



**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](mailto: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.*

**LAND CONSOLIDATION –  
BETWEEN BUDGETARY CONSTRAINTS  
AND IMPROVEMENT OF AGRICULTURAL EFFICIENCY**

**Author**  
**Cecilia Alexandri**  
**Senior Researcher**  
**Head of Department „Agrifood Economy”**  
**Institute of Agricultural Economics**  
**Bucharet, Romania**  
**E-mail: c.alexandri@iea.org.ro**



**Paper prepared for presentation at the XI<sup>th</sup> Congress of the EAAE  
(European Association of Agricultural Economists),  
‘The Future of Rural Europe in the Global Agri-Food System’, Copenhagen,  
Denmark, date as in: August 24-27, 2005**

*Copyright 2005 by Cecilia Alexandri. All rights reserved. Readers  
may make verbatim copies of this document for non-commercial  
purposes by any means, provided that this copyright notice appears on  
all such copies.*

## Abstract

This paper tries to provide some solutions regarding farm consolidation and to diminish the share of subsistence farming, by analysing demographic tendencies, the ownership structure of agricultural land and the structure of the rural workforce, in Romania. The emphasis will fall on the following main solutions: the withdrawal of agricultural pensioners from the agricultural activity in return for an additional pension (before 2007) and the application of the early retirement scheme after joining the EU (probably in 2007).

**Keywords:** Land consolidation, Romania Q13

### 1. Farm structure

As a result of agricultural and forest land restitution to former owners (Law no.18/1991 and Law no.1/2000), in Romania, land ownership has become extremely fragmentary. Consequently, a large number of small, individual farms appeared, co-existing along with associative forms of land exploitation, and as time elapsed, with large farms of capitalist type which were set up, capable to exploit even tens of thousands of hectares of private land or rented.

The General Agricultural Census of 2002/2003 classified the agricultural exploitations according to their juridical status: individual holdings which are natural persons and which generally have small dimensions and agricultural holdings, the so-called legal entities, which usually are large-size farms with legal status. At the same time, quite a polarized agrarian structure emerged in Romania. The results of the General Agricultural Census of 2002 reveal that 45% of the agricultural land is operated under large farms (about 23,000 in number, with an average area of 274 ha), while the remaining 55% of the utilised agricultural area is extremely fragmented, being operated by more than 4.4 million household farms, averaging 1.7 ha/household (Table 1).

Table 1. Agricultural holdings and average utilised agricultural area per holding

Legal status of agricultural holdings	Number of agricultural holdings	Utilised agricultural area -ha-	Average area per holding -ha-
Individual agricultural holdings	4,462,221	7,708,757.6	1.73
Legal entities	22,672	6,221,952.5	274.43
Total	4,484,893	13,930,710.1	3.11

Source: General Agricultural Census 2002, National Institute for Statistics, Bucharest

#### 1.1. Individual agricultural holdings

Individual agricultural holdings use about 7.7 millions of hectares of agricultural land, being, as a whole, represented by private farms. Individual agricultural holdings are the units made up of one or more persons, usually family related, who jointly utilize the land and/or breed animals, which may belong to one or several members.

Most of individual holdings use extremely low-sized land areas, on which a subsistence type of farming is practiced. Thus, half of these farms (49.5%) averagely uses less than 1 hectare. Only 1% of the individual agricultural holdings operate land areas larger than 10 ha. However, out of the number above about 185,000 holdings registered by the 2002/2003 General Agricultural Census are exclusively producing animals and do not farm any agricultural land.

Traditional peasant households (autarhic and semi-subsistence) stands for the largest majority of these farms, the same, having, as a rule, only sporadic connections with the

markets of inputs or with the agricultural markets. As per some estimates made on the basis of the results of the General Agricultural Census, only 92,000 individual holdings produce for the market (Figure1).

