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THE POSSIBILITIES OF MEASURING AND RECORDING THE PROFITABILITY OF AGRICULTURAL FARMS (WITHIN THE CONTEXT OF A PROBABLE INTRODUCTION OF INCOME TAX FOR AGRICULTURAL FARMS)

Summary: Farming in Poland is subject to special tax solutions consisting, among other things, in the exclusion of most individual farmers from the natural person's income tax system. It is a considerable deviation from the principle of universality of this tax, and consequently it causes negative effects.

Of course, the implementation of income tax for agricultural farms would require keeping proper accounting records for tax purposes.

The implementation of an obligation to keep records of economic events on farms could become an important factor in the process of agricultural rationalization because as a result, information helpful in making optimal and effective decisions could be obtained, and financial reports could become a basis for the evaluation of farms' financial standing.

Keywords: accountancy, the profitability of agricultural farms, tax for agricultural farms.

1. Introduction

Farming in Poland is subject to special tax solutions. The most significant element of its distinctiveness is the exclusion of individual farmers from the natural person's income tax system. It is a considerable deviation from the principle of universality of this tax, and consequently, it causes negative financial, social, economic (including modernization) and educational effects.

The exclusion of individual farmers' incomes from the income tax system carries with it a respective decrease in budget incomes; also, exempting one social group from the common necessity of incurring the state maintenance costs and imposing this burden on the other social groups is considerably at odds with the principle of citizens' equality.

The article aims at the presentation of the problems of farms' profitability in Poland, and the possibilities of its measuring and recording.

2. Individual agricultural farms and the natural person's income tax

In every state, agriculture and farmers are under special protection, but also in every state farmers participate in the public financial system not only as beneficiaries, but also as contributors.

The present situation of farmers' income taxation has significant economic consequences outside the national budget as well. Above all, it influences the profitability of farm production in individual farms. Exclusion from the income tax system is identical with exemption from it. Thus, the present tax solutions can be considered equivalent to a subvention in the amount corresponding to the actual average natural person's income tax rate.

The income tax solutions distort also competitiveness within agriculture itself: between individual farmers who do not pay income tax and farms which do pay it (including specialist individual farms).

As the above comments prove, there is a need to include individual farmers in the universal income tax system. This would obviously mean changes in farmers' incomes. In the case of wealthy profitable farms, it would be a sign of desirable normalization. In the case of farms bringing only a small income constituting only a supplementation of their owners' budgets, as well as in the case of unprofitable farms, such changes would be of a respectively lesser importance, or they would not occur at all.

Of course, the introduction of income tax would require farmers to keep proper accounting records for tax purposes.

Accounting records kept by a farmer should be adjusted to individual needs and comprise either the entire business of a given farm or just some selected activities such as revenues and expenses influencing the financial result (income). Information ensuing from such records would serve not only to estimate the level of income, but also, among other things, the value of a farm and its production capacity.

The introduction of an obligation to keep records of economic events on farms could become an important factor in the process of agricultural rationalization because, as a result, information helpful in making optimal and effective decisions could be obtained and financial reports could be a basis for evaluating farms' financial standing.

3. Agricultural income in the national accounts

The national accounts refer to agriculture as a branch of economy, i.e. agricultural production of all entities conducting economic activity regardless of their contribution to production in general. The main sources of data concerning people's incomes are the Central Statistical Office's macro-economic accounts calculated in the national

accounts system and determined by means of micro-economic data aggregation – the Central Statistical Office's household budgets and the agricultural accountancy data provided by the Institute of Agriculture and Food Economics¹.

Current accounts are determined according to institutional sectors illustrating production processes, primary and secondary incomes, their distribution and the application of a formula for determining gross disposable income for the subsector of employers and self-employed individual farmers.

$$\begin{aligned} \text{Global production} - \text{Indirect consumption} &= \text{Gross value added} - \text{Costs related to hired labourers} + \\ &+ \text{subsidies for producers} = \text{Mixed income (gross operating surplus)} - \text{Income from property (balance)} \\ &= \text{Gross primary income} - \text{Income and property taxes} - \text{Social insurance premiums} - \\ &\quad \text{Current transfers (balance)} = \text{Gross disposable income} \end{aligned}$$

Source: prepared on the basis of the National Accounts according to the Institutional Sub-sectors in 1996, *Studia i Analizy Statystyczne*, GUS, Warszawa 1999, p. 146-156.

