

ROMANIA'S AGRICULTURAL LAND FUND AND THE DYNAMICS OF THE LAND OWNERSHIP DURING THE PERIOD 1990 – 2020

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Abstract

The purpose of this study is to analyze the stages through which Romanian agriculture and the land of ownership had passed, namely the evolution of the Agricultural Land Fund, the dynamics of land use by categories of use, starting with the post-communist period, during which the agricultural land division was a notable process for this period for Romania, as for all former communist countries. The research showed that the degree of land fragmentation is high in our country, the greatest division being found in the category of areas below 0.5 ha, with 1.06 million owners (farms with or without legal entity, natural persons, individuals, companies etc.), summing up an area under exploitation of 261.92 thousand ha. On average, a number of 500.68 thousand owners work small areas of land in the size category of 0.5 – 1 ha, 1 – 2 ha and 2 – 5 ha. To examine this situation, there were used and processed a wide range of socio-economic statistical data (land use mode, agricultural land structure and utilised agricultural area by size classes), provided by different official databases. Although Romania is located in a geographical area with high quality of land and a favorable climate for agriculture, our country is still struggling to recover the competitiveness gap compared to countries with a similar communist period from Europe, considering the fact that the large number of land owners (approximately 2.84 million), do not support the stimulation of competitiveness in agriculture, land fragmentation being manifestly pronounced and obvious.

Key words: agricultural land fund, land use, land fragmentation, Romania, post-communist period

INTRODUCTION

In Romania, the cultivation of agricultural land (exploitation of the land through agricultural activities) is a millennial tradition and still represents one of the important branches of the national economy; in recent years, the contribution of agriculture to GDP (Gross Domestic Product) being on average 6% per year. With an area of 23,839.07 thousand ha, Romania occupies 7 % of the surface of the European Union, over 60 % of these land resources being intended for agriculture [6].

The territory of Romania includes the major categories of relief, proportional, symmetrical and spread out concentrically around the circle of the Romanian Carpathians: mountains 31%, hills and plateaus 36%, plains and meadows 33%, arranged in an amphitheater aspect of the major relief shapes, with a relatively uniform distribution of the five named above forms of relief [14]. The

climate is temperate continental transitional to excessive and with external influences: oceanic in the West, Mediterranean in the South-West, continental excessive in the East, transitional in the South, North Baltic in the North-East and maritime on the coast. The average annual temperature is 110 C in the South and 80C in the North. The average annual precipitation is variable depending on the altitude: approximately 500 mm in the plains, 700 mm in the hills and 1,000 - 1,400 mm in the mountain areas, identifying itself through these characteristics as a country predominantly to agricultural activities [20]. This relief and its climate ranked Romania on the 6th place in the European Union in terms of arable land per capita, with nearly 0.41 ha of arable land, a value higher than many countries in the European Union, such as Italy (0.11 ha/inhabitant), Germany (0.14 ha/inhabitant), where the EU 27 average is 0.212 ha/inhabitant [8].

The development of Romanian agriculture was relatively dynamic, the post-communist period being marked by fundamental transformations in agriculture, collective and state ownership being replaced by private ownership [21].

Starting with 1989, the decline of the communist regime, during which agriculture had become collective farming, after the Second World War and reorganized by Ceaușescu in the 70s and 80s [26], led to deep changes in all fields of activity, one of the first branches affected by this transformation being agriculture, as a result of the change in the type of ownership, the type of agriculture and the spatial distribution of the main categories of land use [1].

Decollectivisation farming and restitution of land to former owners are among the most dramatic elements of the economic transition [3].

The next reform after the communist regime, regarding land and the recognition of ownership rights, was represented by Law 18/1991, by which initially a maximum of 10 ha of land was returned to each owner. With the transition to the market economy and the accession to the European Union (after 2007), Romania adopted the European Community Policies. In this period, the type of agriculture was that the rural households shared the land and produced on common basis in the newly formed cooperatives. The decision to farm collectively is explained by the slowly response of the households (small farms) to developing competitive markets [2].

After a short period of time, the number of cooperatives decreased and there was a massive return to small-scale peasant farming [22].

Also during this period, entered in force the Law 1/11 January 2000 for the reconstitution of the right of ownership over agricultural and forestry lands requested according to the provisions of The Land Law No.18/1991 and Law No.169/1997.

This Law stated that the agricultural land will be back off up to 50 ha of arable land and 30 ha of wooded land. Meanwhile, the former land owners have been organized themselves in various associative forms (Law no.

