

# Land Fragmentation and Land Consolidation in Romania<sup>1</sup>

*Marioara Rusu*

*Senior Researcher, Institute of Agriculture Economics*

## **Abstract**

In Romania as a result of Land Laws application, the ownership system has changed. Private property became prevailing with an average area of 2 ha. Furthermore, land property is extremely fragmented, into about 50 million parcels, and one third of agricultural land belong to people who do not live in the rural areas. The establishment of private ownership right upon the agricultural land represents a first step towards a new agrarian structure; however, in the absence of efficient measures that should have in view ways for the agricultural land consolidation, there would be late the working of the commercial farms. The objective of this paper is the analysis of land fragmentation coordinates and the identification of land consolidation rationality. One can conclude that in order to consolidate the agricultural land, there is an obvious and imperative need to conceive an well-articulated and coherent framework of support measures, understood and treated as a complex of economic, social, legal and technical measures, aiming at rural community development.

***Key words: fragmentation, consolidation, Romania***

## **Introduction**

The transition from command to market economy has created and aggravated a series of systemic and structural disequilibria hindering the best use of production potential and farmers' competitiveness implicitly. A series of factors also contributed to the perpetuation of that situation, among which the most important are the following: persistence of a frail and unbalanced competitive environment; excessive land fragmentation, together with labor force surplus lacking possibilities of alternative jobs; identity crisis of rural players involved in farming in relation to market economy rules; shortage of operating capital and extremely low on-farm capitalization possibilities; maintaining of a traditional production structure, non-sufficiently correlated to the market needs, etc. All these contribute to the further enlargement of the existing gap between the Romanian farmers and the EU farmers, as well as between Romania and other Central and East-European countries.

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<sup>1</sup> This paper is based by „Social and Economic Impact of Land Fragmentation in Rural Space: Romania' Case” Study.Team, comprises of the following specialists: Mr.Virgil Pamfil –Team Leader; Ms. Marioara Rusu - Rural Economist, Ms.Violeta Florian – Rural Sociologist, Mr.Mihail Popa – Land Use Planner and Mr.Popescu Marin - Legal Expert. The co-ordination of the project was carried out by FAO-SEUR, represented by Mr. Fritz Rembold – Land Tenure and Rural Development Officer and Mr. Marc Duponcel – Agriculture Policy Officer.Charged with the technical advice for the project was Mr. Karl Kollmer - Land Consolidation Expert, from GTZ.

In the wish to go beyond the general aspects of the agrarian reality offered by the statistical information, in this paper it used both available statistical data and data obtained from the field surveys conducted at the national (1996, 1998, 2001)<sup>2</sup> and local level<sup>3</sup>.

## 1. The Place of Agriculture in Romania's Economy

Agriculture represents one of the most important resources of Romanian economy. The agricultural land totals 14.7 million hectares, out of which 63.1% is arable land. More than 3.2 million inhabitants are working in this sector, i.e. 40% of total employed population.

The increase of agriculture share in labor force represents a contrary trend to that of the developed countries. Restructuring the industrial and constructions sectors, by which an important part of labor force was rationalized, being "constrained" to come back to the agriculture, mainly generated this increase.

Not even the relatively high share of agriculture in GDP (12.9%) is the expression of developed agriculture. On the contrary, the decreasing trend of agriculture in GDP that followed since 1994, together with the increasing trend of agriculture's share in total employed population reveal the continuous decline of labor productivity in agriculture, estimated at 32% of national labor productivity (Popescu M., 2001, p.19).

The low share of agriculture in capital investments (6.7%) and in the fixed assets (3.1%) reveals the precarious technical endowment and the extensive character of production.

As regards the competition for European Union integration, the increasingly pronounced agrarian character of national economy and the decreasing trend of farming activity represent a handicap that will be very difficult to surmount.

## 2. Land Reform: Predictable Consequences?

In agriculture private property has become predominant due to the application of Land Law no.18/1991<sup>4</sup> to the detriment of public property: it represents 78% of agricultural area and 86% of arable area. By the further restitution of certain land according to the provisions of Law 1/2000<sup>5</sup>, which is in course, it is estimated that the share of land private property in agricultural will increase by other 10 percent.

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<sup>2</sup> field surveys conducted in rural households in 1996 and 2001, financed by the World Bank and/or European Union. They were a similar sampling methodology and maintaining a common approach so they are comparable.

<sup>3</sup> field survey conducted in 2000 in Balaciu commune, Ialomi'a county, within „Social and Economic Impact of Land Fragmentation in Rural Space: Rpmnia's Case”, FAO/GTZ Project.

<sup>4</sup> known as Land Law, published in the "Official Gazette" no.37/1991 and republished in the "Official Gazette" no.1/1998.

