



P  L S K I  
**FADN**

SYSTEM ZBIERANIA I WYKORZYSTYWANIA  
DANYCH RACHUNKOWYCH Z GOSPODARSTW ROLNYCH

# **Agricultural families incomes from farms carrying out accountancy in the year 2003**

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# 1. Introduction

Under the National Programme of Preparation for Membership (known as NPPM), the Agricultural Accountancy Office IAFE has modified the organization and methodology of the hitherto agricultural accountancy carried out by individual agricultural farms, on commission and under direct supervision of IAFE.

The aim of those activities was to make agricultural accountancy oriented on the conditions of free market economy and to ensure full compatibility of the collected accounting data with the system working in the Member States of the European Union<sup>1</sup>. The System for Collecting and Use of Accountancy Data from Agricultural Farms (a Polish version of FADN), has been implemented on the basis of the National Programme of Preparation for Membership, and after Poland has obtained the status of a EU Member State on the basis of the Act on collecting and use of accountancy data from agricultural farms of 29 November 2000 (OJ No. 3 item 20 with later amendments). This act was a necessary legislative act which adjusted the Polish law to Acquis of the European Union in the scope of statistical data on the income of agricultural farms obtained from a representative sample of agricultural farms functioning on the territory of the European Union.

FADN is regulated by the regulations, the most basic one being Council Regulation No 79/65 EEC of 15 June 1965, which established the system and imposed the duty to create it in each Member State. This regulation defined three basic rules for FADN. The first and foremost one is the principle of voluntary participation of farmers in the system. Another essential principle regulating the functioning of FADN is Regulation No 118/66 EEC on the form of the farm return to FADN, which is used for the purpose of defining the incomes of agricultural holdings. This regulation defines in detail the scope and type of accountancy data collected from an agricultural farm.

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<sup>1</sup> EU = European Union <http://www.europa.eu.int/>.

**Following the provisions of that regulation one can acknowledge in a very general way that data collected under FADN:**

- Concern exclusively an agricultural holding,
- Reflect the condition and structure of the parts of property as well as the condition and structure of the liability sources,
- Reflect the structure of income and expenses on the level of an agricultural holding,
- Particular attention is paid to the elements connected with the Common Agricultural Policy (subsidies).

Therefore, due to the formal aspects, there is no simple possibility of extending the scope of the accountancy data collected within the Polish FADN.<sup>2</sup> In such a situation, the sole formal source of data on income of farmer families was to examine household budgets (among others, of the farmer families) carried out by the Central Statistical Office (CSO)<sup>3</sup>.

Yet, with the awareness of the fact that lack of such data in the case of individual agricultural holdings is a significant drawback for the possibility of discovering and explaining the principles of the functioning of individual agricultural holdings<sup>4</sup>, during preparing the design of an accountancy database and organization of collecting data, there was made a decision to start collecting data, parallelly to the Polish FADN, on the income of farmer families which is generated outside the farm. The research is carried out parallelly to the Polish FADN, at the same farms but on a separate form, keeping the principle of 'super voluntariness.' It means that the farmer can take part in the Polish FADN (also on a voluntary basis), yet refuse to provide data concerning

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<sup>2</sup> This is exactly the reason to give up collecting data, within the basic scope of the Polish FADN, concerning the income of the farmer families obtained outside the farm, practiced in the agricultural accountancy organized by IAFE until the moment of obtaining the status of a Polish liaison agency of FADN.

<sup>3</sup> In 2002 the research covered 32342 households, i.e. more than 0.2% of the total number of households. Rocznik Statystyczny Rzeczypospolitej Polskiej. CSO. Warsaw 2003 pp. 198-226.

