

THE ROLE OF YOUTH IN SUSTAINABLE DEVELOPMENT OF ROMANIAN RURAL COMMUNITIES

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Abstract

The rural area is an area vital to our country, both by its size and by the complex effects they generate. Agriculture Committee of the Council of Europe believes that European rural areas is more than 85% of the continent and affect directly or indirectly more than half of the European population. Exodus of young people in particular to urban areas, labor migration to EU countries and beyond, and the refusal of young professionals to return to rural areas, are just some of the reasons why human resources in rural Romanian are largely aged and unskilled. *Employment in agriculture* is an indicator on the one hand the development of the sector (i.e. the degree of capitalization of farms), and on the other hand provides guidance on sustainability and "youth" categories of farms, responsiveness to new development efforts and entrepreneurial capacity. Romania's population is also affected by aging, a phenomenon that manifests differently in most member states of the European Union. In Romania, according to the National Institute of Statistics, South and South - West region faces an aging of the population, with the highest percentage of population older than 65 years (16.2% of total population), expecting an increase in this trend. The higher percentage of young population recorded in the North - East (18.3%).

Key words: sustainable development, youth population, Romanian rural communities.

JEL Classification: O15, R10.

INTRODUCTION

The national interest of solving the problems of rural Romanian is the most eloquent, the more rural areas representing 87% of the country and where

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they live more than 50% of its population. The proposed research finds its place in the economic sciences, and social, addressing a topic of national interest, given that, at present, Romania is at the stage of finding real solutions for sustainable development of rural areas. The importance given to rural areas results inclusive from the Recommendation of the EC 1296/1996 on developing a document specifically for this problem as the European Charter of the countryside. Perhaps the most serious current problem is the Romanian rural population aging and lack of professionals who work both in the public and private sectors.

Throughout Europe are suffering from demographic stagnation or decline more or less pronounced, resulting in, among other things, general aging of the population. For the countries of Central Europe that joined the European Union the situation is worrisome because of very low birth rates and thus the gradual reduction of the working age population, the exodus of young people and having highly skilled, the unsatisfactory level of training according to market requirements and acquisition of the skills necessary to transition to the information society, based on knowledge and innovation.

It is estimated that there is a real risk that, in the coming decades, the countries of Central and Eastern Europe to become a sparsely populated region with a declining labor force, forced to bear the burden of an aging population.

Scientific approach to **sustainable rural development** is essential in the current European Romania. The theme of finding ways of returning young professionals in rural areas addressed in this article is one recent and addressed sporadically in economic and social sciences in Romania.

In the current research landscape of rural economy, this subject is something new, unique, but starts today's need to convince young graduates and graduate to return to rural areas (especially in the areas of residence) to live and work. This would be a solution of Romanian rural rejuvenation and to ensure their sustainable development prospects.

MATERIALS AND METHODS

In preparing this article were used as **materials for documentation and information sources**: national and international literature; magazines devoted; studies and research conducted by the authors in the doctoral and postdoctoral training stages; studies and research conducted in the projects developed at the Institute of Agricultural Economics, the National Economy Institute and other institutes of the Romanian Academy; official statistics provided by the National Institute of Statistics etc. The main **research methods** used to compile this article were: bibliographic synthesis; mathematical and statistical processing of data; induction and deduction; observation etc.

RESULTS

According to statistical data used by national legislation, rural Romania covers 87.1% of land surface and are home to 45% of the population, i.e. approx. 9.6 million of Romanian.

In 2012, the Institute for Quality of Life Research (www.iccv.ro) and Institute Social Economy (www.ies.org.ro) made public the results of a representative field surveys among farmers' associations, those forest owners and co-owners, rural communities in Romania, which shows that *75% of rural residents live in poverty*. According to the same survey, over 1,000,000 Romanian living in rural areas are unpaid family workers, people without any wage, and live in their own homes.

