



P  L S K I  
**FADN**

SYSTEM ZBIERANIA I WYKORZYSTYWANIA  
DANYCH RACHUNKOWYCH Z GOSPODARSTW ROLNYCH

# The Plan of Selection of a Sample of Agricultural Holdings under the Polish FADN

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## Initial remarks

This document includes implementation of the stipulations of the Polish and the European Union (EU) legislation in connection with the obligations imposed on the Institute of Agriculture Economics and Food Economy (IAEFE) when implementing the tasks of the Farm Accountancy Data Network (FADN).

The tasks of IAEFE are specified in the Act of 29 November 2000 on agriculture accountancy data network (J. of L. of 2001 No. 3, item 20 as amended) and in Commission Regulation (EC) No 730/2004 of 19 April 2004 adapting Regulation (EEC) No 1859/82 concerning the selection of returning holdings for the purpose of determining incomes of agricultural holdings by reason of the accession of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia to the European Union.

The purpose of the study is to present rules for creating a sample of agricultural holdings to determine incomes under FADN representative survey.

The study has been produced in IAEFE in extensive cooperation with the Central Statistical Office (CSO) employees as regards classification of agricultural holdings and a tabular analysis of general population and the field of observation.

The results of projects financed by the European Commission and the Government of the Republic of Poland as regards the division of the territory of Poland into regions and calculating the Standard gross margin (SGM) are used in the study.

All calculations used for the production of the selection plan have been carried out in IAEFE on the basis of the data made available by CSO from the Common Agricultural Census 2002.

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## Description of agricultural holdings population<sup>1</sup>

The Common Agricultural Census (CAS) was carried out in the period 21.05-08.06.2002 according to the state as of 20.05.2002 at midnight. The census included: individual agricultural holdings where the arable land covered over 0.1 ha; physical persons who were owners of farm animals with no arable land or with arable land of less than 0.1 ha area, and farmlands used by legal persons and organisational entities having no legal personality.

The purpose of CAS was, amongst other things, to provide basic information on agricultural holdings, deliver necessary data so that Poland could meet the obligations towards international organisations, and to create (and update) surveys for choosing samples in representative tests by means of a random selection.

The subject scope was consistent with the scope of Farm Structure Survey (FSS), which *inter alia* made it possible to carry out a classification of agricultural holdings according to the relevant EU legislation.

### Applied definitions of agricultural holdings:

An **agricultural holding** means cropland and forestland, buildings or parts of buildings, equipment and livestock, if they are or can be an organised farm whole, together with rights and obligations connected with running such agricultural holdings.

An **individual agricultural holding** means an agricultural holding which covers 0.10 ha or more, of arable land which is owned or used by a physical person or persons.

An **owner of farm animals** means a person who does not have arable land or a person whose arable land covers less than 0.10 ha, who has at least: 1 representative of cattle or (i) 5 pigs or 1 sow or (i) 3 sheep or goats or (i) 1 horse or (i) 30 representatives of poultry or (i) 5 female furred animals (including rabbits) or (i) 1 beehive.

## Division of Poland into SGM regions

Under Phare 2000 No PL0006.09.06 "Preparation and implementation of selected Common Agricultural Policy (CAP) mechanisms - Technical Assistance (FADN)" Poland was divided into SGM regions in order to introduce a Community typology of agricultural holdings operating in Poland.

Bearing in mind the fact that gross margin is a methodological base to specify standard gross margin, factors which determine production effects obtained by agricultural holdings have become a part of criteria for the division of farm regions. Another applicable assumption for the division of SGM

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<sup>1</sup> The chapter has been prepared on the basis of: Report of the results of the Common Agricultural Census 2002, CSO, Warsaw 2003.

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regions was preservation of territorial compactness of the regions. Furthermore, on the basis of a recommendation conveyed at workshop on FADN in Brussels on May 2000, a rule for delimiting SGM regions in such a way as to preserve the territorial compactness of the regions at a minimal level, determined by NUTS 3 was adopted.

At that time Poland was divided into territorial units which were comparable to those applied in the European Union<sup>2</sup>. Following the Commission's recommendation, the minimal level for delimiting SGM regions in Poland is a union of *poviats* (NDP 3). However, taking into account the access to statistical data, it was decided to delimit SGM regions according to the borders of NDP 2 units, which, in case of Poland, are voivodeships.

To establish homogeneous regions as to determine SGM, 7 statistical parameters which describe factors indicating production effects of agricultural holdings were applied, namely:

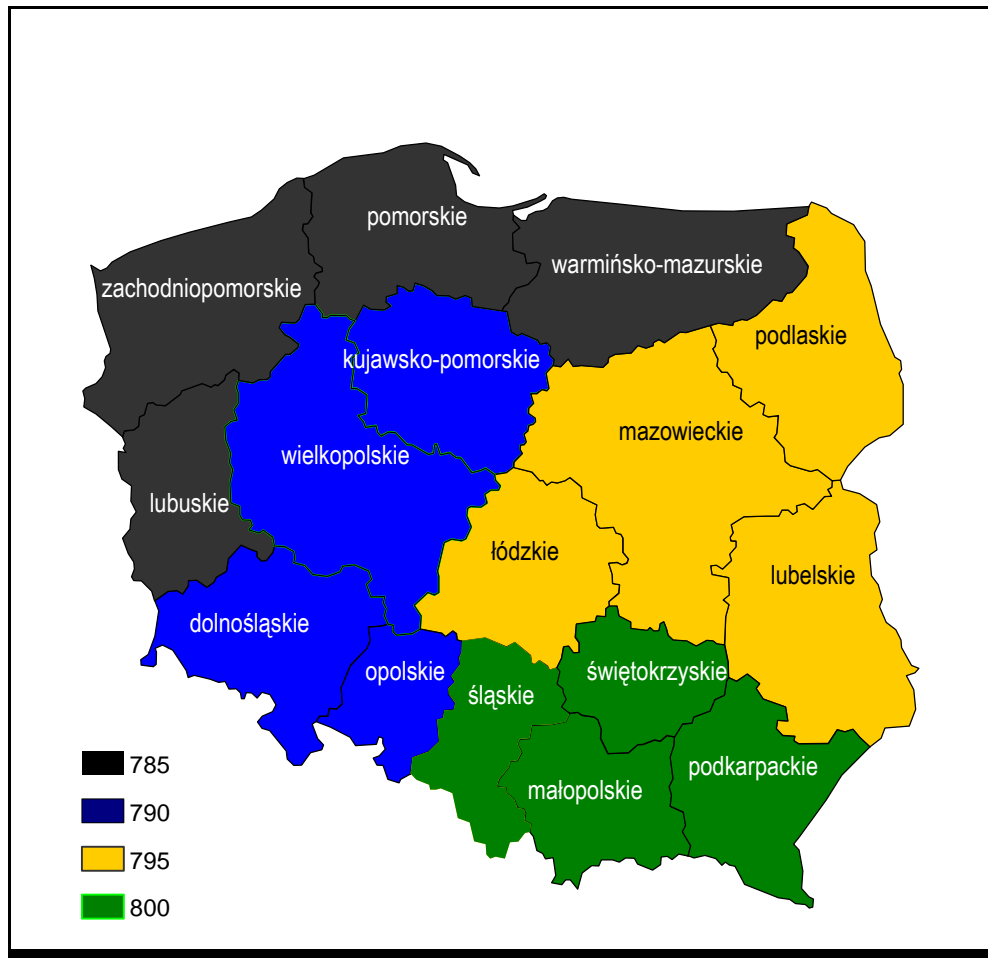
1. Arable land area in an average individual farm in 1996.
2. Percentage contribution of the permanent grassland in arable land in the total farm sector in 2001.
3. A number of dairy cows in an average individual farm (on average in the period 1999-2001).
4. A number of pigs in an average individual farm (on average in the period 1999-2001).
5. Grain crops in total farm sector (on average in the period 1999-2001).
6. Annual milk production from one cow in total farm sector (on average in the period 1999-2001).
7. NPK use per kg in 1 ha of arable land in total farm sector in 2001.

Basing on the analysis of deviations of the listed parameters and having the preliminary assumption on the maximum number of regions, it has been stated that the divisions lines for 4 regions go along the borders of NDP 2 districts, i.e. voivodeships, and each region includes 4 districts of NDP 2 (4 voivodeships each).

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<sup>2</sup> The Order of the Council of Ministers of 13 July 2000 on the introduction of Terminology for Territorial Units for Statistical Purposes (NDP) (J. of L. 2000 No. 58 item 685).

Map 1 Division of Poland into SGM regions



General characteristics of the regions:

**Region (785) - Pomorze and Mazury** - very big agricultural holdings, medium level of production intensity, the region is characterised by the biggest stock of dairy cows and is second as regards the stock of pigs in agricultural holdings.

**Region (790) - Wielkopolska and Śląsk** - big agricultural holdings, very intensive production as the use of mineral fertilisers is the highest and grain crops are the biggest, there is also the highest milk production of cows (the stock of dairy cows - the second place) there and the region has the biggest stock of pigs in agricultural holdings.

**Region (795) - Mazowsze and Podlasie** - medium agricultural holdings, medium level of production intensity, the region is second as regards the stock of dairy cows in agricultural holdings.

**Region (800) - Małopolska and Pogórze** - small agricultural holdings, low level of production intensity (the parameters of all the measured features are the lowest), the region is characterized by highly dispersed and tiny agricultural holdings.

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The table below includes codes used in identification of the region.

Table 1 SGM and FADN regions in Poland

Region name	National Code	FADN Code
Pomorze and Mazury	A	785
Wielkopolska and Śląsk	B	790
Mazowsze and Podlasie	C	795
Małopolska and Pogórze	D	800

## Applied classification of agricultural holdings

By Commission Decision EEC/85/377 (OJ L 220 17.08.85 p.1) the EU established a uniform typology of agricultural holdings in all Member States. It is used both to present the results of analyses and to establish a sample for representative survey and next to implement the results.

In the applied terminology, the economic size unit is specified on the basis of the farm standard gross margin. The agricultural holding type is specified on the basis of contribution of particular standard gross margins from particular agricultural activities (e.g. wheat, pigs) to creation of standard gross margin of an agricultural holding.

The classification consists in grouping of similar agricultural holdings into classes (types) at a higher or lower level of aggregation. The agricultural holding economic size unit is specified on the basis of SGM absolute value of an agricultural holding and is expressed in ESU<sup>3</sup>. It is calculated by way of dividing of standard gross margin of an agricultural holding by one ESU value, applicable in a given year and expressed in Euro, as one ESU value is a fixed Euro number, which is established and updated on a yearly basis by the European Commission according to the indicator of changes in the EU agriculture.

SGM coefficients are calculated periodically on the basis of medium data of three consecutive years in delimited regions of Member States. The European Commission establishes the list of agricultural activities for which calculation of SGM is required. At present the list includes about 100 activities.