<sup>4</sup> Particular farmers' behaviours concerning household, including taking decisions on production and investment, depends on the financial and economic situation of the farmer family, not only on the situation of the farm. This dependence results from the fact that in individual agrotouristic farms, contrary to business enterprises, there is no clear-cut division between the farm and the household of the farmer's family. It concerns in particular the flow of capital. During the accounting period there are, depending on the current needs, two-way transfers of capital between the farm and the household. In accounting terminology such a situation is described as 'capital introduced' (into the farm) and 'capital withdrawal' (from the farm).

income generated outside the farm. A declaration of willingness to participate in an additional examination with the simultaneous agreement on making the data available for scientific and research purposes of IAFE constitutes an integral part of the questionnaire for data registering entitled "Questionnaire concerning the income generated outside the farm of a farmer's family in 2003"<sup>5</sup>

I accept disclosing the above data for scientific and research purposes.	
<input type="checkbox"/>	..... date and farmer's signature
NIG:	

Hitherto experience in data collecting shows that this kind of data belongs to the group described as most sensitive data collected in statistical research. Bearing the above in mind, in order to limit the number of farmers refusing to take part in such research and to limit the respondents' (representatives of the farmer families) tendency to limit the income amount, the method of collecting data concerning the income defined in the terms of money sums was given up. Instead, the codes of relevant income levels were applied<sup>6</sup> (e.g. code 3 means an income amount between 400 PLN and 599 PLN)<sup>7</sup>.

During the process of collecting data in the subsequent 12 months of the year, registration of relevant codes, ascribed to 4 sources of income, was carried out:

- o Hired labour,
- o Disability and retirement benefits,
- o Other social benefits,
- o Other sources.

In order to specify the income coming from registered business activity it was required to give the code which defines the income level achieved in a year. In such a case it is necessary, contrary to other sources, to specify the economic surplus, which constitutes the difference between income and expenses.

<sup>5</sup> The full form of the questionnaire "Questionnaire concerning the income generated outside the farm of the farmer's family in 2003" is attached as annex no.4.

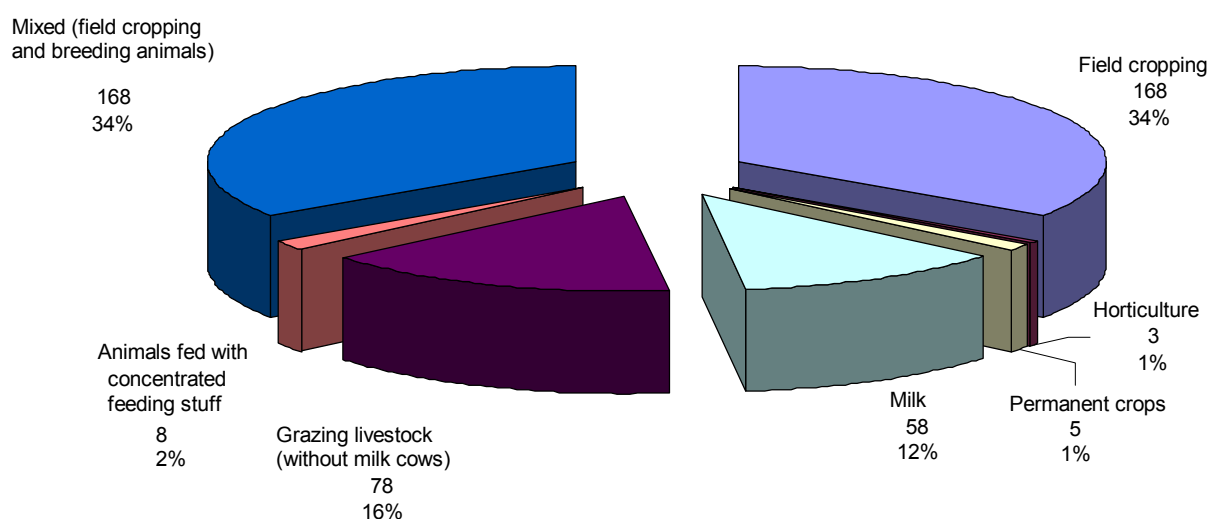
<sup>6</sup> This method was successfully applied during examining income of agricultural holdings by means of an interview, carried out in June 1994 on the territory of 2 communes in cooperation with experts of *Economic Research Service* (ERS) and *National Agricultural Statistics Service* (NASS) from the USA. See: D.Nieć, D. Osuch, J. Gomółka: *Badanie dochodów gospodarstw rolnych metodą wywiadu*. IERiGŻ, Warsaw 1997.

<sup>7</sup> The comprehensive list of codes for amount levels constitutes annex no. 5.

## 2. The structure of the analysed farms

The empirical basis for the analysis of the level and structure of income of farmer families is the data collected at 488 agricultural farms conducting accountancy in 2003. In order to get familiar with problem areas of the income structure of farmer families, the pool of farms was divided by means of 3 criteria: type of farming, economic size and agricultural area size.