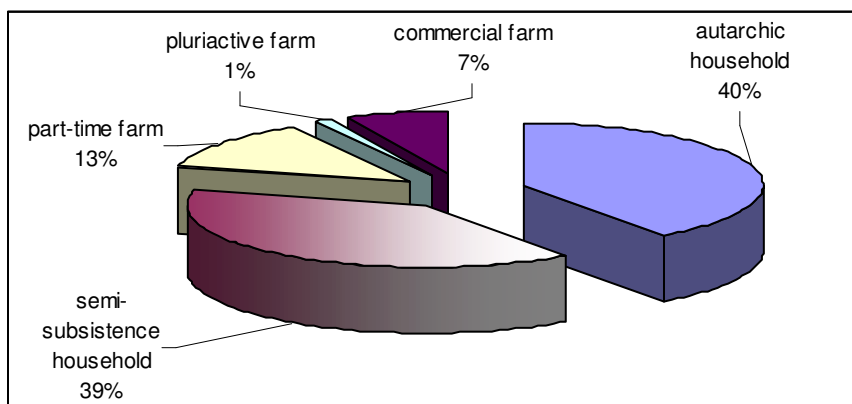


Figure 1. Type of agricultural individual holdings, by area

According to the same estimates, out of the 4,4 millions of existing individual holdings, about 3,4 millions can be considered as « autarchic » households, while about 1 million of individual households can be considered as of semi-subsistence type.

Figure 1 shows the fact that “autarchic “ households would use 40% of the agricultural land while semi-subsistence household 39% of the agricultural land of Romania. The valuations of the specialists point out the fact that part of the agricultural lands hold by the autarchic households could be released by applying the scheme of life annuities for the old peasants as well as by applying some schemes of early retirement for those who are about to retire in the immediate future. At the same time, for the “semi-subsistence “ households micro-grants for investments should be offered.

The extremely small size of the individual holdings will bring about many problems in the implementation of the CAP provisions in Romania. It is most probably that Romania will choose to implement a Single Area Payment Scheme (SAPS). In this context the Government will have to take the decision regarding the establishing of eligibility levels for these payments, namely the size criteria of the agricultural holdings and of the land plots. In conformity with the EU rules, the minimum size of the land eligible for support within SAPS is of 0,3 ha.; anyway, Romania can decide on a higher level which should not exceed 1 hectare. Such a decision might lead to the situation in which 50% of the individual holdings in Romania would not be able to get support and assistance from SAPS. On the other hand, such a decision would be justified by the high administrative costs of running a SAPS in case the exploitations are very small and very numerous. At the same time, the establishing of the eligibility criterion above mentioned (of 1 ha for example) will stimulate the process of consolidation of the agricultural lands in Romania.

## 1.2. Agricultural holdings

The agricultural holdings as legal entities have a much larger size, most of them operating thousands of hectares (Table 2); as a whole, they exploit about 6,2 millions of hectares.

They fall into several categories:

- Farm association (Law 36/1991) - includes the legal status units, which are managed by an agricultural company association, with variable capital, whose main activities include: utilization of agricultural land, machinery and equipment, animal breeding, investments in agriculture. As per the agricultural census there are 2,261 of such units, having an average size of 431 ha;

- Commercial company (Law 31/1990) – includes the legal status units which are managed by a commercial company and which can carry out both agricultural and non-agricultural activities. There are 6,138 of such units with an average size of 353 ha;
- Public administration unit – includes the legal status units, which are managed by central or local public administration unit. There are 5,698 of such entities of an average size of 503 ha;
- Other types of holdings - NGOs, religious settlements and few co-operatives units, accounting 8,575 intities with an average size of 25 hectares.

A very small part of this second component is still represented by state-controlled agricultural companies – the successors of former state farms, even their share diminished dramatically after 2002. The lands owned by the agricultural researche entities are also included here.

Table 2. Agricultural holdings (number), by categories of size <sup>\*)</sup>

Categories of size -hectares-	Individual agricultural holdings	Legal entities
Less than 0.1	539,325	568
0.1-0.3	580,255	1,110
0.3 - 0.5	322,825	627
0.5 - 1	723,600	947
1 - 2	896,603	1,288
2 - 5	949,521	2,874
5 - 10	215,714	3,166
10 - 20	35,953	1,455
20 - 30	5,081	446
30 - 50	3,450	500
50 - 100	2,759	1,091
Over 100	2,229	7,974
Total	4,277,315	22,046

<sup>\*)</sup> only the holdings that farm agricultural land are considered

Source: General Agricultural Census 2002, National Institute for Statistics, Bucharest

## 2. Old rural population – demographic and occupational benchmarks

Population's aging process is stronger in the rural area compared to urban area; this can be noticed when analysing the population structure by age groups. In the rural area the share of old population is 1.4 times higher compared to the situation in the urban area. According to data provided in Table 3, 52% of Romania's population from the age group 55-64 years lives in the rural area, 59% of the country's population from the age group 65-74 years and 61% of the country's population over 75 years old. At the same time, it is also worth mentioning that 29.3% of the rural population is aged over 55 years.