<sup>5</sup> known as Lupu's Law, published in "Official Gazette" no. 8/2000

The individual farms (households) represent the main results of land ownership right reconstitution and constitution on the basis of Land Law and the prevailing form of agricultural production organization. The average area operated by these households is extremely small, i.e. 2.3 ha. Their analysis by categories of size reveals that households up to 5 ha account for 88.5%, while those over 10 ha only 0.5%.

Between 1993-2000, their number and total operated agricultural land area increased, while the average area remained relatively constant. A twice as high share of households with areas less than 1 ha represents according with field surveys a characteristic phenomenon for the period 1996-2000. This seems to be a consequence of the fact that the heirs of the former owners registered in the ownership titles, in the case of reconstituted land, went out of joint-ownership status. In the investigated period, private agriculture, „ stake of political bets”, has still remained a subsistence agriculture, far from operating according to market rules. The lack of balance as regards labour, land and capital resources at household level determines an extremely low productivity. The technical and economic changes are still modest, mainly due to the very high share of agricultural labour, which makes production investments unnecessary. The sector of rural households was dominated by self-consumption, with weak connections to inputs and outputs market. The operation of land, credit, input and agricultural output markets has been and is still deficient, mainly due to the inadequate and changing legal and institutional framework and to the lack of adequate infrastructure.

Although the share of private sector in agriculture had a continuous and constant increasing trend, the radical change in the ownership structure did not have a favorable impact upon the level of agricultural production. The cultivated area had a significant decreasing trend. In 2000 the cultivated area was smaller by over 950 thou. ha (10% of total arable land) than in 1989. In the majority of the 90's, crop production in private sector was under the 1989 level, with larger or smaller variations. The main reasons of it are: a small average area of rural household; agricultural property fragmentation; unclear legal regime of agricultural land; insufficient investments in agriculture; absence of agricultural equipment and implements in most rural households; insufficient support to farmers by the state.

The share of livestock production in total agricultural production declined (from 45.6% in 1989 to 36.5% in 1999), which reveals efficiency diminution in this sector.

Land reform has seriously affected the use and integrity of irrigation and land melioration system. The utilization of land equipped with irrigation facilities has dramatically decreased after 1989. The modality of agricultural land privatization as well as the high degree of land fragmentation created important obstacles to the land irrigation. As a result, although Romania has about 3 million hectares agricultural land equipped with irrigation facilities, the area which is effectively irrigated declined from 82.4% in 1989 to 10-15% after 1991.

The mechanization of agricultural works also declined, small farmers coming back to draft animals and manual labor in many cases. Although it has experienced slight increase, the technical endowment degree of farming activities is still low, i.e. one physical tractor per 56 ha arable land. The structural deficit, generated by the insufficient equipment, is aggravated by its physical and moral wear and tear (50% of existing tractors have more than eight year of service life).

The amount of chemical fertilizers used in agriculture decreased more than 3 times between 1989-2000 (the application rate was about 23 kg of active substance per hectare). The amount of organic fertilizers applied also decreased more than 2.5 times. A drastic diminution was also found as regards the amount of pesticides (from 71.4 thou. tons in 1989 to 14.8 thou. tons in 1999) and certified seed used by farmers. The main cause of this situation was the increase of prices paid for those products in the context of farmers' scarce financial resources.

We can draw the conclusion that agricultural land privatization proved to be insufficient for the initiation of agricultural development. The cause is not privatization as objective process, but rather the modality in which it was carried out, the type of private property, i.e. coming back to an extremely fragmented property, characteristic to the subsistence peasant household, accompanied by the delay in issuing the ownership titles, technological regress, deficient management and precarious situation of national economy.

### **3. Land Fragmentation**

By Land Law application, about 4.7 million persons will receive about 9.4 million hectares, i.e. an average area into ownership of 2 hectares.

