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ANALYSIS OF ENVISAGED EFFECTS OF INTRODUCING THE TAX REFORM IN POLISH AGRICULTURE AGAINST A BACKGROUND OF GERMAN SOLUTIONS

Abstract

The paper touches upon the issue of fiscal burdens of German farmers, including income tax. The situation of the Polish agriculture was analysed at the background of these solutions and it was referred to the effects which may arise after the implementation of the assumptions of the draft act on income tax from natural persons from agricultural activity. Consequences of tax reform were estimated on the basis of data from farms running accounting under the Polish FADN. The draft act on income tax in the Polish agriculture provides for introduction of income tax on farms reaching returns on sales at the level of at least PLN 100 thousand. Below this threshold property tax would apply. It is planned to include subsidies into the tax base.

It should be emphasised that the German tax system included subsidies into the tax base, at the same time introducing other mechanisms (discounts and reliefs) protecting farmers against excessive fiscalism.

Keywords: FADN, tax reform, German farmer, income tax, agricultural activity, draft act, property tax, subsidies.

Introduction

Taxes are sanctioned by law charges paid by citizens and economic operators to the state. So far, Polish farmers, due to pursuing the agricultural activity, have been obliged to pay agricultural tax going to municipality budgets. The exception was taxation of special sections of agricultural production with income tax which goes to the central budget. In addition to these charges, farmers pay other capital taxes, such as property tax, forest tax, tax on means of transport, on inheritance and donations. The agricultural activity is also taxed with value added tax, while farmers paying the lump-sum are exempt from this obligation.

Taxes are a source of income of the central budget and local budgets for the implementation of tasks. Beneficiaries of the budget are all citizens, including farmers. Therefore, it is believed that social justice requires the inclusion of this professional group in the single tax system, particularly now, in the conditions of the market economy. Farmers exempt from paying income tax are increasingly facing social disapproval, they are considered to be a group of taxpayers who are privileged both in terms of the fiscal burden and benefits derived from public resources. Currently, the share of the agricultural community in shaping the municipality budget due to agricultural tax is largely disproportional to benefits derived from public funds. This applies especially to large, economically strong farms, for which the amount of agricultural tax is not commensurate with achieved income (Forfa M., 2011). These large farms, which are most economically viable, are the main beneficiaries of the current tax system and covering them with income tax would be a sign of standardisation (Pawłowska-Tyszko J., 2012). Agricultural tax paid so far by farmers is a small contribution to total income of municipalities, while essential local budget receipts come from property tax (Chmielewska M., 2009; Pawłowska-Tyszko J., 2012). In relation to the function of agricultural tax, it is also believed that it impedes the flow of employees to other economy sectors, delays the process of enlargement of farms, imperfect is its impact on aligning the economic and environmental conditions of farming, there is no connection with the economic results of the farm (Forfa M., 2011).

In view of non-acceptance of such taxation of agriculture, for several years there has been ongoing work on preparing a tax reform. Currently, paid agricultural tax is a product of the number of conversion hectares of the farm and the value of 2.5 dt of rye[1]. Since 2014, by decision of the legislative authorities, a change has been only made in calculating of the purchase price of rye – it will be calculated "according to the average purchase price of rye for 11 quarters preceding the quarter preceding the fiscal year"[2].

So far, agricultural tax has been paid in accordance with the uniform rules by all farmers. The objective of the tax reform in agriculture is to introduce income tax and to diversify the tax burden depending on achieved income. Currently, a discussion is underway on the assumptions to the draft Act on income tax in agriculture. Reconstruction of the tax system in Polish agriculture is a difficult

[1] By 2013, the average purchase price of rye was determined based on the Communication from the President of the Central Statistical Office, published in the Official Gazette of the Republic of Poland „Monitor Polski" within 20 days after the end of the third quarter.

[2] The Act of 10 May 2013 amending the Act on agricultural tax (Journal of Laws of 2013, item 660).

issue. Apart from the scope of the legislative work, it requires a change in the mindset of farmers, their substantive preparation, and preparation of services to implement the system. In introducing such radical changes, of importance is to learn the experiences of other countries. This study shows how, in practice, the tax system functions in agriculture of Germany which is closely related country to Poland in economic terms. Learning this system was included in the programme of organised business trip during the workshop of the Polish FADN (Farm Accountancy Data Network). Against a background of the solutions existing in Germany, draft income tax in Polish agriculture has been evaluated.

Taxation of German farmers

The tax system in Germany is extensive, both in terms of subjects and objects. All citizens are equal in terms of paying taxes, just like they are equal in terms of using the social care system, and the compliance with social justice is watched by the Constitution of Germany.

The German tax system contains many fiscal burdens, including income tax, applicable to natural and legal persons. Generally applicable taxes are included in the following four groups:

1. Capital taxes (including property, inheritance, donation taxes);
2. VAT;
3. Other taxes (e.g., church, excise, electricity consumption taxes);
4. Income tax.

1. Capital taxes include property taxes. They are formed by tax on agricultural land and on other properties. It should be stressed that each farm always pays land tax, even in the case of loss of the harvest. The level of tax on agricultural land is diversified depending on the quality of land, determining the possibility of crop yielding. This feature is measured by points – the poorest land has 20 points, the best – 100. The tax calculation method is based on the Act of 1935.

   Tax on other properties is determined by a tax office of the given federal state (Land) based on the valuation of this property and its beneficiaries are individual municipalities. Farm buildings, involved in the agricultural activity, are exempt from paying this tax. In purchasing such properties, tax is paid only on land under these buildings. Farmers are required to pay tax on acquisition of land and other properties not related to the agricultural activity. The property tax rate is at the level of 4.5% of the property purchase value and in the poorer Lands is higher and amounts to 5%. This tax does not apply to donations or transfer of land between spouses.
2. In German agriculture, as in Polish agriculture, the VAT system is applicable, commonly referred to by the Germans as sales tax. Farmers are most often bound by the average rate system (lump-sum) provided that they are not mandatorily subject to general principles. The farmer paying the lump-sum, just like in Poland, may voluntarily choose taxation in line with general prin-

ciples, but return to the lump-sum system is not possible before the period of 5 years. Taxation in line with general principles pays (as in the case of Polish farmers) to farms making investments.

3. Other taxes are paid by farmers depending on a particular case. For example, persons who declare allegiance to the Church pay church tax, which amounts to 8-9% of the value of income tax.