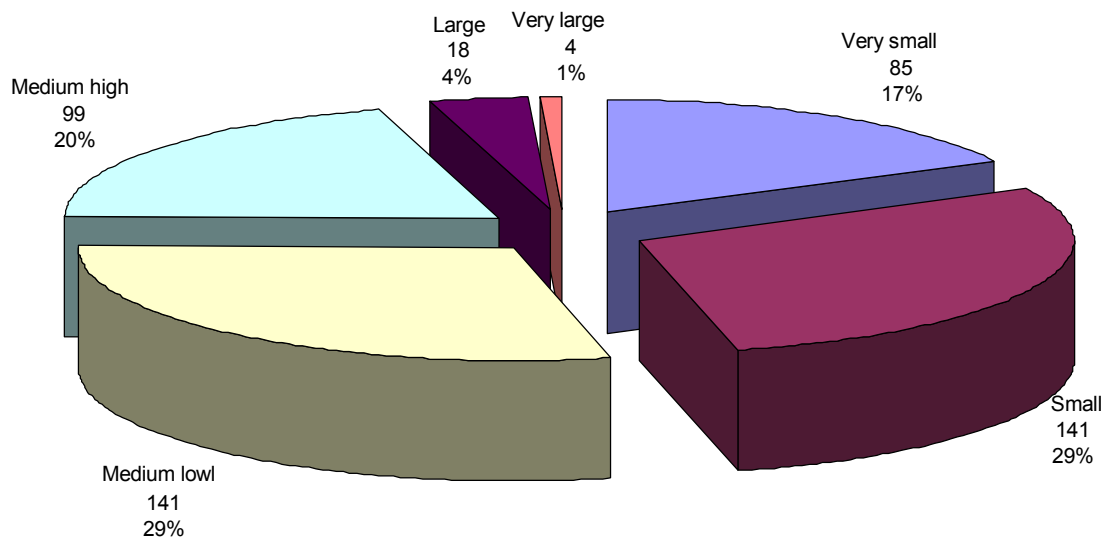
Graph 2.1. Agricultural farms according to type of farming



The analysis of the farms according to type of farming shows that, among the analysed farms, the most numerous group are farms specializing in arable crops and mixed farms with animal and plant production. Next there are farms specializing in grazing livestock (without milk cows) and farms specializing in milk cows breeding. The results of 3 types of farms: specializing in horticulture, permanent crops and breeding animals fed on concentrated feeding stuff (the so-called grain-eaters – pigs and poultry) cannot be published due to their small number.<sup>8</sup>

Graph 2.2. Agricultural farms according to economic size

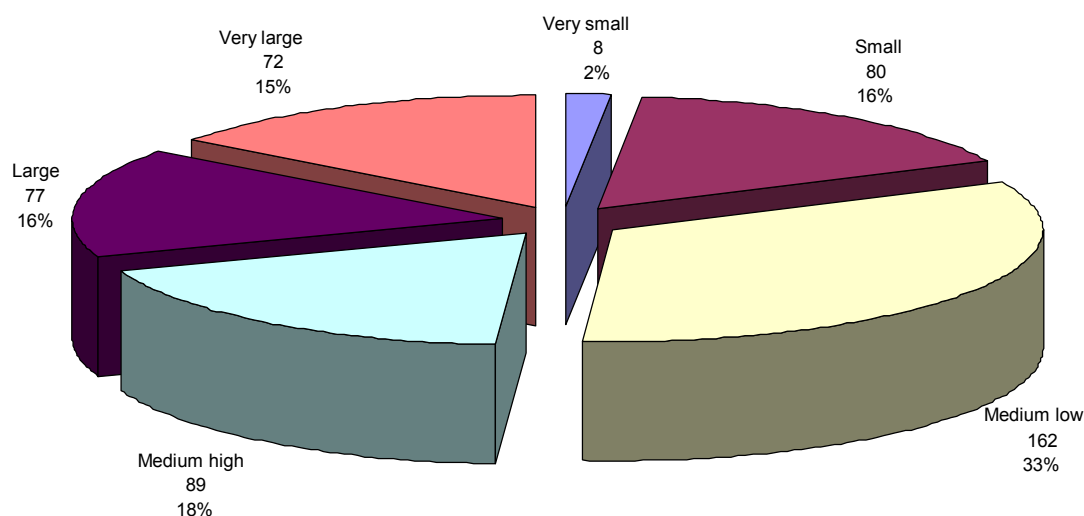
<sup>8</sup> It is possible to publish results for a group of at least 15 farms. It is a principle of FADN, compliant with observing the principle of individual personal data protection.