Table 3. Old rural population on July, 2001

	Persons	(%)	% of total population
Total rural population (persons), Of which:	10,164,645	100.0	45.3
55-64 years	1,165,407	11.5	52
65-74 years	1,186,982	11.7	59
75 + years	639,804	6.3	61
Total rural population over 55 years old	2,992,193	29.3	57

Source: Romania's Statistical Yearbook, 2002, p. 53

According to certain estimates, the pensioned persons in the rural areas hold in their possession about 65% of the agricultural land of the country.

At the same time, according to the results of the latest General Agricultural Census, half of the Romanian agricultural holdings are managed by peasants aged over 60 (Figure 2).

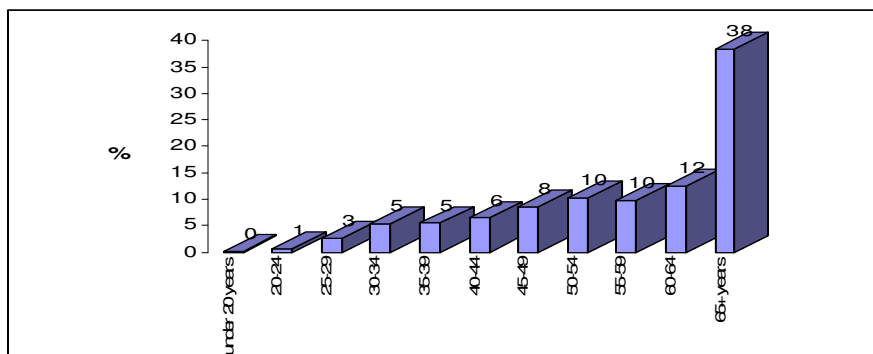


Figure 2: Holder-manager in individual holdings by age

Owing to the extremely low pensions they receive (about 12 euro/month in the year 2002), old farmers continue to work in agriculture even at a very old age. In Table 4, one can notice significant employment rates for the rural population of retirement age.

Table 4. Activity rate and employment rate in rural population, in the first quarter of 2002

Age groups	Activity rate (%)		Employment rate (%)	
	Rural	Urban	Rural	Urban
55-59 years	57.4	28.2	56.4	26.5
60-64 years	47.6	6.5	47.4	5.9
65-69 years	44.1	2.2	44.0	2.1
70-74 years	36.7	1.0	36.7	1.0
75+ years	22.0	0.8	22.0	0.8

Source: Household Labor Force Survey, first quarter, 2002, p. 52

The high employment rate of rural old population should have positive effects upon their incomes; unfortunately, this is not the case. Most of old rural population has few occupational options (farming activities are prevailing) and it is involved in low productivity activities, that can hardly meet their daily needs. In the rural area from our country, about 70% of the employed populations works in agriculture. However, for the old population this phenomenon is even stronger. Thus, out of the employed population aged 50-64, 84% are working in agriculture. As regards rural employed population over 65 years old, 100% are working in agriculture! (Figure 3)