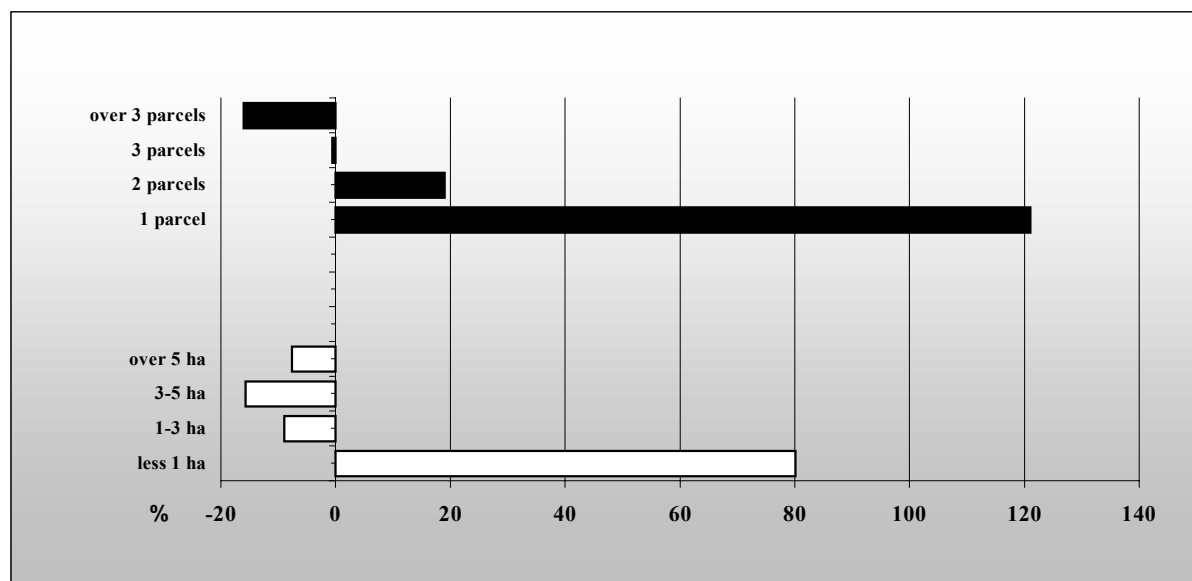
#### *3.1. Present situation*

The excessive concentration of land ownership before 1989 switched over to an exaggerated fragmentation, i.e. from the operation of large land areas to the small households.

In present the land fragmentation process is considered among the main causes of the Romanian agricultural crisis. The dimension of land fragmentation is an unknown problem: according to the most optimistically estimations it will reach about 20 million parcels and to the pessimistic ones about 50 million parcels. But anybody does not know the truth.

As there are no official data on land fragmentation, the results of field surveys conducted at national level in 1996 and 2000 will be presented. These reveal that the negative consequences of small land property are aggravated by the exaggerated fragmentation of it: 4.61 parcels on the average in 1996 and 4.14 parcels in 2000. We are now experiencing an apparent diminution of land fragmentation degree:

the share of households with only one parcel increased by 120% but the share of households having an area less than 1 ha increased instead by 80%.



**Fig.1. Evolution of rural households by size categories and number of parcels (1996-2000)**

Specialists consider that land restitution on the old locations represents a serious error of the agricultural policy, that would be extremely difficult to correct. The private agriculture crisis, amplified by low property size and high fragmentation degree, is also aggravated by the delay in clearing up land ownership rights. At ten years after dismantling agricultural co-operatives the Land Law provisions were not completely implemented: more than 20% of entitled persons did not receive the ownership titles, while 13% did not get back their land. Furthermore, this law application has already generated more than half a million legal disputes so far (Popescu M., 2001, p.52).

In the field surveys, only 68 % of the interviewed persons declared that they received their ownership title, while in 32% of cases, ownership was attested by a certificate, in which the area is specified, and its location is not written down. Between the data published by the Ministry of Agriculture and Food and the interviewed persons' answer there is a difference which can be explained by the many cases in which land owners have not taken their ownership titles from the town hall. The lack of money seems to be the main reason for this situation and also is the unstable legal environment, having in view the issuing of new regulations in relation to land tenure (Law no.169/1997<sup>6</sup> and Law no.1/2000).

<sup>6</sup> published in "Official Gazette" no.299/1997

The excessive land fragmentation presents a serious impediment to the development of a modern and competitive agriculture. Any attempt at efficient economic operation of these properties becomes unworkable, and the administration in fiscal and legal terms of this huge amount of data presents a technical challenge, even for states with extremely evolved resources and informational systems, not just Romania.

Although there was practical experience, as well as the use of technical methods and rules, often with extremely positive results in economic efficiency, in a centralized agricultural economy, they are not relevant in today's climate, due to the land property type transformation.

### *3.2. A Survey Investigating the Potential for Land Consolidation*

A field survey for the analysis of concrete social and economic possibilities for agricultural land consolidation was conducted in the Balaciu commune, Ialomita County, in the Southern region of Romania. On the basis of this study we tried to identify some agricultural land consolidation pro's and con's both at level of rural community and rural households.

First we tried to identify the degree of fragmentation using the following parameters: households' size, the number of parcels, parcels' size and distance to parcels. The size of the parcels is between 0.4 to 0.92 hectares, with an average of 0.85 hectares per parcel. The average number of parcels per property, i.e. 4.39, is quite close to the average number at national level. The average parcel size increases with an increase in household size. The parcels have shown inadequate geometrical shapes, with angles that hinder carrying out mechanization works. Length to width ratio is generally unfavorable, ranging from 1:5 to 1:100. The location of parcels does not take into consideration the existing irrigation system scheme.

