



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



**INSTITUTE OF AGRICULTURAL
AND FOOD ECONOMICS
NATIONAL RESEARCH INSTITUTE**

**The social aspects
of functioning of the small
agricultural holdings
in Poland and Bulgaria**

no 32.1
Warsaw 2011

Barbara Chmielewska
Bożena Karwat-Woźniak
Anna Mantarova
Plamena Yovchevska

**COMPETITIVENESS OF THE POLISH FOOD
ECONOMY UNDER THE CONDITIONS OF
GLOBALIZATION AND EUROPEAN INTEGRATION**



**The social aspects
of functioning of the small
agricultural holdings
in Poland and Bulgaria**



**INSTITUTE OF AGRICULTURAL
AND FOOD ECONOMICS
NATIONAL RESEARCH INSTITUTE**

The social aspects of functioning of the small agricultural holdings in Poland and Bulgaria

Scientific editors

dr inż. Agnieszka Wrzochalska

Authors:

dr inż. Barbara Chmielewska

dr inż. Bożena Karwat-Woźniak

*Prof Anna Mantarova, Institute for the Study
of Societies and Knowledge at BAS*

*Prof Plamena Yovchevska, Institute
of Agricultural Economics at AA, Sofia*



**COMPETITIVENESS OF THE POLISH FOOD
ECONOMY UNDER THE CONDITIONS OF
GLOBALIZATION AND EUROPEAN INTEGRATION**

Warsaw 2011

This publication was prepared as a contribution to the research on the following subject **Changes in the socio-economic structure of rural areas as a competitive factor of rural areas** within the framework of the research task *Human capital in the structural transformation process of rural areas and agriculture*.

The objective of this report is to define and analyse selected social aspects of the functioning of small farms in Poland and Bulgaria.

Reviewer

dr Tadeusz Kmiecinski

Translated by

Agit Thumaczenia

Technical editor

Leszek Ślipiski

Cover Project

AKME Projekt Sp. z o.o.

ISBN 978-83-7658-209-2

*Instytut Ekonomiki Rolnictwa i Gospodarki Żywnościowej
– Państwowy Instytut Badawczy
00-950 Warszawa, ul. Świętokrzyska 20, skr. poczt. nr 984
tel.: (22) 50 54 444
faks: (22) 50 54 636
e-mail: dw@ierigz.waw.pl
<http://www.ierigz.waw.pl>*

Introduction	7
Agnieszka Wrzochalska, PhD	
1. Semi-subsistence farms in the context of the future of CAP in Poland	12
Barbara Chmielewska, PhD	
1.1. A general description of holdings	12
1.1.1. Production directions and area	12
1.1.2. Holdings according to the proportion of direct sales	16
1.1.3. The demographic profile of holders of private farms	17
1.2. The economic situation of semi-subsistence holdings	19
1.2.1. The income of households of farmers according to farm budget surveys	20
1.3. The contribution of semi-subsistence farms in the provision of environmental public goods	24
1.3.1. Regional differentiation in supplying environmental public goods	26
2. The social and demographic structure of the semi-subsistence farm population	28
Bożena Karwat-Woźniak, PhD	
2.1. The family situation and demographic profile of the semi-subsistence farm population	28
2.2. The education level of the population	29
2.3. The demographic profile and enrolment level of holding managers	30
2.4. The vocational activeness of the population	32
3. Social significance of the small acreage agriculture in Bulgaria	36
Anna Mantarova, Assoc. Prof.; Plamena Yovchevska, Assoc. Prof	
3.1. Development of the CAP toward social aims	36
3.2. Environmental protection	37
3.3. High quality and healthy foods	44
Summary and conclusions	51
Literature	54

Introduction

The classification of agricultural holdings uses various criteria, which include legal and official, property, income, production, market, according to the profile of the user, etc. The definition and separation of private farm categories also used the criterion of commercial production value or economic size¹, since both of them determine the market position and economic strength of the holdings, and in turn the ability to compete.

The main determinant describing agricultural holdings in countries with low intensiveness of agricultural economy is assumed as the area of the land used. The main determinant describing agricultural holdings in countries with high intensiveness of agricultural economy is assumed as the value of sold production and the amount of obtained revenue (the role of land and labour as production factors is falling).

According to Art. 34 of the Council Resolution (EC No. 1698/2005), semi-subsistence (small commercial) agricultural holdings are those which “*produce primarily for their own consumption and also market a proportion of their output*”. This definition is based on the conviction that agricultural holdings are divided into semi-subsistence and typically commercial (commercial)², or in other words, unable to compete and holding the ability to compete³, in the transforming economic reality.

EU Member States have a comparable measure of farm size, which is the European Size Unit (ESU)⁴. This measure is particularly useful in a dynamic depiction, since it allows analysis in the conditions of a changing situation in the agricultural markets and agricultural environment⁵.

¹ The economic value of a holding expressed with the ESU number is defined by dividing the sum of the standard gross margins calculated in Euro by 1200.

² In Poland, there is also another, third holding group – non-commercial, which uses production exclusively for self-subsistence, i.e. the food needs of the family.

³ The competitive ability (ability to compete) is a permanent ability of the managing entities to acquire and preserve a share in the local, regional, domestic or even international markets under the conditions of access to the said markets [Józwiak 2009].

⁴ European Size Unit (ESU) – it is used to express the economic size (strength) of agricultural holdings, i.e. their profitability (1 ESU = 1200 EUR). The economic size (strength) of agricultural holdings is calculated on the basis of the “Regional Factors of Standard Gross Margins” (SGM). The Standard Gross Margin (SGM) for an agricultural product is the standard (three-year average in a defined region) production value obtained from 1 hectare or 1 animal, reduced by standard direct costs necessary to create this product.

⁵ “Let us assume that a small holding is a holding below 5 ha. With a reduction in production profitability due to market events/environmental changes, this limit could shift to 20-30 ha. This in turn would make it impossible or very difficult to conduct an analysis of the situation development in this holding group in time”. A. Chlebicka, J. Fałkowski, T. Wołek, 2009:

The ESU measure is a commonly-applied category in FADN surveys (Community Committee on the Farm Accountancy Data Network). In the case of FADN, the thresholds used to define commercial farms are different for different countries. According to the FADN methodology, a commercial farm is a farm in which the maintenance of the farm is the primary activity of the farmer, with revenue sufficient to support a family. In practice, in order for a farm to be classified as commercial, its size must exceed the minimum economic size. These sizes span from 1 ESU in Bulgaria and Romania (data for 2008) to 16 ESU in Germany, Netherlands and Great Britain⁶. In Poland, the minimum threshold of a farm's economic size is defined in the field of observation of the Polish FADN. This size has been defined at the level of 2 ESU.⁷

W. Poczta, J. Średzińska provide the following classification of farms according to their economic strength in ESU: very small (up to 4), small (4-8), medium small (8-16), medium large (16-40), large (40-100), and very large (100 and more)⁸.

Małe gospodarstwa w Polsce – charakterystyka (Small holdings in Poland – a description), Fund for Assistance Programmes for Agriculture (FAPA), Department of Economic Analyses of the Agricultural Policy (SAEPR), Warsaw, March 2009, p. 2.

⁶ S. Davidova (ed.), *Niskotowarowa gospodarka rolna w Europie: definicje i najważniejsze zagadnienia (Semi-subsistence agricultural economy in Europe: definitions and most significant issues)*, a study created for the needs of the seminar entitled *Niskotowarowa gospodarka rolna w UE: sytuacja dzisiaj i perspektywy na przyszłość* (“Semi-subsistence agricultural economy in the EU: present condition and future perspectives”), organised by the European Network for the Development of Rural Areas, which was held in Sybin, Romania, on 13-15.10.2010.

⁷ “In compliance with the guidelines of the European Commission Decision on the classification of agricultural holdings, 2,139,784 agricultural holdings were classified. This population produced approximately PLN 36.5 billion of SGM value. The structure of the creation of SGM value in Poland served as the basis to define the minimum threshold of the economic value of an agricultural holding under the observation area of the Polish FADN. This value has been defined at the level of 2 ESU. (...) The observation area of the Polish FADN covers over 745 thousand agricultural holdings, which comprise 89.3% of the SGM value produced by all the classified agricultural holdings in Poland. For the needs of the Polish FADN, a representative sample of 12,000 farms was appointed, which was accepted by the European Commission. This means that a single holding participating in the Polish FADN represents an average of approximately 62 holdings under the observation area. (...) The agricultural holdings operating in Poland were classified according to the typology mandatory in the EU (Commission Decision 85/377/EEA of 7 June 1985.” *Polski FADN, System zbierania i wykorzystywania danych rachunkowych z gospodarstw rolnych (The Polish FADN, A system of collecting and utilising accounting data from agricultural holdings)*, typescript, Ref: http://www.zodr.pl/download/ekonomia/FADN_DANE-GOSP.pdf, printout from 27.12.2010.

⁸ W. Poczta, J. Śledzińska, 2007: *Wyniki produkcyjno-ekonomiczne i finansowe indywidualnych gospodarstw rolnych według ich wielkości ekonomicznej (na przykładzie regionu FADN Wielkopolska i Śląsk)* (*The production, economic and financial results of private farms ac-*

On the basis of the research conducted in the years 2005-2007, W. Józwiak demonstrated that farms:

- with a size up to 8 ESU held a sub-parity “own labour fee” and negative reproduction of fixed capital;
- with a size of 8-16 ESU held a near-parity “own labour fee” and straight reproduction of fixed capital;
- with a size of 16 and more ESU held an above-parity “own labour fee” and expanded reproduction of fixed capital; they successfully compete with farms in other EU States”⁹.

The research supervised by A. Sikorska showed that “developmental capabilities are held by those farms, in which the revenue allows the payment of labour at the minimum level of the average remuneration in the national economy and for investments modernising and expanding the production capital”. Referring to the authors of the aforementioned research, it is possible to assume that holdings with an economic strength¹⁰:

- up to 8 ESU have no developmental capabilities, as the level of their agricultural revenue does not guarantee the achievement of the parity payment for personal labour (calculated per one full-time employee), constitutes less than half the average remuneration in the country, their average area was 9.5 ha of agricultural land;
- of 8-16 ESU are on the margin of competitive abilities, the level of produced agricultural revenue is sufficient for the parity payment of personal labour (calculated per one full-time employee) and slightly exceeds the average net remuneration in the country, in long-term perspective have the conditions for achieving competitive abilities, their average area was 19.8 ha of agricultural land;
- of 16-40 ESU achieve an average revenue (calculated per one full-time employee) approximately twice as high as the average remuneration in Poland, have full competitive abilities, their average area was 35.1 ha of agricultural land;

cording to their economic size [on the example of the FADN Greater Poland and Silesia region]). Rolnictwo światowe (Global agriculture), 2007, p. 435.

⁹ W. Józwiak, M. Zieliński (Economics of Farm Holdings Department, IAFE-NRI):

A projection of the economic condition of agricultural holdings from selected groups in 2013, presentation at the IAFE-NRI seminar, Warsaw, 16.10.2009.

¹⁰ *Instrumenty oddziaływania Państwa na kształtowanie struktury obszarowej gospodarstw rolnych w Polsce; rola systemu ubezpieczenia społecznego rolników w kształtowaniu tej struktury. Stan obecny i rekomendacje na przyszłość oraz predyspozycje nowych rozwiązań dotyczących tego obszaru dla systemu ubezpieczeń rolników (Instruments of the state's impact on the forming of the regional structure of agricultural holdings in Poland; the role of the system of social insurance for farmers in the formation of this structure. Present condition and recommendations for the future as well as predispositions of new solutions concerning this area for the farmer insurance system), group study supervised by A. Sikorska; authors: P. Chmieleński, L. Goraj, B. Karwat-Woźniak, A. Kowalski, A. Sikorska, expert study for the Ministry of Agriculture and Rural Development, typescript, Warszawa, 2009, p. 71.*

- above 40 ESU have high developmental capabilities and hold a significant competitive advantage, achieve high agricultural revenue (calculated per one full-time employee), are able to finance expensive and multi-oriented investments, their average area was 189.2 ha of agricultural land.

J. St. Zegar states that “in the conditions of Polish agriculture, economically viable farms are usually assumed as those with a minimum economic size of 8 ESU”¹¹. “At the time of pursuing subsidies, the criterion of the economic viability of farms assumed at the level of a minimum of 4 ESU was fulfilled by 93.4% of the beneficiaries. The economic size of almost half the farms (47.5%) is at the level of 16 ESU and higher”¹².

Poland’s integration with the EU produced a need to define the basic concepts concerning agricultural holdings. On its website, The Ministry of Agriculture and Rural Development published a definition of the PROW concepts selections of which (those directly concerning agricultural holdings) are used in this publication. A semi-subsistence farm is assumed as an agricultural holding with an economic size measured with the value of standard gross margins between 2 ESU and 4 ESU¹³.

For the needs of this analysis, a *semi-subsistence farm* is assumed as an agricultural holding with an economic strength between 2 and 8 ESU, which corresponds to an average area of approximately 10 ha of agricultural land. *Other commercial farms* (including large commercial farms) are assumed as holdings with an economic strength above 8 ESU, which corresponds to an average area of approximately 30 ha of agricultural land. To make things easier, the publication uses the terms *other commercial* or simply *other* referring to a private farm with an economic strength above 8 ESU.

The objective of this report is to define and analyse selected social aspects of the functioning of small farms in Poland and Bulgaria. The first chapter includes a description of the features of semi-subsistence farms in Poland in the context of the future of the CAP. The second chapter focusses on the socio-demographic structure of the population of semi-subsistence farms. The third

¹¹ J. St. Zegar: *Ekonomicznie żywotne gospodarstwa rolne użytkowane przez nierolników (Economically viable agricultural holdings used by non-farmers)*. Statistical News No. 7/July 2009, GUS, PTS, Warsaw, p. 28-29.