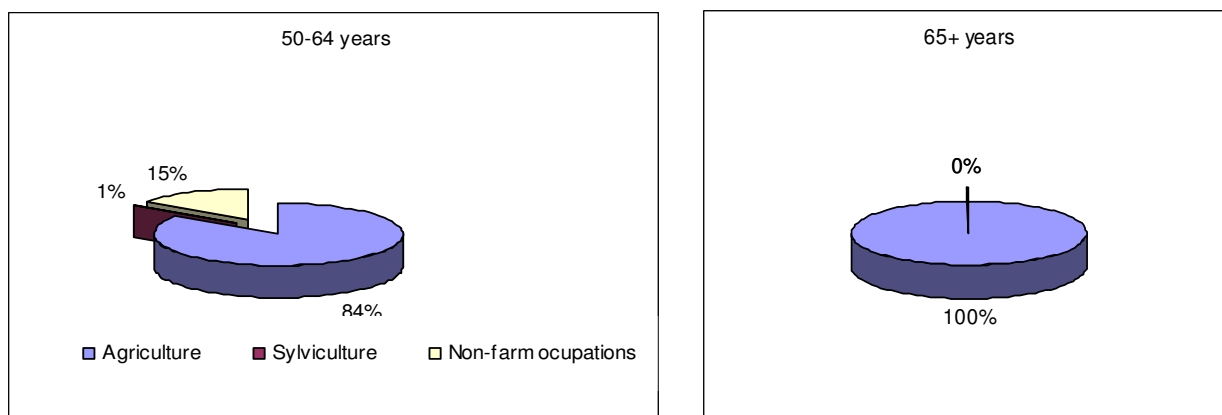


Figure 3: Employment sectors of old rural population, 2002

The pensioners in the rural area mainly come from the former members of the agricultural production co-operatives; they totalled about 1.63 million persons by the end of 2002. Their pensions are very low as the former agricultural production co-operatives had a precarious situation in the past and they did not contribute to the farmer pension fund throughout the years. There are also many social security pensioners in the rural area who are the former agricultural workers of the state farms as well as former commuter workers, former office workers, etc. There is also a significant number of pensioners coming from the urban area. These received land (Law 18/1991) and as they retired (many times early retirement from industry), they settled in the rural areas where they established small farms that provide the necessary food for them and for their children's families who live in towns. As regards the income structure of a pensioners household in the rural area, it is worth mentioning the importance of the incomes in kind (about 50%), then of pensions (31%) (Figure 4).

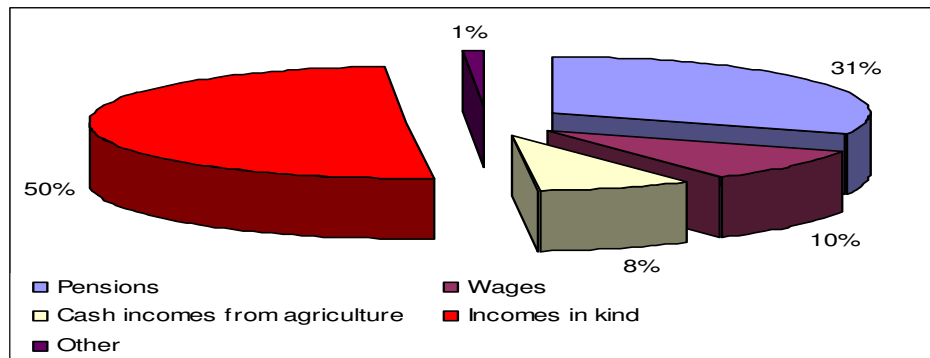


Figure 4: Income structure in pensioners households in the rural area

However, the studies on rural poverty conducted in our country reveal that the pensioners households seem to be less affected by poverty compared to the other types of households, as they own more significant land areas.

For the pensioners households in the rural area, that are estimated to own two thirds of the land areas into private ownership, the main problem seems to be the scarcity of agricultural labour. Out of this reason, a modality to put together the land surplus in the pensioners households and the labour surplus in the young peasants households would be much desired.

Out of this reason, we consider that the application of measures encouraging the present pensioners to get out of the farming activity and to transfer their land properties to the young farmers can be a modality to consider in order to establish farms of a reasonable size and to increase the efficiency of the agricultural activity.

### **3. Farmers getting out of the farming activity: estimation of effects upon the agrarian structure and of effects upon the budget**

Within the rural development measures, the European Union provides funds for the early retirement of farmers from the agricultural activity.

However, Romania is a special case, as the farmer pensioners continue to farm their land, although they receive a pension for old age. This happens because the pension they receive is extremely low (about 10-12 euro/month) and it is impossible for them to live on such a low pension.

Out of these reasons, for our country to have access to the funds for early retirement of farmers from the agricultural activity, it is necessary in the first place to initiate measures and legal framework for the present farmer pensioners to get out of the farming activity.