Households connected with agriculture are surveyed by the Central Statistical Office also from the angle of their budgets². In household budget surveys, a farm's income is the difference between production value (sale and natural consumption) and current expenses on production (purchase of articles and services for the current agricultural production, remuneration and insurance premiums for hired labourers) and taxes and other payments related to a farm's operation (agricultural tax, real estate tax, individual farmers' social insurance premiums). Household budget surveys provide information about incomes that can be used in order to make comparisons with the incomes of other social and economic groups in Poland; the data are not, however, comparable with the macro-economic data, which constitutes a certain drawback.

4. Trends in agricultural farms' incomes according to agricultural types based on Farm Accountancy Data Network (FADN)

As part of the National Programme of Preparation for Membership, the Agricultural Accountancy Department at the Institute of Agriculture and Food Economics modified the organization and methodology of agricultural accountancy applied to individual farm accountancy data collection. The objective of these activities was the orientation of agricultural accountancy towards the market economy and the assurance of the collected accountancy data's compliance with the system used in the European Union Member States.

¹ W. Józwiak, *Rachunkowość rolna, badania dochodów rolniczych i prognozy*, „Wiadomości Statystyczne” 2000, Nr 3, p. 19-24.

² W. Józwiak, op. cit., p. 7-17.

The chief objective of the Polish FADN is the supply of accountancy data from a representative sample of farms to the Farm Accountancy Data Network – FADN.

In FADN's observation field there are commercial farms which have a considerable share in the added value creation in agriculture. These farms fall into the group of farms producing in a given FADN region or state at least 90% of the Standard Gross Margin (SGM) value.

Following the guidelines of the European Commission's decision concerning farm classification, 2,139,784 farms have been classified in Poland. This population produced about 36.5 billion PLN of SGM value. On the basis of the structure of SGM value creation in Poland, the minimum economic size threshold of a farm in the observation field of the Polish FADN has been determined. The size has been determined at the level of 2 European Size Units (ESU).

The observation field of the Polish FADN comprises 745,023 farms producing 89.3% of SGM value generated by all classified farms in Poland. By means of appropriate statistical instruments, a representative sample of farms for the observation field of the Polish FADN has been selected. The Polish FADN sample, accepted by the European Commission, consists of 12,100 farms, which means that one farm participating in the Polish FADN represents on average about 62 farms being in the observation field of the Polish FADN.

Table 1. Farm income according to agricultural types

Farm income according to agricultural types – total					
	2002	2003	2004	2005	2006
Income from a farm	30490	42878	29197	21942	27011
Farm income according to agricultural types – agriculture					
Income from a farm	30779	51683	32695	20109	28531
Farm income according to agricultural types – horticulture					
Income from a farm	no data	no data	47877	41207	43534
Farm income according to agricultural types – remaining permanent cultivation					
Income from a farm	6434	72582	28320	25788	33140
Farm income according to agricultural types – dairy cattle					
Income from a farm	31867	52976	25998	27828	32266
Farm income according to agricultural types – animals in a pasture system					
Income from a farm	45093	58838	33043	29178	36844
Farm income according to agricultural types – granivorous animals					
Income from a farm	48608	43170	66021	47283	39415
Farm income according to agricultural types - cultivations and various animals					
Income from a farm	25052	29564	20292	15822	21342

Source: Standard results achieved by individual farms keeping accountancy records in the years 2002-2006, prepared by the team of the Agricultural Accountancy Department employees, Warsaw 2004-2007.

For the needs of FADN, about 1,000 types of accountancy data referring exclusively to the farm are collected. They illustrate the condition and structure of the property elements, as well as the status and structure of the sources of liabilities. Other data reflect the structure of revenues and expenses at the level of an individual farm.