Figures from the study "*Romania in figures 2011*" National Institute of Statistics (www.insse.ro) attests, however, that *employment of people in rural areas* are part of a trend of slight growth, even while the Romania has been seriously affected by the crisis in 2009-2010. Paradoxically, employment recorded a peak increase of 5.4% in 2009, the most difficult year of the economic crisis in Romania, 0.5% more than in 2007. At the same time, *long-term unemployment in rural areas* decreased on average by 2%, even among young people, the group most affected by unemployment. This could be a signal to decision makers about the ability of poor rural communities in Romania to respond to crises.

According to the same survey of INS, in the countryside of Romania, employment opportunities are close to zero, and access to services, not always of good quality, is slow. These are the reasons for *migration phenomenon* manifests itself in rural areas, especially among young people, 8.3 per thousand inhabitants in 2010 to 6.8 in 2007 and 6 in 2009. The migration phenomenon occurs in reverse, the environment in rural areas, 13.8 per thousand in 2010 to 12.2 in 2007 and 10 in 2009, only those migrating to areas no longer young, which emphasizes the aging rural population.

Peasant farming in Romania is characterized by the fact that owns the land around the house and about 1-5 ha field at a certain distance from home. The production is generally mixed (speaking mainly of field crops and granivores - poultry, pork, and vegetables and fruits for family consumption). In general, lack of means of production and financial resources, making them vulnerable to market pressures means of production and have little chance of survival without capitalize upgrade. Usually, production, distribution and consumption of goods is done in strict relation to the requirements of the family, in the case of subsistence or semi-subsistence farms that produce mostly, sometimes solely for their own consumption.

In this subsistence agriculture, *labor force* is priceless; in the sense that it is not economically evaluated, not investing, it supports very low yields per hectare and harvest is not sold on the market, but is intended for self-consumption (for human food, the farmer and his family and / or animal feed household).

Owners subsistence households are generally elderly, people with little training or heirs who live in urban areas. Some of these households will be able to resist but in the practice of part-time agriculture and non-agricultural diversification of economic activities in rural areas. The combination of farming with activities of manufacturing industries, with service activities for agriculture, trade, tourism, etc., can be a way of improving the incomes of farmers in this category and their integration into overall economic development.

Working in agriculture is the decisive factor for the enhancement of resources in this branch, represented by capital and operating capital land, decisively influencing the production results. Many economists recognize the economic importance of agrarian labor in agriculture through the large share in the structure of production costs related to the workforce. This share is estimated between 30-60% of the total, depending on the type of farm production systems that practice intensive or extensive, etc.

Labor in agriculture must be completely and acknowledge the very special, not only because of economic importance, but also the social importance resulting from the new functions of agriculture. The special nature of agricultural work is not diminished at all from the continued reduction in the number of active participants in agriculture.

The process of gradual reduction of labor in agriculture, caused by increased development (growth) economic, in addition to the beneficial aspects related to productivity growth resulted in a deep crisis in rural areas. Rural life crisis arises, first, the rural exodus, which led to the depopulation of Romanian villages (and not only Romanian) but also the "remoteness of the peasantry" of Romanian peasant, phenomena that shatter lives in rural areas. Another problem is the general assessment methods and procedures work in agriculture. This problem can be addressed in three aspects, namely: labor available, work effectively used (used) and the work required.

Sociological research showed that *work in agriculture - as a factor of production* - has some features and peculiarities of its own. It can be said that, in agriculture, labor is not homogeneous and uniform as in industry. The complexity of work processes in agriculture is determined by the complex structure of agricultural activities, the biological laws of development of plants and animals, the variety of culture systems and technological structures and

natural conditions that determine a range of technical features, economic and social.

Working in agriculture is "subordinated" objectively needs (of needs) living beings. Whatever the adopted animal husbandry system, their care is daily (feeding, watering, etc.). The crop execution of certain treatments should be done only at the right times, all non-execution may jeopardize their respective harvest.