### ***3.1 What would be the cost of the additional pension paid to farmer pensioners and how much land would be released?***

In order to estimate the effects of farmers getting out of the farming activity two scenarios were envisaged: in the first scenario we presumed that all farmer pensioners **who own over 1 ha of land** can participate to this scheme (are eligible); in the second scenario we presumed that only those farmers are eligible **who own more than 3 ha of land**.

Due to the high subjective value attached to land by the old farmers, we considered that this scheme should be based upon the following premises:

a) the farmer pensioners will lease out their land on longer term and keep their ownership right upon this land. The value of rent per year was estimated at about 45-48 euro, while the rent value per month at about 4 euro.

b) in the case in which they accept to lease out their land on longer term, they would get an additional pension of 20 euro/month from the state.

c) the participants to the scheme can keep about 1 ha of land for their personal use for growing vegetables, fruits, other food crops, etc.

This solution provides to farmer pensioners an income comparable to that of pensioners from the urban area, while guaranteeing the ownership upon their land, that they can leave to their heirs. At the same time, it is worth mentioning that farmers can participate to this scheme on a voluntary basis.

Next you will find a presentation of the two variants.

a) Variant 1

In this variant the scheme would be applied to farmer pensioners who have farms larger than 1 ha.

The number of farmers eligible for this scheme would be about 1.3 million (see Table 5), while the land area that could be released for longer term land lease is about 3.2 million ha. These are maximal estimations, as it is unlikely that all eligible pensioners are willing to participate to the scheme.

Table 5. Land area that could be released if the scheme were applied to pensioners having farms larger than 1 ha

Farm size	Number of eligible pensioners	Released area per farm - ha	Total released area -ha-
1-3 ha	650,365	1	650,365
3.1-5 ha	450,104	3	1,350,312
over 5 ha	240,347	5	1,201,734
Total	1,340,816		3,202,411

We are trying next to estimate what would be the monthly incomes of pensioners who participate to this scheme.

The establishment of an additional pension of 20 euro/month started from the objective that the monthly income of a farmer should get closer to the income earned by a social security pensioner (almost 57 euro/month in the year 2002). At the same time, the value of incomes in kind of a pensioner participating to this scheme was established at 10 euro/month. Under these circumstances, the revenues of the farmer pensioners will vary between 46 to 62 euro/month, depending on the number of hectares released, their pension reaching , as value, the average social security pension got by the elderly people from the urban area.

The additional funds that must be paid by the State Budget are presented in Table 6.



Table 6. Evaluation of budgetary payments when an additional pension of 20 euro/month is paid for pensioners getting out of the farming businesses

Farm size	Number of eligible farmers	Monthly budgetary payments for the additional pension - thou. Euro-	Yearly budgetary payments for the additional pension -thou. Euro-
1-3 ha	650,365	13,007	156,088
3.1-5 ha	450,104	9,002	108,025
> 5 ha	240,347	4,807	57,683
Total	1,340,816	26,816	321,796

In these conditions, the maximal cost of applying the scheme to farmer pensioners that release at least 1 ha of land would be about 322 million euro per year or 100 euro/ha.

b) Variant 2

In the situation in which the scheme were applied only to farmer pensioners who have at least 3 hectares into ownership, the number of eligible persons would be lower, reaching only 690 thousand persons, while the released land area would total 2.5 million ha (Table 7).

Table 7. Land area that could be released if the scheme were applied to pensioners having farms larger than 3 ha

Farm size	Number of eligible pensioners	Released area per farm - ha-	Total released area -ha-
3.1-5 ha	450,104	3	1,350,312
Over 5 ha	240,347	5	1,201,734
Total	690,451		2,552,046

If the scheme were applied only to pensioners who can release minimum 3 ha of land, the funds paid from the state budget for paying the additional pensions would total about 166 million euro (see Table 8), while the cost paid for 1 ha of released land would be reduced to 65 euro/year.

Table 8. Evaluation of budgetary payments when an additional pension is paid of 20 euro/month, for pensioners getting out of the farming business

Farm size	Number of eligible farmers	Monthly budgetary payments for the additional pension -thou Euro-	Yearly budgetary payments for the additional pension -thou Euro-
3.1-5 ha	450,104	9,002	108,025
> 5 ha	240,347	4,807	57,683
Total	690,451	13,809	165,708

Analysing the costs and benefits in the two variants, we could state that variant 2 seems to have more advantages: its budgetary cost is almost half of the cost of the first variant, while the released area accounts for 80% of the area released in the case of the first variant (see Table 9).