The structure of the pool of agricultural farms, consisting of 6 economic size classes (the so-called ES6) shows the dominant share of two economic size classes (small and medium low). It is a section of the economic size of farms, expressed in the European Size Units (ESU)<sup>9</sup>, which can be placed within the class from 4 to 16 ESU. Next, with the similar share (20% and 17%), there are the following classes of farms: medium high ones (16-40 ESU) and very small ones (2-4 ESU). Due to the small number (4 farms), the class of very large farms (100 ESU and more) was excluded from the presentation of data, and thus from the analysis of the income situation.

<sup>9</sup> European Size Unit is a parameter which is used to define the economic size of an agricultural holding. The value of one European Size Unit, used to measure the economic size of agricultural holdings equals to a defined standard gross margin given in EUR. For the year 2003 1 ESU = 1200 EUR.

Graph 2.3. Agricultural farms according to agricultural area size



The division of the pool of the agricultural farms into 6 agricultural area size classes shows the dominant share (33%) of the medium low farm class (10-20 ha). Other classes (excluding very small farms, about 1-5 ha) constitute pools similar in terms of their number. Due to the small number (8 farms), the class of very small farms was excluded from the presentation of data, and thus from the analysis of the income situation.

### **3. Analysis of farmer families' income at the farms which conducted accountancy in 2003.**

The analysis covered farmer families' income generated in 2003. In order to define the role of the income sources from outside the farm in making the income of the farmer families, the accountancy data and data from the questionnaires on the income generated outside the farm was used. The questionnaires were collected parallelly to the carried out agricultural accountancy.

#### **3.1. Analysis of the structure of farmer families' income from farms classified according to type of farming**

In terms of the income level of the farmer family<sup>10</sup>, the farms specializing in grazing livestock (without milk cows) and the farms specializing in field cropping seem to be in the most profitable situation, while the lowest income was generated in the families from mixed farms.

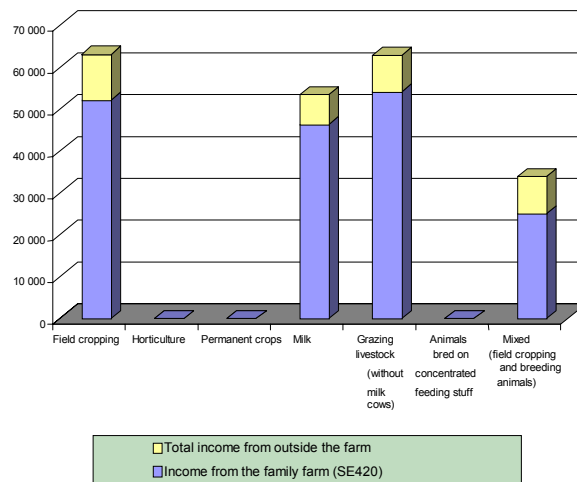
The greatest share of the income generated outside the farm was reported in the mixed farms group, while the absolute income was similar to the one at farms with the highest level of farmer family's income. The greatest share of self-supply in the income generated in the family farm was reported in the mixed farms group (13,5%).

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<sup>10</sup> The sum of the income form the farm and the income generated outside the farm.