Tax burdens on farmers in West Germany and other taxpayers also include solidarity surcharge paid at the level of 5.5% for the eastern Lands. On the other hand, individual farmers do not pay so-called trade tax for municipalities, which is required from entities pursuing the economic activity and also paying personal income tax.

4. With regard to income tax, personal income tax and corporate income tax are applicable. Individual farmers and partnerships in Germany pay personal income tax. In turn, legal persons, that is, capital companies and cooperatives, pay corporate income tax.

Personal income tax in German agriculture

In most cases, income tax in agriculture is determined based on accounting being kept. The taxation subject is income achieved from the crop production, animal rearing and breeding, horticultural production and other production which has been produced with participation of the forces of nature. It should be stressed that taxation also covers direct payments.

Methods to determine income (forms of taxation)

Income in individual farms may be determined using four methods: by keeping full accounting records, comparison of revenues and expenses, by determining average rates and based on profit estimation.

- ***Full accounting*** records apply to farms meeting one of three conditions: their economic value exceeds EUR 25 thousand, they achieve income exceeding EUR 50 thousand, or their income in the calendar year exceeded EUR 500 thousand.

  The economic value of the farm shall be determined by the tax authority (Besteuerungen..., 2009). In the old Lands (former West Germany) this is the tax value of the farm's assets and in the Lands in the territory of East Germany – the farm's replacement value. The tax value of the farm is composed of all non-pecuniary assets of the farm, including intangibles (such as production quotas). What is determined based on the value of this parameter, is, inter alia, an obligation to keep full accounting records or to apply other accounting rules for tax purposes, moreover, the amount of land tax is determined. Therefore, keeping full accounting records requires submitting an exact balance-sheet, but it is necessary to make a precise separation of private assets from farm's assets.

- ***Comparison of revenues and expenses (surplus account method)***. It can be applied by farmers who did not exceed the limit amounts for keeping full accounting records and also are not eligible for using the average rate method, as described below. In this case, accounting consists in recording revenues and expenses on the farm. The account of expenses includes annual depreciation of assets. In calculating income, the change in stocks is not taken into account. This method is a form of the revenue and expense ledger kept in Poland. At the end of the accounting year, the calculations of revenues and expenses are transferred to the official form and along with the tax return are submitted to the tax office.
- ***Average rate method (lump-sum)***. There is no requirement to keep any records here, and determining of tax consists in a general profit estimation. This method applies to farmers meeting the following three conditions. Firstly, they run their farm on their own in the agricultural area of up to 20 ha, exclusive of special crops. Secondly, the population of farm animals is up to 50 large animals (SD). Thirdly, the value of benefits due to special use[3] does not exceed EUR 1,023[4] (Besteuerung..., 2009). These three limit values must occur jointly. Data on the land area and the number of animals has been established as a result of negotiations with farmers' associations. Depending on the number of hectares of land and its quality and the number of animals, the farm value classes have been created. Tax is payable at a flat rate based on the given value class and may be 15.6 to 42.0% of the value of income. The amount of tax is determined once and remains unchanged in the subsequent years, provided that the farm's resources do not change or the farmer does not resign from this form of tax settlement. The farm does not submit any report, while the tax office may compare it with similar farms and thus determine the amount of tax. The farmer settling tax in a lump-sum form may choose the method and start settling income in a form of the revenue and expense ledger.
- ***Profit estimation method***. Income for tax purposes is in this case estimated by the tax authority based on the farm's economic value and the utilised agricultural area. This method is often used in cases where accounting records are kept improperly kept or are not kept at all, despite such a requirement. In addition, it applies only to farmers, who are not obliged to keep full accounting records and simplified accounting records in a form of records of revenues and expenses.

[3] Special use means: forestry (e.g. sale of wood, income from hunting), viticulture (e.g. sale of grapes, wine, grape must), horticulture (e.g. sale of vegetables, flowers, seeds, seedlings), other activities in the field of agriculture and forestry (e.g., sale of fir wood, branches, mushrooms), non-agricultural activity (e.g. sandpits, gravel pits, tourism, biogas plants, distilleries), special crops (e.g. sale of Christmas trees, asparagus, hops).

[4] The value of EUR 1,023 is equivalent to DEM 2,000, as referred to in the source study (Besteuerung..., 2009). It has been converted at a rate of EUR 1 = DEM 1,95583 (exchange rate used during changing the currency from DEM to EUR).

The important issues of taxation of German farmers include the issue of the economic activity. The individual farmer, when running his farm, must take into account the number of animals kept on the farm. In fact, there are specific criteria, when the farm turns into an entity pursuing the economic activity. This condition is, for example, the number of animals per 1 ha. The farm of up to 20 ha can have a maximum of 10 livestock units per 1 ha. In the further area ranges, the animal stocking density per 1 ha is reduced. Exceeding these thresholds determines the transition from the agricultural activity to the economic activity. In this case, the farmer is obliged to pay, in addition to income tax, also trade tax (for the municipality).

Income tax rates, essential deductions and tax reliefs in agriculture and forestry in Germany

Income tax rates in Germany are constructed in a progressive manner, which means that the average tax rate increases as income grows. Income tax rates start with the so-called "zero" zone, i.e. the basic tax-free amount, which in case of individual tax settlement is EUR 8,130[5] (when spouses settle tax jointly, it is EUR 16,260). The marginal tax rate from 14 to 42% starts growing successively in the case of income exceeding EUR 8,130 (Table 1). This marginal rate reflects the average tax rate, with which it is necessary to tax another EUR of taxable income. Income of EUR 8,131 is taxed as follows: amount of EUR 8,130 (tax-free) with the rate of 0%. One EUR of income over the tax-free amount is taxed with the rate of 14%, consequently, the amount of income EUR 8,131 is taxed with the average rate amounting to a little more than 0%.

Table 1 regarding German tax rates in 2013 presents 4 extremely different tax zones:

- Zero zone (so-called tax freedom) for income from EUR 0 to 8,130;
- Progressive zone with the growing tax rate from 14 to 23.96% for income from EUR 8,131 to EUR 13,469;
- Progressive zone with the growing tax rate from 23.97 to 42% for income from EUR 13,470 to EUR 52,881;
- Proportional zone with the tax rate 42% for income from EUR 52,882.

