most important decision within the developed standard was the recognition of fair value as the basis for the valuation of stocks of biological assets and agricultural products. The application of fair value takes into account the opposition expressed by agricultural

[6] According to Tomasz Kondraszuk [2010, p. 314]: „Information obtained from farms becomes a common good and the process of its registration should also be the subject of common concern. This creates the reasons for building systems of records in agriculture at the national or even supranational level, used in advisory services and shaping agricultural policy. The existing modern information and communication technologies support this".

economists in relation to the calculation of full unit costs for agricultural products (biological assets). The standard abolished this obligation, even their valuation was banned at the unit production costs level. Such valuation must be made whilst taking into account fair value[7]. This is a departure from the principle of historical cost and the principle of implementation, however, under the terms of subjectivism, the calculation of unit costs in agriculture is most justifiable[8]. When we measure at fair value, we assume that profits will be made at a certain level already at the stage of collection/acquisition. As Jerzy Gierusz and Joanna Gawrońska [2012, p. 45] note, „In recent decades, we have observed changes in the concept of defining and measuring the financial result. Traditionally, the financial result was determined at the operational level, and its designation was accompanied by a transactional approach, using the historical cost as the basis for the valuation of assets and liabilities. Currently, along with the development of the enterprise value management theory, the overall result determines the change in equity arising as a result of transactions/events made with entities other than owners. This means switching to the so-called concept of the company's operation, with a wide application of fair value measurements. The International Accounting Standard – „ IAS 41. „Agriculture" is an example of the implementation of this modern concept of defining and measuring the achievements of economic (agricultural) activity.

ATTEMPT TO ASSESS THE NAS PROJECT „AGRICULTURAL ACTIVITIES" – RESULTS OF THE TESTS

In conclusion, considering the previous point, the departure of the proposed NAS project concerning „Agricultural activity" from fair value in favour of other methods of valuation of biological assets and agricultural products [Journal of Laws 2018, item 78, p. 2.2b] is inappropriate. The differences between NAS and IAS (p. 2.4a-e), greatly undermine the consistency of the adopted solutions. Here are the suggestions and an attempt to evaluate them:

1. One can omit the valuation of agricultural products during gathering crops/harvest, but their value requires determination no later than at the time of sale and as of the balance sheet date. IAS 41 is applied for the first time to the valuation of agricultural products at the time of their collection or acquisition. IAS 2 does not apply to biological assets as of the moment of harvest and to the valuation of stored inventories if according to the generally accepted solution of the sector they are valued at the obtainable net sale price at particular stages of production.

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7 As a commentary to IAS 41 (p. 889), it was stated that „various sources of raising livestock or arable crops result in the inclusion of different purchase prices or production costs using a historical cost approach. Similar assets should give rise to the same expectations as to future benefits. The valuation and presentation of similar assets based on the same method significantly improves comparability and comprehensibility".

8 Ryszard Manteuffel [1984, p. 12] wrote „(...) calculated unit cost of own costs do not reflect economic reality, they are misleading, so they can not be the basis for making decisions, both on the scale of individual farms and the entirety of our agriculture. They are only a kind of smokescreen, facilitating in some cases justification of various false decisions. They are an expression of opacity in the use of a dummy cost calculation".

2. Biological fixed assets are classified as non-current assets, and non-current assets are included in inventories. IAS 41 recommends that the values of individual groups of biological assets should be broken down into consumed biological assets and productive biological assets as well as mature and immature assets[9].
3. Biological fixed assets in animal production are valued at historical cost, while the valuation according to IAS 41 is measured at fair value minus estimated selling costs.
4. Biological fixed assets in crop production are valued after initial recognition at purchase price or production cost and decreased by depreciation write-off and write-down due to permanent loss of value. IAS 16 additionally provides for the possibility of valuation, after the initial recognition of production plants classified as tangible fixed assets, at a revalued amount (fair value).
5. The valuation of biological current assets takes place at the moment of initial recognition, depending on the circumstances indicated in point 4.2. at the purchase price, production cost, or sale price of the same or a similar component, and as of the balance sheet date – at the initial value no higher than the net sale price or the otherwise determined fair value. In accordance with IAS 41, biological assets are measured at their initial recognition and at the end of each reporting period at their fair value minus estimated point-of-sale costs, except for when the fair value cannot be determined reliably. According to IAS 41, agricultural products are valued at their initial recognition at fair value minus estimated point-of-sale costs.