Graph 3.1. The structure of farmer families' income according to type of farming of agricultural farms

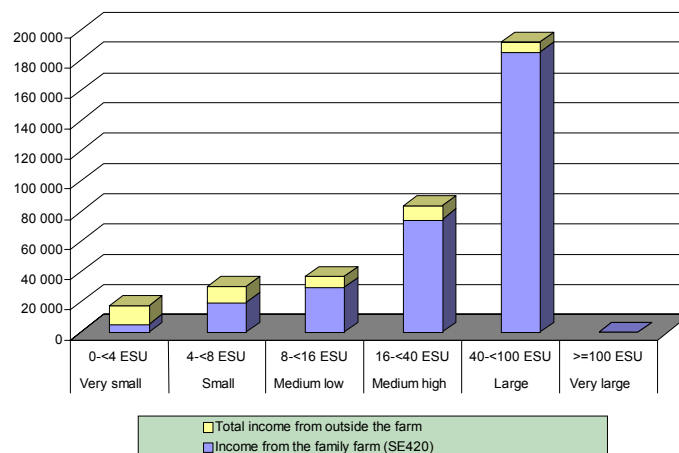


The groups "Horticulture", "Permanent crops", "Grazing livestock" data was not eligible for publication, since the pool is smaller than 15 farms.

### 3.2. Analysis of the structure of the income of farmer families according to economic size<sup>11</sup>

In the groups of farms formed according to the economic size class, there were reported numerous tendencies, correlated both in a positive and negative way to the economic size of a farm:

Graph 3.2. The structure of the income of farmer families according to economic size classes of agricultural farms



In the group "Very large" data was not eligible for publication, since the pool is smaller than 15 farms.

<sup>11</sup> Belonging of a given farm to an economic size class is defined on the basis of its ESU index.

Among the tendencies which are positively correlated to the economic size of the farm, the following were observed:

- An increase of the total farmer family's income,
- An increase of the share of the income generated at the farm in generating the total farmer family's income.

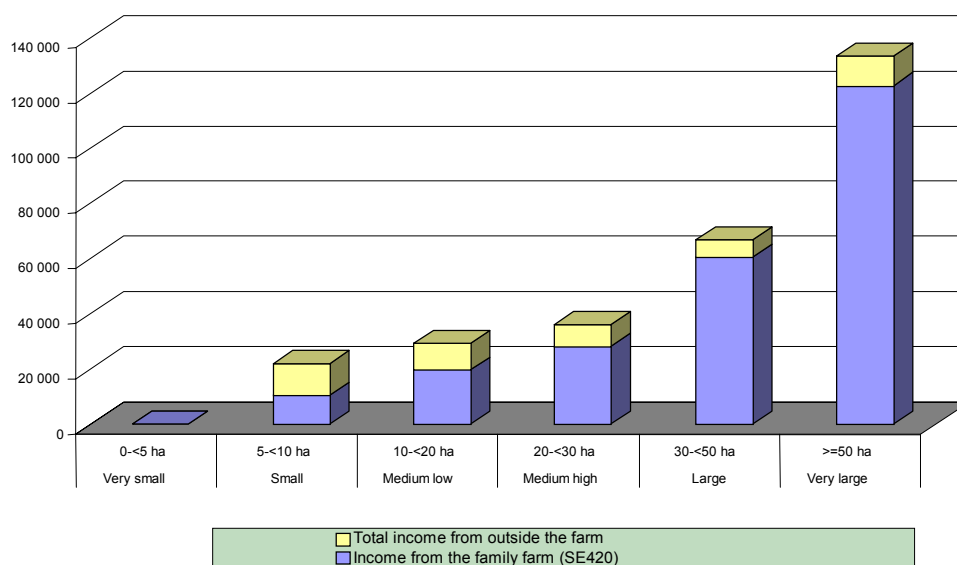
Among the tendencies which are negatively correlated to the economic size of the farm, the following were observed:

- A decrease of the total income generated outside the farm (12 583 PLN in the group of very small farms, while 6 858 PLN in the group of big farms),
- A decrease of the share of the income generated outside the farm in generating the total farmer family's income,  
At very small farms (2-4 ESU), the share amounted to 71.0% while in the group of large farms (40-100 ESU) it was only 3.6%.
- A decrease in frequency of occurrence of additional sources of income,  
At very small and small farms there were reported, on average, two sources of income generated outside the farm, while in most large farms there was only one source.
- A decrease in the share of the value of the products of an agricultural farm which were given to the household of the farmer family (the so-called self-supply consumption) in the value of the income generated in a family agricultural farm.  
At very small farms the share of self-supply amounted to 41.9% of the total income, while in the group of large farms it amounted to 1.5% only.