Moreover, it should be added that since the fiscal year 2008 Germany has introduced so-called "wealth tax". On taxable income exceeding EUR 250,730 (for 2013), a surcharge of 3% has been imposed due to achieving the top tax rate.

The above rules of calculating income tax are applicable for 7 types of revenues defined by the German Act on income tax, i.e. from agriculture and forestry, from economic activity, from self-employment (liberal professions), from work other than self-employment (e.g. contract for employment), from capital

[5] http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Service/Einfach_erklaert/2011--12-08-einfach-erklaert-einkommensteuertarif-und-kalte-progression-flash-infografik-alternativtext.html (as of 24.04.2013).

assets, from rental and lease, from other sources (e.g. pensions, compensation). In the light of determining the amount of the income tax burden, in the case of agriculture and forestry, economic activity and liberal professions revenues lead to gaining profit. In other types, revenues lead to achieving the surplus of revenues over costs of revenues.

Table 1

Income tax, average and marginal tax rate for various levels of taxable income in 2013

Taxable income (EUR)	Income tax (EUR)	Average tax rate (%)	Marginal tax rate (%)
5,000	0	0.0	0.0
8,130	*0*	*0.0*	*0.0*
8,131	*0*	*0.0*	*14.0*[a]
10,000	294	2.9	17.5
15,000	1,386	9.2	24.7
20,000	2,677	13.4	27.0
25,000	4,082	16.3	29.2
30,000	5,601	18.7	31.5
35,000	7,235	20.7	33.8
40,000	8,983	22.5	36.1
45,000	10,846	24.1	38.4
50,000	12,823	25.6	40.7
55,000	14,904	27.1	42.0
60,000	17,004	28.3	42.0
65,000	19,104	29.4	42.0
70,000	21,204	30.3	42.0

[a] According to the official income tax calculator, provided by the Federal Ministry of Finance (https://www.bmf-steuerrechner.de/ekst/?). It should be noted that the items for taxable income equal to EUR 8,130 and 8,131 have been included in the table to illustrate the progressivity of tax rates. The source tables of tax rates do not present the data for these values, since tax-free amounts change over time.

Source: based on income tax rates in the years 1958-2014 provided by the Federal Ministry of Finance (Grundtabelle: https://www.bmf-steuerrechner.de/uebersicht_ekst/?).

Based on the total of one-type revenues, deductions shall be made (to a limited or unlimited extent), so as to determine taxable income. These deductions include, inter alia:
– pension exemption for taxpayers older than 64 (in 2009, it was EUR 1,596);
– losses incurred in another calendar year;
– pension insurance – include statutory pension insurance contributions, agricultural pension fund contributions etc.;
– other insurance, for example, for incapacity for work/practising profession, life insurance, sickness insurance, care insurance, accident insurance, civil liability insurance;

– "church" tax, alimony to a spouse after divorce/separation, own costs of education, costs associated with professional education of children, childcare, sickness-related costs, etc.

In the case of agriculture and forestry, in addition to general reliefs, there are also special reliefs. For revenues from agriculture and forestry, there is an annual tax-free amount of EUR 670 (when spouses settle tax jointly, it is EUR 1,340). This amount is deducted as soon as the total of revenues exceeds EUR 30,700 (EUR 61,400 for spouses). In determining the profit from agriculture and forestry according to average rates (lump-sum), beneficial is the fact that profits from revenues other than those from agriculture, such as forestry, sales of land and buildings, agricultural services, are taken into account, if they exceed EUR 1,534[6].

Not only in the case of the farm, but also for other entities, there is the tax-free amount of EUR 45,000 in selling or liquidating the entity, if the profit on sale/liquidation does not exceed EUR 136,000. This tax-free amount is granted to the taxpayer only once, at his request, when he is older than 55 or is incapable of working. Apart from tax-free amounts, there are also partly more favourable tax rates in selling and liquidating the company. This is the reduced tax rate of 56% of the average tax rate, but it may not fall below 15%.

Summing up, in Germany the agricultural activity is treated as the non-agricultural economic activity. However, farmers may use various types of simplifications, reliefs and exemptions, which in fact reduces taxable income.

Other reliefs in paying income tax in agriculture

Some reliefs in paying income tax in agriculture in Germany result from the scale of the production. There are two requirements for total exemption from income tax: the so-called inefficiency of the agricultural industry and the insignificance of the size of this activity. ***Inefficiency***, understood as the production unprofitability, takes place when land is not a resource involved in the production of agricultural products, is used to develop hobbies of its owner (for example, golf courses). ***Insignificance*** of the size of the agricultural production takes place, when the land area does not exceed 3 acres, exclusive of the intensive production of special crops.

In Germany, reliefs in paying personal income tax are also the possibility of choosing the form of taxation, occurrence of lower lump-sum rates in income tax of agriculture in relation to the economic activity, existence of tax-free amounts. Furthermore, the German law gives farmers an option to carry out privatisation in order to reduce the tax amounts. Farmers do this by reducing the potential of their farm, dividing it among the family members, leasing, transferring to their successors, it is also helpful to conclude contracts of employment or to create family companies. In this way, farmers can avoid keeping full accounting records, mul-

[6] Besteuerung der Land- und Forstwirtschaft Besteuerung der Land- und Forstwirtschaft. Aid 1247/2009. Rechtsstand 01.07.2009; https://www.smartsteuer.de/portal/lexikon/E/Einkuenfte-aus-Land-und-Forstwirtschaft.html#D063026100025.

tiply tax-free amounts, reduce tax progression (lower taxable income thresholds), and meet the requirements to receive support under the Common Agricultural Policy. The prerogative of farmers is also exemption from paying tax in the case of handing over the farm, for example, in a form of inheritance.

In conclusion, the income tax system in German agriculture is based on keeping accounting records in most farms. The form of keeping records depends on the scale of the agricultural activity. Importantly, direct payments are taxable in Germany. It is common to use the services of accounting offices, as this guarantees the data reliability for fiscal authorities, and also makes it easier for farmers to pursue the agricultural activity.

When describing the German tax system in agriculture, it is worth briefly presenting the structure, income of this agriculture, while referring this data to Polish agriculture.

Agrarian structure and income in German and Polish agriculture[7]

Germany and Poland have the similar utilised agricultural area (UAA). In 2010, it occupied 16.7 million hectares in Germany, and in Poland – 15.5 million hectares. In the case of both states, this accounted for about 50% of the country. The structure of German agriculture, however, differs significantly from Polish agriculture. This is expressed by a significant difference in the utilised agricultural area determining the concept of the farm.