The need for labor in agriculture is seasonal workers prefer, as is natural, a service (service) more regular, as in industry. Seasonal agricultural employee is in constant insecurity due to frequent work breaks typically caused by unfavorable weather. There is often a social conflict generated by this situation, the "downtime". Solving is one: guaranteeing a minimum wage for unfavorable weather. In agriculture the number of employees with employment contract of indefinite duration is extremely low. Employment of this type is less adapted to conditions in agriculture where work rhythms and intensities knows very different, where job insecurity is almost constant, where, as noted above, assessing the quality of work performed is quite cumbersome and where production processes are difficult to control.

Regarding the qualitative dimension of labor supply in the labor market in agriculture can show that the more rural labor force has a skill level higher education and the higher productivity, efficiency and overall balance of employment receive their consistency.

The influence of the demographic factor on the potential supply of labor in the labor market in agriculture is not simply to change the number of people of working age, but also includes changing age structure. Among the implications of demographic trends on labor supply and labor market in Romania that can play the following:

a. *a numerical decrease in the supply of labor*, both on account of the actual demographic aging and retirement from activity, as well as new entrants into the labor market. On the other hand, the pressure on labor supply will relax, while emphasizing of a series of social problems, especially in the economic dependency ratio and the ability to create their resources needed for social security;

b. *reducing school population* that will put serious and difficult problems (re) conversion teacher professional before all of the compulsory education;

c. *changes in migratory behavior of labor*. Internally it is possible to reverse the direction of migratory movement from agriculture - farming, the farm - non-farm, especially due mainly to the development of social services, to the rural production etc.¹

¹ After Pert Steliana, *Impact "demographic crisis" on the labor market (Impactul "crizei demografice" asupra pieței muncii)*, Notebooks debate sessions of the Sustainable Development Strategy of Romania "Horizon - 2025", vol. I - Sectoral strategies, Demography, Bucharest, 2004.

Employment in agriculture is an indicator on the one hand the development of the sector (i.e. the degree of capitalization of farms) and on the other hand provides guidance on sustainability and "youth" certain categories of farms, receptivity to new development efforts and entrepreneurial capacity.

Next we analyze employment in Romanian farms in various structural aspects (economic, social, educational, etc.). From a demographic post-revolutionary period marked: more permanent mobility of the population in rural communities; emphasizing distortion demographic balance by age and sex; natural growth rate decreased due to higher general and infant mortality; emphasizing discrepancy regarding the instructional - educational the rural population compared to urban population.

The trend of demographic aging of the rural population and the pressure of elderly quotas increased the load active population. The phenomenon of migration continued especially after 1989. Thus, in 1990 over 616,000 people migrated from rural communities through urban relocation. This was possible due to the closed nature of the abolition legislation of their residence requirement cities and in rural areas where they work.

Regarding internal migration trends were quite stable, and the region has "lost" the greatest number of inhabitants has always been the North - East. People with the highest willingness to migrate are usually young, the working age population who migrate to urban areas in search of better jobs and a social life more attractive.

In the period 2000 - 2007 was dominated by internal migration flows urban - rural, urban flows followed - urban and rural - urban. As a result of the worsening socio-economic conditions in urban areas there was a massive migration of population to rural areas, rural population increased significantly in most regions. During this period there were major changes in socio-demographic structure of the rural population, making their appearance in rural communities socio-economic new categories. Also, there is a drastic reduction of active rural population with superior instructional educational status; 60% are junior level training.

There were also changes in the composition of households rural families. The census of 1992 marked the massive increase in the number of rural households without active persons from 7.54% in 1986 to 30.6% in 1992, while the share of households consisting of 2-4 persons from 63% in 1986-41 % in 1992, the average number of people per household was for rural is 3.12. Another negative factor was that the active population in agriculture - namely the young - numerically decreased at a faster pace with the population of other ages. Also, young people aged 25-29 years are the least numerous of those who remained in the villages.