Income from a family farm consists of a payment for the employment of one's own production elements in a farm's operating activity and a payment for risks taken by a farmer in an accounting year (loss or profit). This income as a relation to the total production value is the most favourable in farms specializing in dairy cattle and animals in a pasture system. The relation of income to production value is the least favourable in farms specializing in horticulture and granivorous animals breeding.

Farm Accountancy Data Network (FADN) is an effective, necessary and indispensable instrument of creating the Common Agricultural Policy of the European Union. Data collected in this structure are used in particular for the following:

- the annual determination of agricultural farms' incomes within the Community,
- the analysis of farms' activity,
- the evaluation of the results of projected changes concerning the Community's agriculture.

However, because of different legal bases, objectives and data collection systems, this system cannot and should not be used as one on the basis of which a determined farm income would constitute an income tax base.

5. The role of accountancy as an information source

An agricultural farm, just like any economic unit, has to be managed. Management of a farm in the market economy cannot be intuitive. The changing environment and competition require these entities to have a system providing information about costs, revenues, assets or their financing sources.

Accountancy is such an information source. It is a system reflecting economic entities' material situation in financial terms as well as a comprehensive presentation of economic phenomena and processes in a systematic way by means of specific methods, forms, organizational and technical solutions. As a result, a formalized, coherent and balanced picture of economic activity of a universal character can be achieved. Accountancy gives a transparent and credible picture of an economic entity's real situation.

Although most decisions made on a farm are those concerning simple problems, they still should not be made in uncertainty (being unfamiliar with choice possibilities, risk connected with every decision, incertitude about possible consequences). Information from accounting records is the basic, even though not the only source of information useful in management.

Some of the accounting records methods used for taxation purposes in microenterprises could also be used on individual farms (with certain corrections, however).

6. Forms of accounting records in microenterprises

Most Polish economic entities classified as small enterprises conduct their economic activity in simple organizational and legal forms, which means they do not have the status of a legal person. Only some entities of this type have such status. Consequently, small economic entities are natural or legal person income taxpayers. An economic entity's form of taxation is the basis for the specification of requirements concerning accounting records.

A natural person's income tax on economic activity can be paid in a simplified form, i.e. the flat rate, or under general rules.

Paying a flat rate consists in using a tax card or paying a flat rate for registered revenues.

Paying a flat rate by using a tax card consists in paying a monthly rate depending on three factors: the fact of conducting economic activity, the number of employees and the number of the population in the place where economic activity is conducted; in the case of paying a flat rate for registered revenues, the amount of income tax depends on the amount of revenues and the tax rate for a given type of conducted activity.

Taxation under general rules means paying taxes for actually achieved income, i.e. for revenues less tax deductible expenses – on the basis of a book of revenues and expenditures or accounting books.

Legal person income taxpayers are obliged to keep accounting books, such as a register, a general ledger, auxiliary ledgers, a stock-book and trial balances.

7. Record keeping obligations in the case of individual farms' accounting records

Record keeping and reporting obligations of entities dealing with agricultural activity can result mainly from the regulations of the accounting and/or tax law. These obligations refer to farms in a very limited scope, however, and only to large farms.

According to the law, farms conducting activity in special agricultural production and farms acting as commercial companies or other legal persons are obliged to keep accounting records. Individual farms and farms acting as civil or registered partnerships are subject to the regulations only if their net revenues from the sale of goods and products as well as financial operations for the previous business year are equal to at least the equivalent of 1,200,000 EUR in PLN, according to the Accountancy Act. In all other cases, accounting records in farms can be kept voluntarily.

Thus, individual farms, the most common in Poland, are usually not obliged to keep accounting records, either under the Accountancy Act or tax regulations. If they do keep records, it is most often done in a simplified form, i.e. following the principle of a singular entry of economic events. Such records focus on cash turnover and are limited to a systematic registration of cash flows and balances.

Farms obliged to keep accounting records have to collect financial data and process them according to the regulations of the Accountancy Act. They are also obliged to present periodical financial reports which contain financial information in systems and relations corresponding mainly to the information requirements of external recipients³.