SGM coefficients for an agricultural holding is calculated by way of totaling up of multiplied SGMs of particular activities by their size (e.g. the number of wheat hectares x SGM of wheat).

For the needs of agricultural holdings classification in Poland, standard gross margins, calculated in IAFE in cooperation with experts from the Institute of Crop Fertilisation and Soil Science, Warsaw Agricultural University and IAFE were used. The calculation was made for four delimited SGM regions in Poland. The standard gross margin – SGM"2000" coefficients were calculated for 35 plant production activities and 23 animal production activities. The table below presents a list of activities for which standard gross margins were calculated.

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<sup>3</sup> ESU = European Size Unit.



Table 2 List of activities for which standard gross margins were calculated for the needs of the Community typology

FSS Code	Unit	Label
D01	ha	Common wheat and spelt
D03	ha	Rye
D04	ha	Barley
D05	ha	Oats
D06	ha	Grain maize
D08	ha	Other cereals
D09	ha	Protein crops for the production of grain
D10	ha	Potatoes
D11	ha	Sugar beet
D14A	ha	Fresh vegetables, melons, strawberries - outdoor - open field
D14B	ha	Fresh vegetables, melons, strawberries - outdoor - market garden
D15	ha	Fresh vegetables, melons, strawberries - under glass
D16	ha	Flowers - outdoor
D17	ha	Flowers - under glass
D19	ha	Seeds and seedlings
D20	ha	Other crops
D23	ha	Tobacco
D24	ha	Hops
D26	ha	Rape and turnip
D27	ha	Sunflower
D28	ha	Soya
D29	ha	Linseed (oil flax)
D30	ha	Other oil seed crops
D31	ha	Flax
D32	ha	Hemp
D34	ha	Aromatic, medicinal and culinary plants
D35	ha	Industrial plants not mentioned elsewhere
G01A	ha	Fruit and berry plantations - temperate climate
G01C	ha	Fruit and berry plantations - nuts
G04C	ha	Vineyards - table grapes
G05	ha	Nurseries
G06	ha	Other permanent crops
G07	ha	Permanent crops under glass
I02	100 m <sup>2</sup>	m <sup>2</sup> Mushrooms (yearly SGM)
R139	harvest/100 m <sup>2</sup>	Mushrooms (per harvest) } + number of harvests / year
J01	heads	Equidae
J02	heads	Bovine under one year old - total
J03	heads	Bovine under 2 years - males
J04	heads	Bovine under 2 years - females
J05	heads	Bovine 2 years and older - males
J06	heads	Heifers, 2 years and older
J07	heads	Dairy cows
J08	heads	Bovine 2 years old and over - other cows
J09A	heads	Sheep - breeding females
J09B	heads	Sheep - others
J10A	heads	Goats - breeding females
J10B	heads	Goats - others
J11	heads	Pigs - piglets under 20 kg

FSS Code	Unit	Label
J12	heads	Pigs - breeding sows over 50 kg
J13	heads	Pigs - others
J14	100 heads	Poultry - broilers
J15	100 heads	Laying hens
J16A	100 heads	Turkeys
J16B	100 heads	Ducks
J16C	100 heads	Geese
J16D	100 heads	Other poultry
J17	head	Rabbits (breeding females)
J18	hive	Beehives

The table below presents a list of classes which economic size units were divided into. In relation to the EU classification, the last "Union" class has been extended and further divided into four classes.

**Table 3** The list of applied economic size units

Class Code	ESU
ES 2	2 ≤ 4
ES 3	4 ≤ 6
ES 4	6 ≤ 8
ES 5	8 ≤ 12
ES 6	12 ≤ 16
ES 7	16 ≤ 40
ES 8	40 ≤ 100
ES 9	100 ≤ 250
ES 10	250 and more
ES 11	250 ≤ 500
ES 12	500 ≤ 1 000
ES 13	1 000 ≤ 1 500
ES 14	1 500 and more

The typology algorithm was established in IAEFE on the basis of relevant EU regulations (Commission Decision EEC/85/377 (OJ L 220, 17.08.1985 p. 1 - 32)). In 2003 this algorithm was used for the classification of agricultural holdings on the basis of Common Agricultural Census 2002 data.

The table below presents a list of types used in the classification of agricultural holdings.

**Table 4** A list of agricultural types used in the classification of agricultural holdings

Code	Label
BD	No agricultural activity
PP	Below threshold
1	Specialist field crops
13	Specialist cereals, oilseeds and protein crops
131	Specialist cereals (other than rice) oilseeds and protein crops
132	Specialist rice
133	Cereals, oilseeds, protein crops and rice combined
14	General field cropping
141	Specialist root crops
142	Cereals and root crops combined
143	Specialist field vegetables
144	Various field crops

Code	Label
1441	Specialist tobacco
1442	Specialist cotton
1443	Various field combined
2	Specialist horticulture
20	Specialist horticulture
201	Specialist market garden vegetables
2011	Specialist market garden vegetables - outdoor
2012	Specialist market garden vegetables - under glass
2013	Specialist market garden vegetables - outdoor and under glass combined
202	Specialist flowers and ornamentals
2021	Specialist flowers and ornamentals - outdoor
2022	Specialist flowers and ornamentals - under glass
2023	Specialist flowers and ornamentals - outdoor and under glass combined
203	General market garden cropping
2031	General market garden cropping - outdoor
2032	General market garden cropping - under glass
2033	Specialist mushrooms
2034	Various market garden crops combined
3	Specialist permanent crops
31	Specialist vineyards
311	Specialist quality wine
312	Specialist wine other than quality wine
313	Quality and other wine combined
314	Vineyards for various types of production
3141	Specialist table grapes
3142	Specialist raisins
3143	Mixed vineyards
32	Specialist fruit and citrus fruit
321	Specialist fruit (other than citrus)
3211	Specialist fresh fruit (other than citrus)
3212	Specialist nuts
3213	Fresh fruit (other than citrus) and nuts combined
322	Specialist citrus fruit
323	Fruit and citrus fruit combined
33	Specialist olives
330	Specialist olives
34	Various permanent crops combined
340	Various permanent crops combined
4	Specialist grazing livestock
41	Specialist dairying
411	Specialist milk production
412	Specialist milk production with cattle - rearing
42	Specialist cattle - rearing and fattening
421	Specialist cattle - mainly rearing
422	Specialist cattle - mainly fattening
43	Cattle - dairying, rearing and fattening combined
431	Cattle - dairying with rearing and fattening
432	Cattle - rearing and fattening with dairying
44	Sheep, goats and other grazing livestock
441	Specialist sheep

Code	Label
442	Sheep and cattle combined
443	Specialist goats
444	Various grazing livestock - no dominant enterprise
5	Specialist granivores
50	Specialist granivores
501	Specialist pigs
5011	Specialist pig rearing
5012	Specialist pig fattening
5013	Pig rearing and fattening combined
502	Specialist poultry
5021	Specialist layers
5022	Specialist poultry - meat
5023	Layers and poultry - meat combined
503	Various granivores combined
5031	Pigs and poultry combined
5032	Pigs, poultry and other granivores combined
6	Mixed cropping
60	Mixed cropping
601	Market gardening and permanent crops combined
602	Field crops and market gardening combined
603	Field crops and vineyards combined
604	Field crops and permanent crops combined
605	Mixed cropping, mainly field crops
606	Mixed cropping, mainly market gardening or permanent crops
6061	Mixed cropping, mainly market gardening
6062	Mixed cropping, mainly permanent crops
7	Mixed livestock holdings
71	Mixed livestock, mainly grazing livestock
711	Mixed livestock, mainly dairying
712	Mixed livestock, mainly grazing livestock other than dairying
72	Mixed livestock, mainly granivores
721	Mixed livestock: granivores and dairying combined
722	Mixed livestock: granivores and grazing livestock other than dairying combined
723	Mixed livestock: granivores with various livestock
8	Mixed crops - livestock
81	Field crops - grazing livestock combined
811	Field crops combined with dairying
812	Dairying combined with field crops
813	Field crops combined with grazing livestock other than dairying
814	Grazing livestock other than dairying combined with field crops
82	Various crops and livestock combined
821	Field crops and granivores combined
822	Permanent crops and grazing livestock combined
823	Various mixed crops and livestock
8231	Apiculture
8232	Various mixed holdings

The table below presents a list of types used in creating the selection plan.

**Table 5** The farm typology after clustering used to create the selection plan

Code of type of farming TF	Label
13, 14	Specialist field crops
20	Specialist horticulture
31, 32, 33, 34	Specialist permanent crops
41, 42, 43, 44	Specialist grazing livestock
50	Specialist granivores
60	Mixed cropping
71, 72	Mixed livestock holdings
81, 82	Mixed crops - livestock

The table below presents "2000" standard gross margin values according to regions in PLN.

**Table 6** Gross margin values according to regions in PLN

Label	FSS Code	Region			
		785	790	795	800
Common wheat and spelt	D01	1 214	1 312	943	976
Rye	D03	578	667	540	625
Barley	D04	861	1 143	924	919
Oats	D05	561	813	637	805
Grain maize	D06	899	1 328	1 426	1 234
Other cereals	D08	664	921	691	865
Protein crops for the production of grain	D09	1 454	1 889	1 602	3 608
Potatoes	D10	2 973	2 795	2 608	2 033
Sugar beet	D11	2 636	2 822	2 622	2 784
Fresh vegetables, melons, strawberries - outdoor - open field	D14A	6 556	6 747	5 710	7 351
Fresh vegetables, melons, strawberries - outdoor - market garden	D14B	5 504	5 997	5 402	6 512
Fresh vegetables, melons, strawberries - under glass	D15	174 963	183 607	189 828	186 939
Flowers - outdoor	D16	34 312	34 312	34 312	34 312
Flowers - under glass	D17	366 667	366 667	366 667	366 667
Seeds and seedlings	D19	9 480	8 065	7 797	7 522
Other crops	D20	361	361	361	361
Tobacco	D23	3 083	7 437	9 919	5 864
Hops	D24	7 991	7 991	7 991	7 991
Rape and turnip	D26	912	1 080	1 119	1 160
Sunflower	D27	1 021	1 021	1 021	1 021
Soya	D28	509	509	509	509
Linseed (oil flax)	D29	352	352	352	352
Other oil seed crops	D30	1 133	1 133	1 133	1 133
Flax	D31	1 470	1 470	1 470	1 470
Hemp	D32	1 330	1 330	1 330	1 330
Aromatic, medicinal and culinary plants	D34	952	1 644	2 028	1 216
Industrial plants not mentioned elsewhere	D35	2 652	2 652	2 652	2 652
Fruit and berry plantations - temperate climate	G01A	4 352	4 863	5 161	4 203
Fruit and berry plantations - nuts	G01C	2 276	2 276	2 276	2 276
Vineyards - table grapes	G04C	3 578	3 578	3 578	3 578