The analysis of employed population by age and activities of the national economy, we can draw some conclusions with profound socio-economic implications, as follows:

- over 1/5 of the workforce in agriculture is the elderly (65 years or more);
- Romanian peasant, reached retirement age is forced to work to secure basic needs, because the amount of pension is insufficient (lowest pensions they are still peasants, the pension system is still discriminatory in their disadvantage net compared to other socio-professional categories of pensioners);
- over 50% of the working population are employed in agriculture in other fields, practicing agriculture "in the limit of available time" with adverse effects on labor productivity and quality of agricultural production.

In Table 1 are shown a number of issues concerning the structure of employment in the Romanian agricultural holdings year by year:

- the category of classification or degree of involvement in farming;
- the level of training (especially the heads of holdings);
- distribution by sex and age of the individual farmers and their families etc.

Table 1

The structure of the labor on Romanian farms

SPECIFICATION	The agricultural area of the holding (ha)			
	< 5	5 - 20	20 - 50	> 50
<i>Family labor force</i>				
Thousands persons	2248,6	702,0	35,0	14,5
Thousands annual work units (AWU)	846,1	308,3	17,7	8,1
<i>Non-familial regularly engaged workforce (permanently)</i>				
Thousands persons	10,4	5,2	3,2	52,4
Thousands annual work units (AWU)	7,9	2,5	2,2	40,8
<i>Non-familial labor force employed irregular (seasonal)</i>				
Thousands annual work units (AWU)	54,1	36,2	6,9	24,2
Heads of holding (thousand) in which:	918,2	289,6	14,9	13,3
- women (%)	19,8	20,6	14,5	10,6
- part time - less than 50% (%)	63,7	54,9	44,0	42,4
- full-time - 50% and above (%)	34,0	40,4	44,2	41,8
- only basic training in agriculture (%)	7,9	8,6	16,2	16,9
- higher education in agriculture (%)	0,9	2,1	9,1	26,9
Individual farmers (thousand), of which:	917,3	287,5	14,1	5,9
- women (%)	20,2	21,5	14,8	11,0
- age distribution (%)				

SPECIFICATION	The agricultural area of the holding (ha)			
	< 5	5 - 20	20 - 50	> 50
- under 35 years	3,8	2,8	6,4	6,7
- 35 - 44 years	9,8	7,5	14,3	20,6
- 45 - 54 years	15,8	14,5	22,2	29,1
- 55 - 64 years	24,6	23,3	24,8	21,6
- 65 years and over	45,8	51,9	32,3	22,0
- the main occupation (%)	16,4	15,8	12,2	14,3
- as a secondary occupation (%)	5,1	5,4	5,6	7,2
Individual farmer's wife, who works on the farm (thousand)	630,6	183,9	9,6	3,7
- age distribution (%)				
- under 35 years	9,1	6,5	11,7	15,7
- 35 - 54 years	36,4	32,9	45,9	56,1
- 55 years and over	54,5	60,5	42,4	28,2
- with another activity (%)	21,8	20,2	19,5	23,2

Note: AWU = Annual Work Unit (1,960 hours, equivalent to 245 working days of 8 hours/day); Unit ESU (UDE) = Economic Dimension Units, equivalent to a size of holding 1,200 Euro.

Source: EUROSTAT - "Structure of agricultural holdings", Newsrelease 60/2007, www.europa.eu, www.epp.eurostat.ec.europa.eu.

A first feature is observed age distribution of heads of holdings; in almost half of farms considered (more than 1 ESU), i.e. in 47% of cases, the manager is aged over 65 years. The size classes ranging holdings 5-20 ha, over half (52%) of heads holdings over 65 years and under 5 ha farm category, the percentage is close (46%).