According to the Januszewski fragmentation index<sup>7</sup> all households, regardless of size, are considerably fragmented. Those larger households also have the highest degree of fragmentation. The average distance to the nearest parcel is 1.88 km and to the farthest parcels 7.15 km. From this, one can draw the conclusion that distance is a further stress factor in the degree of fragmentation.

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<sup>7</sup> It was calculated for the first time in 1964 and it is used commonly to evaluate levels of fragmentation in contemporary agricultural systems. This index divides the square root of total farm area by the sum of the square roots of the plot sizes. (Source: Jolyne Melmed-Sanjak, Peter Bloch and Robert Hanson, „Project for the Analysis of Land Tenure and Agricultural Productivity in the Republic of Macedonia”, Working paper no.19, Land Tenure Center, University of Wisconsin-Madison, 1998, p.137)

**Table 1. Aspects of land fragmentation**

<b>Households structure by size</b>	<b>Mean parcel size (ha)</b>	<b>Mean no. of parcels</b>	<b>Januszewski's fragmentation index</b>	<b>Mean distance to nearest parcel (km)</b>	<b>Mean distance to farthest parcel (km)</b>	<b>Average age of hh head</b>
< 1 Ha	0.40	1	0.88	1.92	4.50	45.5
1-3 Ha	0.79	3	0.63	2.06	7.04	60.2
3-5 Ha	0.88	4	0.54	1.70	7.20	63.8
5-7 Ha	0.91	6	0.48	1.95	7.56	67.9
> 7 Ha	0.92	8	0.40	1.82	7.46	74.8
Total*)	0.85	4.39	0.55	1.88	7.15	64.0

\*) All totals are weighted averages according to population distribution across household size

A social and economic analysis of the investigated commune offers arguments both in favor of and against land consolidation. As main arguments in favor of land consolidation one can mention: there is a high share, 86.2 % of arable land, situated in plain region, making consolidation of parcels easier; there is a fast re-orientation of agricultural activity (in the last 3 years the peasants introduced rape seed in cultivation and renounced at soybeans and sugar beet); a strong associative behavior is present (in commune operated 3 legal associations and 28 family associations); the land leasing is a common practice; there is a high share (25 %) of landowners who do not live in the commune.

The factors representing arguments against land consolidation, or that could become obstacles difficult to surmount in the case of this process are: the decline of the association phenomenon as a result of moral and professional prestige erosion of associations leaders; community poverty, that comprises over 60 % of the commune's population, estimated as traditional poverty by the authorities; land sale-purchase market is at the beginning; there are no many alternative jobs for rural population ( one small dairy unit, one workshop for wood processing, two forges and four units for fodder processing, all with a small number of workers). Some cultural and informational aspects could encounter problems in assimilating the consolidation patterns: the church has no role in community life; the local authorities are not strong enough involved in the commune activity; there is too much bureaucracy; there is no cooperation/cohesion among people living in the community; the educational, medical and banking infrastructure are weakly developed; only 30% of landowners received their ownership titles; etc.

At rural household's level there were studied the pro's and con's land consolidation on a sample of 146 households. The socio-demographic structure could be one of the positive factor in land consolidation: the relative high level of education (13% have high education of which 3% in agriculture) ; the flexibility in changing occupational structure; the relatively low average age of sample; etc. Others aspects which could represent the arguments in favor of land consolidation refer to: the relatively high average area into property (3.74 ha); land operation under associative (38.6%) and leasing forms; the high awareness of households' heads (71%) to land fragmentation phenomenon; the high share of respondents (above 60%) who thinking that land should be consolidated in an way or another; the negative heads' perception of the land fragmentation consequences: 32.2 % consider that fragmentation generates low efficiency and 24.7 % believe that it is due to the application of crop technology under optimum conditions.

Arguments against land consolidation are mainly linked to: the legal system of land inheritance division in equal shares which dominates the property transfer and represents the most significant barrier to of land consolidation; 50.7 of interviewed households want to share the agricultural land in equal parts to heirs; 32.9% want that their land remaining to one heir; only 8.2% of households want to give the agricultural land to one single heir, who will continue agricultural activity; the positive perception of the agricultural land fragmentation consequences: 7.5% of the interviewed persons think that fragmentation has positive results related to the head of the household's ability to spread risk by cultivating a series of crops on several parcels, each with its own soil and microclimate characteristics, 5.5% consider that the existence of several parcels offers greater security of harvests against theft; lack of financial funds makes respondents perceive the impossibilities to buy land as the main obstacle to having a less fragmented land area; a low experience in parcels' exchanges between landowners ( 2.7% ).