36/1991), within three categories of individual agricultural enterprises, distributed of size, as the following: family farms, from 1 to 100 ha, with an average area of 48 ha and a share of 31.8% of agricultural land; private commercial farms, including those owned by the state, ranging from 100 ha to over 10,000 ha, with an average area of 424.5 ha, representing 34.82 % of the country's agricultural area, and non-subsidized subsistence farms (2,736.7 thousand units), with an average area of 1.79 ha and a share of 33.9% of the total agricultural area [14].

As state subsidies and agriculture markets ceased to be active over time, new land management policies were issued and land reforms led to massive transfers of land ownership [10].

Thus, the transition to a market economy threw agriculture in an uncertainty zone by returning land to owners, disappearing the control of markets, reducing the demand for products, damaging the irrigation systems and increasing unemployment.

The agricultural potential of Romania was and is still very high, but it is neutralised by the strong fragmentation of property and the large number of land plots, where the farming in a competitive agriculture is not viable. As a direct consequence, this subsistence farming slows down the performance of the Romanian agricultural sector [4].

In this context, the purpose of the study is the temporal and spatial analysis of the change in the main categories of land use in the period 1990-2020.

MATERIALS AND METHODS

The study was based on the data provided by the National Institute of Statistics, INSSE (Romanian Statistical Yearbooks 1990-2020; General Agricultural Census, 2010, 2020; TEMPO-Online database etc.), and other databases, identifying and analyzing the main factors that affected the evolution of agricultural land use and the transfer of property from the state (Agricultural Production Cooperatives, CAPs) to the owners.

The analyzed indicators were: the size of the agricultural holdings, the land areas owned and the evolution of the agricultural land fund over the last 30 years.

This study reports land use and outlines the causes and effects of environmental change from the fall of the communist regime to the present.

The documentation of the subject by selecting relevant bibliographic literature and processing data on land use, referred to: agricultural land (arable land, vines, orchards, pastures and hayfields) and non-agricultural land, respectively.

RESULTS AND DISCUSSIONS

In the last thirty years, Romania's agriculture passed through many changes at the organizational level and the use of land.

With a total area of 238,397.07 km² [24], Romania ranks 12th in size, at the European level, with a general land fund comprising of arable land (39.2%), forests (28%), meadows and hayfields (20.5%), vineyards and orchards (2.3 %), buildings, roads and highways (4.5 %), waters and ponds (3.7 %) and other areas (1.8 %).

In 2020, the agricultural area was 14,133.15 thousand ha, representing 59.28% of the total area of the land fund, determined in 2010 when it was 14,634.43, decreasing by 501.28 thousand ha, referred to the level of 2020 and by 635.87 thousand ha, compared with the year 1990 (Table 1).

During the period 1990 - 2005, in the Southern Romania, the phenomenon of the agricultural land abandonment was manifested [16], with an dropout rate of 21.1%, due to the unfavorable topography, the high level of land division, the decreasing income in agriculture, the insecurity ownership, lack of agricultural machinery and demographic developments during the transition period.

By 2005 year, 95.6 % of the country's agricultural area was returned to the former owners or their legal heirs, and by 2010, almost all of the agricultural area become in private system, so that later half of these areas would be leased [15].

This right of private ownership over the lands that were in the patrimony of agricultural production cooperatives (CAP), was made under the conditions of law 18/1991, by reconstituting the right of ownership. According to Chap. II, art (2), the provisions of this law benefited the cooperative members (who brought land to the agricultural production cooperative or whose land was taken over, in any way), their heirs and other specifically established persons. The establishment of the property right was done by issuing a Title of ownership, within the limit of a minimum area of 0.5 ha for each entitled person and a maximum of 10 ha per family, in arable equivalent [23], later being completed with up to 50 ha [12].

In the capitalism, agriculture came with new challenges for farmers, land management became expensive and they were found solution in selling the land in several forms.

These challenge of the agricultural transition was important for Romania, the legal reforms were postponed and the process of privatization of agriculture became difficult and lasting, therefore the practice of subsistence agriculture has come back naturally [7].

Romanian agriculture developed after the 2000s, with the emergence of land consolidation following the purchase or lease of land, especially after 2007 with Romania's accession to the European Union, when large holdings with Romanian and foreign capital made new land acquisitions, but also by encouraging various associative forms [9].