Over the years, we may observe in Germany a decrease in the number of farms with up to 50 ha and an increase in the number of entities with more than 50 ha. The lower area threshold for the farm is 5 ha of the utilised agricultural area, while in Poland it is 1 ha. In total, in Germany in 2010 there were 299,100 farms, while in our country there were as many as 2,278,000 (Table 2.) The average farm in Germany has the utilised agricultural area of 61.3 acres[8] (2010), when in the Polish countryside it is 6.82 ha. It is essential that in Germany we can observe are large differences in the area size of the farm between the East and West Lands. In former West Germany, there are usually individual farms with the smaller utilised agricultural area (on average, 44.5 ha) and in former East Germany there are large farms, often managed as part of companies and cooperatives, with the area which is as many as five times larger (on average, 249.1 ha of the utilised agricultural area). However, nine out of ten German farms are individual farms.

In the light of the analysed tax problems, income of German farmers is important. It is known that it is subject to strong fluctuations. On average, in the past 5 years, German farmers (making their living mainly on agriculture) have achieved annual income per farm of about EUR 51,000. Per family member

[7] Pursuant to: German Statistical Yearbook (2011 and 2013) and the Report on results. Common Agricultural Census 2010.

[8] Farms with the utilised agricultural area of 5 ha.

working on the German farm, this income is EUR 34,000. Small farms in Germany and farms, where agriculture is not a main source of livelihood, achieve relatively low income – on average, in the past 5 years it has been about EUR 12,000 annually per family member (Landwirtschaft verstehen, 2013). However, it must be added that the large share of farmer's income is that of financial support from agriculture from the EU funds, state and Lands. For comparison, the average gross remuneration per FTE in Germany is about EUR 45,000 annually (Statistisches Jahrbuch, 2013).

Table 2

Number and percentage of farms by area groups of agricultural land in Germany and Poland in 2010

Germany			**Poland**		
Area groups of agricultural land (ha)	Number of farms	%	Area groups of agricultural land (ha)	Number of farms	%
Less than 5 ha	27,400	9	1 ha and less	715,000	31
			1-5 ha	863,000	38
5-10 ha	47,300	16	5-10 ha	352,000	15
10-20 ha	63,200	21	10-20 ha	224,000	10
20-50	76,100	25	20-50	97,000	4
50-100	51,600	17	50 ha and more	27,000	1
100-200 ha	22,800	8			
200 ha and more	10,800	4			
Total	**299,100**	**100**	**Total**	**2,278,000**	**100**

Source: own study based on: Statistisches Jahrbuch 2011, Statistisches Bundesamt and Report on results Common Agricultural Census 2010. CSO, Warsaw 2011.

The agrarian structure of Polish agriculture differs significantly from that of German agriculture. When compared to 2002, it has improved in 2010, as evidenced by an increase in the number of farms with an area of more than 20 ha and a decrease in the number of smaller farms. It should be noted, however, that as many as 84% of farms used the area not exceeding 10 ha[9], while in Germany such a small area was used only by one-fourth of all farms (Table 2). According to the Common Agricultural Census 2010, as many as 38% of farms had an area 1-5 ha; among them, some were farms involved in special sections of agricultural production[10]. Farms with 5-20 ha of the utilised agricultural area accounted

[9] Common Agricultural Census 2010. CSO, Warsaw 2011.

[10] Special sections of agricultural production include: cultivation in heated and non-heated greenhouses of more than 25 m2, cultivation in heated plastic tunnels above 50 m2, cultivation of mushrooms and mycelium – more than 25 m2 of the area, poultry for slaughter above 100 head, laying poultry above 80 head, poultry hatcheries, fur animals, apiaries with more than 80 families.

to 25%, and only 1.0% were individual farms with an area of more than 50 ha of UAA. This structure is closely related to income of these farms and thus to the possibilities of paying income tax.

As in Germany, income of Polish farmers in most farms is now lower than that of those employed in the national economy, and subsidies for the operating activity are often a basis of this income. Large fragmentation, characteristic of Polish agriculture, is a reason for which many farms conduct the production for their own purposes only, do not sell products and may not achieve income determined for tax objectives. It is worth building the considerations on farm income in Poland on the Polish FADN data. The FADN accounting system applies only to commercial farms, the number of which in Poland is about 731 thousand.[11] This group of farms is a field of survey for the Polish FADN. The classification of the farm into this field of survey is determined by its economic size, expressed in EUR. It includes farms which produce about 90% of the Standard Output[12], which in practice means the economic size of those farms of at least EUR 4 thousand. Farms below this threshold are not of interest to the FADN at all due to the low production potential.

The results of agricultural accounting of the Polish FADN show that the average farm with the utilised agricultural area of 5-20 ha of UAA does not achieve income per capita in the farmer's family at the level of the average net remuneration in the national economy. For example, in 2010 farms with 5-10 ha of UAA had average income per capita at the level of PLN 18,058, and farms with 10-20 of UAA – PLN 24,416[13]. The average net remuneration in the national economy was PLN 25,864[14]. In turn, in 2011, in the same groups of farms, farmers achieved, on average, PLN 19,348 and PLN 27,497[15], and the average net remuneration in the national economy was calculated at the level of PLN 27,227. These results confirm, in a sense, the poor economic situation of these farms, so taxes should not be any excessive burden on these entities, the more that abovementioned farmer's income defined in the FADN system is not only payment for his labour as in the case of the employee but also compensation for the use of own capital and land. At this point, it should be reminded that in Poland there

[11] Farm sampling plan of the Polish FADN for the fiscal year 2013 version of 05-09-2012. IAFE-NRI, Warsaw 2012.

[12] Standard Output is the 5-year average production value of the specific crop or livestock production, obtained from 1 ha or 1 animal within 1 year, in the production conditions average for a given region. The production value of the given crop and livestock production includes: sales, consumption on the farm and in the household as well as changes in stocks. It refers to the main product(s) and by-product(s). These values shall be based on net prices "ex-farm" (exclusive of VAT). In the case of SO, subsidies for production are not taken into account (Goraj, Płonka, Cholewa, Osuch, 2010).

[13] Standard results obtained by individual farms participating in the Polish FADN in 2010.