In order to consolidate the small-sized parcels, the main directions could be: stimulation of parcel exchanges by the simplification of necessary operations and granting facilities concerning cadastral registration; avoiding land fragmentation in the case of land restitution on the basis of Law no.1/2000; legislation change referring to land inheritance, so as to avoid the division of land between several heirs; elaboration of certain regulations that should forbid plot diminution below certain limits; incentives for buying small parcels and for their inclusion into larger parcels, through land consolidation, etc.

## 4. Institutional and Legal Framework

### 4.1. General background

The legal and institutional framework newly created in the Romanian has no precedent in our history. The paradox of the Romanian society in transition is “the limited capacity of society to absorb change, while it is under the terrible pressure of accelerating the change” (Daianu, D., p.160).

The institutional building initiated in Romania has in view the creation of a frame that should permit the “reign of the law”, law being considered as a norm that is socially accepted. One should never forget that during the communist period the market economy compatible laws generally disappeared from the collective memory. At the same time people forget that “even before the communist regime was established, Romania had also looked upon the Western society as an institutional model that was worth following” (Daianu, D., p.161). One of the crucial points of the transition period is the coexistence of strong inertia/resistance of old institutional structures with an attempt of building up new institutional patterns. In many cases the legal system operation has to suffer under the conditions in which people do not believe in their individual and collective responsibilities so as make other respect them. Sometimes, under the conditions in which there is a confusion regarding the ownership rights, the observance of contract and of property is looked upon as “a piece of paper lacking significance”(Daianu D., p.165).

The delay of institutional perpetuated reform and contributed to a state incertitude and lack of responsibility, with large loss of resources, at the level of economic agents, public organization and civil society. The changes in the institutional system presuppose modification for formal rules, of informal restrictions and of the effective enterprises; the changes are produced in a continuous and relatively smooth form, as the institutional system also includes informal restrictions (represented by customs, traditions, moral norms) that are persistent over time (as against the formal ones that can be changed relatively fast).

In Romania, the institutional reform must represent one of the exigencies of society modernization and its getting in line with the developed European countries. After 1990, the economic reform represented a first priority, while a more reduced importance was given to institutional framework establishment. In general, the legal framework related to institutional structures is poorly represented and the laws on public administration and different NGOs, meant to support civil society and a real democracy are still under analysis and approval.

The legal and institutional framework improvement was explicitly stipulated in 1993 and then in 1996. The governmental programs and most undertaken actions focused on: providing the legal framework for the support of macroeconomic policies and of their structural components; the amendment of legislation in force for the working of government programs;

institutional organization of the implementation of legislation adopted by government decisions.

The policy decisions of 1994, 1997, 1998 and 2000 that had in view the institutional system restructuring mainly referred to staff rationalization in ministries and not to the change of tasks and modalities of connecting the whole society to the market economy requirements.

#### *4.2. Main laws which determined land fragmentation*

The legal causes of excessive fragmentation of agricultural land may be analyzed from several points of view. Some of them are generated by the imperfections of the laws and rules, others, on the contrary, by the non applied of some special stipulations of them.

In the objective category could be included: the limiting of the restorable area to a maximum of 10 ha; the Land Law stipulation, by which people who worked in the agricultural productive cooperatives, and did not own land, may receive up to 0.5 ha, where were available; the unclear stipulation, by which the assignment will be made as a rule on old locations, although the the law stipulation refers to the hilly areas.

Subjective causes refer to not abide by some legal Land Law stipulations: “the territorial delimitation of the new properties resulting from the application of the present law shall start from the present territorial organisation and shall be made on the basis of some parcelling-out projects prepared by specialized bodies (Art. 44).”; “the Ministry of Agriculture and Food and the Ministry of Environment together with the Academy of Agricultural and Forestry Sciences shall take measures for the development of the national surveillance, estimation, prognosis, and warning systems regarding the quality condition of agricultural and forestry soils. These institutions will create an informational and provision system and assure databanks at country and county levels. They shall propose the necessary measures for land protection and improvement, in order to maintain and increase the production capacity (Art. 68).”; ignoring Art. 35 from the Application Rules, which shows the way of land restitution in hydro-ameliorative works; the provisions of the law, mainly referring to the legal circulation of agricultural land, were totally blocked due to a non-establishment of the Agency for Rural Development and Territory Organisation.

Land fragmentation is an evolving phenomenon, especially due to: the beginning application of the Law 1/2000, that extends the returnable area up to 50 ha; the privatization of the former state farms; the unfinished of the Land Law application; future division of private property between heirs; etc.