¹² Z. Wasag: *Poziom żywotności ekonomicznej gospodarstw rolnych w Polsce (Level of the economic viability of agricultural holdings in Poland)*, Agricultural Engineering 8(117)2009, p. 261, base on: L. Drożdżel (ed.) 2007: *ARiMR – three years after the accession*. Agency of Agricultural Restructuring and Modernisation, Warsaw, p. 69-141.

¹³<http://www.minrol.gov.pl/index.php?/pol/Wsparcie-rolnictwa-i-rybolowstwa/Plan-Rozwoju-Obszarow-Wiejskich/Definicje-pojec-PROW>, reading from 29.09.2010.

chapter contains a presentation of the social significance of such farms in Bulgaria. The main aspects analysed relate to the broadly-defined, so-called ecological culture of the agriculture-related population.

The empirical material of analysis in the first part of the study is comprised of GUS mass statistical data and the results of household budget surveys. The analysis is based on a group of private farms, since private farms in Poland comprise 99.8% of the nation's total farms, and also due to the higher comparativeness of the results of the presented analysis with the results from other sources, including household budgets, FADN and IAFE-NRI surveys. The analysis is based on data for the year 2007, due to the accessibility of data in the form necessary for its conduction and comparativeness with the results from other sources. The commercial level of farms was defined according to their economic strength.

The main empirical materials in the second part included the data from the IAFE-NR panel field surveys conducted on a representative sample of approximately 4 thousand agricultural holdings held by a natural person (persons), accompanied by standard statistical data.

The main empirical materials in the third part include data from: 1. Empirical sociological survey "Modern society: between vulnerability and sustainable development. " - representative for the population over 18 in the region of Blagoevgrad, includes 1057 persons in 65 settlements, the sample is combined - stratificated (according to the type of settlements - Blagoevgrad, towns in the district and villages) and two stage cluster. 2. Empirical sociological survey "Environmental culture of producers of agricultural products" – in 56 villages, one stage cluster sample. Both surveys are carried out in March 2010¹⁴.

¹⁴ *Project The transformation of the national value system and its synchronization with European patterns: the development of environmental culture as an indicator of translation of European values in the Bulgarian society*, project leader Assoc. prof. A. Mantarova), funded by National Science Fund – Sofia.

Part 1. Semi-subsistence farms in the context of the future of CAP in Poland

1.1. A general description of holdings

1.1.1. Production directions and area

The numbers and structure of holdings according to their economic strength (ESU) are presented in Table 1. In 2007, there was a total (i.e. with area up to 1 ha and above 1 ha) of 2387246 private farms conducting agricultural activity in Poland, including 520906 with an economic strength of 2-8 ESU (semi-subsistence) and 242640 with an economic strength above 8 ESU (other commercial). In Poland, the dominating number is that of non-commercial holdings (up to 2 ESU) – they comprise 68.0% of the total private farms conducting agricultural activity; semi-subsistence farms (2-8 ESU) comprise 21.8%, while other commercial farms (above 8 ESU) comprise only 10.2%.

Table 1.1. Number and structure of private farms according to economic size classes in 2007

Farms with agricultural land area	Total	According to economic size classes (ESU)						
		Overall 0-8	including				2-8	8 and more
			0-2	2-4	4-6	6-8		
in absolute numbers								
Total	2387246	2144606	1623700	299589	138433	82884	520906	242640
Above 1 ha	1741622	1502164	987834	295665	136882	81783	514330	239458
share in the total number of farms								
Total	100.0	89.8	68.0	12.5	5.8	3.5	21.8	10.2
Above 1 ha	100.0	86.3	56.7	17.0	7.9	4.7	29.5	13.7
Average area of a farm in a farm group with the agricultural land area of: 0 ha and above								
Total	6.80	4.26	2.51	7.99	11.02	13.66	9.70	29.25
Agricultural land	5.96	3.58	2.00	6.86	9.74	12.21	8.48	27.04

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 296-301.

In the group of commercial farms, i.e. above 2 ESU (in 2007 there were 763546 private farms conducting agricultural activity) 68.2% was comprised of semi-subsistence farms (2-8 ESU), and 31.8% was comprised of other commercial holdings (above 8 ESU). Meanwhile, the number of individual commercial agricultural holdings conducting agricultural activity with an agricultural land area above 1 ha in Poland was 753788, including 514330 with an economic strength of 2-8 ESU and 239458 with an economic strength above 8 ESU.

Table 1.2. The territorial structure and number of individual commercial holdings (i.e. with an economic strength above 2 ESU) and agricultural land above 1 ha

Holdings with agricultural land area	Holdings with an economic strength above 2 ESU		
	Total (above 2 ESU)	Semi-subsistence (2-8 ESU)	Other (above 8 ESU)
	Holdings with above 1 ha of agricultural land		
In absolute numbers			
Total above 1 ha	756910	514790	242120
1 to 2	11686	8155	3531
2 to 3	23088	20640	2448
3 to 5	88676	84229	4447
5 to 10	272745	249207	23538
10 to 15	158851	107861	50990
15 to 20	76309	29452	46857
20 to 30	64486	12926	51560
30 to 50	37221	2045	35176
50 to 100	15861	224	15637
100 and more	7987	51	7936
area structure in %			
Total above 1 ha	100.0	100.0	100.0
1 to 2	1.5	1.6	1.5
2 to 3	3.1	4.0	1.0
3 to 5	11.7	16.4	1.8
5 to 10	36.0	48.4	9.7
10 to 15	21.0	21.0	21.1
15 to 20	10.1	5.7	19.4
20 to 30	8.5	2.5	21.3
30 to 50	4.9	0.4	14.5
50 to 100	2.1	0.0	6.5
100 and more	1.1	0.0	3.3

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 286-287.

The average total holding area in Poland was 6.80 ha (5.96 ha of agricultural land); while that of semi-subsistence farms (i.e. holdings with an economic strength of 2-8 ESU) was 9.70 ha (8.48 ha of agricultural land), and of other holdings (i.e. with an economic strength above 8 ESU) – 29.25 ha (27.04 ha of agricultural land). The area of an average semi-subsistence farm is almost three times smaller than the area of an average other commercial holding. 85.8% of the semi-subsistence farms (2-8 ESU) were holdings with agricultural land between 3 and 15 ha; almost half (48.4%) was comprised of holdings with area of 5-10 ha. The highest percentage of other holdings fell under 10 to 50 ha of agri-

cultural land (76.3%), while the highest percentage (21% each) was comprised of holdings with areas of 10-15 ha and 20-30 ha.

Table 1.3. The horizontal structure of the number of holdings and cultivated area according to the orientation of plant production

Holdings cultivating	Holdings according to economic strength					
	Total commercial above 2 ESU	Total semi-subsistence 2-8 ESU	Total other above 8 ESU	Total commercial above 2 ESU	Total semi-subsistence 2-8 ESU	Total other above 8 ESU
	Holding number structure			Cultivated area structure		
Total	100	67.7	32.3	100	39.3	60.7
cereals	100	68.4	31.6	100	40.8	59.2
leguminous edible	100	72.2	27.8	100	52.5	47.5
potatoes	100	70.6	29.4	100	52.0	48.0
industrial crops	100	44.3	55.7	100	17.5	82.5
field vegetables	100	71.7	28.3	100	45.5	54.5
vegetables under cover	100	39.2	60.8	100	10.9	89.1
strawberries	100	77.4	22.6	100	62.5	37.5

Source: Own calculations on the basis of the Characteristics of agricultural holdings in 2007, GUS, Warsaw 2008, p. 302-303.

Table 1.4. The vertical structure of the number of holdings and cultivated area according to the orientation of plant production

Holdings cultivating	Holdings according to economic strength					
	Total commercial above 2 ESU	Total semi-subsistence 2-8 ESU	Total other above 8 ESU	Total commercial above 2 ESU	Total semi-subsistence 2-8 ESU	Total other above 8 ESU
	Holding number structure			Cultivated area structure		
Total	100	100	100	100	100	100
cereals	44.5	45.0	43.5	82.3	85.4	80.4
leguminous edible	1.0	1.1	0.9	0.4	0.5	0.3
potatoes	33.2	34.6	30.2	5.1	6.8	4.1
industrial crops	7.5	4.9	12.9	9.6	4.3	13.1
field vegetables	8.4	8.9	7.4	2.0	2.3	1.8
vegetables under cover	1.2	0.7	2.2	0.08	0.02	0.1
strawberries	4.2	4.8	2.9	0.5	0.7	0.3

Source: Own calculations on the basis of the Characteristics of agricultural holdings in 2007, GUS, Warsaw 2008, p. 302-303.

In general, the growth in the commercial level of an agricultural holding is positively correlated with the area of the holding, but there are exceptions among both semi-subsistence and other holdings. In the structure of holdings above 1 ha of agricultural land in the group of semi-subsistence farms, holdings with large area of 15-30 ha comprised 8.2% of the total semi-subsistence farms (including: 15-20 ha of agricultural land – 5.7%, and 20-30 ha – 2.5%). Meanwhile, in the group of other commercial holdings, holdings with small area up to 10 ha comprised 10.0% (including up to 5 ha – 4.3% and 5-10 ha – 9.7%).

Semi-subsistence farms constitute 67.7% of the total number of private commercial holdings conducting plant production, using 39.3% of their total area for plant cultivation; while other farms analogically comprise 32.3% and use 60.7% of their area. Within the structure of the number of holdings conducting cultivation and their area, semi-subsistence farms dominate the others, particularly in the production of strawberries, leguminous edibles and potatoes; while other holdings dominate the semi-subsistence farms in the production of industrial crops and vegetables under cover.

Table 1.5. The structure of holdings according to livestock production

Holdings with:	Structure in %					
	Holdings according to economic strength					
	Total above 2 ESU	Total 2-8 ESU	Total above 8 ESU	Total above 2 ESU	Total 2-8 ESU	Total above 8 ESU
Total	100	68.5	31.5	100	100	100
Cattle	100	65.7	34.3	31.2	29.9	34.0
including: cows	100	65.3	34.7	28.9	27.6	31.9
Pigs	100	67.8	32.2	30.1	29.8	30.9
Sheep	100	72.0	28.0	0.4	0.4	0.3
Goats	100	78.9	21.1	0.8	1.0	0.6
Chicken poultry	100	70.1	29.9	32.6	33.4	31.0
Horses	100	78.9	21.1	4.8	5.5	3.2

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 302-303.

Semi-subsistence and other holdings have a similar (vertical) structure of basic crops. In the total number of holdings conducting production (of cereals, leguminous edibles, potatoes, industrial crops, field vegetables, vegetables under cover, strawberries) it was similar – over 40% of the holdings conduct cereal production (respectively 45.0% and 43.5%) on over 80% of their area (respectively 85.4% and 80.4%) and over 30% cultivate potatoes (34.6% and 30.2%), which takes respectively 6.8% and 4.1% of their total area used to conduct plant production.

Within the structure, other holdings surpass semi-subsistence farms mainly in the number of holdings producing industrial crops and their cultivated area.

In the structure of farms breeding farm animals, a higher percentage of semi-subsistence farms in comparison to other farms bred horses and goats as well as sheep and chicken poultry, while a lower percentage bred cattle and pigs.

1.1.2. Holdings according to the proportion of direct sales

The holdings with a value of direct sales to consumers above 50% of the total value of the agricultural holding sales became the foundations for presenting the difference in the sales orientations between semi-subsistence and other farms.

Table 1.6. Private farms according to the proportion of direct sales in the total sales of an agricultural holding

Specification	Total holdings	With economic strength		
		Non-commercial 0-2 ESU	Commercial	
			Semi-subsistence 2-8 ESU	Other above 8 ESU
Economic size classes: from 0 ESU				
Total private farms	2387246	1623700	520906	242641
Holdings with a value of direct sales to consumers above 50% of the total value of sales	384995	260522	92898	31574
	Total private farms = 100			
	16.1	16.0	17.8	13.0
	Holdings with value of direct sales to consumers above 50% of the total value of sales = 100			
	100.0	67.7	24.1	8.2

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 296-297, 298-299.

Direct sales are practised by all the holding groups, while the total number of private farms with the value of direct sales to consumers at more than 50% of the total sales value of the agricultural holding are dominated by non-commercial farms (67.7%), followed by semi-subsistence farms: 24.1%, and other commercial farms: 8.2%.

In the structure of private farms according to their commercial level, the highest percentage of holdings with the value of direct sales to consumers at more than 50% of the total sales value is in the group of semi-subsistence farms, at 17.8%, followed by semi-subsistence farms at 16.0%, and other commercial farms at 13.0%.

1.1.3. The demographic profile of holders of private farms

Table 1.7. The agricultural education of managers of private farms and the period of holding management

Farms held by a manager with education	Holdings with economic strength		
	Total commercial (above 2 ESU)	Semi-subsistence (2-8 ESU)	Other (above 8 ESU)
	Vocational education of farm managers		
Number of total holdings	763546	520906	242640
Number of holdings managed by people with agricultural vocational education including total number of holdings = 100 (%)	472694	292799	179895
	61.9	56.2	74.1
Number of holdings managed by people with agricultural vocational education in total = 100			
Higher	3.7	3.1	4.6
Post-secondary	0.6	0.5	0.6
Secondary vocational	21.6	18.4	26.7
Basic vocational	30.0	27.0	35.0
Agricultural training course	44.1	50.9	33.1
Holding management period			
Total* in absolute numbers	763546	520906	242640
	Total = 100		
Up to 1 year	2.1	2.2	1.8
2-5	10.2	10.5	9.5
6-10	15.7	16.6	14.0
11-20	36.9	36.0	38.9

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 298.

The scale of the commercial level of the holdings is affected by the demographic profile of their holders, such as the education of the holding managers or the period of holding management.

The managers of semi-subsistence farms represented a lower level of vocational preparation (education), i.e. agricultural education, than the managers of other commercial holdings. The percentage of holdings managed by people with agricultural vocational education in the group of semi-subsistence farms was at 56.2%, and higher in the group of other holdings, at 74.1%.