Label	FSS Code	Region			
		785	790	795	800
Nurseries	G05	34 793	34 793	34 793	34 793
Permanent crops under glass	G07	26 558	26 558	26 558	26 558
m2 Mushrooms (yearly SGM)	I02	6 560	6 560	6 560	6 560
Mushrooms (per harvest) } + number of harvests / year	R139	1 640	1 640	1 640	1 640
Equidae	J01	446	446	446	446
Bovine under one year old - total	J02	391	447	547	499
Bovine under 2 years - males	J03	1 082	1 072	1 007	889
Bovine under 2 years - females	J04	2 185	2 282	2 146	1 925
Bovine 2 years and older - males	J05	1 367	1 733	1 135	929
Heifers, 2 years and older	J06	5 019	6 674	8 060	5 938
Dairy cows	J07	2 311	2 363	2 158	1 967
Bovine 2 years old and over - other cows	J08	98	54	78	47
Sheep - breeding females	J09A	29	36	34	45
Sheep - others	J09B	29	36	34	45
Goats - breeding females	J10A	290	384	471	388
Goats - others	J10B	290	384	471	388
Pigs - piglets under 20 kg	J11	136	136	136	136
Pigs - breeding sows over 50 kg	J12	1 342	1 458	1 497	1 197
Pigs - others	J13	490	622	584	519
Poultry - broilers	J14	293	293	293	293
Laying hens	J15	1 023	678	267	572
Turkeys	J16A	1 773	1 726	1 675	1 954
Ducks	J16B	1 773	1 726	1 675	1 954
Geese	J16C	1 773	1 726	1 675	1 954
Other poultry	J16D	1 773	1 726	1 675	1 954
Rabbits (breeding females)	J17	61	61	61	61
Beehives	J18	204	204	204	204

## Rules for establishing the observation field

Out of 2 933 228 objects registered in Common Agricultural Census 2002, 2 172 205 agricultural holdings declared running agricultural activities. Such agricultural holdings were classified according to the EU rules. The economic size unit and agricultural type were calculated for 2 139 784 agricultural holdings (the remaining ones did not run activities, for which SGM was calculated).

The minimal threshold which classifies an agricultural holding to be a commodity agricultural holding (it means inclusion of the agricultural holding in a survey) is expressed in ESU. This size unit is established for each Member State separately and changes in time, depending on the existing agrarian structure and economic strength of agricultural holdings.

The threshold is established in such a way as to include in the analysed population, agricultural holdings which produce at least 90% of standard gross margin of agricultural production in a Member State. In case of Poland, the threshold was established for 2 ESUs (see: Tabela 7), which ensured covering 89,3% of SGM. This threshold was exceeded by 745 023 agricultural holdings.

Tabela 7 Distribution of basic parameters characterising the general population

Class Code	ESU	Numer of holdings			SGM			UAA			LU			AWU		
			%	Cumulative %	w th. zl	%	Cumulative %	w th. ha	%	Cumulative %		%	Cumulative %		%	Cumulative %
	≤ 2	1 394 761	65,18%	100,0000%	3 914 445,67	10,73%	100,00%	3 081,49	20,42%	100,00%	746 065,43	8,70%	100,00%	869 546,28	38,11%	100,00%
ES 2	2 ≤ 4	280 398	13,10%	34,8177%	3 822 517,21	10,48%	89,27%	1 923,68	12,75%	79,58%	917 570,72	10,70%	91,30%	417 808,08	18,31%	61,89%
ES 3	4 ≤ 6	148 380	6,93%	21,7136%	3 466 068,73	9,50%	78,79%	1 466,54	9,72%	66,84%	862 633,76	10,06%	80,59%	256 778,02	11,26%	43,57%
ES 4	6 ≤ 8	91 190	4,26%	14,7793%	3 006 336,21	8,24%	69,29%	1 149,72	7,62%	57,12%	772 810,70	9,01%	70,53%	169 606,76	7,43%	32,32%
ES 5	8 ≤ 12	100 478	4,70%	10,5177%	4 661 216,10	12,78%	61,05%	1 631,22	10,81%	49,50%	1 215 949,68	14,18%	61,52%	197 012,63	8,64%	24,88%
ES 6	12 ≤ 16	48 618	2,27%	5,8219%	3 190 107,96	8,74%	48,28%	1 004,22	6,65%	38,70%	843 886,09	9,84%	47,33%	100 866,42	4,42%	16,25%
ES 7	16 ≤ 40	62 875	2,94%	3,5498%	6 878 530,03	18,85%	39,53%	2 032,81	13,47%	32,04%	1 742 716,18	20,33%	37,49%	144 004,31	6,31%	11,83%
ES 8	40 ≤ 100	9 642	0,45%	0,6115%	2 625 844,57	7,20%	20,68%	800,56	5,30%	18,57%	524 548,86	6,12%	17,16%	31 787,50	1,39%	5,51%
ES 9	100 ≤ 250	2 308	0,11%	0,1609%	1 679 442,63	4,60%	13,48%	755,28	5,00%	13,27%	242 624,89	2,83%	11,04%	26 033,65	1,14%	4,12%
<i>ES 10</i>	<i>&gt; 250</i>	<i>1 134</i>	<i>0,05%</i>	<i>0,0530%</i>	<i>3 239 782</i>	<i>8,88%</i>	<i>8,88%</i>	<i>1 247,36</i>	<i>8,26%</i>	<i>8,26%</i>	<i>703 774,01</i>	<i>8,21%</i>	<i>8,21%</i>	<i>67 987,06</i>	<i>2,98%</i>	<i>2,98%</i>
ES 11	250 ≤ 500	762	0,04%	0,0530%	1 256 756,79	3,44%	8,88%	556,86	3,69%	8,26%	218 833,84	2,55%	8,21%	24 201,97	1,06%	2,98%
ES 12	500 ≤ 1000	245	0,01%	0,0174%	776 771,35	2,13%	5,44%	304,48	2,02%	4,58%	162 565,90	1,90%	5,66%	17 869,70	0,78%	1,92%
ES 13	1000 ≤ 1500	69	0,00%	0,0059%	389 739,18	1,07%	3,31%	129,25	0,86%	2,56%	83 944,28	0,98%	3,76%	8 402,40	0,37%	1,14%
ES 14	> 1500	58	0,00%	0,0027%	816 514,49	2,24%	2,24%	256,77	1,70%	1,70%	238 429,99	2,78%	2,78%	17 512,99	0,77%	0,77%
<b>TOTAL</b>		<b>2 139 784</b>			<b>36 484 290,93</b>			<b>15 092,89</b>			<b>8 572 580,32</b>			<b>2 281 430,71</b>		

For converting of SGM expressed in PLN into ESU, the PLN exchange rate -> Euro was used in the amount of 3,96822 and Euro 1 200 per 1 ESU. Euro exchange rate was calculated as the average from three years (1999-2001)<sup>4</sup>.

The table below shows basic parameters which characterise the observation field against the background of the general population. Agricultural holdings included in the observation field have at their disposal over 80% of arable land, and over 90% of convertible animals<sup>5</sup> are kept there. At the same time only about 62% of the workers measured in AWU<sup>6</sup> are employed there. It has to be stressed that only about 35% of agricultural holdings were included in the observation field. It shows that the production of agricultural holdings in the observation field is highly concentrated and the production of the remaining "agricultural holdings" is significantly dispersed. It is hard to call them agricultural holdings because the production is of a self-supply nature and it virtually does not contribute to the agricultural production in Poland.

Table 8 Basic parameters characterising the observation field against the background of the general population

Characteristics	Unit of measurement	General population	Observation field	Observation field contribution to general population in %
Standard gross margin	PLN thousand	36 484 291	32 569 845	89.27
Arable land area	ha	15 092 889	12 011 402	79.58
Number of convertible animals	LU	8 572 580	7 826 514	91.30
Number of workers employed full-time	AWU	2 281 431	1 411 884	61.89
Number of agricultural holdings	unit	2 139 784	745 023	34.82

<sup>4</sup> CLASSEX 320 rev. 1, Luxemburg, February 2003.

<sup>5</sup> 1 livestock unit (LU) for:

horses	:= 0.6	dairy cows	:= 1.0	sows	:= 0.5
calves	:= 0.4	defective cows	:= 1.0	porkers	:= 0.3
calves < 1 year	:= 0.4	other cows	:= 0.8	other pigs	:= 0.3
bulls 1 – 2 years	:= 0.6	goat mothers	:= 0.1	broilers	:= 0.007
heifers 1 – 2 years	:= 0.6	other goats	:= 0.1	egg-laying hens	:= 0.014
bulls 2 years	:= 1.0	sheep	:= 0.1	other poultry	:= 0.03
heifers	:= 0.5	other sheep	:= 0.1		
heifers for fattening	:= 0.5	piglets	:= 0.027.		

<sup>6</sup> AWU (Annual Work Unit) - a person employed full-time = 2 200 hours/year.



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### ***Basic characteristics according to regions***

Comparison of data included in the tables of this chapter provides interesting observations connected with the division of the number of agricultural holdings and standard gross margin in particular regions. Special attention shall be paid to Małopolska and Pogórze regions. The observation field covered about 17% of agricultural holdings producing about 66% of standard gross margin. Agricultural holdings in that region are dispersed and tiny, and the level of production is low. Getting ahead of the course of this study, it is worth noting that the contribution of a sample from that region to the Poland wide sample is only about 12%. Agricultural holdings from Małopolska and Pogórze regions are not only dispersed and tiny, but also very similar. Thus, using Neyman's optimal allocation (which applies the changeability of agricultural holdings), the sample from that region is so small-numbered.