### **3.3. Analysis of the structure of farmer families' income according to the size of agricultural area**

The structure of the families' income from agricultural holdings classified according to the size of agricultural area shows that the main source of income for farms of more than 10 ha in 2003 was the income generated from the agricultural activity, while additional, non-agricultural activity, was marginal in the farmer family's income. This tendency has been illustrated in bar chart 3.3.

Graph 3.3. The structure of farmer families' income according to agricultural area size classes



In the group "Very small" data was not eligible for publication, since the pool is smaller than 15 farms.

In the groups of farms formed according to the surface class, expressed in the number of hectares of arable land, there were reported numerous tendencies, correlated both in a positive and negative way to the size of the agricultural area:

Among the tendencies which are positively correlated to the size of the farm's surface, the following were observed:

- An increase of the total farmer family's income,
- An increase of the share of the income generated at the farm in generating the farmer family's income.

Among the tendencies which are negatively correlated to the size of the agricultural area, the following were observed:

- A decrease of the share of the amount of income generated outside the farm in generating the total farmer family's income,  
At very small farms (5-10 ha) the share amounted to 51.4%, while in the group of very large farms (more than 50 ha), it was only 8.0%.
- A decrease in the frequency of occurrence of additional sources of income,

At very small and small farms there were reported, on average, 2.1 sources of income generated outside the farm, while in the group of very large farms there was 1.3 source.

- A decrease in the share of the value of the products of an agricultural farm which were given to the household of the farmer family (the so-called self-supply consumption) in the value of the income generated in a family agricultural farm.

At small farms the share of self-supply amounted to 22.8% of the amount of the income from a family agricultural holding, while in the group of large farms it amounted to 2.3% only.

The structure of income of farmer families from agricultural holdings conducting accountancy in 2003 according to type of farming  
(in PLN per farm)

Specification	Field cropping	Horticulture <sup>12</sup>	Permanent <sup>1</sup> 2 crops	Milk	Grazing livestock (without milk cows)	Animals <sup>12</sup> fed on concentrated feeding stuff	Mixed (field cropping and breeding animals)
<b>Income from a family farm</b>	<b>52 047</b>	.	.	<b>46 235</b>	<b>54 081</b>	.	<b>24 984</b>
Consumption	2 285	.	.	3 035	3 053	.	3 367
Consumption share in the income from a family farm %	4.4	.	.	6.6	5.6	.	13.5
<b>Income generated outside the farm</b>	<b>10 917</b>	.	.	<b>7 068</b>	<b>8 631</b>	.	<b>8 857</b>
Including:		.	.			.	
Hired labour	3 511	.	.	2 566	3 319	.	2 807
Retirement or disability pensions	3 204	.	.	3 093	3 764	.	4 605
Other social benefits	181	.	.	200	754	.	411
Other sources	3 364	.	.	1 209	794	.	1 033
Registered non-agricultural activity	658	.	.	0	0	.	0
<b>Farmer family's income</b>	<b>62 964</b>	.	.	<b>53 303</b>	<b>62 713</b>	.	<b>33 841</b>

<sup>12</sup> Data not eligible for publication since the pool is smaller than 15 farms.

The structure of income of farmer families from agricultural holdings conducting accountancy in 2003  
According to economic size classes of agricultural farms  
(in PLN per farm)

	Very small	Small	Medium low	Medium high	Large	Very large <sup>13</sup>
	0-<4 ESU	4-<8 ESU	8-<16 ESU	16-<40 ESU	40-<100 ESU	>=100 ESU
<b>Income from a family farm (SE420)</b>	<b>5 148</b>	<b>19 892</b>	<b>29 846</b>	<b>74 908</b>	<b>185 265</b>	.
Consumption (SE260)	2 156	2 911	3 211	2 997	2 816	.
Consumption share in the income from a family farm %	41.9	14.6	10.8	4.0	1.5	.
<b>Income generated outside the farm</b>	<b>12 583</b>	<b>10 517</b>	<b>7 261</b>	<b>8 661</b>	<b>6 858</b>	.
Including:						.
Hired labour	4 681	4 586	1 760	2 167	1 150	.
Retirement disability pensions	6 006	3 986	3 540	2 838	200	.
Other social benefits	245	436	377	341	339	.
Other sources	1 366	1 456	1 166	3 040	5 169	.
Registered non-agricultural activity	285	54	417	275	0	.
<b>Farmer family's income</b>	<b>17 731</b>	<b>30 409</b>	<b>38 507</b>	<b>81 767</b>	<b>192 124</b>	.