Compared to other holdings, within the structure of semi-subsistence farms according to the agricultural education of the holding managers, the percentage of people with agricultural higher, post-secondary, secondary vocational and basic vocational education was lower; it was higher only in the case of managers with professional (agricultural) preparation at the level of an agricultural training course.

In comparison to others, semi-subsistence farms had a higher percentage of people managing the holding for a short period of time (up to 10 years) and a lower percentage of people managing the holding for a longer period of time (11 years and more), which suggests that the length of the time of holding management by a single person has a positive influence on the improvement in the commercial level of the holding (its economic strength).

Table 1.8. Private farms according to the number of full-time employees in the agricultural holding

Specification	Total	Holdings with economic strength			
		Non-commercial 0-2 ESU	Total commercial (above 2 ESU)	including	
				Semi-subsistence (2-8 ESU)	Other (above 8 ESU)
Total number of holdings	2387246	1623700	763546	520906	242640
Number of full-time agricultural employees in thousand AWU	2245.8	914.8	1331.0	803.0	528.0
Number of full-time employees in AWU per 1 holding	1.06	1.77	0.57	0.65	0.46
Total full-time employees = 100	100.0	40.7	59.3	35.8	23.5
Full-time employees above 2 ESU = 100	x	x	100.0	60.3	39.7

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 306-307.

There is a significant diversity in the use of labour force in private farms according to their economic strength. Non-commercial holdings (0-2 ESU) engage the most, as much as 40.7% of the total number of full-time agricultural employees; 35.8% find employment in semi-subsistence farms (2-8 ESU). Almost 1/4 of all full-time employees (23.5%) work in other holdings.

1.5 times more labour calculated as per full-time employees (in AWU) finds employment in semi-subsistence farms than others; this advantage is 1.4 times when calculated per 1 holding.

In calculation per holding, non-commercial holdings have 1.77 full-time employees (in AWU); semi-subsistence farms 0.65, i.e. half as much as non-commercial holdings; and other commercial holdings - 0.46, i.e. almost four times less than non-commercial holdings.

The use of the labour force is most extensive in other commercial holdings. The higher employment rate in semi-subsistence farms indicates a higher labour consumption of their production, but also hidden unemployment. How-

ever, in a situation of difficult conditions on the labour market, particularly in rural areas, it is possible to assume that semi-subsistence farms also play a social role and contribute to reducing the depopulation of rural areas.

1.2. The economic situation of semi-subsistence holdings

Table 1.9. Private farms according to income exceeding 50% of income from agricultural and non-agricultural activity

Households with income exceeding 50% of income:	Total	Holdings with economic strength			
		Non-commercial 0-2 ESU	Total commercial (above 2 ESU)	including	
				Semi-subsistence (2-8 ESU)	Other (above 8 ESU)
Total in absolute numbers	2387246	1623700	763547	520906	242641
structure of income according to its source					
Total holdings	100.0	100.0	100.0	100.0	100.0
from exclusively agricultural activity	25.3	7.6	62.9	51.5	87.2
from mixed (agricultural and non-agricultural) and exclusively non-agricultural activity	74.7	92.4	37.2	48.5	12.8
- from exclusively non-agricultural activity	69.2	87.0	31.5	41.2	10.7
- from hired labour	31.6	40.4	13.0	17.6	3.1
Total holdings above 2 ESU = 100					
from agricultural activity	x	x	100.0	55.9	44.1
from mixed (agricultural and non-agricultural) and exclusively non-agricultural activity	x	x	100.0	89.1	10.9
- from non-agricultural activity	x	x	100.0	89.2	10.8
- from hired labour			100.0	92.7	7.6

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 306-307.

Private semi-subsistence and other commercial farms show a significant difference in their sources of income. Revenue from agricultural activity is the main source of income of only half (51.5%) of all semi-subsistence farms, (i.e. over 50% of the total income is comprised of income from agricultural activity), while this number is at 87.2% in the group of other commercial holdings. For the next 48.5% of semi-subsistence farms, the main source of income is

non-agricultural and agricultural activity, which is dominated by hired labour (17.6%). In the group of other holdings, hired labour is the main source of income in only 3.1% of holdings.

1.2.1. The income of households of farmers according to farm budget surveys

In 2010, the average monthly disposable income per person in households of farmers was at PLN 1024.53, which was higher by 15.9% in comparison to the previous year; the growth in the real income level was at 13.2%, which was the highest among all social and economic groups. The high dynamics of growth in disposable income in the group of agricultural households was affected by the subsidies associated with the use of agricultural holdings (real growth of 43.2% in comparison to the drop of 7.7% in 2009) and the real growth in agricultural production income by 14.5% (2009 saw a drop by 3.1%)¹⁵.

During the period of accession to the European Union, the dynamics of growth in disposable income in the group of households of farmers was higher than in other socio-economic groups. During the years 2004-2010, the nominal disposable income of farmers grew by 89.8%, and in other holding groups grew: in total by 62.2%, employees by 61.5%, self-employed (entrepreneurs) by 57.0%, retirees and pensioners by 51.5%. Despite the higher growth dynamics, in 2010 the disposable income of agricultural households was still lower: by 14.1% in comparison to the income of an average household in the country, by 14.6% in comparison to employee income, by 30.2% in comparison to the income of self-employed people (entrepreneurs) and by 13.2% in comparison to the income of retirees and pensioners. During the period of accession to the European Union, there was a continuous falling trend (with the exception of 2008, which saw a break) of the disparity of the income of agricultural households in comparison to other social and economic groups (Table 1.10, Chart 1.1).

The years 2004-2010 (the period of accession to the European Union), saw changes to the structure of the disposable income of households of farmers, which were presented through the growth in the proportion of income from agricultural labour and hired labour, and the drop of the proportion from social benefits. The years 2004-2010 saw a growth in income from private farms from 66.1% to 71.5%, and from hired labour from 7.6% to 10.2%; as well as a drop in the proportion from social benefits 20.9% to 14.9%, and from self-employment from 1.8% to 1.0%.

¹⁵ In European Union States, the indicator of agricultural activity revenue growth was highest in Poland (after Bulgaria); in 2010 in comparison to 2005 it amounted to 153.6% (in EU-15 – 104.5%). Eurostat, reading from 18.01.2011.

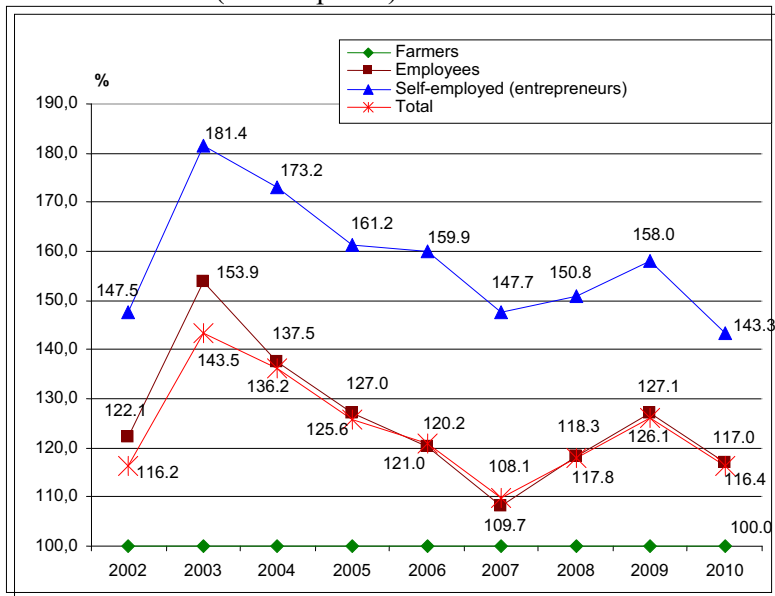
Table 1.10. The average monthly disposable income per one person in households during the years 2002-2010

Years	Households							
	Total	Of farmers	Of employees			Self-employed	Retirees	Pensioners
			Total	on positions				
				of labourers	of non-labourers			
in PLN per 1 person monthly (current prices)								
2002	664.21	571.83	698.01	530.68	931.86	843.24	794.52	546.25
2003	680.50	474.31	729.87	545.91	972.82	860.20	814.34	562.94
2004	735.40	539.93	742.45	543.80	1030.94	935.12	869.01	612.34
2005	761.46	606.17	770.00	565.78	1062.82	977.10	883.81	621.75
2006	834.68	689.75	829.18	622.73	1125.06	1102.63	943.89	684.95
2007	928.87	846.76	915.17	700.95	1232.24	1251.07	999.05	754.52
2008	1045.52	887.35	1049.84	815.18	1392.23	1338.51	1096.87	802.38
2009	1114.49	884.01	1123.30	863.02	1489.61	1396.47	1180.65	870.55
2010	1192.82	1024.53	1199.22	908.38*	1596.89*	1468.38	1244.77	925.63

* Not final data.

Source: Household Budgets, GUS, successive years.

Chart 1.1. The relations of disposable income in households in the years 2002-2010 (current prices) Farmer households = 100



Source: Own calculations on the basis of Household Budgets, GUS, successive years.

During the years 2004-2010, the highest growth dynamics were held by income from hired labour (growth by 153.3%) and from agriculture (growth by 105.2%).

Regardless of the holding area (as well as the economic strength), the disposable income of agricultural households was lower in comparison with the disposable income of self-employed households, i.e. entrepreneurs. In the literature. (J. St. Zegar), it is believed that both vocational groups should present comparable income. The income of the self-employed significantly exceeded the income of farmers, but this advantage dropped with the growth in the area (economic strength) of the agricultural holding. Comparable income was not achieved in the income of the holdings with area above 20.00 ha, which corresponds to commercial holdings (including large commercial).

Table 1.11. The relations of the disposable income of households of farmers and self-employed households

Years	Total	Including households of farmers with agricultural land						
		total up to 1 ha	total above 1 ha	including:				
				1.00-4.99	5.00-9.99	10.00-14.99	15.00-19.99	20.00 and more
Disposable income of the self-employed/income of farmers (%)								
2003	180.0	191.2	179.9	225.2	215.9	208.2	149.2	135.5
2005	161.2	150.9	161.3	222.0	202.8	181.9	159.4	105.7
2008	150.8	172.5	150.7	188.3	195.9	199.4	165.5	91.5

Source: Own calculation on the basis of the results of GUS household budget surveys.

It is possible to generalise that the income of semi-subsistence agricultural holdings in comparison with non-agricultural (self-employed) holdings is sub-par, and only the income of other commercial holdings including large commercial) achieve parity values.

The difficult situation of households of farmers, especially those of semi-subsistence farms, is also possibly indicated by the results of the research of the authors of the *2009 Social Diagnosis*, who prepared a ranking of 147 social, demographic and vocational groups on eight dimensions of life quality¹⁶ in 2009. Table 1.12 presents the location of farmers and the rural population in selected dimensions of quality of life.

The farmers and the rural population held one of the bottom locations in the ranking of civilisational level and material prosperity. These indicators were

¹⁶ These are: 1. Civilisational level, 2. Material prosperity level, 3. Social prosperity level, 4. Mental well-being, 5. Social capital level, 6. Intensification of pathological phenomena (the lower the indicator value, the higher the pathology), 7. Physical well-being (health), 8. Living stress (the lower the indicator value, the higher the stress). *Social Diagnosis 2009 Quality of life and condition of Polish citizens, Report*, ed. J. Czapiński, T. Panek, main project sponsors, Ministry of Labour and Social Policy, PFRON, published by the Council of Social Monitoring, Warsaw, p. 412-419.

only inferior in the groups of the elderly, lonely, pensioners, people with elementary and lower education and the unemployed. The farmers had higher places in the ranking of social capital level (with the exception of the agricultural helper group of labourers) and physical well-being (health). The top position of the vocational group of gardeners in the group of agricultural vocations draws the attention.

Table 1.12. The place of farmers and rural areas in the ranking of 147 social, demographic and vocational groups in eight quality of life dimensions in 2009

Social and demographic groups	Quality of life dimensions							
	Civilisational level		Material prosperity level		Social capital level		Physical wellbeing (health)	
Scale from - to	from 1.55 to -1.32		from 1.46 to -0.81		from 1.34 to -0.36		from 0.43 to -1.40	
	ranking location	indicator value	ranking location	indicator value	ranking location	indicator value	ranking location	indicator value
Gardeners	75	0.12	66	0.12	10	0.51	49	0.24
Farmers producing crops	125	-0.24	124	-0.25	20	0.33	42	0.27
Farmers	130	-0.30	135	-0.35	24	0.32	37	0.28
Farmers, crops and animals	134	-0.38	137	-0.39	34	0.20	53	0.23
Helpers in agriculture	141	-0.61	142	-0.46	141	-0.24	21	0.33
Subsistence farmers	143	-0.67	146	-0.73	69	0.02	123	-0.08
Rural areas	129	-0.30	131	-0.29	93	-0.05	99	0.01

Source: *Social Diagnosis 2009 Quality of life and condition of Polish citizens, Report*, editing: J. Czapiński, T. Panek, main project sponsors, Ministry of Labour and Social Policy, PFRON, published by the Council of Social Monitoring, Warsaw, p. 412-418.

1.3. The contribution of semi-subsistence farms in the provision of environmental public goods

The semi-subsistence farms have an input in the supply of environmental public goods, e.g. by maintaining the good culture of soil and conducting organic farming.

Agricultural land is maintained in good culture in both semi-subsistence and other commercial holdings. In semi-subsistence farms, the agricultural land maintained in good culture comprised 99.2% of the total agricultural land area; this number was slightly higher in other holdings, at 99.5%.