Table 9 Standard gross margin in region 785 in zloty

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	31 368 618	20 067 466	17 833 352	30 438 360	27 065 752	98 276 308	123 209 019	154 951 045	119 203 805	622 413 725
14	34 127 639	25 092 061	19 926 604	35 320 728	27 414 830	82 112 482	44 095 368	56 386 620	95 490 258	419 966 590
20	7 318 059	7 210 853	8 071 446	12 941 821	12 660 094	38 638 068	26 160 619	21 884 958	19 560 519	154 446 436
31	0	0	0	0	0	0	0	0	0	0
32	3 815 697	2 924 495	1 693 379	2 324 386	1 064 409	2 945 575	2 535 772	5 208 430	2 744 968	25 257 110
33	0	0	0	0	0	0	0	0	0	0
34	410 941	491 876	675 138	1 594 110	1 129 728	5 491 375	6 163 240	5 077 144	12 951 319	33 984 869
41	13 060 032	19 089 276	27 171 256	61 587 612	50 829 882	77 790 575	10 285 864	3 477 667	4 845 350	268 137 513
42	1 438 173	1 272 209	1 327 362	1 600 155	1 246 881	2 364 143	1 426 346	926 415	8 745 313	20 346 996
43	13 644 387	19 298 285	29 206 230	64 803 706	57 262 114	117 982 429	22 362 902	11 696 980	12 719 525	348 976 558
44	3 063 794	2 311 342	2 009 887	2 808 803	1 901 694	1 909 571	204 843	0	0	14 209 934
50	13 940 986	14 605 643	18 434 465	44 576 027	46 718 481	183 078 903	153 527 759	103 771 776	342 464 272	921 118 311
60	28 937 972	31 280 936	28 144 103	39 607 740	23 539 098	50 535 433	9 339 973	12 634 104	60 752 109	284 771 468
71	25 796 912	43 815 799	53 895 553	100 272 813	60 307 142	92 003 798	13 249 121	6 299 484	19 952 679	415 593 301
72	20 199 517	35 436 749	47 894 873	86 896 946	59 505 537	102 954 431	18 715 236	3 224 698	83 748 554	458 576 543
81	37 020 646	39 460 840	32 821 417	49 186 546	39 812 036	97 876 969	33 672 351	60 345 558	135 907 586	526 103 948
82	43 083 896	50 233 671	44 899 382	67 780 959	48 221 378	121 618 313	50 996 799	55 632 569	104 618 138	587 085 104
TOTAL	277 227 268	312 591 500	334 004 447	601 740 712	458 679 056	1 075 578 372	515 945 210	501 517 447	1 023 704 396	5 100 988 408

Table 10 Standard gross margin in region 790 in zloty

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	83 962 535	43 726 442	31 760 847	47 382 807	33 699 723	113 335 210	123 762 361	149 880 810	93 879 954	721 390 688
14	80 864 121	72 703 372	59 952 528	95 199 189	63 909 947	149 389 152	66 404 311	76 635 505	154 213 875	819 272 000
20	24 300 703	30 777 368	28 014 658	50 317 335	39 796 917	137 741 240	95 615 924	47 279 447	41 245 557	495 089 150
31	0	0	0	0	0	0	0	0	0	0
32	10 470 523	8 691 600	6 601 656	10 489 651	7 880 812	12 810 438	3 865 145	3 617 817	3 812 006	68 239 648
33	0	0	0	0	0	0	0	0	0	0
34	721 343	844 203	1 173 052	3 052 910	3 020 832	12 362 060	11 681 973	15 478 462	13 696 537	62 031 372
41	9 610 776	10 920 511	15 790 403	34 600 108	26 428 330	52 434 278	3 910 267	1 545 211	0	155 239 884
42	1 644 847	1 535 597	1 229 962	1 489 401	1 266 578	3 753 335	1 173 275	525 310	1 467 844	14 086 150
43	12 509 517	14 208 209	14 727 618	35 270 889	36 413 454	122 920 190	35 462 626	15 139 482	36 365 834	323 017 819
44	3 187 139	1 705 960	1 329 385	1 411 088	539 962	1 981 347	210 627	0	0	10 365 508
50	65 627 365	76 689 784	90 529 012	215 173 619	231 983 901	913 356 945	535 665 281	188 300 254	387 311 269	2 704 637 429
60	61 539 317	69 189 830	63 256 457	99 729 403	63 022 244	119 749 907	24 515 725	25 448 358	120 399 123	646 850 364
71	42 816 176	64 208 420	79 383 270	157 974 203	134 336 355	273 587 595	38 251 406	13 972 145	121 630 806	926 160 377
72	66 268 584	121 032 967	153 658 656	337 381 334	303 784 457	745 391 267	126 548 841	25 481 144	195 284 421	2 074 831 671
81	59 151 198	59 821 006	52 482 746	93 079 360	72 960 826	150 791 865	33 248 440	92 875 835	439 840 996	1 054 252 273
82	128 288 942	162 636 206	149 421 205	251 493 936	180 019 627	439 143 663	149 115 702	102 759 446	186 257 426	1 749 136 152
TOTAL	650 963 087	738 691 474	749 311 455	1 434 045 234	1 199 063 965	3 248 748 491	1 249 431 904	758 939 225	1 795 405 649	11 824 600 485

Table 11 Standard gross margin in region 795 in zloty

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	41 189 311	16 994 095	9 424 161	12 355 127	7 579 601	23 845 318	18 204 504	13 796 832	16 025 175	159 414 123
14	167 542 026	117 230 185	82 977 523	99 904 083	48 251 756	62 581 353	23 005 787	18 830 902	20 957 582	641 281 197
20	25 521 426	35 972 037	30 544 264	73 159 251	66 353 345	279 232 998	171 290 121	58 122 893	38 052 776	778 249 109
31	0	21 110	0	0	0	0	0	0	0	21 110
32	87 311 589	92 020 524	84 375 352	135 170 689	64 888 134	68 464 919	11 317 955	3 066 834	0	546 615 997
33	0	0	0	0	0	0	0	0	0	0
34	2 135 048	2 576 974	2 904 443	5 877 269	4 940 326	17 292 982	17 234 979	11 667 631	21 858 859	86 488 511
41	99 827 395	115 713 714	137 862 000	242 357 078	151 205 850	165 287 176	7 337 123	1 118 031	0	920 708 366
42	7 584 361	8 363 923	4 204 134	6 908 672	4 204 784	8 630 942	3 325 581	994 811	0	44 217 209
43	73 129 695	79 532 648	88 988 723	184 616 979	178 113 484	388 806 449	54 915 985	12 879 738	9 605 253	1 070 588 957
44	19 454 843	8 664 335	6 843 965	7 537 330	2 897 099	3 673 143	421 761	0	0	49 492 475
50	59 588 509	66 043 014	64 415 203	123 350 659	112 104 883	358 015 205	246 441 090	106 904 587	76 171 662	1 213 034 812
60	250 279 087	216 981 677	160 594 369	169 856 021	80 266 021	85 332 621	14 084 693	11 588 992	24 173 441	1 013 156 921
71	266 231 265	350 281 492	315 793 716	434 889 425	230 142 586	228 072 562	13 040 326	4 578 180	9 098 993	1 852 128 546
72	205 970 500	295 661 801	267 210 749	357 367 527	196 060 021	266 500 156	32 014 198	4 837 921	21 487 646	1 647 110 519
81	371 240 883	263 043 784	180 969 500	224 811 980	114 373 089	132 076 079	13 763 093	19 914 267	21 038 947	1 341 231 622
82	214 289 655	189 288 229	130 118 403	147 126 668	71 070 234	92 153 445	28 999 020	29 039 997	21 985 192	924 070 844
TOTAL	1 891 295 592	1 858 389 542	1 567 226 505	2 225 288 757	1 332 451 213	2 179 965 347	655 396 216	297 341 616	280 455 527	12 287 810 316

Table 12 Standard gross margin in region 800 in zloty

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	11 701 450	4 811 637	3 374 200	6 067 433	3 973 843	18 416 435	15 945 197	11 575 841	6 322 014	82 188 050
14	68 571 282	49 281 587	38 459 379	41 372 326	18 935 625	24 461 583	13 287 350	4 649 007	10 330 427	269 348 565
20	26 615 735	32 184 382	27 772 325	54 587 183	38 935 587	109 606 380	65 532 693	21 887 905	17 919 065	395 041 255
31	0	0	0	0	0	0	0	0	0	0
32	24 875 811	16 308 051	11 013 491	11 010 866	2 875 176	4 893 490	1 729 967	738 635	1 978 296	75 423 782
33	0	0	0	0	0	0	0	0	0	0
34	1 525 949	1 393 453	1 246 622	2 957 322	2 320 485	8 265 968	4 540 156	5 123 652	1 920 070	29 293 677
41	57 068 904	24 479 293	13 188 825	11 545 977	4 647 262	5 036 057	261 088	525 251	0	116 752 658
42	2 803 384	1 492 338	651 141	664 148	441 818	744 454	1 446 192	0	0	8 243 475
43	61 607 905	22 175 465	12 141 440	14 960 731	8 124 107	13 211 181	5 940 577	5 253 680	7 698 659	151 113 745
44	13 966 348	3 278 077	1 059 697	941 467	254 108	483 844	277 344	1 173 302	0	21 434 187
50	28 575 989	27 841 084	26 877 333	42 857 237	34 412 369	85 714 924	65 444 844	43 834 045	46 426 346	401 984 171
60	129 219 808	86 325 122	58 341 269	55 776 750	22 884 130	22 787 196	4 247 235	4 683 491	0	384 265 001
71	166 396 615	67 412 601	34 023 504	27 189 098	8 794 792	9 448 234	2 229 109	3 523 923	3 377 299	322 395 175
72	122 296 221	93 251 218	54 916 641	55 799 394	21 200 677	24 951 694	2 265 124	2 733 332	10 718 007	388 132 308
81	182 540 967	58 537 775	25 767 245	23 654 080	7 913 622	7 753 052	5 277 108	2 059 058	24 312 974	337 815 882
82	105 264 898	67 624 133	46 960 694	50 757 388	24 200 123	38 463 330	16 647 260	13 883 219	9 213 079	373 014 125
TOTAL	1 003 031 266	556 396 216	355 793 807	400 141 398	199 913 722	374 237 824	205 071 245	121 644 342	140 216 237	3 356 446 056

Table 13 Standard gross margin in Poland in zloty

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	168 221 913	85 599 639	62 392 560	96 243 727	72 318 919	253 873 270	281 121 081	330 204 528	235 430 947	1 585 406 587
14	351 105 068	264 307 206	201 316 035	271 796 326	158 512 157	318 544 570	146 792 816	156 502 034	280 992 143	2 149 868 353
20	83 755 922	106 144 640	94 402 692	191 005 591	157 745 943	565 218 686	358 599 357	149 175 203	116 777 917	1 822 825 950
31	0	21 110	0	0	0	0	0	0	0	21 110
32	126 473 619	119 944 669	103 683 878	158 995 592	76 708 530	89 114 422	19 448 840	12 631 717	8 535 270	715 536 537
33	0	0	0	0	0	0	0	0	0	0
34	4 793 281	5 306 507	5 999 254	13 481 610	11 411 371	43 412 384	39 620 349	37 346 888	50 426 785	211 798 428
41	179 567 107	170 202 793	194 012 484	350 090 774	233 111 323	300 548 086	21 794 342	6 666 160	4 845 350	1 460 838 420
42	13 470 765	12 664 067	7 412 600	10 662 377	7 160 061	15 492 873	7 371 394	2 446 535	10 213 158	86 893 830
43	160 891 504	135 214 608	145 064 012	299 652 305	279 913 158	642 920 250	118 682 090	44 969 880	66 389 272	1 893 697 079
44	39 672 124	15 959 713	11 242 934	12 698 687	5 592 863	8 047 905	1 114 574	1 173 302	0	95 502 104
50	167 732 849	185 179 525	200 256 013	425 957 541	425 219 634	1 540 165 977	1 001 078 974	442 810 662	852 373 549	5 240 774 723
60	469 976 184	403 777 565	310 336 197	364 969 914	189 711 493	278 405 157	52 187 626	54 354 945	205 324 673	2 329 043 754
71	501 240 969	525 718 313	483 096 043	720 325 539	433 580 876	603 112 189	66 769 961	28 373 731	154 059 777	3 516 277 399
72	414 734 823	545 382 735	523 680 918	837 445 202	580 550 693	1 139 797 548	179 543 398	36 277 096	311 238 628	4 568 651 041
81	649 953 694	420 863 404	292 040 909	390 731 966	235 059 573	388 497 965	85 960 992	175 194 718	621 100 504	3 259 403 724
82	490 927 391	469 782 238	371 399 684	517 158 951	323 511 361	691 378 751	245 758 780	201 315 232	322 073 836	3 633 306 225
TOTAL	3 822 517 213	3 466 068 732	3 006 336 215	4 661 216 102	3 190 107 956	6 878 530 035	2 625 844 574	1 679 442 631	3 239 781 808	32 569 845 265