### 4.3. Main laws for land consolidation

4.3.1. *Land market laws.* A crucial role in counteracting land fragmentation and in the establishing of optimum-sized farms is played by the various functions of the land market, by land sale/purchase and land leasing in particular.

*Law on circulation of land no. 54/1998*<sup>8</sup>. By removing the prohibitions regarding legal circulation of land, this Law stipulates that land areas under private ownership are, and will remain, in the civil domain, regardless of their owner. In order to impose limits to very large land properties, the property of the person acquiring agricultural land cannot exceed 200 hectares in arable equivalent, per family (Land Law provided an upper limit of only 100 hectares). The limit provided by the present legislation for ownership right re-constitution/constitution would be exceeded so farm sizes could increase that is an essential requirement for efficient and competitive agriculture.

The liberalization of land sale and purchase offers a series of advantages designed to stimulate agricultural development. The application of co-owners', neighbors' or lessees' preemption rights will contribute to the reduction of land fragmentation, with beneficial effects upon productivity, costs and profitability. Hereby the structure of land tenure could be improved.

*Land Lease Law no.16/1994*<sup>9</sup>, modified and completed in 1998<sup>10</sup>, regulated leasing land areas and other agricultural assets. According to this law, leasing is based upon a written contract between the lessor and lessee. Contracting parties may be physical or legal entities. Agricultural land lease has a series of advantages, namely: it gives peasants, with parcels too small the possibility to set up farms that permit them to use their full labor potential and increase their production; it represents a profitable alternative for those who cannot work their land by themselves, for different reasons; it could lead to the establishment of commercial farms, which favors efficient agriculture; compared to land purchase market land lease requires lower financial inputs; those who lease land keep their ownership rights to that land, having a source of income.

4.3.2. *Environments Protection Law*<sup>11</sup> stipulations influence land utilization, establish the regulations which provide the maintaining of an ecological balance, and indirectly favor sustainable agricultural development.

Landowners have the following tasks in order to provide soil quality protection: to prevent soil quality deterioration; to provide location, design, building-up and to set into operation projects for different units, as well as change of land use category.

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<sup>8</sup> published in "Official Gazette". no. 102/1998

<sup>9</sup> known as Lease Law published in "Official Gazette" no.91/1994

<sup>10</sup> published in "Official Gazette" no.126/1998

<sup>11</sup> Law no. 137 published in "Official Gazette" no.304/1995

4.3.3. *Associations' law*<sup>12</sup>. An important role in land consolidation is held by the operating of associative forms, appeared on the basis of Law 36/1991. It was believed that these associations would help to alleviate some of the transition problems facing new landowners. The associations have had a series of difficulties, which led to their decline numbers and area. The poor managerial training of association chiefs causes difficulties through lack of cash for production development, the inheritance of some agricultural practices and behavior characteristic of the former production co-operatives, etc. In many agricultural associations, the problem of private ownership right is maintaining into an unclear framework.

#### 4.4. *Assessment of the institutional framework*

From an institutional point of view, land problems are quite dispersed and they are indirectly approached by a series of government institutions: The Ministry of Agriculture and Food - in charge of technically coordinating the procedures of the Land Laws; The Ministry of Justice - co-ordinates legal land registration in the Land Books; The National Office for Cadastre, Geodesy and Cartography - co-ordinates technical land registration; The Ministry of Public Works and Regional Planning - organizes, manages, directs and controls the execution of the special cadastre; etc.

At the same time, certain local problems regarding the agricultural land are also founded in the activity of certain public services, subordinated either to different ministries or to certain governmental agencies locally coordinated. The role of all these structures is limited, owing to the lack of well-defined and coherent objectives area and to the lack of communication among these institutions, in this kind of problems. The relations between local and central level in defining and implementing the agricultural policy should be based upon a full clarity as regards the role of each administrative level. It is very important that enlarged partnership relations to be created between the public and private institutions at different levels. It is worth mentioning that certain good results obtained by institutional reforms in Romania are also found in the established partnership structures, in particular with foreign assistance.

We consider that when the institutional crisis will be surmounted, the reform acceleration will be possible in the whole rural area.

#### 4.5. *The situation of the cadastre*

The cadastre and land registration system is organized on the basis of Law no.7/1996<sup>13</sup>. The general cadastre provides a unitary and compulsory system of technical, economic and juridical evidence, by which, all areas of land, as well as other immovable assets on the whole territory of the country, regardless of their location and owner, are identified, registered and

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<sup>12</sup> published in "Official Gazette" no.97/1991

<sup>13</sup> published in "Official Gazette" .no. 61/1996

represented on maps and cadastre plans. The cadastre is organized both at the level of each administrative unit (i.e. a commune, town or city) and at the national level through the institutions created for this purpose (i.e. the National Office of Cadastre, Geodesy and Cartography at national level and its territorial offices at each county level). The objective of land registration is recording into the Land Book of the ownership rights. The Land Book is, in fact, the identity card of a property and it is unique to any real estate item. Any owner who wishes to transaction land must obtain its cadastre documentation.