[14] IAFE-NRI own estimate based on the CSO data.

[15] Standard Results 2011 achieved by individual farms participating in the Polish FADN.

are 25% of farms with 5-20 ha of the utilised agricultural area and 38% of farms with only 1-5 ha (Table 2). At the other extreme, in our country there are farms which are modern, strong, highly profitable, economically viable, which derive huge financial benefits of national and EU budget support and charged only with agricultural tax.

Therefore, although the introduction of income tax in agriculture is necessary, it is required to take into account the production capacity of farms, as taxes, which on the one hand are a source of income for the state budget, are also an instrument of the state impact on economic operators (Dziemianowicz R., Przygodzka R., 2006). Proper designing of the tax may have a stimulating effect on the development of the activity, while in other case it may slow down the activity of the economic operator. According to L. Goraj, in designing the tax it is necessary to take into account many aspects, including the financial liquidity of the farm, maintenance of its development capacity, possibility of keeping records (Goraj l., 2013).

Currently, we already know the assumptions to the draft Act on income tax in agriculture. Later in this article, the most important contents of this document are shown.

Assumptions to the draft Act on personal income tax in agriculture[16]

The system of income tax in Polish agriculture, assumed in the draft, will be somewhat similar to the German system. Just like in Germany, the basis for calculating income tax will be primarily accounting records kept by the farm.

Reports on amendments to taxation of agriculture show that income tax in agriculture should be neutral for the state budget. Therefore, the amount of budget receipts from income tax from agriculture should be maintained at the level of the total of the existing amounts of agricultural tax and income tax from special sections of agricultural production. The implementation of this project will result in shifting the fiscal burden among farms, depending on the scale of income they achieve.

The introduction of personal income tax in agriculture will take place once finally approved. This will result in:
– liquidating agricultural tax and tax on special sections of agricultural production,
– introduction of property tax,
– exemption of direct payments from taxation,
– mandatory keeping records of events on the farm.

A basis for preparing the draft Act on taxation in agriculture were the solutions applicable in pursuing the economic activity. Because of this, settlement of the agricultural activity with the tax office will be in many aspects similar to settlement of the economic activity.

[16] Assumptions to the draft Act on personal income tax from the agricultural activity and amending other acts. Draft of 4 June 2013.

The settlement period of income tax will be the calendar year treated as the fiscal year. Due to the specific nature of the agricultural production, taxation will take account of income achieved in the marketing year preceding the fiscal year. For example, for the fiscal year 2015 the marketing year will be a period of the second half of 2013 (from 1 July to 31 December) and the first half of 2014 (1 January–30 June).

The basis for determining tax will be keeping accounting records, starting with the first marketing year following the entry of the Act into force. Income determined on this basis will allow to choose the form of taxation. Keeping the records of revenues will be binding on all farmers, including those not subject to income tax. Entries in the records of revenues will be made on a basis of VAT and VAT RR invoices or other documents proving the sales transaction. In the first year of the application of the Act, taxable revenues will be determined based on invoices within the meaning of the legislation on value added tax and on VAT RR invoices.

The object of taxation will be revenues generated from the sales of products, services provided within the framework of the agricultural activity. Taxation will not cover products used for the purposes of the family or the farm (internal consumption), but they also could not be the costs of revenues. The agricultural activity will include the production of unprocessed crop or livestock products, using own crops or animals bred or reared. In addition, the draft provides for including the following in the agricultural activity: agri-tourism services, if the number of rooms does not exceed 5, provision of services using own equipment, conducting so-called small processing in the field of selling own products for a value of up to PLN 5 thousand as well as the lease of the farm.

The subject of taxation will be a natural person achieving income from the agricultural activity, including persons leasing the land. If the agricultural activity is pursued jointly by more than one person, these persons will be obliged to settle jointly according to their share in the ownership of the farm.

Forms of taxation

As a result of the tax reform in agriculture, income tax or property tax will be applicable instead of agricultural tax. Taxation with income tax will be in line with general principles or in a form of lump-sum tax on recorded income. Taxation in line with general principles will be determined based on the revenue and expense ledger or books of account kept by the farm.

Lump-sum tax will be determined based on the records of revenues on the farm.

Property tax will be applicable to farms achieving income from the agricultural activity of up to PLN 100 thousand. The tax base for property tax for farms pursuing the agricultural activity will be their utilised agricultural area, expressed in conversion hectares. The tax rate is to be PLN 185 per 1 conversion ha and will be revalued. In the case of agricultural land, on which there is no agricultural activity, the higher rate of property tax will be applicable.

Achieving income of more than PLN 100 thousand will require charging income tax. During the transitional period, of probably 2 years, these limits will be increased.

The records of revenues to determine lump-sum income tax may be kept by farmers whose income does not exceed EUR 150 thousand17.

The revenue and expense ledger will be applicable when the income limit exceeds EUR 150,000, and the upper limit allowing to use this way of recording will be the amount of EUR 1,200,000. Above this threshold, it will be required to keep full accounting records.

Tax base, tax rates

In the case of lump-sum tax on recorded income, the tax base will be income without deducting the costs incurred. Tax is to be ***4% of the*** *value of revenues.*

The tax base for taxpayers keeping the revenue and expense ledger and books of account will be income from the agricultural activity, and tax is to be 19% of this income.

According to the assumptions, in the case of the revenue and expense ledger income is a difference between revenues and costs of revenues. This method is therefore comparable to the surplus account method applied in Germany.

In the case of books of account, taxable income will be calculated on a basis of properly kept books and decreased by the tax-free amounts.

Costs of revenues

The costs of revenues from the agricultural activity will include the costs incurred to achieve revenues. They will be, inter alia, direct costs associated with the crop and livestock production, costs associated with pursuing the agritourism activity, small processing, lease, remunerations for employees, depreciation. As the costs we should understand expenses incurred in connection with the agricultural activity, which will include the value of materials directly used in the production of (inter alia, seeds, fertilisers, animal feed, fuel, energy, spare parts), expenses for legal and accounting aid, other services for the farm, remunerations for employees. The costs will also include the value of the annual depreciation rate, while they will not include the value of stocks which will be recorded on a quantitative basis only.