Table 14 Utilised agricultural area in region 785 in ha

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	42 247	26 074	26 515	37 243	31 889	110 846	151 356	167 624	115 813	709 608
14	25 449	17 034	11 783	19 624	14 540	45 350	26 923	36 969	67 377	265 049
20	831	681	529	791	577	1 670	780	534	688	7 081
31	0	0	0	0	0	0	0	0	0	0
32	5 105	1 564	11 346	20 118	622	59 575	699	10 980	3 752	113 761
33	0	0	0	0	0	0	0	0	0	0
34	77	225	88	253	137	437	470	374	691	2 752
41	8 758	10 636	13 324	27 510	21 175	32 995	6 085	1 353	1 604	123 441
42	1 290	834	697	934	502	912	440	320	1 068	6 996
43	9 018	9 988	14 454	26 856	21 725	44 202	10 143	6 788	6 501	149 675
44	3 041	1 775	1 066	1 455	787	694	117	0	0	8 936
50	4 355	5 455	5 709	11 706	11 351	42 838	24 382	16 299	49 649	171 743
60	20 732	18 821	16 074	20 865	12 152	26 869	5 863	6 418	33 759	161 552
71	15 634	21 667	23 676	41 566	23 981	36 056	5 245	3 957	9 855	181 637
72	9 490	14 857	18 180	30 046	19 528	33 267	6 237	1 394	29 532	162 531
81	29 813	25 284	18 800	25 853	20 733	46 515	20 981	45 267	92 460	325 705
82	24 721	27 055	23 367	33 309	24 011	61 255	28 447	33 119	56 342	311 626
TOTAL	200 562	181 951	185 607	298 128	203 711	543 481	288 168	331 395	469 091	2 702 094

Table 15 Utilised agricultural area in region 790 in ha

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	75 650	38 687	27 071	41 198	29 228	96 069	108 917	123 112	70 599	610 533
14	45 191	35 993	27 949	43 314	29 314	65 883	29 821	42 270	81 874	401 609
20	1 674	2 046	1 448	2 434	1 791	4 959	2 703	576	1 792	19 423
31	0	0	0	0	0	0	0	0	0	0
32	4 627	2 586	2 609	12 145	2 147	3 393	1 435	928	2 787	32 655
33	0	0	0	0	0	0	0	0	0	0
34	131	195	98	260	318	1 236	775	1 073	1 257	5 343
41	4 446	4 528	5 487	11 217	7 899	15 357	1 325	378	0	50 637
42	757	534	389	351	523	1 076	118	97	344	4 188
43	5 579	5 291	5 048	10 500	9 828	30 444	9 078	5 063	12 878	93 709
44	2 376	846	595	504	157	858	29	0	0	5 365
50	14 999	18 177	21 036	45 357	45 295	154 715	72 475	22 345	40 195	434 593
60	33 507	30 959	25 414	36 376	21 692	40 007	8 828	11 666	98 303	306 751
71	17 445	23 437	25 986	46 565	35 988	66 364	9 406	4 786	37 041	267 019
72	22 157	37 999	44 463	87 916	70 679	154 626	25 073	7 246	50 000	500 159
81	34 375	27 728	21 317	34 385	25 495	51 281	14 503	51 654	185 662	446 401
82	57 555	66 106	56 261	88 875	61 481	146 090	52 757	44 053	71 566	644 742
TOTAL	320 469	295 111	265 170	461 397	341 834	832 357	337 243	315 246	654 298	3 823 127



Table 16 Utilised agricultural area in region 795 in ha

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	48 653	19 087	10 408	13 552	7 851	29 124	19 841	13 169	16 758	178 444
14	101 629	57 906	36 685	43 401	20 186	27 040	11 787	10 840	10 943	320 418
20	3 059	3 369	2 462	6 027	4 772	15 942	5 122	992	656	42 400
31	0	6	0	0	0	0	0	0	0	6
32	25 466	23 552	20 511	33 767	14 298	29 747	2 771	1 059	0	151 171
33	0	0	0	0	0	0	0	0	0	0
34	425	408	371	720	566	1 727	1 686	922	2 568	9 394
41	52 843	52 515	56 535	91 107	52 825	53 858	3 343	951	0	363 976
42	3 169	2 739	1 362	1 742	1 101	1 636	737	70	0	12 556
43	32 559	32 630	32 251	60 927	53 354	102 538	11 994	4 749	3 644	334 647
44	10 622	4 190	3 088	2 862	984	1 385	54	0	0	23 184
50	19 064	18 947	16 900	28 903	23 472	61 175	28 947	8 729	10 748	216 885
60	139 203	98 491	64 096	62 738	25 998	26 601	4 669	5 257	3 854	430 907
71	125 076	146 767	122 435	155 815	76 164	68 785	4 049	1 843	3 200	704 132
72	82 160	106 907	89 148	109 510	55 738	67 389	7 065	1 638	5 821	525 377
81	223 883	132 221	82 032	94 200	45 227	49 124	8 098	10 857	14 085	659 727
82	109 423	84 774	53 637	56 725	26 549	33 611	13 477	13 704	9 679	401 579
TOTAL	977 233	784 509	591 921	761 996	409 086	569 681	123 641	74 782	81 956	4 374 804

Table 17 Utilised agricultural area in region 800 in ha

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	11 823	5 386	3 167	6 596	4 143	18 211	16 785	11 046	6 254	83 410
14	30 464	16 928	11 794	12 759	6 103	9 925	6 710	2 987	4 052	101 723
20	2 524	2 676	1 827	3 070	1 708	3 903	1 087	290	491	17 577
31	0	0	0	0	0	0	0	0	0	0
32	12 753	20 241	3 389	2 971	746	1 502	539	176	644	42 960
33	0	0	0	0	0	0	0	0	0	0
34	248	209	140	250	180	501	302	416	152	2 400
41	26 122	9 952	4 971	4 345	1 648	1 810	160	205	0	49 214
42	806	426	179	144	45	164	697	0	0	2 460
43	22 554	7 731	4 003	4 846	2 856	3 816	3 353	2 068	3 150	54 378
44	7 082	1 652	539	314	113	790	157	620	0	11 266
50	6 948	6 192	5 380	7 907	6 031	12 387	6 822	3 297	5 266	60 228
60	58 242	31 102	18 269	16 142	5 923	5 348	1 578	2 656	0	139 260
71	67 216	23 794	11 290	8 529	2 927	3 038	846	1 497	1 792	120 929
72	40 451	28 280	15 528	15 341	5 658	6 684	966	727	2 995	116 631
81	94 292	25 339	10 390	9 428	3 157	4 181	3 389	1 334	13 024	164 535
82	43 890	25 056	16 159	17 054	8 359	15 036	8 116	6 541	4 197	144 408
TOTAL	425 415	204 965	107 027	109 697	49 594	87 295	51 508	33 860	42 017	1 111 378

Table 18 Utilised agricultural area in Poland in ha

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	178 374	89 235	67 161	98 589	73 111	254 250	296 900	314 951	209 424	1 581 995
14	202 733	127 862	88 212	119 099	70 144	148 198	75 240	93 067	164 245	1 088 800
20	8 089	8 771	6 267	12 323	8 846	26 473	9 693	2 392	3 626	86 481
31	0	6	0	0	0	0	0	0	0	6
32	47 951	47 943	37 854	69 001	17 813	94 216	5 445	13 142	7 183	340 547
33	0	0	0	0	0	0	0	0	0	0
34	881	1 038	697	1 483	1 201	3 901	3 234	2 786	4 668	19 889
41	92 169	77 630	80 317	134 179	83 548	104 021	10 913	2 888	1 604	587 268
42	6 022	4 533	2 626	3 171	2 170	3 787	1 992	487	1 412	26 200
43	69 711	55 640	55 757	103 129	87 762	180 999	34 568	18 668	26 173	632 408
44	23 122	8 463	5 288	5 135	2 041	3 726	356	620	0	48 751
50	45 365	48 771	49 025	93 873	86 149	271 114	132 626	50 670	105 857	883 450
60	251 683	179 373	123 853	136 120	65 766	98 826	20 938	25 996	135 916	1 038 470
71	225 371	215 664	183 387	252 475	139 060	174 243	19 546	12 084	51 888	1 273 716
72	154 258	188 043	167 319	242 813	151 603	261 966	39 342	11 005	88 349	1 304 698
81	382 363	210 572	132 539	163 865	94 612	151 102	46 971	109 112	305 231	1 596 367
82	235 588	202 992	149 424	195 963	120 400	255 993	102 796	97 417	141 784	1 502 355
TOTAL	1 923 679	1 466 536	1 149 724	1 631 218	1 004 225	2 032 815	800 560	755 284	1 247 362	12 011 403

Table 19 Livestock units in region 785

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	876	605	532	1 003	826	2 914	2 439	2 859	4 872	16 926
14	2 251	1 872	1 472	2 673	2 076	5 392	1 856	3 473	5 657	26 721
20	32	44	30	27	44	87	46	4	1	314
31	0	0	0	0	0	0	0	0	0	0
32	15	17	7	1	0	10	0	26	0	77
33	0	0	0	0	0	0	0	0	0	0
34	1	7	6	2	0	16	3	2	0	38
41	5 261	7 543	10 635	23 881	19 394	29 439	3 880	1 068	1 688	102 790
42	537	454	491	613	434	604	496	227	2 046	5 902
43	4 828	6 839	10 359	22 687	19 551	39 114	7 137	3 507	3 143	117 166
44	1 544	1 050	780	1 151	676	768	64	0	0	6 033
50	5 366	5 367	6 571	15 109	15 463	61 967	37 162	19 565	128 065	294 634
60	5 419	6 243	5 597	7 680	4 562	9 163	1 364	2 015	12 187	54 231
71	8 532	14 579	18 187	34 224	20 311	30 414	4 259	1 989	5 508	138 004
72	7 184	12 346	16 952	31 425	21 871	38 168	7 024	1 189	27 596	163 755
81	9 632	10 373	8 610	12 745	10 080	22 895	8 182	12 735	26 861	122 112
82	9 544	12 688	11 571	17 577	12 726	30 590	11 145	11 890	26 865	144 597
TOTAL	61 023	80 027	91 800	170 798	128 014	271 543	85 056	60 547	244 490	1 193 298