Similarly to the Accounting Law, the regulations of the Natural Person's Income Tax Act of 26 July 1991 do not refer to individual farms, with the exception of farms conducting economic activity in specialist agricultural production branches. Because of the lack of connections between the amount of agricultural tax and income, farms are exempt from the obligation to keep tax records.

Table 2. Individual farms according to agricultural land area groups in 2002

Agricultural land area groups	Number of individual farms		
	total	including farms keeping accountancy records	
		total	percentage (total = 100)
total	2 928 578	57 752	2.0
Up to 1 ha	976 852	3 603	0.4
Above 1 ha, including 1) :	1 951 726	54 149	2.8
1-5 ha	1 146 298	8 223	7
5-10 ha	426 520	9 647	2.3
10-15 ha	182 505	8 695	4.8
15-20 ha	83 790	6 830	8.2
20-30 ha	64 080	8 208	12.8
30-50 ha	31 432	6 606	21.0
50-100 ha	11 977	3 728	31.1
100-200 ha	2 907	1 056	36.3
200-300 ha	779	343	44.0
300-500 ha	746	358	48.0
500-1000 ha	515	319	61.9
1000 ha and more	177	136	76.8

¹⁾ left-sidedly closed intervals were assumed

Source: Prepared on the basis of: *The Characterization of Individual Farms Keeping Accountancy Records 2002*, GUS The Statistical Office in Poznań, Poznań 2004, p. 61.

³ M. Rydzewska-Włodarczyk, *Obowiązki ewidencyjne i sprawozdawcze podmiotów zajmujących się działalnością rolniczą*, „Buchalter” 2004, Nr 51/52.

In certain cases, individual farms' record keeping obligations result from the regulations of the Goods and Services Tax Act of 11 March 2004 or from other regulations. This refers to farmers who are not exempt from VAT under article 43, paragraph 1 and under article 113, paragraph 1 of the Goods and Services Tax Act, or those who additionally conduct non-agricultural economic activity.

On the one hand, keeping records for taxation purposes on farms is connected with the necessity of generating information required for the proper and timely settlement of tax expenses, and on the other hand, it is connected with tax expenses management. Information requirements in this respect depend on external factors (farm's environment) and internal factors (management level and functional area). It is worth noticing that a farm obliged to pay only an agricultural or forest tax has fewer requirements for information than a farm obliged to pay income tax or VAT.

The set of information for taxation purposes is not identical for all farms. It is determined by the specificity of a given entity, and especially by its type of economic activity, its organizational and legal form as well as size. Information requirements are submitted by two groups of entities: tax offices and taxpayers (farms).

The data presented in Table 2 prove that the number of individual farms keeping accountancy records grows proportionately with the increase of acreage. It is probably connected with the obligation to keep accountancy records when net revenues from the sale of goods and products and financial operations for the previous business year exceeds the limit (according to the Accountancy Act, the equivalent of 1,200,000 EUR in PLN), or with the increased information requirements. It should be taken into account, however, that in most cases keeping accountancy records results from meeting the legal requirements and not from the increased information requirements of people making decisions in entities.

8. The financial result (income) and factors influencing its amount

The financial result (income) is the result of an enterprise's activity achieved in a specified time and expressed in financial terms. It is the most synthetic measure in the evaluation of an economic entity's activity. The amount of the financial result (income) of an agricultural enterprise is influenced by the basic production results, i.e. plant and animal production, auxiliary production and provision of services, and the results of the remaining operating and financial activity as well as extraordinary events.

Farm management can be based on plant and animal production. The basis for determining income from plant production is the specification of the sowing structure, i.e. the area and the share of particular plants in the area of arable land and the specification of expected crops.

Animal production is the second basic production branch on a farm. On the basis of the herd turnover indexes characterizing the herd can be obtained, i.e. so-

called herd turnover parameters. The following elements can be distinguished in herd turnover: the status as at the beginning of a year, revenues, expenditures and the status as at the end of a year. Revenues may come from animal births, purchase, change of classification, i.e. transferring of animals from younger to older groups. Expenditures involve the following: animal sales, slaughter, death and change of classification.

Revenues from the sale of agricultural products can be included in accounting books; they are presented in the profit account in amounts due without VAT, determined by multiplying the amount of sold products by the sale price less discounts.