Table 9. Estimation of budgetary costs per hectare in case the scheme of pensioners getting out of the agricultural activity is applied

In case farmers who get out of activity have farms of the following size:	Yearly budgetary cost -thou. Euro -	Released area -ha-	Euro/hectare released
Farms > 1ha	321,796	3,202,411	100
Farms > 3 ha	165,708	2,552,046	65

Of course, we can presume that the pensioners owning 1-3 hectares could release up to 2 hectares and in this case the costs/hectare in the first variant would be lowered.

In case the scheme were applied to all farmer pensioners who could release at least 1 ha, the maximal budgetary cost of the scheme would represent 10% of the total expenses by the State Social Security Budget in the year 2001. In case it is applied to farmer pensioners who could release at least 3 ha, this share would be down to only 5% (see Table 10).

As you can see in Table 10, the State Social Security Budget does not have a very good situation; in fact it has featured a deficit for the last 9 years. This deficit grew larger in the year 1998, due to labour rationalization on large scale mainly in the mining sector; these workers received compensation payments being put on the early retirement list. In the year 2001 the expenses from the State Social Security Budget exceeded its incomes by 9.4%.

Table 10. Situation of Social Security Budget in the last years

	Thou. Euro					
	1996	1997	1998	1999	2000	2001
Revenues	1,529,980	1,627,031	2,335,710	2,328,024	2,556,476	2,929,010
Expenditures	1,578,327	1,634,166	2,656,796	2,403,768	2,787,513	3,205,838
Surplus(+), Deficit (-)	-48,347	-7,136	-321,086	-75,744	-231,038	-276,828

Source: Romanian Statistical Yearbook, 1996-2002, National Institute for Statistics

In the year 2004 farmers' pensions increased. The budgetary effort for supporting this increase of farmers' pensions is estimated at about 192 million euro per year (16 million euro per month).

In case the above-mentioned scheme of farmer pensioners release from the farming activity is applied (variant 2), an additional amount of 165 million euro/year should be added.

#### 4. What would be the cost of the early retirement scheme

Tables 11 and 12 represent a very rough assessment of the eventual payments implied by the application of an early retirement scheme upon the old population from the rural area. In this case, too, I started from the premise that the population participating to the scheme would have to give up at least 3 ha agricultural land. I took into consideration the whole rural population which is before the retirement age (men aged 60-64 and women aged 55-59), although part of this population might also have non-agricultural activities or might not have land. However, as it was mentioned, more than 80% of the old employed population (over 50 years old) works in the farming sector. At the same time, according to a mentioned study (Rusu, 2001), only 38% of the rural households whose head is aged 55-65 years own over 3 ha agricultural land. We thus estimated that only 38% of the population aged 55-65 would be eligible for this scheme.

Table 11. Variant 1: Persons before the retirement age get an average pension per economy

Rural population before the retirement age	Number	out of which eligible	Average monthly pension Euro/person	Payments – thou. euro	
				Per month	Per year
Men aged 60-64	290,499	110,390	57.5	6,350	76,196
Women aged 55-59	279,479	106,202	57.5	6,109	73,305
Total	569,978	216,592		12,458	149,501

The data included in table 11 estimate the situation in which the whole rural population before the retirement age would receive a pension equal to the average pension per economy. The (maximum) costs of such a scheme would total about 150 million euro per year. I mention that such a scheme would be extremely advantageous for the rural population, as it would assume a cash income, for a two-person family, amounting to about 3.6 million ROL (over 100 euro).