Table 1.13. A comparison of the maintenance of the culture of agricultural land and the fallowing of arable land in commercial holdings

Holdings with economic strength	Holdings with area					
	Agricultural land	Agricultural land in good culture	Proportion*	Arable land	Fallowed arable land	Proportion**
	number of holdings			number of holdings		
	in absolute numbers		%	in absolute numbers		%
Commercial total (above 2 ESU)	763545	763115	99.9	737189	49598	6.7
Semi-subsistence (2-8 ESU)	520904	520649	100.0	501023	36158	7.2
Other (above 8 ESU)	242641	242466	99.9	236166	13440	5.7
	area					
	in hectares		%	in hectares		%
Commercial total (above 2 ESU)	1097179 4	1090127 8	99.4	8416006	91762	1.1
Semi-subsistence (2-8 ESU)	4414421	4376902	99.2	3229463	54737	1.7
Other (above 8 ESU)	6557373	6524376	99.5	5186543	37025	0.7

* Proportion of the number of holdings with agricultural land in good culture in the total number of holdings with agricultural land. **Proportion of the fallowed arable land in the total arable area in holdings.

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 300-301.

Larger differences are present in relation to fallowed land, the appearance of which (due to the small percentage of the total land area) can be considered as an element with a positive impact on the preservation of natural habitats or lower pollution of soil with chemical products.

In the total number of holdings utilising arable areas, the number of holdings with an area of fallow land comprised:

- in commercial holdings, i.e. with an economic strength above 2 ESU – 6.7%;
- in semi-subsistence farms (2-8 ESU) - 7.2%;
- in other holdings (above 8 ESU) it was lower, at the level of 5.7%.

Meanwhile the area of fallow land comprised:

- in the group of commercial holdings, i.e. with an economic strength above 2 ESU – 1.1% of their arable area;
- in the group of semi-subsistence farms (2-8 ESU) – 1.7% of their arable area;
- in the group of other holdings (above 8 ESU) – 0.7% of their arable area.

Table 1.14. Private farms according to organic methods of production

Holdings	Holdings with economic strength			
	Non-commercial 0-2 ESU	Commercial total (above 2 ESU)	including	
			Semi-subsistence (2-8 ESU)	Other (above 8 ESU)
Organic production				
Total in absolute numbers	1623700	763547	520906	242641
Holdings, which apply organic methods of agricultural production in absolute numbers	1871	6464	4092	2371
Total holdings = 100 (%)	0.11	0.85	0.78	0.98
Holdings above 2 ESU, which apply organic methods of agricultural production = 100 (%)	x	100.0	63.3	36.7

Source: Own calculations on the basis of the *Characteristics of agricultural holdings in 2007*, GUS, Warsaw 2008, p. 300.

The organic methods of production are used relatively more frequently in other commercial holdings, which is indicated by the higher percentage of holdings using organic methods of production in the total number of holdings in comparison to semi-subsistence farms (0.98% to 0.78% in semi-subsistence farms). However, in absolute numbers, the group of semi-subsistence farms has twice as many holdings using organic methods of production than the group of other holdings (respectively 4092 holdings to 2371 holdings).

In the total number of commercial holdings (above 2 ESU), the holdings using organic methods of production are comprised in 63.3% of semi-subsistence farms (2-8 ESU) and in 36.7% of other holdings (above 8 ESU).

1.3.1. Regional differentiation in supplying environmental public goods

In order to present the significance of agricultural holdings with various areas (it was assumed that a small holding area corresponds to its low economic strength) in the supply of environmental public goods, an attempt was made to use the regional diversity of the basic indicators significant to the forming of the natural environment. The voivodeships were ranked according to the growing average area of private farms and assigned with indicators describing environmental goods. The collected statistical data (Tables A3, A3a and A3b in the Annex) allow the following generalisations:

1. The viability` (migration balance indicator) of rural areas greatly depends on the presence of a metropolis in the voivodeship, and rather less on the territorial structure of the holdings. This is indicated by the migration balance, which is positive in the rural areas of voivodeships with a metropolis (Pomorskie, Gdańsk, 5.9; Śląskie, Katowice, 4.6; Mazowieckie, Warsaw 2.4, Małopolskie, Kraków 1.3); while voivodeships without a large urban centre and various holding sizes such as Warmińsko-Mazurskie and Lubelskie, present the same negative value in the migration balance (-1.9) despite a significant difference in the holding size (respectively 17.71 ha and 6.68 ha). This also indicates the process of depopulation of rural areas distant from urban centres.
2. The area of the holding is not the decisive factor in the development of agritourism, which is indicated by the volume of collective tourist accommodation in the rural areas of individual voivodeships. The voivodeships dominated by small-area holdings (Małopolskie, Podkarpackie, Śląskie) presented a high indicator of tourist accommodation (from 20 to 16 per 1000 km²), but it should be noted that these voivodeships are attractive to tourists. A similarly high indicator of collective tourist accommodation was present in voivodeships with a large area, such as Pomorskie (17) and Zachodniopomorskie (22), but these voivodeships are also attractive to tourists. This indicator was lower in voivodeships not attractive to tourists, regardless of the area of the holdings.
3. The condition of the environment is also affected by the equipment of residences with such basic systems as pipelines, lavatories, bathrooms, network gas and central heating. The voivodeships with a small holding area presented a comparable or better state of rural household equipment in basic water, waste water and gas media than those with large-area holdings, which indicates a positive influence of small-area holdings on the condition of the natural environment.

4. The assumed indicators of the influence of farm area on the state of the environment also include the percentage of industrial and municipal treated waste water in total waste water requiring treatment, municipal waste per 1 inhabitant and expenditures on fixed assets serving environmental protection and water management in rural areas. Considering the indicator of the percentage of industrial and municipal treated waste water in total waste water requiring treatment, it was shown that the lowest value of the indicator was present in two voivodeships: Śląskie (52.9%) and Świętokrzyskie (55.4%). These voivodeships have a similar average farm area (respectively 4.64 and 4.96). The differences in other voivodeships (regardless of the farm area) are not high. This may suggest that the value of the indicator depends more on the prosperity and efficiency of the local government than on the area structure of farms. A similar trend is present in the expenditures on fixed assets serving environmental protection and water management. The voivodeships with agricultural holdings of small areas “produce” decisively less municipal waste per inhabitant than voivodeships with holdings of large areas. This indicates the improved, more pro-environmental waste management system of the holdings.

Part 2. The social and demographic structure of the semi-subsistence farm population

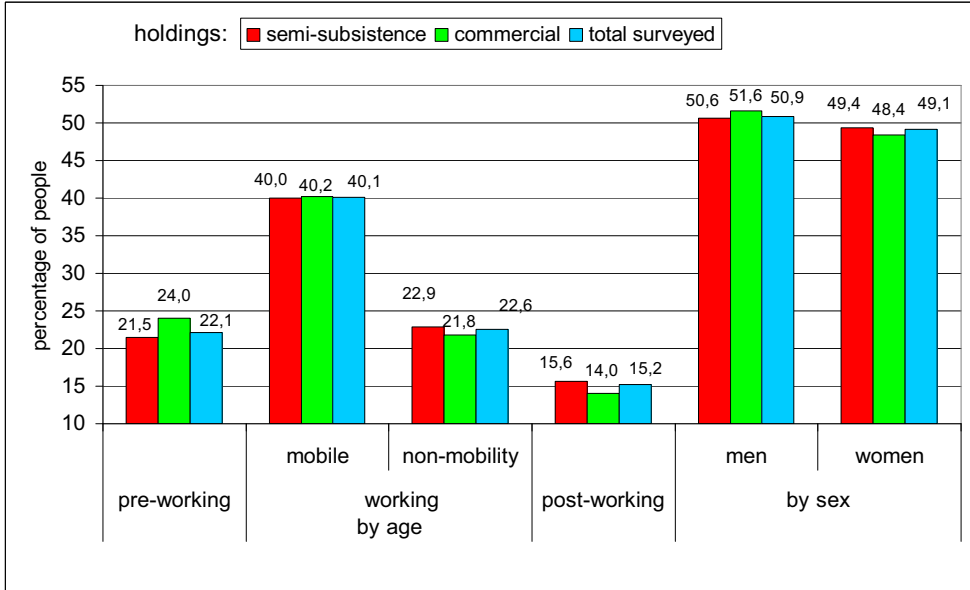
2.1. The family situation and demographic profile of the semi-subsistence farm population

The usual users of private farms are multi-generation families [Sikorska 1999]. This thesis is confirmed by the family situations of both semi-subsistence and commercial entities. In both cases, single-person families or childless marriages were rare, but their percentage in the group of semi-subsistence farms was twice as high as in the case of commercial entities (17% to 7%). Full families, i.e. minimum of two generations (both parents and children) comprised almost 65% of the users of semi-subsistence entities and approximately 80% in the group of commercial entities. In consequence, the household of a user of a semi-subsistence farm had an average of 3.9 people, which was approximately 20% lower than the family of the user of a commercial holding (4.7 people).

The structure of the population from semi-subsistence farms according to demographic profile does not significantly differ from the population associated with other commercial holdings (Chart 2.1). Although the studies conducted in IAFE-NRI indicate that there are more elderly people living in semi-subsistence farms, these differences are insignificant, since it has been determined that almost 16% of the semi-subsistence farm population was of post-working age (among the general agricultural population - over 15%), while the parallel percentage in commercial holdings was 14%. Also in the case of people of non-mobility working age, their relatively highest number was present in the population from semi-subsistence farms, but this difference was minimal in relation to both the population from commercial holdings and the total agricultural population (up to 1%). Simultaneously, semi-subsistence farms were home to a smaller number of pre-working age people. Their proportion in the population from semi-subsistence entities was almost 22%, while in the population of commercial holdings it was 24%.

During the analysis of the population structure according to gender, it was established that the relations between the numbers of females and males were very similar. This profile involved both the compared populations, although the proportion of females was slightly lower in the families using semi-subsistence farms than among the population from commercial entities (50.6% to 51.6%).

Chart 2.1. The structure of population according to age* and gender in selected groups of individual commercial holdings



* The economic age groups used by GUS are applied: **pre-working** – people aged up to 17 years; **working** – females aged 18-59 and males aged 18-64; **post-working** – females aged 60 years and upwards and males aged 65 years and upwards. **Working age** is divided into two further groups: **mobile** (younger working) – people aged 18-44 and **non-mobility** (older working) – females aged 45-59 and males aged 45-64.

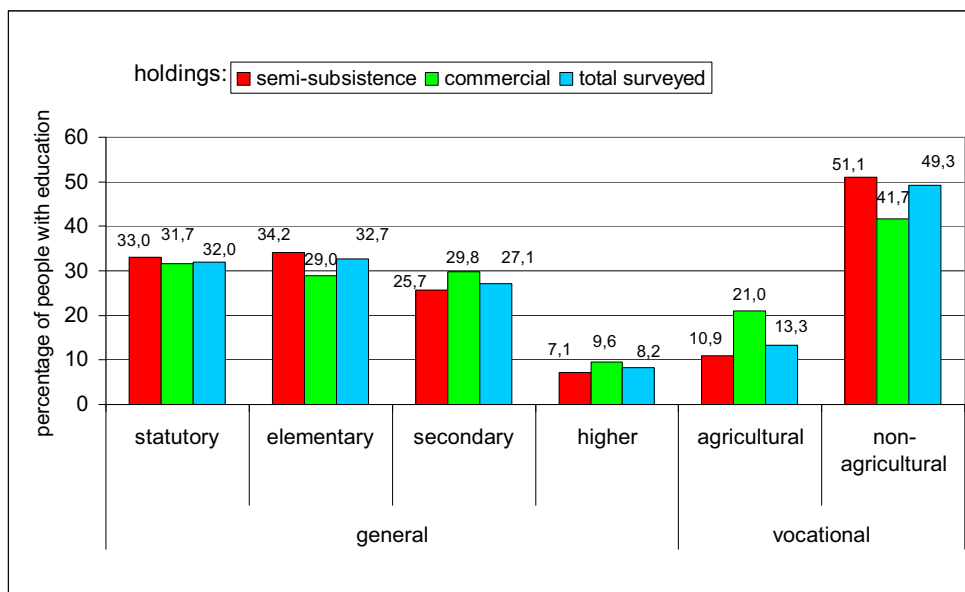
Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

2.2. The education level of the population

Despite the fact that the demographic structure of people associated with the compared entity groups was similar, the population from semi-subsistence farms had a slightly lower level of education in comparison to the commercial entity population (Chart 2). In comparison to the commercial entity population, the number of secondary school (25.7% to 29.8%) and higher academy (7.1% to 9.6%) graduates from semi-subsistence farms was relatively low, while the proportion of people with general education at the fundamental (34.2% to 29.0%) and statutory (33.2% to 31.7%), i.e. elementary or middle, level was relatively higher.

The differences in the level and orientation of the education of people from semi-subsistence and commercial entities reflect the process of rationalising mutual relations between the functions of the agricultural holding and vocational foundations of its users.

Chart 2.2. The education of people* from selected agricultural holdings



* Elementary or middle education.

**Recognises people aged 15 and upwards.

Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

In each of the distinguished categories, the most frequent orientation of education was to obtain non-agricultural qualifications. However, the proportion of people with such education in the semi-subsistence farm population was significantly higher than among those from commercial holdings (51.1% to 41.7%), and due to this, the proportion of people with an agricultural education in semi-subsistence entities is two times lower than in other commercial holdings (10.9% to 21.0%).

2.3. The demographic profile and enrolment level of holding managers¹⁷

With economic development, the quality of labour resources is becoming a factor deciding upon the effectiveness or lack thereof in the conducted agricultural activity [Gall et al 2003]. The profile of people managing agricultural activity is particularly significant, since they are the ones making the strategic decisions, which condition the nature and future of the holding [Klepacki 2004].

¹⁷ Names of supervisor, administrator, manager and farmer.