Table 20 Livestock units in region 790

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	2 396	1 760	1 084	1 653	1 010	3 273	2 082	2 832	3 209	19 298
14	7 849	8 991	8 638	11 395	6 005	10 147	2 451	4 772	10 952	71 200
20	77	163	133	257	245	918	291	43	513	2 640
31	0	0	0	0	0	0	0	0	0	0
32	30	35	24	65	38	37	4	0	150	382
33	0	0	0	0	0	0	0	0	0	0
34	2	12	1	15	19	10	9	25	132	225
41	3 510	3 938	5 638	12 180	9 252	18 382	1 374	573	0	54 845
42	440	376	269	340	349	1 163	183	89	740	3 948
43	3 656	4 312	4 580	10 730	11 156	36 271	9 481	4 210	9 182	93 577
44	1 306	681	435	483	134	789	74	0	0	3 902
50	21 874	25 059	30 000	70 935	78 310	311 442	172 275	49 660	119 486	879 040
60	9 899	11 850	11 128	17 342	10 729	19 532	3 032	2 977	22 186	108 677
71	12 703	19 219	24 025	47 872	40 987	81 987	11 264	3 738	32 389	274 185
72	20 747	37 947	48 727	108 707	99 181	246 513	41 146	7 288	55 801	666 056
81	14 048	14 042	12 404	22 277	17 127	34 906	7 318	17 529	83 518	223 167
82	29 017	40 276	38 617	65 153	45 068	107 403	33 842	20 251	41 919	421 545
TOTAL	127 553	168 659	185 702	369 403	319 609	872 772	284 825	113 987	380 177	2 822 687

Table 21 Livestock units in region 795

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	1 780	1 021	405	427	216	541	1 157	184	351	6 083
14	18 998	14 104	9 591	10 931	4 368	3 759	499	470	1 164	63 884
20	189	371	377	1 438	1 340	5 519	1 497	154	12	10 895
31	0	0	0	0	0	0	0	0	0	0
32	560	719	742	964	369	263	37	0	0	3 655
33	0	0	0	0	0	0	0	0	0	0
34	13	20	18	67	42	116	12	6	0	294
41	37 634	44 077	52 884	92 943	58 093	63 135	3 021	443	0	352 229
42	1 255	1 429	930	1 375	1 003	1 713	830	117	0	8 652
43	20 479	23 751	26 452	56 270	53 914	113 276	14 291	3 296	2 081	313 810
44	7 339	3 248	2 479	2 619	1 037	1 399	42	0	0	18 164
50	20 250	22 484	21 835	39 976	37 390	118 636	81 092	32 694	26 731	401 087
60	44 478	38 597	27 168	27 467	11 749	10 102	781	941	371	161 653
71	84 937	110 660	100 771	139 254	72 979	70 691	3 731	1 234	2 386	586 642
72	67 973	97 493	88 482	120 281	67 294	92 367	11 015	1 613	6 719	553 237
81	96 076	66 489	45 554	56 680	28 546	31 857	3 021	3 580	4 615	336 418
82	55 171	49 506	33 933	37 678	17 765	21 872	6 127	6 013	4 542	232 607
TOTAL	457 131	473 971	411 619	588 369	356 105	535 247	127 153	50 744	48 971	3 049 309

Table 22 Livestock units in region 800

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	639	203	235	274	84	496	501	388	490	3 310
14	6 694	4 070	3 051	2 880	1 101	1 040	368	314	1 140	20 657
20	265	412	238	633	376	1 011	220	14	5	3 174
31	0	0	0	0	0	0	0	0	0	0
32	326	162	89	61	11	8	0	0	0	656
33	0	0	0	0	0	0	0	0	0	0
34	12	17	11	22	7	23	3	0	0	95
41	24 493	10 342	5 534	4 811	1 896	2 078	98	196	0	49 447
42	460	282	137	141	58	192	643	0	0	1 914
43	18 468	7 283	4 072	5 066	2 780	4 228	1 956	1 703	2 401	47 958
44	5 249	1 127	290	296	53	348	0	567	0	7 930
50	10 764	10 359	9 540	15 050	11 817	27 459	16 757	7 743	14 605	124 092
60	24 906	15 277	9 356	8 595	2 751	2 158	269	823	0	64 135
71	55 755	22 611	11 497	9 396	3 006	3 224	803	1 081	1 166	108 538
72	44 137	33 682	20 027	20 503	7 863	9 108	748	930	2 944	139 941
81	51 560	16 037	7 059	6 376	2 133	1 952	1 166	487	5 255	92 025
82	28 137	18 113	12 554	13 275	6 225	9 828	3 983	3 103	2 131	97 346
TOTAL	271 864	139 977	83 690	87 379	40 159	63 154	27 515	17 347	30 136	761 220

Table 23 Livestock units in Poland

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	5 690	3 589	2 256	3 358	2 137	7 224	6 179	6 262	8 922	45 617
14	35 791	29 037	22 751	27 879	13 549	20 338	5 175	9 028	18 913	182 461
20	562	990	779	2 354	2 004	7 535	2 054	214	532	17 024
31	0	0	0	0	0	0	0	0	0	0
32	930	933	862	1 091	418	318	41	26	150	4 769
33	0	0	0	0	0	0	0	0	0	0
34	29	56	36	106	69	165	26	34	132	652
41	70 898	65 900	74 691	133 814	88 634	113 035	8 373	2 279	1 688	559 312
42	2 692	2 541	1 827	2 468	1 844	3 673	2 152	433	2 786	20 416
43	47 431	42 186	45 464	94 753	87 401	192 889	32 865	12 716	16 806	572 510
44	15 439	6 106	3 984	4 550	1 899	3 304	180	567	0	36 029
50	58 254	63 269	67 945	141 070	142 979	519 503	307 285	109 661	288 887	1 698 853
60	84 702	71 967	53 248	61 083	29 792	40 956	5 446	6 756	34 744	388 695
71	161 927	167 068	154 480	230 746	137 283	186 317	20 057	8 042	41 449	1 107 369
72	140 041	181 468	174 189	280 916	196 208	386 156	59 932	11 020	93 060	1 522 990
81	171 316	106 942	73 627	98 077	57 885	91 611	19 686	34 330	120 249	773 723
82	121 869	120 583	96 674	133 684	81 784	169 693	55 097	41 256	75 456	896 095
TOTAL	917 571	862 634	772 811	1 215 950	843 886	1 742 716	524 549	242 625	703 774	7 826 515



Table 24 Annual work unit in region 785

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	2 206	1 025	738	945	807	1 869	2 093	2 766	2 347	14 795
14	2 935	1 692	1 013	1 374	878	1 772	714	1 023	2 648	14 048
20	457	368	330	410	364	737	268	203	114	3 251
31	0	0	0	0	0	0	0	0	0	0
32	226	175	76	96	63	52	70	151	73	983
33	0	0	0	0	0	0	0	0	0	0
34	30	22	33	70	16	95	187	75	30	559
41	1 290	1 302	1 465	2 555	1 601	1 762	127	53	26	10 181
42	123	83	61	47	29	36	12	2	15	408
43	1 246	1 290	1 514	2 620	1 735	2 419	274	233	275	11 606
44	337	213	127	135	99	44	3	0	0	958
50	1 097	861	861	1 622	1 286	3 170	1 463	1 019	4 357	15 736
60	3 006	2 335	1 525	1 656	795	1 114	142	175	1 568	12 316
71	2 717	3 106	2 962	4 181	1 889	2 042	178	86	694	17 855
72	1 956	2 420	2 486	3 499	1 789	2 114	211	68	691	15 233
81	3 909	2 820	1 761	2 010	1 222	2 016	555	1 624	4 089	20 006
82	3 895	3 354	2 321	2 637	1 394	2 403	698	720	2 295	19 717
TOTAL	25 431	21 065	17 272	23 857	13 967	21 643	6 996	8 198	19 223	157 653

Table 25 Annual work unit in region 790

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	5 983	2 255	1 283	1 543	891	2 050	1 631	2 684	2 423	20 742
14	7 717	5 095	3 298	3 999	2 134	3 401	1 033	1 642	4 077	32 396
20	1 500	1 562	1 217	1 732	1 082	2 765	1 033	336	838	12 065
31	0	0	0	0	0	0	0	0	0	0
32	726	572	428	524	346	442	93	167	106	3 403
33	0	0	0	0	0	0	0	0	0	0
34	41	40	75	84	74	283	168	139	101	1 005
41	962	777	856	1 409	853	1 154	48	19	0	6 078
42	158	75	50	45	26	949	12	21	614	1 951
43	1 159	927	754	1 396	1 096	2 555	438	275	876	9 476
44	370	127	68	107	12	128	4	0	0	814
50	5 114	4 378	4 141	7 594	6 367	15 947	5 017	1 324	3 895	53 776
60	6 434	4 922	3 484	4 271	2 065	2 763	375	478	2 970	27 763
71	4 464	4 548	4 307	6 558	4 183	6 009	458	165	3 498	34 189
72	6 399	8 300	8 134	13 476	9 177	15 166	1 383	116	3 148	65 299
81	6 126	4 328	2 852	3 862	2 283	3 245	556	2 021	15 567	40 841
82	12 058	10 896	7 852	10 014	5 471	8 588	1 548	1 301	2 726	60 454
TOTAL	59 208	48 802	38 800	56 615	36 060	65 446	13 797	10 686	40 838	370 251