Young farmers (under 35) appear only in 4% of farms surveyed, but it is interesting to note that the categories of medium and large farms (between 20-50 ha and 50 ha), most heads of holdings aged between 35 and 64 years, and 27% have higher education specialist.

Also in case of holdings with animals, farmers over 65 years to a greater extent in the position of head of the holding (47%). Large animal farms (over 50 LU - livestock unit) are led by young farmers (under 35 years) in 10% of cases, while vegetable farms profile, the percentage is less than half. Most balanced age distribution of heads of holdings can be found in large animal farms, 75% of them aged between 35-64 years; this proportion drops to 47% in farms with fewer animals. On farms with low-profile animal and the plant, between 60-80% of individual farmers work only part-time (less than 50% of the total) holdings; 21% of them having a different activity as the main source of income.

Labor issues in various aspects, was often a subject of study in the research of "Rural Microeconomics" sector of Agricultural Economics Institute of the

Romanian Academy. In numerous research projects was studied the structure of employment in agriculture and Romanian rural areas. In its surveys and investigations there have been questions about the workforce. *The issue of youth as the workforce in agriculture and rural areas*, and their role in sustainable rural development process has always been present in these studies.

Next will be presented some results obtained from a research project carried out between 2006 - 2008 in 419 farms, of which 268 individuals and 151 legal entities, relatively uniformly distributed at the national level.

The dynamics of the labor market is a result of the restructuring of the economy and employment opportunities offered by the various sectors. Employment rate of population in Romania has remained relatively constant over the period 2000 - 2007 (58% in 2005, 58.8% in 2006), according to data from statistical yearbooks.

At the regional level, employment rates above the national average in less developed regions - North - East, South and South - West - caused by high employment rates in agriculture. Bucharest - Ilfov also records, employment rates above the national average, due to much higher labor supply and diversified.

The phrase "Romanian rural population is aging" is checked and if the results of our studies. At the level of 419 farms studied, the age distribution of heads of holdings is as follows (Table 2):

Table 2

The age distribution of the farms heads from the sample

Groups of age	The number of people (heads of holding)	%
30 – 40 years	22	5,25
41 – 50 years	44	10,50
51 – 60 years	98	23,38
61 – 70 years	55	13,12
71 – 80 years	34	8,11
over 81 years	81	19,33

Source: Database obtained in CNCSIS research project "Sustainable development potential farm", 2006-2008.

Given that **sustainable development of the farm** is, first, a development that is part of the "continuity in time and space" and can be measured by the level of income, equity, employment, the occupation of the territory and the preservation and protection of the environment and biodiversity, the present

study aims at knowing how labor as the main factor of production employed in Romanian agriculture can contribute to "permanent" farming in certain territories and the further development of existing farms.

In our view, the crucial issue is to reform the peasant class in Romania, a qualitative and vocational rehabilitation. *Romanian peasant training problem* is not new. For example, S. P. Radianu (1881) designed and proposed a whole system design and gradual training, the level of the most advanced European countries. One of the great followers of S. P. Radianu, Gheorghe Ionescu Sisești developed his predecessor thesis on "*improving agriculture through education*". According to his conception, agricultural education must develop parallel in all branches and fields of higher education must train managers and researchers, while lower education aims to form particularly good cultivators of their own land.

Therefore, restoring peasant class as a great democratic, modern organization goes through a unified and multilateral education, keeping everything we better in this area, it is natural adding new elements conducive to recovery - on new bases - a social class - Romanian peasantry, based regeneration nation and ancestral traditions.

From all the data it is clear **the important position of agriculture in the Romanian economy** and the fundamental role of labor resources in the sector and agricultural holdings within each part. No matter how we characterize the national economy of Romania (developing, still in transition during the restructuring period), one fact is certain, agriculture, the natural and human resources available (categories of land, labor) by its contribution to the creation of macroeconomic indicators (GDP, GVA etc.) continues to hold a dominant position in the economy. *Human resource management in Romanian agriculture* currently seeks rapid increase farm income (especially family holdings) to their maintenance costs and rapid growth of productivity in relation to average farm project expenditures (family farmer).