[17] Limits for lump-sum tax on recorded income (also for keeping the revenue and expense ledger) expressed in EUR shall be converted into the Polish currency at the average EUR exchange rate announced by the NBP, applicable on 1 October of the year preceding the fiscal year. For lump-sum tax, for example, in 2014, in accordance with the NBP Table No 190/A/NBP/2013, the average NBP exchange rate for EUR 1 on 1 October 2013 was PLN 4,2230, which gives the amount of PLN 633,450. Legal basis: The Act of 20 November 1998 on lump sum income tax on certain types of income received by natural persons (Journal of Laws No 144, item 930; amended in Journal of Laws 2012 item 1540).

Reliefs and deduction

According to the assumptions of the Act, with regard to reliefs and deductions the rules will be similar as in taxation of income from the non-agricultural activity, depending on the form of keeping accounting. Both in the case of taxation in line with general principles, as well as lump-sum tax, the following will be deducted: farmers' social insurance contribution, loss from the agricultural activity, donations, Internet and rehabilitation deductions. The health insurance contribution will be deducted from tax. Taxation in line with general principles will also give the right, inter alia, to settle jointly with a spouse and to use child relief.

Fiscal effects for farms arising from the introduction of the reform based on the prepared assumptions

Based on the assumptions of the draft Act on income tax in agriculture, we can make an initial assessment of the effects of introducing these changes for farms. For this purpose, the Polish FADN data, i.e. that of economically stronger farms, has been used. For a more complete picture, the calculations have been made in a period of 3 years (2010-2012). The calculations only apply to individual farms, potential payers of personal income tax. For implementing the task, the following variables have been selected from the Polish FADN database: revenue from the farm (sales), expenses for the operating activity (in accordance with the rules given above in the subchapter on costs of revenues), cost of annual depreciation, number of conversion hectares of the utilised agricultural area. Taxes paid have been excluded from the expenses of the farm. The total of expenses and depreciation means the costs of revenues. We must remember that the expenses incurred may apply not only the current year, but are in full the cost of revenues of the current year, just as revenues are sales made in the current year, exclusive of stocks. In order to compare the new burden with the existing one, agricultural tax and tax on special sections of agricultural production, currently paid by farms, have also been identified.

To obtain a more complete picture of tax changes, the entire population of individual farms has been divided into two groups. **Group I** includes farms classified in accordance with the Community Farm Typology[18] into the following agricultural types: field crops, permanent crops, dairy cows, grazing livestock and mixed (Table 3); **Group II** are farms belonging to agricultural types: horticulture and granivores (Table 4). This division results from the fact that most farms conducting special sections of agricultural production specialise in horticultural crops and poultry production. Therefore, farms have been divided into those paying agricultural tax and those additionally burdened with tax on special sections of agricultural production, although this is subject to some error.

[18] According to the Standard Output "2007" coefficients for the purposes of the Community Farm Typology

The calculations have been made for the groups of farms identified based on the utilised agricultural area.

The level of taxes after the reform has been calculated pursuant to the proposed draft according to three ways, by adopting a version of lump-sum tax on recorded income (4% of the value of revenues), revenue and expense ledger (19% of the value of income) and property tax.

Farm revenues are equivalent to the value of sales of products from the farm. Income is a difference between sales and costs in total. Provided conversion hectares apply to land taken for crops, and thus giving the right to charge property tax at the rate of PLN 185/ha. Calculations of taxes are subject to some error, even for the fact that no deductions have been made, except for the KRUS contribution.

According to the assumptions of the Act on income tax in agriculture, farms with revenues below PLN 100,000 would not pay income tax, but property tax. In the case of farms keeping FADN accounting records in the year 2010-2012, this tax would apply to these entities (**Group I**), where the utilised agricultural area is lower than 20 ha (Table 3). Calculated property tax for these groups of farms would be 2-3 times higher than paid agricultural tax. However, such a large increase in property tax in relation to agricultural tax seems to be only apparent if we take into account that the tax rate per 1 conversion ha in 2012 was PLN 185.45 (in 2010 – PLN 85.25, and in 2011 – PLN 94.10). Understated agricultural tax provided in Table 3 may result from reliefs in paying tax, moreover, it must be remembered that these are average values for the entire group of farms.

As we may see from the data on the sample structure of the Polish FADN – entities with up to 20 ha of UAA, classified into the **Group I**, that is, potential payers of property tax, accounted for, in a period of 3 consecutive analysed years, about 33-34% the population of individual farms (Table 5). In farms from the **Group II**, there were no potential payers of property tax.

In the case of other farms from the **Group I** (more than 20 ha of UAA), it would be better for farmers to pay income tax, by keeping revenue and expense ledgers. The calculation shows that after deducting the KRUS contribution from income, income tax calculated using this method would be about 2-3 times higher than currently paid agricultural tax (Table 3).

Table 3

Fiscal effects for individual farms belonging to the Polish FADN sample in the years 2010-2012after the introduction of the planned tax reform (types: field crops, permanent crops, dairy cows, grazing livestock, mixed crops) – Group I

Year	Area classes of agricultural land (ha)	Number of conversion hectares (ha)	Sales (revenue) (PLN)	Operating expenses + depreciation (PLN)[a]	Taxable income less the KRUS contribution (PLN)	Tax in line with general principles (19% of the value of income) (PLN)[b]	Lump-sum tax - 4% of the value of sales less the KRUS contribution (PLN)	Property tax (PLN)[c]	Agricultural tax (PLN)	KRUS contribution
2010	<= 5	3.21	38,588	33,512	x	x	x	594	220	1,204
	5 <= 10	6.21	43,337	39,719	x	x	x	1,148	427	1,464
	10 <= 20	10.41	69,576	61,037	x	x	x	1,926	691	1,763
	20 <= 30	15.76	108,890	93,921	12,941	2,459	4,274	x	987	2,028
	30 <= 50	23.72	170,773	146,017	22,500	4,275	6,741	x	1,441	2,256
	> 50	57.46	361,628	319,578	38,794	7,371	14,335	x	3,791	3,257
2011	<= 5	3.28	41,196	36,130	x	x	x	607	248	1,393
	5 <= 10	6.21	48,117	43,622	x	x	x	1,149	460	1,578
	10 <= 20	10.45	77,936	69,048	x	x	x	1,933	739	1,911
	20 <= 30	15.88	123,162	107,639	13,328	2,532	4,839	x	1,084	2,195
	30 <= 50	23.93	193,502	169,222	21,810	4,144	7,641	x	1,581	2,470
	> 50	56.55	411,944	375,853	32,548	6,184	16,336	x	3,914	3,543
2012	<= 5	3.41	43,396	39,084	x	x	x	632	367	1,552
	5 <= 10	6.21	51,979	46,541	x	x	x	1,149	655	1,653
	10 <= 20	10.41	82,283	72,041	x	x	x	1,926	1,070	2,049
	20 <= 30	15.68	132,671	114,766	15,555	2,956	5,213	x	1,576	2,349
	30 <= 50	23.76	207,717	178,070	26,936	5,118	8,200	x	2,355	2,711
	> 50	58.34	482,407	406,704	71,539	13,592	19,130	x	6,230	4,164

[a] Are the costs of revenues according to the draft Act; [b] Tax after deducting the KRUS contribution from income; [c] PLN 185 per 1 conversion ha.