Table 26 Annual work unit in region 795

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	3 471	998	457	443	213	780	508	209	348	7 428
14	18 078	9 184	5 107	4 795	1 822	1 843	558	250	541	42 178
20	1 681	1 806	1 335	2 561	1 845	5 126	1 673	356	614	16 995
31	0	1	0	0	0	0	0	0	0	1
32	7 096	6 526	5 164	6 988	2 864	2 458	294	88	0	31 477
33	0	0	0	0	0	0	0	0	0	0
34	131	130	110	162	129	420	283	215	153	1 733
41	11 260	8 823	8 022	10 638	5 091	3 989	96	22	0	47 942
42	623	456	174	235	118	138	52	8	0	1 804
43	7 243	5 653	4 883	7 733	5 692	8 377	655	195	196	40 627
44	2 388	686	425	328	97	81	4	0	0	4 009
50	5 174	4 070	3 091	4 543	3 200	6 520	2 287	1 472	662	31 021
60	28 898	17 853	10 072	8 083	2 869	2 177	306	175	364	70 797
71	30 853	27 492	18 783	19 480	7 686	5 439	210	204	458	110 605
72	21 554	21 908	15 118	15 368	6 289	5 821	398	138	300	86 892
81	44 446	21 074	11 040	10 357	3 910	3 165	213	444	992	95 640
82	23 233	14 487	7 639	6 394	2 344	2 033	455	551	411	57 546
TOTAL	206 129	141 146	91 418	98 107	44 168	48 367	7 991	4 326	5 039	646 693

Table 27 Annual work unit in region 800

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	1 123	319	225	221	95	576	323	446	156	3 484
14	8 442	4 262	2 581	2 109	736	674	209	75	334	19 422
20	1 786	1 786	1 220	2 045	1 032	1 994	654	314	438	11 269
31	0	0	0	0	0	0	0	0	0	0
32	2 441	1 361	774	633	129	173	33	6	124	5 675
33	0	0	0	0	0	0	0	0	0	0
34	113	70	65	158	83	192	137	109	2	930
41	8 199	2 182	851	573	176	137	4	0	0	12 121
42	261	118	30	23	12	16	27	0	0	486
43	7 844	1 854	744	704	277	300	165	103	233	12 225
44	2 063	298	64	53	12	42	2	110	0	2 644
50	2 727	1 833	1 443	1 678	1 105	1 739	819	506	312	12 162
60	16 765	7 572	3 885	2 846	835	699	62	108	0	32 771
71	22 744	5 909	2 202	1 326	326	243	150	804	127	33 831
72	14 837	7 604	3 334	2 567	737	647	20	69	233	30 049
81	25 479	5 216	1 729	1 170	278	321	171	56	841	35 262
82	12 216	5 378	2 968	2 327	840	794	228	118	87	24 956
TOTAL	127 040	45 764	22 116	18 434	6 671	8 548	3 003	2 823	2 887	237 287

Table 28 Annual work unit in Poland

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	12 783	4 597	2 703	3 152	2 007	5 276	4 554	6 105	5 273	46 449
14	37 172	20 232	12 000	12 277	5 570	7 690	2 513	2 990	7 600	108 044
20	5 424	5 521	4 103	6 747	4 322	10 621	3 627	1 208	2 004	43 578
31	0	1	0	0	0	0	0	0	0	1
32	10 488	8 634	6 441	8 241	3 402	3 126	491	412	302	41 538
33	0	0	0	0	0	0	0	0	0	0
34	315	262	283	474	303	989	776	538	286	4 226
41	21 712	13 084	11 193	15 176	7 721	7 041	275	94	26	76 322
42	1 165	733	315	350	184	1 139	103	31	629	4 649
43	17 491	9 725	7 895	12 454	8 799	13 651	1 532	806	1 580	73 934
44	5 158	1 323	684	624	219	295	12	110	0	8 425
50	14 111	11 141	9 536	15 437	11 958	27 377	9 587	4 321	9 227	112 695
60	55 103	32 682	18 967	16 855	6 564	6 752	885	936	4 903	143 647
71	60 777	41 055	28 253	31 545	14 084	13 734	996	1 259	4 777	196 480
72	44 746	40 232	29 071	34 910	17 992	23 748	2 013	391	4 371	197 474
81	79 960	33 438	17 383	17 400	7 693	8 747	1 495	4 144	21 489	191 749
82	51 402	34 116	20 780	21 372	10 049	13 818	2 929	2 689	5 519	162 673
TOTAL	417 808	256 778	169 607	197 013	100 866	144 004	31 788	26 034	67 987	1 411 884

Table 29 Number of holdings in region 785

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	2 370	861	543	650	412	849	401	217	57	6 360
14	2 532	1 079	603	755	418	722	164	75	41	6 389
20	535	310	241	275	192	333	93	30	8	2 017
31	0	0	0	0	0	0	0	0	0	0
32	283	128	51	51	17	27	8	8	2	575
33	0	0	0	0	0	0	0	0	0	0
34	30	21	20	34	17	45	22	7	5	201
41	937	799	819	1 315	774	754	39	4	2	5 443
42	107	54	41	36	18	21	6	1	1	285
43	981	810	880	1 386	870	1 095	86	15	7	6 130
44	227	99	60	62	29	17	1	0	0	495
50	1 017	615	557	935	707	1 549	531	149	72	6 132
60	2 053	1 335	855	855	359	469	35	16	21	5 998
71	1 815	1 844	1 628	2 156	920	902	50	8	8	9 331
72	1 406	1 494	1 445	1 868	912	986	77	4	13	8 205
81	2 651	1 691	999	1 059	605	888	125	76	59	8 153
82	3 084	2 139	1 358	1 460	737	1 087	187	75	46	10 173
TOTAL	20 028	13 279	10 100	12 897	6 987	9 744	1 825	685	342	75 887

Table 30 Number of holdings in region 790

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	6 446	1 896	971	1 025	513	984	408	205	52	12 500
14	5 896	3 109	1 817	2 053	973	1 346	241	100	64	15 599
20	1 755	1 320	832	1 081	599	1 193	340	67	16	7 203
31	0	0	0	0	0	0	0	0	0	0
32	793	376	201	225	119	115	14	4	2	1 849
33	0	0	0	0	0	0	0	0	0	0
34	51	36	34	66	46	101	42	22	6	404
41	692	465	477	735	403	497	16	3	0	3 288
42	127	64	38	32	19	33	4	1	1	319
43	920	604	443	750	548	1 099	139	19	17	4 539
44	236	75	40	31	8	20	1	0	0	411
50	4 809	3 254	2 721	4 568	3 507	7 850	1 986	275	116	29 086
60	4 428	2 952	1 920	2 158	964	1 121	94	37	38	13 712
71	3 043	2 718	2 396	3 373	2 046	2 589	157	18	23	16 363
72	4 572	5 087	4 634	7 196	4 597	6 871	513	34	52	33 556
81	4 252	2 557	1 592	1 999	1 109	1 396	124	108	134	13 271
82	9 109	6 930	4 531	5 406	2 733	3 959	570	134	82	33 454
TOTAL	47 129	31 443	22 647	30 698	18 184	29 174	4 649	1 027	603	185 554

Table 31 Number of holdings in region 795

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	3 207	735	288	266	115	208	65	21	10	4 915
14	12 599	5 040	2 532	2 180	740	593	82	27	11	23 804
20	1 880	1 553	912	1 570	999	2 421	649	88	13	10 085
31	0	1	0	0	0	0	0	0	0	1
32	6 404	3 907	2 554	2 930	994	685	44	4	0	17 522
33	0	0	0	0	0	0	0	0	0	0
34	153	111	86	125	73	149	64	17	9	787
41	7 182	4 897	4 154	5 201	2 316	1 686	30	1	0	25 467
42	622	356	129	148	64	81	11	2	0	1 413
43	5 109	3 379	2 685	3 929	2 704	3 654	224	18	6	21 708
44	1 496	375	210	162	45	36	2	0	0	2 326
50	4 300	2 821	1 948	2 629	1 700	3 120	883	160	35	17 596
60	18 238	9 363	4 903	3 715	1 235	829	53	14	6	38 356
71	18 765	14 900	9 580	9 428	3 535	2 315	53	6	4	58 586
72	14 264	12 603	8 120	7 762	3 007	2 578	127	7	6	48 474
81	27 517	11 349	5 516	4 890	1 756	1 310	52	24	12	52 426
82	15 454	8 157	3 967	3 210	1 093	872	102	38	11	32 904
TOTAL	137 190	79 547	47 584	48 145	20 376	20 537	2 441	427	123	356 370



Table 32 Number of holdings in region 800

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	919	210	103	131	60	155	53	18	4	1 653
14	5 126	2 111	1 168	907	293	235	47	7	4	9 898
20	1 945	1 380	833	1 170	589	969	244	32	9	7 171
31	0	0	0	0	0	0	0	0	0	0
32	1 851	707	336	244	45	44	7	1	1	3 236
33	0	0	0	0	0	0	0	0	0	0
34	111	60	37	63	35	72	17	7	1	403
41	4 401	1 063	404	255	72	50	1	1	0	6 247
42	207	66	20	14	7	6	4	0	0	324
43	4 859	967	368	325	125	125	19	7	4	6 799
44	1 128	146	33	21	4	4	1	1	0	1 338
50	2 072	1 193	820	922	530	771	229	60	19	6 616
60	9 560	3 725	1 784	1 224	356	220	16	5	0	16 890
71	12 810	2 955	1 043	601	135	98	8	5	2	17 657
72	8 844	4 033	1 680	1 225	326	252	8	3	5	16 376
81	14 406	2 566	794	524	122	73	17	3	11	18 516
82	7 812	2 929	1 436	1 112	372	346	56	19	6	14 088
TOTAL	76 051	24 111	10 859	8 738	3 071	3 420	727	169	66	127 212

Table 33 Number of holdings in Poland

ESU →	2 -< 4	4 -< 6	6 -< 8	8 -< 12	12 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	Total
↓ TF	ES 2	ES 3	ES 4	ES 5	ES 6	ES 7	ES 8	ES 9	ES10	
13	12 942	3 702	1 905	2 072	1 100	2 196	927	461	123	25 428
14	26 153	11 339	6 120	5 895	2 424	2 896	534	209	120	55 690
20	6 115	4 563	2 818	4 096	2 379	4 916	1 326	217	46	26 476
31	0	1	0	0	0	0	0	0	0	1
32	9 331	5 118	3 142	3 450	1 175	871	73	17	5	23 182
33	0	0	0	0	0	0	0	0	0	0
34	345	228	177	288	171	367	145	53	21	1 795
41	13 212	7 224	5 854	7 506	3 565	2 987	86	9	2	40 445
42	1 063	540	228	230	108	141	25	4	2	2 341
43	11 869	5 760	4 376	6 390	4 247	5 973	468	59	34	39 176
44	3 087	695	343	276	86	77	5	1	0	4 570
50	12 198	7 883	6 046	9 054	6 444	13 290	3 629	644	242	59 430
60	34 279	17 375	9 462	7 952	2 914	2 639	198	72	65	74 956
71	36 433	22 417	14 647	15 558	6 636	5 904	268	37	37	101 937
72	29 086	23 217	15 879	18 051	8 842	10 687	725	48	76	106 611
81	48 826	18 163	8 901	8 472	3 592	3 667	318	211	216	92 366
82	35 459	20 155	11 292	11 188	4 935	6 264	915	266	145	90 619
TOTAL	280 398	148 380	91 190	100 478	48 618	62 875	9 642	2 308	1 134	745 023

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## Rules for creating the representative sample

FADN deals with representative surveys, which means *inter alia* that the surveys are conducted on a randomly selected sample of agricultural holdings. To reflect the diversity of agricultural holdings in the best way, a method of estimating the sample prepared by the Polish statistician, Jerzy Neyman, so-called an optimal allocation was used. To this end, the observation field was divided, taking into account 3 criteria:

- geographical location - regions;
- economic size unit - classes of economic size units;
- agricultural type.