Ad 1. The key moment for recognizing whether a given process can be included in agricultural activity is when the crops are gathered (harvest) or another form of collection/acquisition. It is defined as the moment when the product becomes separated from biological assets or the moment when the life processes of biological assets end. According to IAS 41, „Profit or loss that arises at the moment of initial recognition of an agricultural product is determined as the result of gathering crops/acquisition" [IASCF 2004, Profits and losses p. 29]. This is a very important moment for the assessment of the achieved benefits from agricultural activity and the risk associated with production (biological transformation). At that given moment, the agricultural activity ends and trade (sale) or processing begins and the related market risk. Whether sales after three months bring additional profit on sales - is the farmer's profit/loss from management, not production (biological transformation - agricultural activity). In terms of economics and organization of farms, production categories play an important role. We distinguish (among others) global production, gross and net final production, gross and net (pure) production, as well as commodity production and potential commodity production. On their basis, the categories of gross and net value added are calculated. They are a reference point for the analysis of the efficiency of incurred expenditures as part of agricultural activity understood as the management of (by the economic entity) biological transformation of biological assets into agricultural products or other biological assets.

Ad 2. The breakdown presented by IAS facilitates the understanding of the specifics of biological assets. Such an approach is needed and at the same time understandable. The

[9] Mature biological assets are assets that have achieved characteristics that indicate their readiness to harvest or harvest (in the case of consumer assets) or whose condition enables regular harvesting or acquisition (in the case of production assets).

distinction between production and consumption assets (criterion for the division due to the ability to regenerate) in both plant and animal production is the basis for determining the possibility of generating future economic benefits. In turn, the definition of maturity and immaturity (division due to the possibility of obtaining/acquisition, but also reproduction) in the case of biological assets is indicated when assessing their usefulness, and ultimately also their valuation.

Ad 3. Draft NAS proposes a "backbreaking" way to reach the value of the basic herd. In the case of cattle (other animals too), a record of costs broken down into individual animals (groups of animals) is very difficult. This concerns the whole rearing period from the calf to the dairy cow. As a result, the calf appears in addition to the cow, which should also absorb some of the costs. In the case of long-lasting production cycles and activities which are difficult to evaluated (a pregnant cow gains very much in value), the use of fair value as a basis for valuation (future economic benefits) is great facilitation. The use of complex methods of cost calculation has very different results and is dependent to a large extent on the individual calculation (the problem of subjectivity).

Ad 4. In this case, we can ask ourselves which approach will bring us closer to answering questions such as: what is 1 ha of blueberry worth? Will the cost of establishing a plantation be appropriate for estimating future economic benefits – or will it be determined based on the expected discounted cash flows (and therefore fair value)?

Ad 5. Again, the departure from the fair value measurement will have „deplorable" effects. Why is the IASC warning included in IAS 41 omitted? „The Management pointed out that it is not feasible to reliably determine the cost of producing agricultural products obtained from biological assets" [IASCF 2004 B43].

In summary, it should be stated that all the differences and proposed changes should be assessed unfavorably from the point of view of potential users of the NAS concerning „Agricultural Activity". This applies first of all to the valuation of biological fixed assets, plant products, and animal unit costs[10].