Table 2.1. The structure of holding managers according to demographic profile in 2005

Holdings	Average age of manager	Percentage of managers at			Proportion of females among managers
		working age		post-working age	
		mobile	non-mobility		
semi-subsistence	46.5	44.8	45.6	9.6	23.8
commercial	44.4	47.6	49.1	3.4	9.7

Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

The data on the age structure of holding managers generally show that the differences among the distinguished farm categories in this area were relatively small. This does not change the fact that the people managing semi-subsistence farms were relatively older than the managers of commercial units. These differences were expressed mainly in the almost three-times-as-high (9.6% to 3.4%) percentage of post-working age managers and lower percentage (44.8% to 47.6%) of people up to 44 years of age, i.e. of mobile working age. In consequence, the average age of a manager of a semi-subsistence farm was 46.5 years, which was 5% higher than that of a commercial entity manager (44.4). It should also be noted that the level of feminisation in the group of semi-subsistence farm managers was higher. The percentage of females among the managers of semi-subsistence entities was over twice as high as that of the commercial unit managers, at 23.8%.

Table 2.2 The education of managers from selected holding groups

Holdings	Percentage of people with education					
	general				vocational	
	statutory	elementary	secondary	higher	agricultural	non-agricultural
semi-subsistence	27.9	47.0	20.1	5.0	19.6	52.1
commercial	23.2	45.7	26.2	4.9	41.9	34.1

Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

Much like in the total population, there is also a certain gap among farmers in the education level depending on the holding being in the group of semi-subsistence or commercial entities. The managers of semi-subsistence farms were slightly less educated than the managers of commercial farms. This was mainly shown by the higher percentage of people ending their education at the statutory level, particularly the lower proportion of managers with secondary education (Tab. 2). 28% of semi-subsistence managers had a general education

at the statutory level, while the analogical percentage for managers of commercial holdings was 23%. In both groups of managers, the most popular was elementary education (46-47% people). There were also no differences in the level of the percentage of managers with higher education, which was approximately 5%. The largest disproportions were in the field of secondary education. This education was held by 20% of semi-subsistence and 26% of commercial farmers.

Much like in the case of the total population, in the case of the managers, there is also a tendency to obtain non-agricultural qualifications. This is proven by the orientations of the vocational specialisations of the managers from the selected holding groups. Although the farmers from semi-subsistence entities had non-agricultural education most frequently (52%), the proportion of people with non-agricultural education among the managers of other commercial holdings was also significant, at 30%. Simultaneously, among managers of semi-subsistence farms, the proportion of people with an agricultural education was over twice as low as that of the managers of other commercial holdings, at 20%.

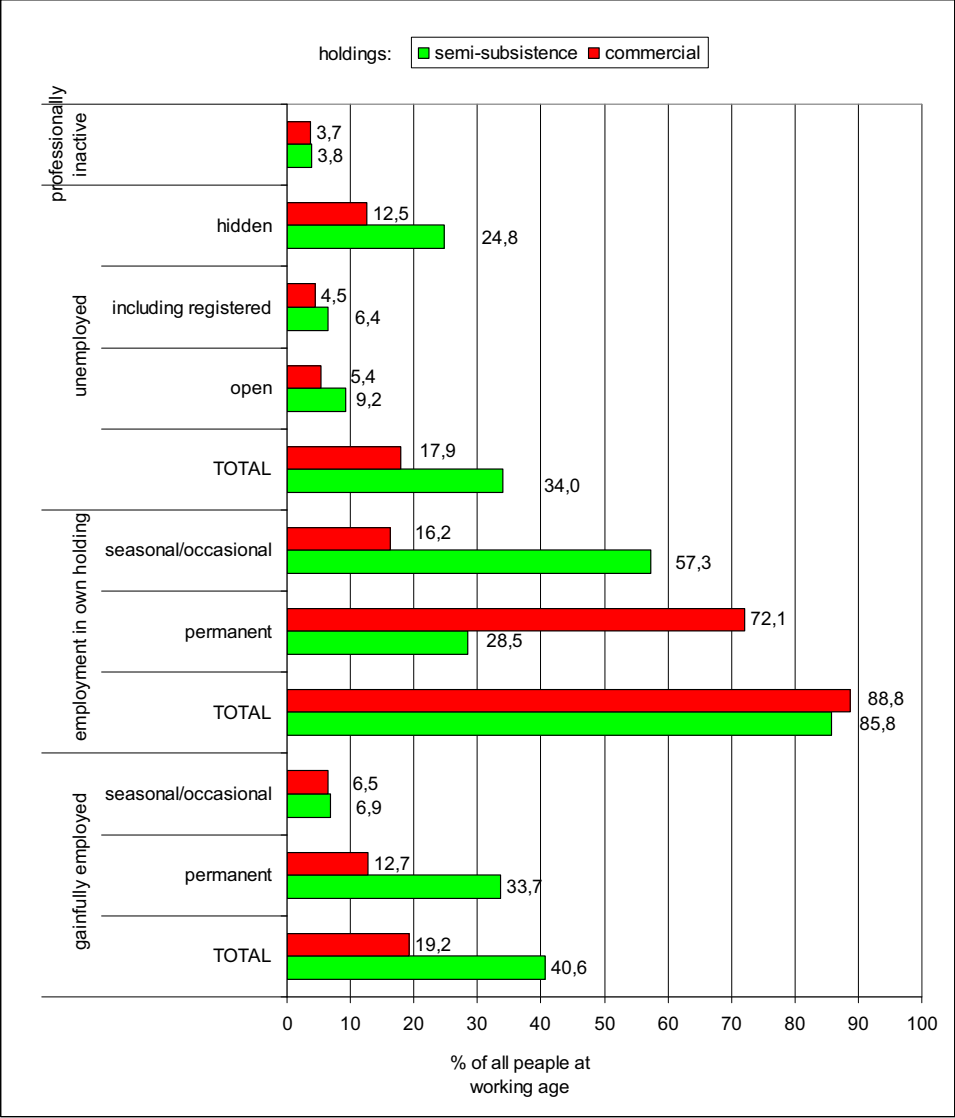
2.4. The vocational activeness of the population

The family model of agricultural farming, which dominates Polish agriculture, results in the involvement of people outside the family members in the work within the agricultural holding, which causes its composition to be the main condition for the profile of the population employed in agricultural activity [Sikorska 2003]. At the same time, along with the development of the non-agricultural labour market, the vocational aspirations and life plans of individual people have become a significant determinant. The competition of gainful employment in the selection of the main workplace – inside or outside the holding – affected the growth in the significance of the economic condition of private farms with the making of such decisions. In consequence, not only the family situation, but also the labour possibilities and primarily the economic profile of private farms condition the allocation of vocational activeness [Sikorska 2003].

The differences in the scale of agricultural activity of the holding categories distinguished found reflection in the distinctness of the structural division according to the allocation of vocational activity. Although due to the nature of agricultural production (e.g. high labour seasonality) most people from both semi-subsistence and commercial holdings have worked in agricultural production (Chart 3), some are involved in agricultural activity occasionally, particularly in the population of semi-subsistence entities. In this group, less than 29%

of active people were continuously employed in agricultural production. In the case of commercial entities, this percentage was at 72%.

Chart 2.3. The activeness of the working age population on the non-agricultural labour market*from selected holding groups



* 100 was defined as the total number of working age population from a given group of holdings.

Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

The conducted research shows that approximately 41% working age people from semi-subsistence farms was employed outside of the holding, including 34% with full-time employment. Furthermore, approximately 9% actively pursued employment outside of their own agricultural activity. The percentage of people oriented towards work outside of their holding would be higher with the inclusion of people working in the holding due to the inability of employment outside of it, despite the fact that their work has little use. This situation concerns approximately 25% of working age people in families using semi-subsistence farms. This indicator defines the scale of hidden unemployment in this entity category.

The non-agricultural employment of the population from commercial holdings was much lower. In this case, approximately 13% had full-time employment outside the holding, while an additional 6-7% worked occasionally. The registered open (4-5%) and unregistered open (approximately 1%) unemployment rate was also lower, as well as hidden unemployment (12-13%).

From the perspective of the future of semi-subsistence farms, particularly the nature of the processes of rationalising the held production assets, the information concerning the allocation of the economic activeness of holding managers is significant.

The questionnaire data shows that the managers of semi-subsistence farms were more frequently active on the non-agricultural labour market than people managing holdings with a higher production scale. In 2005, approximately one third (30.8%) of semi-subsistence farm managers and almost one fifth (18.8%) of commercial holding managers was employed outside their own holding. The diversities in the nature of employment are also visible. Among the managers of semi-subsistence farms, this was mainly permanent full-time employment, while people working occasionally outside their own agricultural activity comprised approximately one quarter (23.9%) of the total earning managers. The proportion of occasional workers among farmers from commercial holdings employed in non-agricultural activity was almost two thirds (64.8%).

The differences in the allocation of the economic activity of the population from the selected holding category find reflection in the multiple sources of income, primarily in the basic source of their support. The empirical data indicates that, regardless of the category of the used holding, families with more than one source of income clearly comprise the most numerous group. Only approximately 9% of the families from semi-subsistence farms gain all their income from the agricultural holdings, while in the case of commercial holdings, this proportion is approximately 23% (Table. 1.3).

Table 1.3. The structure of semi-subsistence and commercial holdings according to the number and main source of income

Holdings	Holding percentage						
	1	2	3	supported mainly by			
	sources of income			gainful employment		disability and retirement pensions	holdings
				total	including hired		
	verse total = 100			verse total (without column 5) = 100			
1	2	3	4	5	6	7	
semi-subsistence	9.1	51.9	39.1	47.8	42.2	30.3	22.1
commercial	23.4	55.7	20.9	6.4	4.8	1.7	91.9

Source: Created on the basis of the IAFE-NRI 2005 questionnaire.

However, the most evidence on the advancement of the process of economic diversification of people from the distinguished entity categories is provided by the role of income from the used holdings. Only approximately 22% of the families with semi-subsistence farms are supported mainly from agricultural activity, while the rest are mainly supported from gainful employment outside the holding (48%), as well as retirement and disability pensions (30%). Meanwhile, commercial holdings are dominated (approximately 92% of the total holdings in this group) by those gaining their main income from agriculture.

Part 3. Social significance of the small acreage agriculture in Bulgaria

3.1. Development of the CAP toward social aims

The agriculture and agricultural producers have a special place in the "co-ordination system" of the society. Half a century these relations are regulated and improving support for the common European wellbeing. 2012 marks the 50th anniversary of the oldest, most expensive and most dynamic Community policy - the Common Agricultural Policy (CAP). Created on July 30, 1962 under Art. 39 of the Treaty of Rome (1957), the CAP will remain in history as the first and most well-developed integration policy in Europe, the strongest welding link of the European Economic Community. As a result of measures taken in the early seventies, the community is provided with food at reasonable prices, productivity in agriculture has increased, markets have stabilized, thus, achieving the main objectives of the CAP. The next two decades are characterized by overproduction, which caused changes in the CAP and coincided with a rethinking of the relationship between society, nature and man. Contemporary trends highlight a critical point in this relationship, causing a number of social sciences to enhance research in the theory of sustainable development, including the most important economic, social and environmental problems of the modern world. The philosophy of the summit in Rio de Janeiro in 1992, approved the path of sustainable development as "Agenda XXI", aiming to harmonize the relationship man-environment and society-nature. This forum highlighted the role of agriculture as part of the system of material production in which the biological rotation of substances and energy in the ecosystem is intrinsically connected with the purposeful economic activity of the individual and the economic systems of society. This makes the agro ecological systems a component of the ecological and economic systems and determines the place of agriculture in the theory of sustainable development. The principle of sustainability implies the requirement that the economic activity in the sector has to be carried out in a way that natural resources are preserved for the future generations. This is achieved by the preservation of biodiversity and landscape, ensuring food security, prevention of natural hazards etc.

The chapter aims to present the social significance of small acreage agricultural production through analysis of representative data from empirical sociological surveys conducted in March 2010 on the territory of Blagoevgrad region.

Environmental awareness of farmers engaged in small acreage production in Bulgaria has deep traditions rooted in the mentality of the Bulgarians. The social significance of this production is undeniable. It is being rediscovered and

reinterpreted, with regard to the changes in the CAP (2014-2020) – aiming for a more ecological agriculture and increased food security for the population. These are global issues of the sustainable development to which European citizens are particularly sensitive and empathetic. With great force it applies to the beginning of the new millennium. On 03/03/2010, the European Commission published a Communication Europe 2020, COM (2010) 2020 strategy for smart, sustainable and inclusive growth. Strategy "Europe 2020" reveals a new perspective to the agricultural sector and rural development on the continent. The debate focuses on the new reference and budget period of the Common Agricultural Policy, on its objectives, principles and contribution to strategy "Europe 2020". Formal public consultation on the future of the CAP after 2013, announced by the Commissioner of Agriculture Ciolos, are held under the slogan: "Your ideas are important to us." In late 2010 the European Commission published a communication - a document detailing various options for changes in European agricultural policy. It reflects the views summarized after the public discussion setting the policies forming the increasingly austere CAP, which saw its funds axed from 79% in 1980 to 44% in 2010. The declared public priorities determine the estimates for the next reference and budget period. In 2014-2020 CAP expenditure will be reduced to 39% of the EU budget. This requires a more focused forecasting and channeling of financial flows towards agricultural sectors and regions of priority to the respective country.

On 12/10/2011 the European Commission presented a draft reform of the CAP after 2013 (Dacian Ciolos). The aim is to make agriculture across Europe more competitive, more sustainable and stable in order to ensure environmental protection and rural development, as well as manufacturing of high quality and healthy food for its citizens. The Reform Project is laid down in detail and is reflected in a number of normative acts of the EC (1-7).