The population of Romania, located in a declining, is affected by aging, a phenomenon that manifests itself differently in most Member States of the European Union. In Romania, according to the National Statistics Institute, South and South - West facing an aging of the population, with the highest share of population aged over 65 years (16.2% of total population), expecting an increase in this trend. The highest share of young population is recorded in the North - East (18.3%).

Due to the current economic crisis and social problems caused by this, more and more EU countries are beginning to face an acute shortage of labor in agriculture and a growing phenomenon of migration of seasonal workers in a

country in another. On the economic crisis, some of the cheap labor from the East, be returned to their countries of origin, began to migrate to northern states, which can provide better pay and decent working conditions.

Despite the shortage of labor force growth, the employment rate of the labor force is still low and unemployment is high, so there is, in principle, an important source of unused labor. Unfortunately, the agricultural sector is still totally unattractive, especially for young people, due to the very low pay, difficult working conditions and lack of other facilities and opportunities. According to managers, labor migration is the main factor determining the difficulties of finding new employees. Poor training of graduates is the second factor affecting the ability of firms to fill available jobs.

The education of the rural population aged 25-64 years registered in the past decade an increasing trend in the share of persons with secondary education or higher. The need for vocational training comes with the increasing competitiveness and diversification of products and services in agriculture and forestry, the restructuring and modernization of agriculture and forestry, processing and marketing sectors for agricultural and forestry products, encourage market oriented businesses the requirements for a wide range of economic and management skills and the objective of sustainable land management and environmental protection, application of environmentally friendly technologies and practices and the use of renewable energy. Therefore, *it is necessary that training activities, information and diffusion of knowledge to be extended to adults who are involved in areas related to agriculture, food and forestry.* Training activities, information and diffusion of knowledge is particularly necessary in disadvantaged in terms of natural, wherever the continuation of farming contributes significantly to maintaining the viability of rural areas. Thus, it is necessary to extend the scope of training, information and diffusion of knowledge to all adults who are or will be engaged in the agricultural, forestry and food.

The National Rural Development Programme (NRDP) 2007-2013 included activities related to human resource development, being in complementarity with the Sectoral Operational Programme Human Resources Development (SOP HRD). The demarcation between SOP HRD and NRDP was based on the type of interventions and territorial demarcation. The NRDP, Priority I - "Increasing the competitiveness of agriculture and forestry" were financed only short training programs (core courses and specializations) to improve knowledge workers in agriculture and forestry. Also in this direction, the NRDP has considered and early retirement in order to transfer farms from old to young farmers in exchange for compensation. Thus, increasing the

competitiveness of agriculture was promoted by stimulating the transformation of rural households in commercial family farms, and increasing middle class in rural areas by promoting young farmers and farm concentration. The human factor plays a decisive role in increasing the performance of Romanian agriculture, in this modern age, the individual management (farmers) and collective (conducted in organizations and agricultural companies). Developing entrepreneurial skills in the great mass of farmers remains a goal of integration success Romanian agricultural structures in community structures.

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REFERENCES

1. Alexandri Cecilia, Davidovici I., Gavrilescu D., 2004, *Tratat de economia agriculturii* (Treaty of agricultural economy), Expert Publishing House, Bucharest.
2. Bureau J. C., Mahé L. P., 2009, *CAP reform beyond 2013: An idea for a longer view, Education and culture – Europe for citizens*, Notre Europe, Mai. 2008.
3. Chirișescu Vergina, 2009, *Aspecte privind structura și potențialul de forță de muncă al exploatațiilor agricole românești* (Aspects of the structure and potential of labor in Romanian farms), Annual work plan, Institute of Agricultural Economics, Romanian Academy, sector "Microeconomics", Bucharest.
4. Gavrilescu Camelia, coordonator, 2009, *Managementul economic și ecologic al resurselor de sol* (Economic and ecological management of soil resources), Romanian Academy Publishing House, Bucharest.
5. Girardin P., 2004, *Etude prospective sur la caractérisation et le suivi de la durabilité des exploitations agricoles françaises*, Agricultural Ministry, Paris.