<sup>13</sup> Data not eligible for publication since the pool is smaller than 15 farms.

The structure of income of farmer families from agricultural holdings conducting accountancy in 2003  
According to agriculture area size classes of agricultural farms  
(in PLN per farm)

	Very small <sup>14</sup>	Small	Medium low	Medium high	Large	Very large
	0-<5 ha	5-<10 ha	10-<20 ha	20-<30 ha	30-<50 ha	>=50 ha
<b>Income from a family farm (SE420)</b>	.	<b>10 711</b>	<b>19 621</b>	<b>28 277</b>	<b>60 675</b>	<b>122 735</b>
Consumption (SE260)	.	2 441	2 695	3 492	3 013	2 802
Consumption share in the income from a family farm %	.	22.8	13.7	12.3	5.0	2.3
<b>Income generated outside the farm</b>	.	<b>11 350</b>	<b>9 629</b>	<b>7 987</b>	<b>6 357</b>	<b>10 651</b>
Including:	.					
Hired labour	.	4 190	4 041	2 696	1 719	1 753
Retirement disability pensions	.	5 498	3 747	3 289	3 240	2 676
Other social benefits	.	359	436	478	224	221
Other sources	.	1 185	1 315	1 525	645	5 376
Registered non-agricultural activity	.	119	91	0	529	625
<b>Farmer family's income</b>	.	<b>22 061</b>	<b>27 608</b>	<b>34 634</b>	<b>67 032</b>	<b>133 387</b>

<sup>14</sup> Data not eligible for publication since the pool is smaller than 15 farms.

## The questionnaire concerning the farmer family's income generated outside the farm in 2003



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### Ankieta dot. dochodów spoza gospodarstwa rolnego rodziny rolnika w 2003 r.

Imię i nazwisko pracownika biura rachunkowego: \_\_\_\_\_

W poniższej tabeli proszę wpisać, w odpowiedniej rubryce, nr przedsiębiorstwa w którym określony dochód się znajduje.

		<u>Dochody po potrąceniu zaliczek na podatek dochodowy</u>				<u>Dochody po opodatkowaniu</u>
		z pracy najemnej	z emerytur i rent	z pozostałych świadczeń społecznych <sup>1)</sup>	pozostałe	z zarejestrowanej działalności pozarolniczej
		1	2	3	4	5
Styczeń	01					X
Luty	02					
Marzec	03					
Kwiecień	04					
Maj	05					
Czerwiec	06					
Lipiec	07					
Sierpień	08					
Wrzesień	09					
Październik	10					
Listopad	11					
Grudzień	12					
<b>RAZEM</b>	<b>13</b>					

<sup>1)</sup> np. odszkodowania z tyt. ub. społecznych; zasiłki.

Jeżeli prowadzona jest działalność pozarolnicza proszę podać krótki opis lub symbol EKD/PKD:

.....  
.....

Symbol  
EKD/PKD:

\_\_\_\_\_

Wyrażam zgodę na udostępnienie powyższych danych dla celów naukowo-badawczych IERiGŻ.

NIG: \_\_\_\_\_

.....  
data i podpis rolnika



The list of codes for defining amount levels, used in collecting data concerning the income generated outside the farm in 2003

Nr przedziału	Przedziały kwot od – do w zł
1	poniżej 200
2	200 - 399
3	400 - 599
4	600 - 799
5	800 - 999
6	1 000 - 1 199
7	1 200 - 1 399
8	1 400 - 1 599
9	1 600 - 1 799
10	1 800 - 1 999
11	2 000 - 2 499
12	2 500 - 2 999
13	3 000 - 3 499
14	3 500 - 3 999
15	4 000 - 4 499
16	4 500 - 4 999
17	5 000 - 5 999
18	6 000 - 6 999
19	7 000 - 7 999
20	8 000 - 8 999
21	9 000 - 9 999
22	10 000 - 10 999
23	15 000 - 19 999
24	20 000 - 24 999
25	25 000 - 29 999
26	30 000 - 34 999
27	35 000 - 39 999
28	40 000 - 44 999
29	45 000 - 49 999
30	50 000 i więcej