Table 12. Variant 2: the persons before the retirement age receive 1 million ROL/month (average value/person of incomes obtained from farming, in a farmers' family)

Rural population before the retirement age	Number	Out of which eligible	Average monthly pension		Payments - thou. euro	
			ROL/pers.	Euro/pers	Per month	Per year
Men aged 60-64	290,499	110,390	1,000,000	34	3,799	45,583
Women aged 55-59	279,479	106,202	1,000,000	34	3,654	43,853
Total	569,978	216,592			7,453	89,436

In variant 2, presented in table 12, persons before the retirement age are offered 1 million ROL (average value per person of farming incomes in a farmers' family). The amounts assumed by such a scheme are more modest (about 90 million euro per year). This scheme could be completed by the right of farmers participating to the scheme to keep a small land area for their immediate needs (like in Poland, for example, where the participants to the scheme can keep one hectare at maximum, in which the land under farm buildings is also included).

Both men and women's involvement in this scheme is based on the finding that in many farmer households, part of the land can be on the wife's name (inherited from her parents).

The estimation of scheme application effects as regards land areas that can be released is not too easy, as few information exist on land areas owned by these categories of rural people. One thing is sure: only 38% of the rural households whose head is aged 55-65 years own more than 3 ha agricultural land. If we estimate that about 100,000 households could participate to this scheme (according to tables 11 and 12 there are about 100,000 eligible household heads – men), then the released area would be about 300,000 ha (100,000 households x 3 ha). Thus, the early retirement scheme effect proves to be much less important than that expected from the present pensioners' getting out of the farming business.

## 5. Recent developments on this subject

Life annuities for elderly peasants who agree to sell or lease out their land is one of the most debated topics in Romania today. The level of compensation proposed by the government is 100 euro/ha per year for selling and 50 euro/ha per year for leasing. The first reactions on this subject of the elderly farmers refer to the fact that these sums of money are too small to enable them to live in case they give up their land. At the same time, the problem

arises if these measures could remain in place after Romania's joining the European Union. What is clear however is that in any case it cannot be financed with community funds, before or after accession, since the EU has a different scheme with the same purpose but different rules: early retirement, applicable not only to land owners but also to agro laborers. In this scheme the age limit for becoming eligible is lower (55) but the annuity is paid for a maximum of 15 years (10 for laborers) and not beyond the age of 75 (which is the legal retirement age for agro laborers in the EU). In case the Romanian scheme is accepted by the EU, they can both function after 2007, but only if the national budget can fully fund the first one. Alternatively, they could be implemented in succession, one before and the other after joining the EU.

## References

- Alexandri, C., et al., 2003, *Study on possible measures to enhance consolidation of farms in the context of accession to the European Union: the Romanian case*, FAO Project TCP/ROM 0167 Strategy for agricultural and rural development in Romania
- Alexandri, C., et al., 2002, *Sectoral Analysis of the Agricultural Production*, FAO Project TCP/ROM 0167 Strategy for agricultural and rural development in Romania
- Chirca, C., Tesliuc, E., 1999 – *De la saracie la dezvoltare rurala*, WB, NIS.
- Rusu, M. , 2001, *Land Rental Markets in Romania*, report prepared for FAO
- Rusu, M., 2001, *Evolution of rural households:1996-2000 (survey)*, working report prepared for World Bank
- Tesliuc, C., Pop, L., Tesliuc, E. (2001) – *Saracia si sistemul de protectie sociala*, Editura Polirom
- \* \* \* *Coordonate ale nivelului de trai in Romania. Veniturile si consumul populatiei in anul 2001*, NIS, Bucuresti, 2002
- \* \* \* *Analize demografice. Situatia demografica a Romaniei in anul 2000*, NIS, 2001
- \* \* \* *Ancheta asupra fortei de munca in gospodarii (AMIGO)*, NIS, Bucuresti 2002
- \* \* \* *Conditii de viata ale populatiei din Romania*, NIS, Bucuresti, 2002
- \* \* \* *Romanian Statitcal Yearbook, series 1990-2002*, NIS, Bucuresti
- \* \* \* *Eurobarometrul Rural*, dec.2002, Fundatia pentru o societate deschisa, Bucuresti
- [www.bnro.ro](http://www.bnro.ro)
- [www.europa.eu.int/comm/agriculture](http://www.europa.eu.int/comm/agriculture)
- [www.indaco.ro](http://www.indaco.ro)
- [www.insse.ro](http://www.insse.ro)
- [www.kappa.ro](http://www.kappa.ro)
- [www.maap.ro](http://www.maap.ro)
- [www.sapard.ro](http://www.sapard.ro)