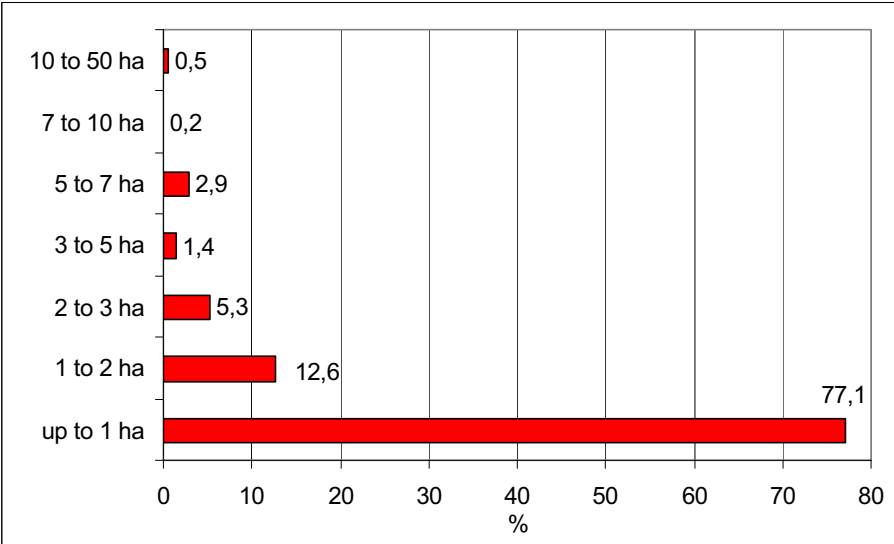
On the onset of the new program and budget period of CAP (2012-2020) the social role of agriculture as a major sector of material production and of the agricultural producers is ever more distinctly highlighted. These producers not only directly affect the environment, but are crucial to the quality of the creation of their agricultural production as well.

3.2. Environmental protection

When an analysis is made of the results from ESS, it must be borne in mind that the area is typical for small acreage production with characteristic sustainability, determined by the natural system of Blagoevgrad region. An idea for the size of the cultivated land is given by the results shown in Figure 1. Over

77% of respondents cultivate up to 1 ha. About 13% of the respondents - up to 2 ha, less than 5% cultivate from 2 to 3 ha. The majority, almost 95% of the agricultural producers in Blagoevgrad region, cultivate up to 3 ha. It is also observed that sometimes the cultivated land consists of several land plots. This is an essential piece of information that is important for deciphering some of the results of the ESS. This fact determines the opinions of agricultural producers in the region in response to some questions and their perceptions of proenvironmental practices that respondents often identified with their traditional activities. Their attitude to production is "an inheritance" from the ancestors.

Chart 3.1. Acreage of your cultivated land is:



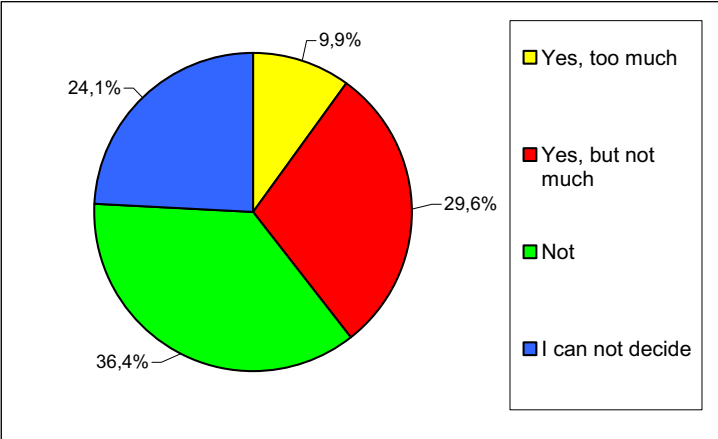
Source: ESS representative for the residents of villages in Blagoevgrad region. 2010

One of the tasks of the study is to establish the knowledge of the key recommendations and requirements for preservation of the environment associated with the agricultural activities of producers, especially *those arising from the application of the CAP*. In this regard, with a panel of more general questions was established the respondents' awareness of the agricultural policy - of the EU - 27. The level of general knowledge of the CAP is defined by several questions. Asked how they specify the *information they have on the CAP of the EU*, almost 12% of respondents answered it is fairly detailed and complete, about 20% answered it is fragmented, 37% define it as minimal. Every third respondent said he has no information. Answers to the question where you get most of the in-

formation are quite indicative. Most respondents, about 23% identify the media as a primary source. Almost 16% get information from colleagues and relatives. The same percentage responded that services to the Agriculture Ministry of Agriculture and National Agricultural Advisory are their source of information on the CAP. Do you need more information in this regard is the question that respondents answer most categorically. Almost 95% of them answer "yes" while only 5% say that they need additional information. This result indicates that the interest in the Common Agricultural Policy and its shift towards environmental protection is very important. It represents a key to the success or failure of implementation of the CAP (2014-2020).

Asked whether agriculture harms the environment (Chart 3.2.), the majority - 36,4% of the responses were negative. Almost 30% of respondents said yes, but not much. Almost one in four found it difficult to answer the question. Only one in ten responded that agriculture damages a lot the environment. Therefore, the majority of owners and users of land properly assess the impact of agriculture on the environment. Every seventh agricultural producer from the region of Blagoevgrad recognizes the direct link between environment and economic activity in agriculture and their responses characterize it as harmonious.

Chart 3.2. Do you think that agriculture is harming the environment?



Source: ESS representative for the residents of villages in Blagoevgrad region. 2010

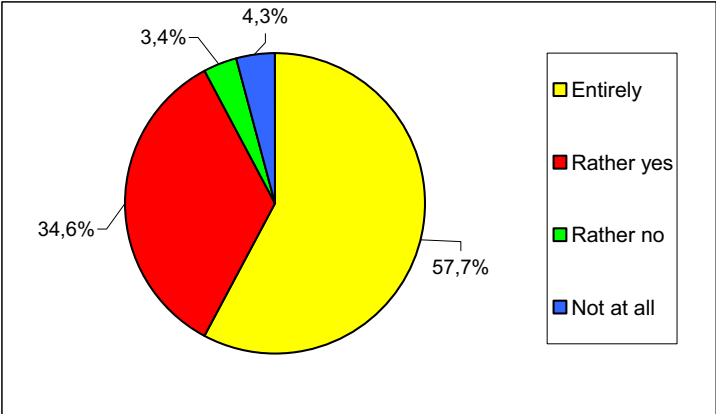
The conclusion that follows from these answers is that agricultural producers assess positively the role of the sector for protection and conservation of the environment, take interest in the requirements of the CAP and need more information in this regard. Almost all respondents declare such willingness. Therefore this actively manifested interest is a prerequisite for success-

ful implementation of the environmental standards, reaffirmed in the CAP (2014-2020).

Within the study, information was collected describing different aspects of production practice in terms of caring for the land. Overall, the results speak for the manifestation (especially in certain tendencies) of high ecological awareness of agricultural producers in Blagoevgrad region.

The majority - 57.7 percent, say they fully comply with the qualitative characteristics of the land when choosing the crop to be grown. To this group we can add the respondents who answered "rather yes" - almost 35%. In total, the farmers, for whom the characteristics of the land are primary, exceed 92%. Respondents with negative answers - "rather not" and "not at all" are merely less than 8%. Every ninth respondent observed the characteristics of the land he manages.

Chart 3.3. How do you comply with the quality of land when choosing crop?



Source: ESS conducted in Blagoevgrad, March 2010

However, it should be reiterated that the survey was conducted among small-acreage producers. The good knowledge on behalf of the owner of the possibilities for growing each crop on the individual land plots he works upon is a prerequisite for maximum yield. This information and the practice are passed down from preceding generations and is inherited and kept by their successors. This is another type of profile for evaluation of traditional agricultural practices. Its significance will be rediscovered and it will become more interesting for research, given the future changes, in the agricultural policy of the community after 2014.

When choosing a technology 17.4% of respondents fully comply with the characteristics of the land and 33.9% more or less take it into account. The respondents who are likely not to comply represent the highest proportion - 34.8 percent. Nearly 14% answered that they do not comply. The data for the compli-

ance of the qualitative characteristics of land resources with the technological requirements of the crops grown reveal the complexity of this relationship and its ambiguous modality. Naturally, the highest percentage of responses was "rather not". Explanation for this result can be found in the lack of specialized knowledge that more than 20 years after the dissolution of the cooperative structures is hardly available. Many of our respondents do not possess such knowledge and they do not have where to acquire it from. Here the advice of relatives and neighbors, or the seller at the store is insufficient. The lack of specialized advice is a problem the seriousness of which will be highlighted even more when entering new proenvironmental practices and strengthening the environmental imperative of the CAP in the new reference period after 2014 probably will learn from the experience of neighboring countries and the practice to create service agricultural structures will be implemented in our country.

Age variations are again most pronounced in the group of the youngest. Over 53% declared that rather comply with the quality of land in the choice of technology for growing crops. This is almost 20 points higher than the average responses of all respondents. Also the group of the youngest registered the lowest percentage of "fully" - just 6.3%, the average being 17.4%. The deviation is over 11%. This frankness of farmers from 18 to 29 years is revealing. This is a signal of future problems if these young people remain in production with this, honestly stated and acknowledged deficit of specialized knowledge. The highest share of respondents that fully comply with the qualitative characteristics of land when choosing technology is reported in farmers aged 40 - 49 incl. More than 34%, this exceeds almost twice the total. And this is a logical result. This can be explained by the fact that people in this group are most active, enterprising, with already accumulated knowledge and experience. These are farmers who most enjoyed the opportunities of modern information technologies. A significant proportion of respondents from the next age group - 50 to 59, completely or mostly technology comply with the technology for the growing of crops with the quality of land. So do six in ten respondents. In the group of the elderly - 60 or more years old, under 40% complied fully or responded "rather yes". This result clearly demonstrates that only the rich life experience and a long agricultural practice are not sufficient to manage technological discipline in the growing of crops and to comply with qualitative features of the soil. These results are alarming and indicate a need for searching and finding a way through European programs to fill this gap. Only the rich nature and good agro-ecological condition of agriculture, which is famous for Bulgaria, are not sufficient for competitive and environmentally sound production.

The crop rotation is defined as a significant new proenvironmental measure within the new changes in the CAP. In the upcoming new reference period starting in 2014 the crop rotation is within the special focus with regard to the role of agriculture in preserving the environment. In this respect, the results of the study are indicative of the attitude of respondents to the rotation, or rotation of arable crops and the importance they attach to the rotation in comparison with properties of the earth. In doing so 10.9% fully comply with the qualities of land, 29.3 percent "rather yes" -, 30.2% „rather not" - and 29.7% did not comply at all. These are results which, after further detailed study would be a valuable source of information on the "bottlenecks" in the system of proenvironmental agricultural practices. Properly organized, crop rotation is the activity which provides substantial benefits to the environment. To realize a suitable rotation of arable crops, it is necessary to suitable know-how, both of the physiological requirements of plants and technological features while keeping them in separate phases of development, including at harvest. Lastly, all these requirements must be combined with the qualities of the land. This is all kind of agricultural system, which requires very specific knowledge and skills. But in the new CAP based on good agricultural practices, farmers need to manage environmental and agricultural systems. This is a requirement of the European citizens, in view of protecting the environment and producing healthy food for all. The results show that this task would be hard to Bulgarian farmers. Reasons for this finding give us the above results. Only one in ten respondents fully complies with the quality of land in crop rotation. Every third person - "rather complies," which in conjunction with the complex system of interconnecting factors "quality of the land" and "rotation" which has already been mentioned, is quite a conditioned response. The answers "rather not" have the highest share - over 30%. If we add the answers "not at all" it would turn out that six in ten respondents do not comply with the quality of land when conducting crop rotation. Here the group of the youngest experienced the most serious difficulties. The deficit of knowledge and information is considerable and represents the main reason for this low score. It will be difficult for these young people to create sustainable agricultural systems, if this information vacuum is not filled. Despite their long experience on the field, the representatives of the top age group - over 60 years, also have difficulties in combining the qualities of land with crop rotation. This once again shows the need for specialized training and consultancy, as a prerequisite and necessary condition for implementing proekological practices and sustainable agricultural systems to meet the environmental imperative of the altered CAP. For this purpose it is necessary to reinforce the potential of the respective ad-

ministrations, with specialist prudent in this not quite easy field. There is an expressed interest on behalf of the producers.

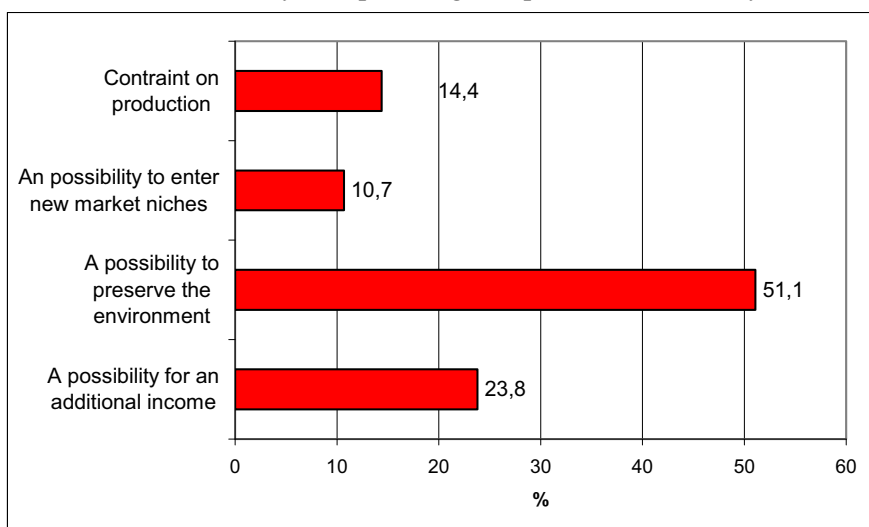
As for the latest trends, the information about the production of environmentally clean production is indicative. According to the answers of the respondents 19.3% of them are already producing such products (though some only for own consumption), 24.9% intend to switch to such production in the next 1-2 years, 31.0% were undecided and 23.8 % will adhere to standard production. For the serious information deficit here speaks the fact that in indirect questions, it was found that only about one fifth of respondents are aware of requirements to classify the crops as biological / organic. In support of this claim are the responses of more than half of the respondents who did not know whether the farm will be able to meet these requirements over the next year - two.