6. Landais E., 1998, *Agriculture durable: les fondements d'un nouveau contrat social*, Courrier de l'environnement, Nr. 33.
7. Pert Steliana, *Impact "demographic crisis" on the labor market* (Impactul "crizei demografice" asupra pieței muncii), Notebooks debate sessions of the Sustainable Development Strategy of Romania "Horizon - 2025", vol. I - Sectoral strategies, Demography, Bucharest, 2004.
8. Toma Camelia, Gavrilescu D., Turtoi Crina, Gavrilescu Camelia, 2007, *Indicators for characterizing the potential for multifunctional activities within the farm*, in Thematic Proceedings, International Scientific Meeting "Multifunctional agriculture and rural development (II) - rural values preservation" second book, Beočin - Serbia, 6 - 7. Decembrie. 2007
9. Toma Camelia, 2008, *Estimating the farm sustainability - a diagnosis method based upon indicator*, in "Agricultural Management" - Scientific papers Series I, vol. X (1), Publisher Agroprint, Timișoara.
10. Turtoi Crina, Toma Camelia, Gavrilescu Camelia, 2009, *Evolution of the production factors in the Romanian agriculture and its potential for a competitive development in the enlarged EU*, 112 EAAE seminar, December. 2009, Belgrad, Serbia.
11. Turtoi Crina, Toma Camelia, Gavrilescu Camelia, 2007, *Multifunctional Development of Rural Space in Romania*, in Thematic Proceedings, International Scientific Meeting "Multifunctional agriculture and rural development (II) - rural values preservation" second book, Beočin - Serbia, December. 06 - 07th. 2007.
12. Virgil Voineagu, coordonator, 2012, *România în cifre 2011* (Romania in figures 2011), National Institute of Statistics, www.insse.ro.
13. Administrația Prezidențială, Comisia Prezidențială pentru Analiza Riscurilor Sociale și Demografice, 2009, Raportul „Riscuri și inechități sociale în România” (The report "Risks and social inequities in Romania"), www.presidency.ro.
14. www.ies.org.ro/info-stiri/vrs/IDstire/346/t/studiu-iccv-si-ies
15. EUROSTAT, baze de date pentru agricultură (database for agriculture), www.europa.eu.
16. EUROSTAT, *Structure of agricultural holdings*, Newsrelease 60/2007, www.europa.eu, www.epp.eurostat.ec.europa.eu.
17. Ministerul Agriculturii, 2008, Programul Național de Dezvoltare Rurală (PNDR) al României 2007 - 2013 (National Rural Development Programme (NRDP) 2007-2013).
18. CEEEX project, 2006 - 2009, *Modelarea răspunsului exploatațiilor agricole la integrarea principiilor economice cu cele de mediu prin managementul durabil*

- al resurselor de sol* (Modelling the response of agricultural holdings to the integration of the economic environment through sustainable management of soil resources), Research reports.
19. CNCSIS project, 2006 - 2009, *Modele și metode complexe de cercetare în dezvoltarea rurală durabilă a României* (Models and complex methods of research in sustainable rural development in Romania), Research reports.
 20. CEEEX project, 2006 - 2008, *Dezvoltarea durabilă a României în context european și mondial* (Sustainable development of Romania in the European and global context), Research reports.
 21. CNCSIS project, 2006 - 2009, *Potențialul de dezvoltare durabilă a exploatației agricole* (Sustainable development potential farm), Research reports.
 22. www.madr.ro – Ministerul Agriculturii și Dezvoltării Rurale al României.
 23. www.hotnews.ro/stiri.