Source: own calculations.

Table 4

Fiscal effects for individual farms belonging to the Polish FADN sample in the years 2010-2012after the introduction of the planned tax reform (horticulture and granivores) – Group II

Year	Area classes of agricultural land (ha)	Number of conversion hectares (ha)	Sales (revenue) (PLN)	Operating expenses + depreciation (PLN)[a]	Taxable income less the KRUS contribution (PLN)	Tax in line with general principles (19% of the value of income) (PLN)[b]	Lump-sum tax - 4% of the value of sales less the KRUS contribution (PLN)	Property tax (PLN)[c]	Agricultural tax (PLN)	KRUS contribution
2010	<= 5	2.29	594,176	511,995	79,959	15,192	23,678	1,604	166	2,223
	5 <= 10	5.80	153,254	133,562	18,060	3,431	6,065	278	369	1,631
	10 <= 20	10.63	164,791	149,464	13,465	2,558	6,517	134	640	1,863
	20 <= 30	16.62	272,912	237,445	33,270	6,321	10,829	171	911	2,197
	30 <= 50	24.11	325,173	287,396	35,360	6,718	12,910	89	1,129	2,416
	> 50	47.93	729,143	665,726	60,437	11,483	29,047	212	1,949	2,980
2011	<= 5	2.25	600,505	555,720	42,364	8,049	23,923	1,588	162	2,421
	5 <= 10	5.90	176,749	162,004	12,904	2,452	6,996	382	396	1,841
	10 <= 20	10.71	196,171	179,297	14,747	2,802	7,762	148	691	2 128
	20 <= 30	16.59	291,747	270,248	19,182	3,645	11,577	158	998	2,318
	30 <= 50	23.19	375,037	348,654	23,707	4,504	14,894	95	1,253	2,676
	> 50	50.10	874,957	814,665	56,695	10,772	34,854	222	2,185	3,597
2012	<= 5	2.18	625,779	568,167	55,175	10,483	24,934	1,944	200	2,436
	5 <= 10	5.81	152,794	130,962	19,930	3,787	6,036	325	611	1,902
	10 <= 20	10.65	229,060	205,883	20,970	3,984	9,074	205	1,000	2,207
	20 <= 30	16.44	345,038	304,809	37,648	7,153	13,698	220	1,498	2,581
	30 <= 50	23.03	446,722	399,217	44,562	8,473	17,752	84	1,870	2,913
	> 50	48.13	1,012,504	930,375	78,099	14,839	40,339	222	3,520	4,030

[a] Are the costs of revenues according to the draft Act; [b] Tax after deducting the KRUS contribution from income; [c] PLN 185 per 1 conversion ha.

Source: own calculations.

The farms on which tax burden would be the highest, would be those with more than 50 ha of land and with the highest income. Tax in that group would be in the years 2010-2012, respectively, PLN 7,371, 6,184 and 13,592 per farm. These calculations show that pursuant to the provisions of the reform, the increased fiscal burden would apply to larger, economically stronger farms. Tax calculated in the farms with more than 20 ha of the utilised agricultural area using the method of lump-sum tax on recorded income would be generally by 35-80% higher than that calculated on a basis of the revenue and expense ledger (Table 3). From the calculations made it results that the 4% rate of lump-sum tax, adopted for the agricultural activity, is too high. This simplified form of records, allowing the farmer to record the events on his own, without incurring the costs of tax settlement, is not much real to be applied with this rate.

Table 5

Structure of the Polish FADN sample (individual farms) in the years 2010-2012

Year	Area classes of agricultural land (ha)	Farms in total		Farms belonging to the types: horticulture and granivores		Farms of other types[a]	
		number	%	number	share in the FADN sample (%)	number	share in the FADN sample (%)
2010	<= 5	424	3.9	283	2.6	141	1.3
	5 <= 10	1,274	11.6	291	2.6	983	8.9
	10 <= 20	3,069	27.9	474	4.3	2,595	23.6
	20 <= 30	2,137	19.4	369	3.4	1,768	16.1
	30 <=50	2,106	19.1	361	3.3	1,745	15.9
	> 50	1,994	18.1	253	2.3	1,741	15.8
	Total	11,004	100.0	2,031	18.5	8,973	81.5
2011	<= 5	389	3.6	260	2.4	129	1.2
	5 <= 10	1,226	11.3	269	2.5	957	8.8
	10 <= 20	3,048	28.0	441	4.0	2,607	23.9
	20 <= 30	2,085	19.1	326	3.0	1,759	16.2
	30 <=50	2,111	19.4	328	3.0	1,783	16.4
	> 50	2,031	18.7	245	2.2	1,786	16.4
	Total	10,890	100.0	1,869	17.2	9,021	82.8
2012	<= 5	371	3.4	243	2.2	128	1.2
	5 <= 10	1,157	10.6	264	2.4	893	8.2
	10 <= 20	3,032	27.8	433	4.0	2,599	23.8
	20 <= 30	2,082	19.1	298	2.7	1,784	16.4
	30 <=50	2,157	19.8	346	3.2	1,811	16.6
	> 50	2,110	19.3	245	2.2	1,865	17.1
	Total	10,909	100.0	1,829	16.8	9,080	83.2

[a] Types: field crops, permanent crops, dairy cows, grazing livestock, mixed.
Source: own calculations.