It can be concluded that the deficit in information is very significant factor, which, despite the positive attitudes and predispositions, will prevent the introduction of modern environmental practices. It is clear that the awareness is too poor regarding the opportunities provided by CAP in terms of support for organic produce. Not at all familiar with agri-environmental payments for organic farming are 52.7% of respondents, those with agri-environmental payments for management of lands with high biological value - 48.6%, and those with agri-environmental payments for soil and water - 43.8 percent. This highlights the impressive level of unawareness. It is also evident in the difficulty to determine what type of production is cheaper to produce - clean or standard. This is a potential barrier to the initiative, innovation and economic activity.

Asked what in the agricultural production damages environment the most, the majority of respondents said that these are the used artificial fertilizers. This is the opinion of one in three farmers. One in four respondents says that most harmful are the anti-pest products used in plant production. Over 18% of respondents believe that growing the same crop for several years in a row damages the environment. For 8, 5% these are the livestock waste, 5% answered that nothing harms the environment, and 9, 4% of respondents say that other agricultural practices damage the environment. Figure 3.4 shows the attitude of the respondents towards the ecological practices.

The answer to this question combines concepts of the values of the agricultural producers in the region as well as their practical activities. Over half of the respondents identify the ecological practices as an opportunity to conserve the environment. Almost 24% see it as an opportunity for additional income, around 11% - new market niches. Only 14.4% considered them as a limitation to production.

Chart 3.4. In your opinion, green practices are mostly



Source: ESS, March 2010, Blagoevgrad region

These results allow us to conclude that the respondents have good ecological culture, high sensitivity towards issues related to environmental protection, which is a prerequisite for conflict-free adoption of the new environmental regulations of the CAP. This is a potential for the emergence of new synergies between the application of the Common Agricultural Policy and the traditionally good agricultural practices of farmers from Blagoevgrad region engaged in small-acreage production. This is another outline of the social importance of this type of farming.

3.3. High quality and healthy foods

The last few decades in the developed industrial countries, along with the reaching of significant quantitative contentedness with food, attention started to be paid to their quality and composition. With the development of science and research it was found that the residua from fertilizers, from insecticides and herbicides contained in foods, are not without significance for human health. With the modern information communication technologies the information from the leading research centers spreads rapidly, reaching millions of people. In Bulgaria, as well, consumers do increasingly reflect on what they consume. The attention paid to the content and quality characteristics of food increases, as well as the popularity and interest towards the so-called "clean" and "organic" foods.

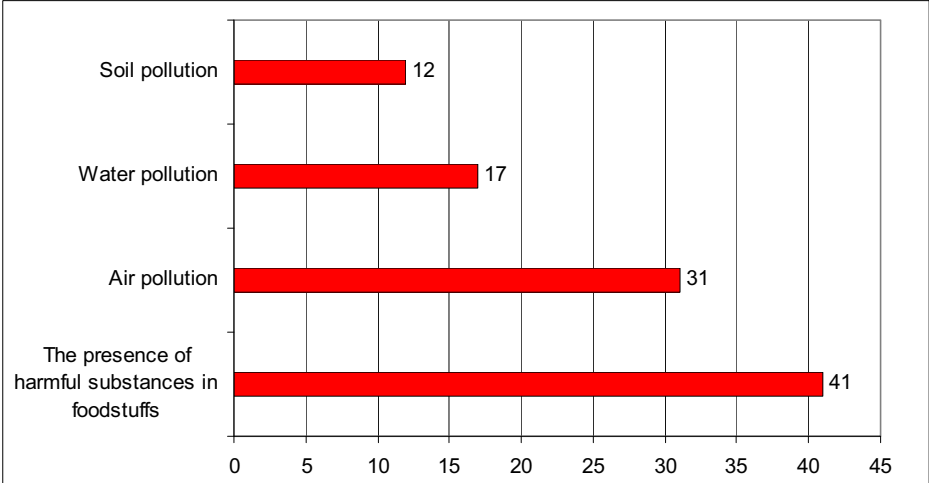
Based on results conducted in March 2010 in Blagoevgrad region, a representative sociological survey examine some aspects of the problem of clean

foods, namely the interest in them and for their use. This problem is directly related to the social significance of small scale agricultural production.

Firstly, the results of this study clearly show that people associate food quality (including their ecological purity) with their health. The presence of harmful substances in foodstuffs is considered most dangerous and in their assessments the respondents placed this risk factor ahead of such as air pollution, water and soil pollution.

This view is most common among university graduates (48%), while among the low educated groups (without education and with primary education) those sharing it are less than one third. As added differentiating factors stand out gender and age. The statement is supported more by women than men, and in terms of age - least in the age group over 60 years.

Chart 3.5. What do you think is most dangerous? (in %)



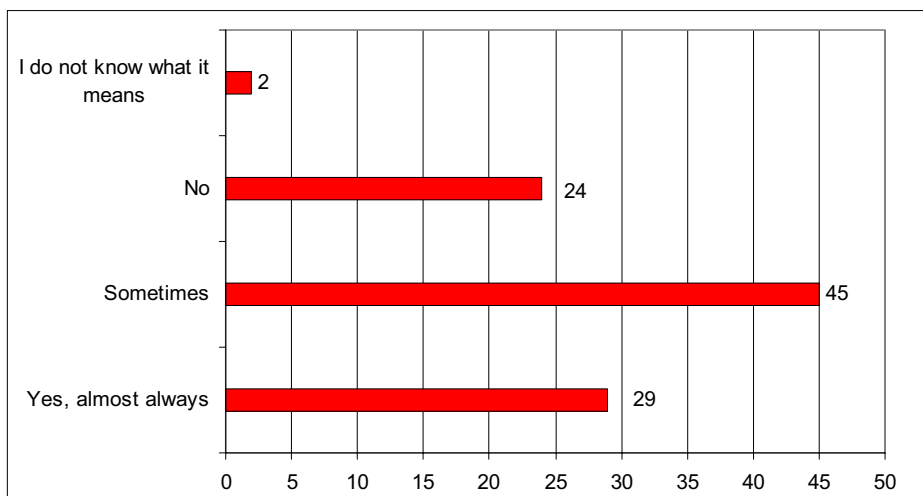
Source: ESS, March 2010, Blagoevgrad region

Logically, the view for the damage from contaminated foods grows into a desire for the reduction of the content of harmful substances to be one of the three priority tasks that must be addressed urgently. It was placed second (out of 7 options) the difference with the first - "reducing air pollution" being at the borderline of statistical significance. At the back places are positioned "Reducing water pollution", "Reducing soil pollution", "Construction of modern household waste storage facilities", "Recultivation of areas damaged by human activities", "Ensuring the safety of relay transmitters of mobile operators". In this case, again a key differentiating factor is education - addressing the issue of food quality is an outright priority for respondents with higher education, while

for those with low educational attainment, it gives way to other, traditional environmental problems.

The study shows that the consumer behavior, for one reason or another, did not adequately comply with the expressed concerns about the ecological purity of food. Less than one third of the people care about this quality of foods they buy. Another 45% do so sometimes. 24,1% of the respondents do not seek such information, and a small part – 1.6%, do not know at all what that is.

Chart 3.6. When you buy food, are you interested in whether it is environmentally friendly? (in %)



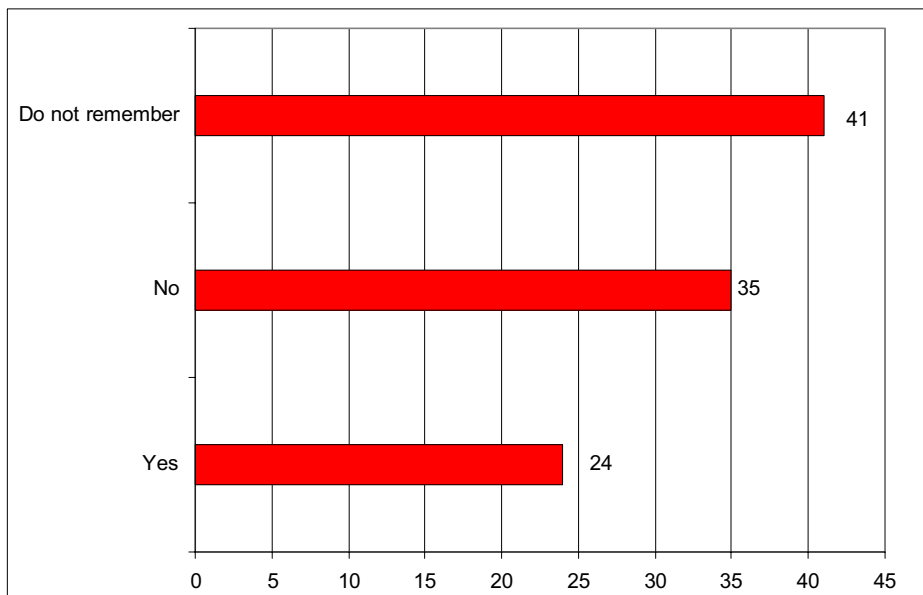
Source: ESS, March 2010, Blagoevgrad region

The actual consumption of ecologically clean foods, however, lags significantly behind the declared interest in them. During the survey less than one quarter of the respondents have replied that they have bought such product in the course of the last month.

From the group of those, who gave a positive response (24.2% of respondents), only one-sixth (apparently for the moment, this is contingent of a conscious and sustainable oriented towards organic foods) are able to remember the name of the manufacturer. This point to the idea that the others have either done accidentally such purchase, or have chosen socially prestigious answer which is not adequate to their actual behavior. (From the group of the respondents who identified their material situation as very good, on the direct question for purchase of environmentally friendly product in the last month 24.1% responded negatively, while the question of the manufacturing company 37.9% - (14 points more) said they are not buying this kind of products!)

However even the positive response for prestige is an indication of potential interest. The memory of the name of the manufacturer is quite sure indicator that there is systematic and durable orientation toward manufacturers of this type of production or at least that the implementation of such a purchase is carefully thought out, targeted search result.

Chart 3.7. Have you bought ecologically clean product during the last month?
(in %)



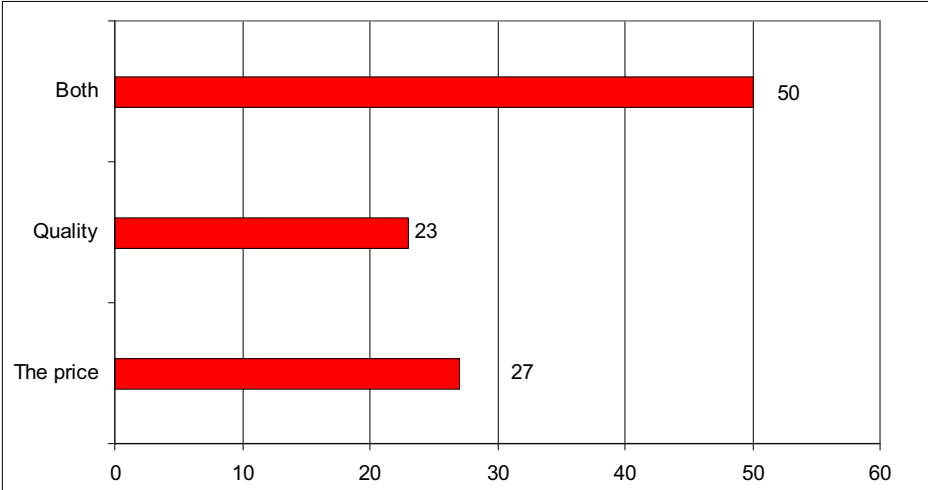
Source: ESS, March 2010, Blagoevgrad region

The analysis of information on a certain set of indicators geared to the conclusion that low real consumption of green foods is determined mainly by economic reasons. More than a third of respondents - 38% declare that they would not (and most possibly cannot) pay a higher price for ecologically clean product. Obviously, at the moment the material condition of the people, their limited financial resources are very serious limiting factor in the selection of food. Indicative of this is the information in response to a question which is decisive for the respondents when purchasing food products.

Approximately half of respondents said they look for a balance when choosing between price and quality. This response clearly dominates all social-group differentiation, and amongst the adults over 60 years is distributed along with the answer, giving priority to price. Amongst the younger people between 18 and 29, those who are seeking balance between price and quality is the

highest part. In the rest of this age group the distribution is definitely in favor of quality, while amongst others ages there is a parity (30-39 years old) or the price advantage (40-60 years old). About one out of four respondents, however, the most important in the purchase is the price. The dependence on financial condition clearly outlines the differences. While 37.9 percent of people with very good financial condition are choosing food products favor of quality, those who are not so well off represent 16.0%. And just the opposite - the price is decisive for 27.6% of respondents with very good position and 46.6% of those with bad position. The established distributions and dependencies give grounds to expect that improving the economic situation in the country and income growth against the backdrop of the registered and now awareness of the importance of environmental cleanliness of food for human health, will increase demand and consumption of ecologically clean food.