SUMMARY

For many years, agricultural economists have been "eagerly awaiting" a document presenting the principles of preparing and presenting financial reports in agriculture, sanctioning the result categories and methods of their calculation previously applied in the field of economics and organization of farms. The preparation of IAS 41 has definitively ended the „interregnum" period in the scope of drawing up and interpretation of financial reports in agriculture, including those regarding the measurement of costs and valuation of inventories. A chance emerged in which the picture of agricultural activity

[10] According to IAS 41 (p. 888) "the method of measuring the purchase price or production cost of biological assets is sometimes less reliable than the fair value measurement, because the occurrence of common products and common costs may lead to a situation in which the relationship between the contribution and the result is poorly defined and forces a complicated, arbitrary allocation of costs between different products of biological transformation. This type of cost allocation becomes even more arbitrary if the biological assets produce additional biological assets (offspring) and these additional biological assets are also used in the own agricultural activity of the unit".

created in accordance with IFRS would be consistent with the theory of economics and organization of agricultural enterprises.

The introduction of „fair value" revealed differences in the measurement and assessment of the achievements of economic units in agriculture. Its use in the valuation of biological assets means that the financial result is calculated assuming that in the conditions of a functioning active market, the ascertained price will be possible to achieve, including at the moment of obtaining agricultural products. In the case of an active market, such an „optimistic" solution should be considered appropriate and does not jeopardize the implementation of the „going concern" principle. As part of the accounting policy, it is paramount to have a financial year that minimizes the effects of „optimistic" valuation of inventories of manufactured products. Traditionally, for holdings with plant production, this period is July 1 – June 30 of the following year. This period should be adapted to the direction of agricultural production.

It also seems that the adopted solutions in IAS 41 meet the principle of „information economics" and their usefulness (the principle of „the predominance of content over form") and ensure compliance with the concepts used on the basis of economics and organization of farms. The merits of IAS 41 definitely outweigh its disadvantages and mean that it should become the foundation upon which agricultural accounting in Poland will be revived.

A question arises about the meaning of developing a NAS regarding „Agricultural Activity." A clear stand from the NAS Council would be needed to clarify the interpretations of IAS 41 and show its various effects to better understand the specificity of agriculture (agricultural activity).

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TEORIA EKONOMIKI I ORGANIZACJI GOSPODARSTW ROLNICZYCH W KONTEKŚCIE KRAJOWEGO STANDARDU RACHUNKOWOŚCI NR 12. „DZIAŁALNOŚĆ ROLNICZA”

Słowa kluczowe: rachunkowość, standardy, działalność rolnicza, wartość godziwa, ekonomika, finanse

ABSTRAKT

Głównym celem artykułu jest przedstawienie krytycznej oceny uregulowań KSR nr 12. „Działalność rolnicza” na tle teorii ekonomiki i organizacji gospodarstw rolniczych. Kwestia kluczowa dotyczy zgodności pojęć i kategorii dotyczących pomiaru dokonań gospodarstw. Biologiczny charakter produkcji rolniczej sprawia, że stosując tradycyjny model rachunkowości oparty na zasadzie kosztu historycznego i zasadzie realizacji, nie ma możliwości właściwego odzwierciedlenia skutków zdarzeń gospodarczych, związanych z działalnością rolniczą (przemianą biologiczną). W szczególności dotyczy to zysku lub straty powstałej w momencie początkowego ujęcia składnika aktywów biologicznych w wartości godziwej (loco gospodarstwo). Tak ustalony wynik jest zyskiem lub stratą wynikającymi nie ze sprzedaży a z produkcji. Na gruncie działalności rolniczej jest to właściwe podejście, bowiem kategorie produkcji są w rolnictwie kluczowymi wielkościami dla oceny dokonań gospodarstw. Niestety projekt KSR nr 12 „Działalność rolnicza” pomija ten ważny fakt i stara się przy wycenie pomijać wartość godziwą. Wprowadza subiektywne metody ustalania kosztów wytworzenia produktów rolniczych, co narusza zasadę „ekonomiki informacji” i jej użyteczności („zasadę przewagi treści nad formą”) oraz uniemożliwia budowę spójnego systemu pojęć i kategorii w rolnictwie.

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