Proposed lump-sum tax is particularly detrimental to farms covering special sections of agricultural production (**Group II**). In all ranges of the utilised agricultural area, the lower amounts of tax were calculated using general principles, i.e. 19% tax on income less the amount the KRUS contribution (Table 4). It was at least 50% less, and in some cases even 3 times less. By analysing data in the farms belonging to the **Group II** (horticulture and granivores), not only the level of achieved income, but also the level of paid tax on special sections of agricultural production proves that these sections are located mainly in the group of up to 5 ha of the utilised agricultural area. In these farms, income tax would be more than 10 times higher than that both taxes paid so far, i.e. tax on special sections of agricultural production and agricultural tax. In 2010, the obligation towards the would be PLN 15,192, and in the following years, respectively, PLN 8,049 and 10,483. The FADN data shows that in these two types of production income is much higher than in other types of farms (**Group I**), therefore, also in other area groups income tax exceeded (sometimes more than twice) tax payable in the identical area ranges in farms of other types of production (Tables 3 and 4). We can therefore believe that the fiscal burden of farmers involved in the horticultural production, rearing pigs, rearing poultry will be much higher than in the case of other specialisations. For many farms of this type this burden may be quite severe, especially for those belonging to the Group I (up to 5 ha of UAA), which are beneficiaries of subsidies for the agricultural activity to a very small extent. Non-taxation of subsidies may be another aspect of social injustice, especially in relation to farms obliged to pay high taxes due to achieved income and not privileged in terms of support financed from the public budget. To this end, it is worth looking at income of two random farms from the Polish FADN database: one of them specialises in horticulture (UAA less than 5 ha), the other in field crops (UAA more than 300 ha).

Specification	**Income (sale of products – costs) (PLN)**	**Tax (19% of income) (PLN)**	**Subsidies to operational activity (PLN)**	**Income after taxation (PLN)**	**Actual tax rate (%)**
Horticultural farm	342,216	65,021	0	277,195	19.0
Field farm	335,136	63,675	469,880	741,341	7.9

Income of these two farms from sales of agricultural products (in this case, income from the operating activity) is similar, and therefore calculated income tax is at a similar level. In reality, however, income of the farm with field crops is PLN 805,016 (with subsidies), and the tax rate is only 7.9%. The field farm draws great benefits from public funds, regardless of the effects of production. In contrast, the horticultural farm, deprived of subsidies, burdened with the equal risk of production as the farm field, is unaided. This example suggests that subsidies for the operating activity should be taxed on an equal footing with the sale of products.

An analysis of the effects of introducing the tax reform in the designed shape indicates that in no area range of the **Group II** farms did revenues enable exemption from income tax and charging with property tax, but they did not also oblige to keep books of account. The highest average income in 2012 was PLN 1,012,504 in farms with the area above 50 ha (Table 4). The limit requiring the farms to start using books of account is the amount of EUR 1,200,000. In the FADN database there are, however, single farms achieving income above this limit. The data analysis shows that the basic form of keeping the records in specialised farms, belonging to the following types: horticulture and granivores, would be the revenue and expense ledger. The presented results are, however, average values. In fact, each farm will have to treat the issue of selecting the way of taxation on a case-by-case basis.

Summary

The envisaged fiscal effects of introducing the tax reform in agriculture have been estimated pursuant to the Polish FADN data. From the calculations it results that about 34% of the sample of individual farm in the Polish FADN would be exempt from paying income tax for the benefit of property tax. It would apply to farms with up to 20 ha of the utilised agricultural area, exclusive of the following types: horticulture and granivores. On this basis, we may think that farms which are outside the field of survey of the Polish FADN, i.e. those whose economic size is below EUR 4 thousand of Standard Output (SO) and whose sales revenues would not exceed PLN 100,000, would be subject to property tax. This means that in this group of farms the taxation rules would remain unchanged. According to the Agricultural Census data in 2010, as many as 61.2% of 1,891.1 thousand farms had the economic size below EUR 4 thousand SO. It is worth adding here that farms below EUR 4,000 SO out of 1,506,000 entities classified according to the Community Farm Typology managed only 14.9% of the utilised agricultural area in the country and generated only 7% of the Standard Output (Farm sampling plan…, 2012).

In farms whose revenue is PL 100-150 thousand, it would be possible to select the form of taxation – either lump-sum tax (4% of income) or tax calculated in line with general principles (19% of income). Exceeding the limit amount of income – PLN 150 thousand would make the farm keep the revenue and expense ledger. The lump-sum income tax burden would be higher than in the case of that in line with general principles. From the analyses made it appears that for individual farms of the Polish FADN a better form of taxation would be the revenue and expense ledger. A small percentage of these individual farms would be obliged to keep full accounting records. The limit obliging to keep books of account is the annual sales value exceeding EUR 1,200,000.

The effects of the reform would be particularly severe for high-income households, where the costs of revenues are high. This applies in particular to horticultural, poultry and pig farms. Taxation of such farms would increase by many times in relation to the current state. Taxation in large farms of other specialisations would increase in a similar manner, but loss in their income would be much less noticeable due to fact that farms receive untaxed subsidies to their operating activity.

According to the authors of the paper, the introduction of the tax reform in agriculture pursuant to the adopted assumptions to the Act can be very detrimental to many farms, by threatening the continuation of the production, and especially their development.

Specific reservations are raised by exemption of direct payments from taxation and exemption of farms subject to income taxation from property tax. Property tax paid by these farms should reduce the amount of income tax.

As regards the recording of accounting data on the farm, it is necessary to simplify the entries in the revenue and expense ledger and adapt it to the records of revenues and expenses, so as to enable efficient saving recording.

When comparing the assumptions of the tax reform in agriculture with the presented tax system in Germany, we may notice the difference in treating direct payments. Germany includes these payments in the tax base. The obligation to pay income tax applies to all farms, but to determine taxable income more methods are used. The revenue limit, above which there is an obligation to keep books of account, is EUR 500 thousand thus it is much lower than in Poland. Another common form of keeping records is the revenue and expense ledger, in which – just like in the Polish proposal – revenues and expenses are recorded. There is also a form of lump-sum taxation, available for some farmers with the utilised agricultural area of up to 20 ha. In special cases, especially faulty record keeping, the profit estimation method is used. Taxation applies to income, but tax rates are varied and tax progression, reaching the level of 42% of the income value, is applicable. Compared to the obligation for all farmers to register income, as planned in Poland, in Germany there is no such obligation. Some farmers, due to low revenues, are able to determine tax based on estimated income. In Germany, all farmers pay property tax. With respect to land, it is called land tax and is always paid, even if there are losses from production.

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