The sample size was established to cover about 12 100 agricultural holdings by way of negotiations with the European Commission. This means that the sample includes about 1.6% of the observation field (12 100 x 100 / 745 023).

After the sample size is established on the basis of changeability, the specimen sizes from particular layers are specified. The total number of specimens is the sample.

The Neyman's method was applied in its pure form. Application of standard deviation of only one characteristic, i.e. standard gross margin, was used in order to assess changeability. The formula applied has the following form:

$$n_i = n \times \frac{N_i \times \sigma_i}{\sum N_i \times \sigma_i}$$

where:

- n - number of agricultural holdings in the sample;
- i - number of the consecutive layer;
- n<sub>i</sub> - number of agricultural holdings in i/layer;
- N<sub>i</sub> - number of agricultural holdings in the observation field;
- σ<sub>i</sub> - standard deviation of standard gross margin in i/layer.

The most important feature of the applied method is the fact that the sample is in fact a sum of samples from particular layers.

Due to very large differences in changeability between classes of low economic size units and those of high economic size units, the observation field was divided into two groups: up to 100 ESUs and over 100 ESUs. Hence, the following sample sizes were established for the separated groups: 11 800 and 300 agricultural holdings.

A standard error of the average was calculated for both "samples" (it was respectively 94.2031 and 33 409.4384) according to the formula:

$$\sigma_{\bar{x}} = \sqrt{\frac{1}{n} \times \left( \frac{\sum N_i \times \sigma_i}{N} \right) - \frac{\sum N_i \times \sigma_i^2}{N^2}}$$

## **Structure of the sample of agricultural holdings under the Polish FADN**

The tables present the structure of the sample in particular regions and generally in Poland.

Table 34 Number of holdings and structure of the sample in region 785

		ESU						Total
		2 < 6	6 < 16	16 < 40	40 < 100	100 < 250	> 250	
ES →		2 - 3	4 - 6	7	8	9	10	2 - 14
<b>TF</b>	13, 14	55	69	74	71	6	8	283
	20	8	15	16	11	1	1	52
	31, 32, 33, 34	4	4	4	4	1	1	18
	41, 42, 43, 44	35	127	76	13	1	3	255
	50	14	46	75	65	3	70	273
	60	28	40	21	4	1	3	97
	71, 72	55	171	73	12	1	16	328
	81, 82	79	124	88	36	3	7	337
<b>TOTAL</b>		<b>278</b>	<b>596</b>	<b>427</b>	<b>216</b>	<b>17</b>	<b>109</b>	<b>1 643</b>

Table 35 Number of holdings and structure of the sample in region 790

		ESU						Total
		2 < 6	6 < 16	16 < 40	40 < 100	100 < 250	> 250	
ES →		2 - 3	4 - 6	7	8	9	10	2 - 14
<b>TF</b>	13, 14	139	144	107	78	6	7	481
	20	26	51	56	39	2	5	179
	31, 32, 33, 34	11	14	10	7	1	1	44
	41, 42, 43, 44	27	72	72	15	1	2	189
	50	69	224	370	210	5	34	912
	60	62	97	48	9	1	4	221
	71, 72	129	492	386	58	2	12	1 079
	81, 82	188	346	233	72	5	26	870
<b>TOTAL</b>		<b>651</b>	<b>1 440</b>	<b>1 282</b>	<b>488</b>	<b>23</b>	<b>91</b>	<b>3 975</b>

Table 36 Number of holdings and structure of the sample in region 795

		ESU						Total
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	
ES →		2 - 3	4 - 6	7	8	9	10	2 - 14
TF	13, 14	172	111	36	17	1	2	339
	20	30	72	109	72	2	4	289
	31, 32, 33, 34	90	124	34	11	1	2	262
	41, 42, 43, 44	196	430	206	25	2	0	859
	50	59	129	147	101	3	3	442
	60	221	173	34	6	4	0	438
	71, 72	494	761	181	17	1	2	1 456
	81, 82	496	368	84	19	2	2	971
<b>TOTAL</b>		<b>1 758</b>	<b>2 168</b>	<b>831</b>	<b>268</b>	<b>16</b>	<b>15</b>	<b>5 056</b>

Table 37 Number of holdings and structure of the sample in region 800

		ESU						Total
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	
ES →		2 - 3	4 - 6	7	8	9	10	2 - 14
TF	13, 14	68	47	18	12	1	2	148
	20	28	52	45	26	1	1	153
	31, 32, 33, 34	22	13	5	3	1	0	44
	41, 42, 43, 44	91	29	8	4	1	0	133
	50	27	46	34	26	2	4	139
	60	104	57	10	10	0	0	181
	71, 72	217	82	12	2	1	1	315
	81, 82	205	75	20	10	1	2	313
<b>TOTAL</b>		<b>762</b>	<b>401</b>	<b>152</b>	<b>93</b>	<b>8</b>	<b>10</b>	<b>1 426</b>

Table 38 Number of holdings and structure of the sample in Poland

		ESU						Total
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250	
ES →		2 - 3	4 - 6	7	8	9	10	2 - 14
TF	13, 14	434	371	235	178	14	19	1 251
	20	92	190	226	148	6	11	673
	31, 32, 33, 34	127	155	53	25	4	4	368
	41, 42, 43, 44	349	658	362	57	5	5	1 436
	50	169	445	626	402	13	111	1 766
	60	415	367	113	29	6	7	937
	71, 72	895	1 506	652	89	5	31	3 178
	81, 82	968	913	425	137	11	37	2 491
<b>TOTAL</b>		<b>3 449</b>	<b>4 605</b>	<b>2 692</b>	<b>1 065</b>	<b>64</b>	<b>225</b>	<b>12 100</b>

## Calculated weights

After the size of the sample of agricultural holdings was established, the weights (how many agricultural holdings from the observation field represented one agricultural holding in the sample) were calculated according to the formula:

$$w_i = \frac{N_i}{n_i}$$

where:

$w_i$  - weight of an agricultural holding in  $i$  layer.

The tables present weights in particular regions.

Table 39 Weights in region 785

		ESU					
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250
ES →		2 - 3	4 - 6	7	8	9	10
TF	13, 14	124,40	49,00	21,23	7,96	48,67	12,25
	20	105,63	47,20	20,81	8,45	30,00	8,00
	31, 32, 33, 34	115,50	47,50	18,00	7,50	15,00	7,00
	41, 42, 43, 44	114,69	49,53	24,83	10,15	20,00	3,33
	50	116,57	47,80	20,65	8,17	49,67	1,03
	60	121,00	51,73	22,33	8,75	16,00	7,00
	71, 72	119,25	52,22	25,86	10,58	12,00	1,31
	81, 82	121,08	50,15	22,44	8,67	50,33	15,00

Table 40 Weights in region 790

		ESU					
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250
ES →		2 - 3	4 - 6	7	8	9	10
TF	13, 14	124,80	51,06	21,78	8,32	50,83	16,57
	20	118,27	49,25	21,30	8,72	33,50	3,20
	31, 32, 33, 34	114,18	49,36	21,60	8,00	26,00	8,00
	41, 42, 43, 44	117,89	48,94	22,90	10,67	23,00	9,00
	50	116,86	48,20	21,22	9,46	55,00	3,41
	60	119,03	51,98	23,35	10,44	37,00	9,50
	71, 72	119,53	49,27	24,51	11,55	26,00	6,25
	81, 82	121,53	50,20	22,98	9,64	48,40	8,31

Table 41 Weights in region 795

		ESU					
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250
ES →		2 - 3	4 - 6	7	8	9	10
TF	13, 14	125,47	55,14	22,25	8,65	48,00	10,50
	20	114,43	48,35	22,21	9,01	44,00	3,25
	31, 32, 33, 34	117,51	54,53	24,53	9,82	21,00	4,50
	41, 42, 43, 44	119,47	50,57	26,49	10,68	13,50	-
	50	120,69	48,66	21,22	8,74	53,33	11,67
	60	124,89	56,95	24,38	8,83	5,00	-
	71, 72	122,53	54,44	27,03	10,59	13,00	5,00
	81, 82	125,96	55,52	25,98	8,11	31,00	11,50

Table 42 Weights in region 800

		ESU					
		2 -< 6	6 -< 16	16 -< 40	40 -< 100	100 -< 250	> 250
ES →		2 - 3	4 - 6	7	8	9	10
TF	13, 14	123,03	56,64	21,67	8,33	25,00	4,00
	20	118,75	49,85	21,53	9,38	32,00	9,00
	31, 32, 33, 34	124,05	58,46	23,20	8,00	10,00	-
	41, 42, 43, 44	141,07	56,83	23,13	6,25	13,00	-
	50	120,93	49,39	22,68	8,81	30,00	4,75
	60	127,74	59,02	22,00	2,10	-	-
	71, 72	131,99	61,10	29,17	8,00	8,00	7,00
	81, 82	135,19	58,13	20,95	7,30	22,00	8,50

## Rules for selection of agricultural holdings

The FADN survey is carried out mainly by the agency of the so-called accounting offices. They are centres of agricultural consulting or regional centres of consulting on development of agriculture and rural areas. In total, there are 26 accounting offices in Poland. The survey is supervised by IAEFE.

The agricultural holdings were selected through finding appropriate agricultural holdings by the employees of the accounting offices.

They were supplied with questionnaire forms, which made it possible to calculate (after entering the data in computer databases and activating of classification algorithm) the economic size unit and agricultural type, and then decide whether the surveyed agricultural holding was suitable for FADN survey.

In view of necessity to simplify the farm selection procedures, it has been decided to aggregate some stratum.

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First of all, classes ES 2 and ES 3, as well as classes ES 4, 5 and 6 in all types of farming has been brought together. In particular regions, classes within types have been aggregated starting from ES 9 in view of the low amount of farms in single classes of observation field.

In schedules with the quantities and structure of sample, all the aggregations have been marked using double frame.

## **Final remarks**

The presented plan of the selection of a sample of agricultural holdings entered into force in the accounting year 2004.

The plan will be updated in the accounting year 2006. The SGM“2002” coefficients will be then used for classification of agricultural holdings.

Regardless of that, every year a part of agricultural holdings in the sample will be exchanged so that the plan of selection could be accomplished in the best way.