Chart 3.8. What is decisive for you when buying food? (in %)



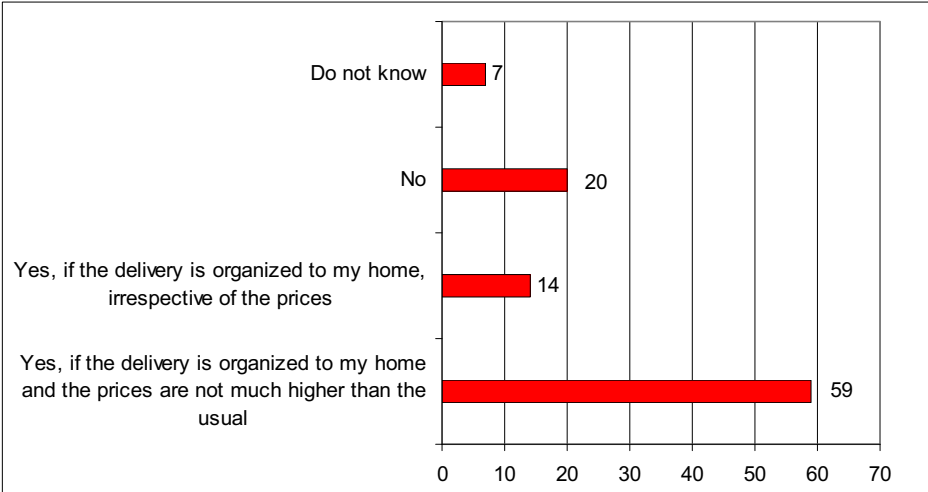
Source: ESS, March 2010, Blagoevgrad region

It should not be forgotten, however, the other influencing consumer behavior factors which are secondary, but in a new situation may appear with decisive influence – the insufficient recognition of the ecologically clean and organic products as well as distrust in the control and the correlation between the indicated and actual quality.

In the course of the survey we tried to explore attitudes towards an already successfully launched practice in other countries (e.g. Czech Republic) - the supply of agricultural products directly from a specific manufacturer (mostly small) to the end user.

The survey shows that nearly three quarters of respondents expressed willingness to be included in such a practice. It is likely that during the transition from intention to action this share will shrink noticeably, but still it is quite significant, giving rise to the statement that such an initiative deserves to be launched and supported. The emphasis on economic conditions put by the great majority of people on the one hand shows that the actual scale will depend heavily on the price of the service (which is a challenge for rational organization and reasonable pricing). On the other hand - in case of positive changes in the financial position of households the interest and involvement of people will increase. In support of the outlook of rising interest in the future is the fact that among those interested in the ecological purity of food there are more people who expressed willingness to buy agricultural products this way. It is expected that in the course of time this contingent to increase in numbers and in share, in parallel with the process of going green thinking, driven by the movement of information, the translation of ideas and values disseminated in developed societies, by the changes in value hierarchies and priorities. This will foster the rediscovery of the social significance of small acreage agricultural production, given its role in preserving the natural environment, reducing biodiversity loss, maintenance of landscape, providing healthy and quality food and other activities important to the "grid" of society and man.

Chart 3.9. Would you personally buy food directly from an agricultural producer? (in %)



Source: ESS, March 2010, Blagoevgrad region

The advent of such a practice would be beneficial to producers and consumers. The direct and sustainable relation will be accompanied by greater confidence by the user, whilst being an incentive and support for development of small acreage production by giving perspective to it and creating sustainable market links. In a wider perspective the sustainment of small-scale production (though not economically highly effective) means stopping the depopulation of villages and regions, keeping people in the villages as agricultural producers, rather than migrated to big cities, becoming users of the agricultural production.

Summary and conclusions

Agricultural transformations in the circumstances of growing competition are mainly shaped by the processes of the economic polarisation of farms and the reduced role of agricultural activity as a source of subsistence¹⁸. However, this process failed to contribute to the intensification of the tendency to liquidate farms, but mainly resulted in the limitation of their economic functions. This tendency is expressed by the appearance of market-oriented units¹⁹, the main purpose of which is to satisfy the demands of competition and further professional development, and entities with a small production scale. Although both the mentioned populations showed a growing trend, the growth in their value did not happen at the same pace. The number of holdings with relatively low economic potential grew relatively quicker. In consequence, Polish agriculture is dominated by entities with a scale of operations not allowing the achievement of a satisfactory income from the work in the held farm with a low competitive ability. The presence in agriculture of a large group of farms failing to satisfy the significant production and income functions slows down the processes of the pro-effectiveness transformations in agriculture and simultaneously conditions the effectiveness level of the entire sector.

Studies on structural changes in agriculture usually emphasise the need to activate operations aimed at creating conditions to enliven the flow of agricultural production factors, particularly land of holdings with low market activeness in comparison to pro-market units, driving to strengthen their market position and competitiveness. This process is associated with the progressive disappearance of agricultural holdings, the reasons for which include the diversification of the economic activity of the agricultural population. The pace of shifting to non-agricultural activities depends on many factors, which include the profile of the social and demographic structures of agricultural population. The demographic phenomena (including primarily the population growth rate) are autonomic factors, but the profile of the population (age, gender, education level, professional aspirations) in given conditions may restrain or stimulate the processes of economic activeness diversification, and in turn the pro-effectiveness structural trans-

¹⁸ According to data of the Central Statistical Office (GUS), in 2007, agricultural activity was the main source of income for only slightly above 25% (in 2005 – for nearly 27%) of agricultural holdings with a holder of a private farm and almost 34% (in 2005 – over 36%) agricultural holdings with a holder of a private farm with an area above 1 ha of agricultural land, i.e. the income from the holding comprised 50% of the total income [Description of agricultural holdings 2007].

¹⁹ In the text of the study, the names: farm, agricultural holding, unit, and entity are used interchangeably.

formations of Polish agriculture. These changes are a major problem not only for the development of agriculture and rural areas, but also the entire country.

The subject of this paper is the socio-demographic analysis of the semi-subsistence farms population, characterised by poor production potential (up to 8 ESU). The aim of the analysis was to investigate the differences in this regard between the population of semi-subsistence and commercial entities, whose principal objective is to meet competition requirements. The characteristics of the population (age, sex, education), and the location of economic activity are important elements, which could hamper or stimulate the diversification of economic activity and the pro-effectiveness transformation of Polish agriculture. These changes are connected with transferring the rural workforce to the non-agricultural sector and the process of closing down agricultural farms, together with the concentration of land.

It has been documented in the paper that, although the demographic features of semi-subsistence farms population are not much different from the population of commercial farms, the ageing processes are fairly more advanced. In addition, individuals from semi-subsistence-farm families were characterised by a lower level of scholarisation, especially regarding agricultural education, than the commercial farms population. These tendencies were visible especially among farm managers. The high proportion of women was not the only feature of the group of individuals managing semi-subsistence entities.

The analysis of the economic activity of the semi-subsistence-farms population indicates that this population was active mainly on the non-agricultural labour market. 34% of the semi-subsistence working-age population is permanently employed in the non-agricultural sector, which is 3 times as much as among commercial-farms population. At the same time, 9% of the working age population from semi-subsistence farms actively seek this kind of employment.

Although the impact on the labour market from semi-subsistence farms population is significantly larger than from the rest of the population, the idle resources of the labour force in this category are to be considered significant. People working in agricultural farms, although their work is close to non-profitability as regards agricultural activity, constitute 25% of the total semi-subsistence farms working-age population.

The analysis of the maintenance sources of the families working in semi-subsistence farms indicated a general division of this community into two groups: one whose maintenance depends on performing non-agricultural work (48%) and one which receives its maintenance sources from pension and retirement benefits (30%). Despite relatively small production and thus also income from agricultural activity, the farms were the main source of maintenance for

22% of semi-subsistence-farm families, being the only source for only 9%, whereas the corresponding rate for commercial farms amounted to 22%. It turned out, however, that, despite the diversity of income sources, the economic situation of large commercial farm families was relatively worse. Their annual income per family amounted to, respectively, 41% and 49% of the average income of commercial farm families.

Semi-subsistence farms in our country are evolving, along with successive generations. According to analyses concerning demographic features, education directions, professional ambitions and sources of maintenance, it can be predicted that in the long-term perspective a significant portion of semi-subsistence farms will undergo such a course of action as described above and their status will become increasingly similar to small farms. One may assume that the improvement in the labour market (an increase in labour-force demand in the non-agricultural sector) can accelerate the process of giving up semi-subsistence-farms activity. From the perspective of pro-effective transformations in agricultural structures these changes will be advantageous, as the existence of over 1 million semi-subsistence farms weakens the competitiveness of our agriculture. It is necessary to seek mechanisms influencing their disappearance. Another factor influencing the tendency to close down semi-subsistence farms may be the change in common agricultural policy beginning in 2014, if the level of subsidies, calculated in real prices, is smaller than the current one.

In conclusion we can say that the interconnections between the new ecological imperative of the CAP (2014-2020) and traditional agricultural practices are direct and straightforward. This reaffirms the role and place of production and small-acreage production and its sustainability for the conditions in Bulgaria. Through their activities the producers care for the environment, preserve the biodiversity and landscape, produce healthy food and create a true "green economy", objective of "Europe 2020" and the CAP after 2014. Ecological sensitiveness of farmers is transformed into ecological culture, manifests itself in the positive attitudes and implementation, albeit to different extent of traditional and contemporary practices. This is a precondition for the occurrence of unique synergic effects in the future sustainable integration of the CAP ecological imperative and traditional agricultural practices and essential factor for preservation of the environment in agricultural production and manufacturing of clean and healthy. This underlies as a key social component in the CAP (2014-2020).

Literature

1. *Charakterystyka gospodarstw rolnych w 2007 roku (The characteristics of agricultural holdings in 2007)*, GUS, Warsaw 2008.
2. Dacian Ciolos. Un nouveau partenariat entre l'Europe et les agriculteurs. SPEECH/11/653Bruxelles, 12 octobre 2011.
3. Gall M. D., Gall J. P.& R. Borg W.: *Educational research: An introduction*, Allyn & Bacon, Boston 2003.
4. <http://value-nature.com/participants.html>
5. Hunek T.: *Rolnictwo w procesie formowania się nowego ładu społeczno-gospodarczego (Agriculture in the process of forming a new social and economic order)*, [in:] *Wieś i rolnictwo na przełomie wieków (Rural areas and agriculture at the turn of the century)*, IRWiR PAN, Warsaw 2001.
6. Józwiak W.; Mirkowska Z.: *Zdolność konkurencyjna polskich gospodarstw rolnych w zestawieniu z gospodarstwami węgierskimi i niemieckimi (The competitive ability of Polish agricultural holdings in comparison with Hungarian and German holdings)*, in the collective study edited by W. Józwiak, entitled *Sytuacja ekonomiczna, efektywność funkcjonowania i konkurencyjność polskich gospodarstw rolnych osób fizycznych (The economic condition, functioning effectiveness and competitiveness of Polish agricultural holdings of physical persons)*, IAFE-NRI, 2005-2009 Multiannual Programme, Warsaw 2009.
7. Karwat-Woźniak B.: *Potencjał ekonomiczny polskich gospodarstw indywidualnych w Polsce w toku zmian globalnych (The economic potential of Polish private farms in Poland during global transformations)*, Roczniki Naukowe SERIA (SERIA Scientific Yearbooks), t. XI, z. 2, Warsaw-Poznań-Olsztyn, 2009.
8. Klepacki B.: *Znaczenie wiedzy i wykształcenia w rozwoju rolnictwa (The significance of knowledge and education in agricultural development)*, Zagadnienia Ekonomiczne (Economic Issues) No. 2, University of Warmia and Mazury, Olsztyn 2004.
9. *Proposal for a Regulation of the European Parliament and Council establishing a common organization of agricultural markets*, COM (2011) 626.
10. *Proposal for a Regulation of the European Parliament and the Council amending Regulation (EC) № 73/2009 as regards the implementation of direct payments to farmers for 2013* COM (2011) 630.
11. *Proposal for a Regulation of the European Parliament and the Council amending Regulation (EC) № 1234/2007 as regards the regime of the single payment scheme and supporting harvesters* COM (2011) 631.

12. *Proposal for a Council Regulation establishing measures for the determination of certain benefits and refunds related to the common organization of agricultural markets*, COM (2011) 629.
13. *Proposal for a Regulation of the European Parliament and the Council laying down rules for direct payments to farmers under support schemes under the Common Agricultural Policy*, COM (2011) 625;
14. *Proposal for a Regulation of the European Parliament and the Council on support for rural development by European Agricultural Fund for Rural Development*, COM (2011) 627.
15. *Proposal for a Regulation of the European Parliament and the Council on the financing, management and monitoring of the CAP*, COM (2011) 628.
16. Sikorska A. *Gospodarstwa bez produkcji towarowej w strukturach indywidualnego rolnictwa (Holdings with no commercial production in the structures of individual agriculture)*, Komunikaty, Raporty, Ekspertyzy (Announcements, Reports, Expert Studies), z. 549, IAFE-NRI, Warsaw 2010.
17. Sikorska A.: *Gospodarstwa socjalne w strukturze społeczno-ekonomicznej wsi (Social holdings in the social and economic structure of rural areas)*, Studia i Monografie (Studies and Monographs), z. 117, IAFE, Warsaw 2003.
18. Sikorska A.: *Struktura społeczno-demograficzna i wykształcenie ludności wiejskiej (The social and demographic structure and education of the rural population)*, Studia i Monografie (Studies and Monographs), z. 87, IAFE, Warsaw 1999.
19. Woś A.: *Układy strukturalne w chłopskim rolnictwie (w świetle danych rachunkowości rolnej) (The structural arrangements in peasant agriculture [in light of agricultural accounting data])*, Komunikaty, Raporty, Ekspertyzy (Announcements, Reports, Expert Studies), z. 465, IAFE, Warsaw 2000.
20. Wrzochalska A.: *Kobiety kierujące gospodarstwami rolnymi (Women in charge of farms)*, Komunikaty, Raporty, Ekspertyzy, z. 542, IAFE, Warsaw 2010.
21. Zegar J. St.: *Indywidualne gospodarstwa rolne w układzie przestrzennym (Private farms in a spatial arrangement)*, in a collective study edited by J. St. Zegar entitled *Zróżnicowanie regionalne rolnictwa (Regional diversification of agriculture)*, GUS, Warsaw 2003.
22. Zegar J. St.: *Struktura polskiego rolnictwa rodzinnego pod koniec pierwszej dekady XXI wieku (The structure of Polish family agriculture during the end of the first decade of the 21st Century)*, IAFE-NRI, Warsaw 2009.

COPY FREE

Print run: 500 copies

Printing and binding: EXPOL Wloclawek