The creation of a national land pool/ fund that should be used for the stimulation of the land market, land consolidation, rational land concentration and agriculture restructuring. Romania is at an early stage in this field, the investment resources, infrastructure and human resources necessary for the establishment of an efficient cadastral system are limited.

## **5. Institutional Arrangements against Land Fragmentation**

In the transition period a series of measures were taken in the direction of counteracting the negative effects of agricultural land fragmentation.

### *5.1. Land Market*

The establishment of the land market presents a particular importance, being able to contribute to: land property size increase; decrease of agricultural land fragmentation through the application of the preemption right of co-owners, neighbors or lessees; gradual transition of agricultural labor in the non-farm sectors, etc.

At present in Romania the land market has already begun its operation. It is a timid beginning, but we should not forget that during the communist period this market was not functional.

*5.1.1. Land lease.* As institution that had been forbidden during the communist period<sup>14</sup>, has become functional starting with the year 1994. The importance of this institution cannot be contested, as it is one of the most efficient modalities for land consolidation.

Although there are no official data<sup>15</sup> regarding the land lease market, this is recognized as the main segment of land market in Romania at present. The specialists think that land lease market has got larger and larger in the latest years.

Information regarding land lease market and its main characteristics also results from the field surveys conducted in the rural area. The 2000 survey indicates that land lease, has had an

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<sup>14</sup> Decree no.115 of March 28, 1959

<sup>15</sup> There was an attempt in this respect of the Directorate for Rural Development within the Ministry of Agriculture and Food that was materialized through data centralization at commune level only for the year 1997. According to these data, in Romania land operation on land lease basis is about 10% of agricultural land.

expansion tendency. As compared to the year 1996, the share of households leasing out land increased by one third and the share of households leasing in land also increased by about four times. The multiple job-holding households, which operate land on individual basis, with hired labor, have a well-defined lessee behavior. The household that lease out agricultural land, the whole property or only part of it, generally consist of old-aged persons or persons confronted with a series of financial difficulties, as well as owners who live in towns. Under the conditions in which most leasing agreements are informal (about 90%), it is difficult to assess the real size of land lease market (total leased area, number of lessees, main features, etc.).

*5.1.2. Land sale-purchase market.* Since early transition to market economy, land transaction emerged, on an informal basis, under the conditions in which the legal and institutional framework was absent. Those interested by land transaction appealed to a series of solutions, such as apparent juridical documents of donation, accompanied by sale-purchase documents, under private signature, etc.

Land sale-purchase market has become operating under a legal framework since 1998. The share of households that had land transactions is low, less than 1% of the total agricultural land area, while the transacted land areas are small - 1.26 ha on average.

Though, less developed than the land lease market, agricultural land sale-purchase market is increasing and probably it is larger than it appears in the official statistics. The average price of one hectare of land in extramural areas was 7.05 million lei in May 2001. Land price is different from one county to the other. We consider these prices underestimate the current average prices to a great extent. The notary's fees, which are high enough, make the participants to land transactions declare lower prices that those paid in reality. At the same time, the official statistics regarding land market volume may not reveal the real activity level on this market, considering that sometimes land is still sold on an informal basis. It is the case of persons who have not received their ownership titles yet or persons who wish to avoid notary fees.

It must be mentioned that land transactions have not taken place in all the localities of the country (2686 communes) only in 1516 of them. At present in Romania, land sales market is a mixture of smaller markets that operate in different areas and have in view different modalities of land use, being characterized by an extreme diversity.

Data from the field survey of 2000 indicate the households consisting of old-aged persons, with no heirs, lacking technical production means and financial resources mainly represent those who sell land. In the case of pensioners who live in the rural area, these keep a certain land area for their own use, for food security reasons, and sell the remaining land. Mainly households consisting of young persons, with higher incomes, that operate larger areas and have lager human resources buy and are interested in buying land.

There seems a low possibility for the land market to significantly develop in the years to come: only 1.6% of respondents manifested their option to sell land in the near future. Prosterman, L., R., and Duncan, J., reached the same conclusions during their field visits in five Romanian counties. They state that “only several farmers expressed their interest to sell land. Many landowners, either young or retired people told us they would never sell their land” (p.9).