Manufacturing costs are assigned to revenues from basic activity. Records of costs of sold products can be kept, for instance, in the following accounts: “Costs of sold plant products” and “Costs of sold animal products”. Both costs and revenues can be also recorded with greater precision, e.g. in account 501 – Basic activity costs – plant production (as a synthetic account) and with developed analytics:

- 501-1 Costs of winter wheat production,
- 501-2 Costs of spring wheat production, etc.

and respectively, revenues:

- 701-1 Revenues from sale of winter wheat,
- 701-2 Revenues from sale of spring wheat, etc.

and accounts of costs of plant products sale:

- 702-1 Cost of winter wheat sale,
- 702-2 Cost of spring wheat sale, etc.

The result of operating activity can be determined on the basis of revenues and tax deductible expenses.

Apart from revenues and operating activity costs, the following elements also influence the financial result (income) of an agricultural enterprise: remaining revenues and operating costs, revenues and financial costs, extraordinary profits and losses. It is worth mentioning that keeping records in these accounts in an agricultural enterprise does not differ from keeping records in industrial production.

As it results from the data concerning entities keeping account books and from FADN, in Poland, there still exists a group of “social farms”, i.e. farms producing mainly for their own needs and not dealing with production for the market. Among farms dealing with market production, there are numerous high productivity farms; hence, small farms are being displaced by high productivity farms.

9. Conclusions

Legal restrictions concerning the obligatory keeping of accountancy records in farms together with the demand for information specific for agriculture contribute to facultative data collection and processing. The type and scope of optionally created information should not result from only the size of activity, but also from the type of

activity, specialization and a farm's relations with the environment. Keeping records of economic events should be adjusted to individual needs.

To sum up we can point results below:

- for the majority of farms in Poland, records kept in a simplified form are sufficient (especially within the context of tax obligations), i.e. a flat rate (a tax card, a flat rate for registered revenues) or under general rules (the book of revenues and expenditures);
- since agricultural activity is characterized by a relatively high relation of costs to revenues, the most favourable taxation form with respect to the tax base, i.e. income, is a book of revenues and expenditures. In this taxation form, there are increased records keeping obligations in comparison with other simplified forms, but its advantage is the possibility of obtaining more information;
- because of the specific nature of an agricultural farm, obligatory record keeping in the form of a book of revenues and expenditures should be extended and a division into activities connected with plant or animal production should be introduced;
- for the purpose of ordering the system of agricultural financing and taxation, the present social insurance system for farmers should be verified, and income calculated on the basis of kept accounting records could be the only factor (or one of a few factors) influencing the basis of social insurance premium calculation;
- a new system is required, one that would make it possible for farmers to be included in it not only as beneficiaries of public funds but also as contributors.

Literature

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MOŻLIWOŚCI POMIARU I EWIDENCJI DOCHODOWOŚCI GOSPODARSTW ROLNYCH (W KONTEKŚCIE EWENTUALNEGO WPROWADZENIA PODATKU DOCHODOWEGO)

Streszczenie: Rolnictwo w Polsce podlega szczególnym rozwiązaniom podatkowym, polegającym m.in. na tym, że większość rolników indywidualnych jest wyłączona z podatku dochodowego od osób fizycznych. Stanowi to istotne odstępstwo od zasady powszechności tego podatku i w konsekwencji rodzi negatywne skutki.

Jest sprawą oczywistą, że wprowadzenie podatku dochodowego wymagałoby od rolników prowadzenia odpowiedniej ewidencji księgowej dla potrzeb podatkowych.

Jednocześnie wprowadzenie obowiązku prowadzenia ewidencji zdarzeń gospodarczych w gospodarstwach rolnych mogłoby się stać poważnym czynnikiem racjonalizacji gospodarki rolnej, gdyż w wyniku jej prowadzenia pozyskałoby się informacje pomocne w podejmowaniu optymalnych, efektywnych decyzji, a tworzone sprawozdania finansowe mogłyby być podstawą oceny sytuacji finansowej gospodarstw rolnych.