The slow beginning of the agricultural land sale-purchase market in relation to agricultural land lease market has been frequently explained by the lack of legal framework for quite a long period (about seven years from the coming into force of Land Law), as well as by the delay in issuing the ownership titles. In my opinion these are important causes, however some other causes can also be identified: relatively low incomes obtained from farming activities offer low possibilities for capital accumulation that should facilitate buying land; high inflation makes certain potential sellers to wait for a better moment; very high banking interest rates are limited farmers access to credits; agricultural land cannot be used as the collateral in getting credits; a small number of entrepreneurs are willing to start activity in agriculture; by tradition, land is a valuable asset for Romanians and they alienate it with great difficulty; landowners' reluctance to sell agricultural land mainly refers to the possibility to lease out it under the better conditions too.

The negative impact of high land fragmentation could be reduced by land market transactions. The improvement of legal restrictions in this field, together with an efficient cadastral system might lead to a more efficient operation of land market, to fragmentation decreasing implicitly.

### *5.2. Legal and family associations*

The agricultural associations appeared as a result of the concerted action represented the fastest modality of land area concentration and hence of relative diminution of the negative effects of private property excessive fragmentation, mainly in the plain areas. In this case, agricultural land is contributed only for use, the associated members maintaining their ownership right upon land. Membership is quite heterogeneous: those persons are prevailing who lack financial sources and mechanization equipment, which live in rural area but, there are also cases in which the members live in town.

Blamed or overestimated, these organization forms have had an important role in the transition period. The defining characteristic of the period 1993-2000 is the decrease of legal associations both as regards their number by 13% and the operated agricultural land area by 17%. In the last time many associations leased in land on formal and informal arrangement basis, ranging from tens to thousands of hectares.

The increase of land consolidation degree implicitly through the development of association forms can be achieved only by solving up certain problems referring to: ownership right clearing up; improvement of legal and institutional framework in the direction of promoting modern cooperative principles; financial support for the technical endowment of associations; managerial and professional training of staff; etc.

### 5.3. *Entrepreneurial family farms*

Agriculture practised by rural households did not feature uniformity. In parallel with subsistence agriculture, entrepreneurial agriculture also operated, although on a very small scale. The presence of entrepreneurial behaviour in private agriculture is an early start in agriculture operation in conformity with market economy rules and it represents a first step towards its modernisation and development. The field survey conducted in 2001 attempted to identify certain entrepreneurial orientations and aptitudes in the peasant economy context. Unfortunately, the entrepreneurial tradition is very weak in Romanian agriculture under the conditions in which the private land farming tradition transmitted from generation to generation was interrupted during the communist period, and the opinion of a large part of civil society referring to private entrepreneurs is quite unfavourable.

It might be useful to see what happen with agricultural entrepreneurs between 1996 and 2000. What changes occurred in terms of incidence and structure? Defining agricultural entrepreneurs is always a controversial issue. However we are going to use four dimensions of agriculture related entrepreneurship in Romania by means of endeavouring to make agriculture a business: buying or/and leasing land; making productive investment; buying inputs/selling outputs; hiring labour force.

According to the schedule above we identified three types of entrepreneurial households.

**Table 2. Types of households according to entrepreneurial behaviour (%)**

<b>Type of entrepreneurial household</b>	<b>1996</b>	<b>2000</b>
Households with weak entrepreneurial behaviour	38.4	27.6
Households with medium entrepreneurial behaviour	19.3	15.8
Households with strong entrepreneurial behaviour	5.5	6.2

The economic crisis that not only persisted but also deepened in the investigated period of time has determined a significant decrease (28%) of the share of rural households with weak entrepreneurial orientation and of those with medium entrepreneurial orientation (18%).

At the same time, the households considered as having strong entrepreneurial orientation better adjusted to problems occurring in the investigated period and even increased by 13%.

The aspects presented regarding the characteristics and changes produced at the level of rural households with entrepreneurial orientation invite to reflect on this matter. Agricultural sector performance is mainly influenced by two factors, i.e. the quality of entrepreneurs in the agricultural sector and a favourable economic environment. During the transition period, the governments that have been in power mainly focused upon decollectivisation and denationalisation, while the problems linked to competitive family farms development, such as land consolidation, were on the second place in the agricultural policy agenda.

### **Conclusions**

In Romania as a result of Land Laws application, the ownership system has changed. Private property became prevailing but is extremely fragmented. Land fragmentation is an evolving phenomenon that is not finished yet.

Land consolidation represents a necessity but any type of agricultural land consolidation program can be achieved only by taking into account the local specifics and the social and economic needs. The application of any uniform consolidation schemes could be destined to failure. In order to consolidate the agricultural land, there is an obvious and imperative need to conceive an well-articulated and coherent framework of support measures, understood and approached as a complex of economic, social, legal and technical measures, aiming at rural community development.

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