The European financing through the funds of the SAPARD program (Special Accession Program for Agriculture and Rural Development - €500,000,000) to support the development of agriculture and the rural environment, which named the financing of several projects with reference to agricultural land and the change of use, led to significant spatial changes in agriculture, either by land use classes [19].

Currently, the lands are distributed according to the Land Fund, and are worked in private ownership, are leased, or "given in part" or have other modes of ownership.

Romania's land fund is made up of all land of any kind, regardless of destination, the title on the basis of which they are defined as public or private domain of which they are a part [23].

According to the same Law 18/1991, the land in our country is divided into five land groups, depending on the destination:

a) Agricultural lands:

- productive agricultural lands: arable; orchards; wine nurseries and vines; fruit, hop and mulberry plantations; permanent meadows; greenhouses, solariums and nurseries etc.;

- lands with forest vegetation, if they are not part of forestry, wooded pastures etc.;

- lands covered by constructions and agro-zootechnical installations; fisheries and land improvement developments; technological and agricultural exploitation roads; platforms and storage spaces that serve the needs of agricultural production;

- non-productive lands that can be arranged within the improvement perimeters and used for agricultural production [11].

b) Forestry lands, namely: wooded lands or those that serve the needs of culture, production or forestry administration; lands intended for afforestation and non-productive ones (cliffs, steeps, boulders, ravines, torrents), if they are included in the forestry facilities;

c) Lands permanently under water, namely: surfaces covered, permanently or for most of the year, by standing water (lakes, ponds, territorial sea) or flowing water (rivers, streams), the bottom of inland maritime waters and territorial seas;

d) Intra-village lands, related to urban and rural localities, on which the constructions, other facilities of the localities are located, including agricultural and forest lands; "all the lands, regardless of the category of use, located in the perimeter of urban and rural localities as a establishment result of the border limit for the intra-village, according to the legislation in force" [13].

e) Land with special destinations, such as land used for road, rail, naval and air transport; the lands with constructions and related installations; constructions and

hydrotechnical, thermal, electricity and natural gas transport, telecommunications installations; lands intended for mining and oil exploitation, quarries and dumps of any kind; for defence needs; beaches, reserves, natural monuments, archaeological and historical ensembles and sites and the like [18].

The structure of land use and the variety of land use categories, closely related to the location of natural components, such as the climate and the specificity of the relief, determined the division into two land categories.

These two categories of land having the same economic destination, created naturally or artificially, are:

a) Agricultural, land that is permanently cultivated, used mainly for vegetable agricultural production and comprises 14,133.15 thousand hectares, of which: arable land 8,564.91 thousand hectares, pastures and hayfields 3,723.52 thousand hectares, orchards and fruit trees 343.83 thousand ha and vines 1500.88 thousand hectares, at the level of 2020 [17].

According to the use of land, a) the arable area is occupied by: cereal crops for grains; dried legumes and protein crops for grains; industrial plants (fiber plants, oil plants, medicinal plants, aromatic plants and spices); rooted; fresh vegetables, melons and strawberries; ornamental flowers and plants; forage plants harvested green; plants for the production of seeds and seeds for sale; other crops in arable land and fallow arable land.

b) Non-agricultural surfaces, with forestry destination, with a total area of 9,705.92 thousand ha, includes: forests and forest vegetation (6,730 thousand ha); lands permanently under water (830 thousand ha); lands with buildings (760 thousand ha); roads and railways (390 thousand ha), respectively degraded and unproductive land (490 thousand ha) [17].

Over the last 30 years, the changes in the use of agricultural and non-agricultural land, reflected a downward trend in agricultural areas. If in 1990 Romania has had 14,769.02 thousand ha of agricultural land, by 2020 this

surface decreased, reaching a total of 14,133.15 thousand ha (Table 1).

Table 1. Land use (thousand ha)

Land use/Year	Year 1990	Year 2004	Year 2014	Year 2020
Agricultural land (thousand ha)	14,769.02	14,711.55	14,630.07	14,133.15
Non-agricultural land (thousand ha)	9,070.05	9,127.51	9,208.99	9,705.92
Total area (thousand ha)	23,839.07	23,839.07	23,839.07	23,839.07

Source: Own determination based on [17].

The difference of 635.87 thousand ha, that lost their characteristic of agricultural land, can be found added to the non-agricultural land (in 2020), the reason being the transfer of land to the forestry and construction sectors. (Figure 1).

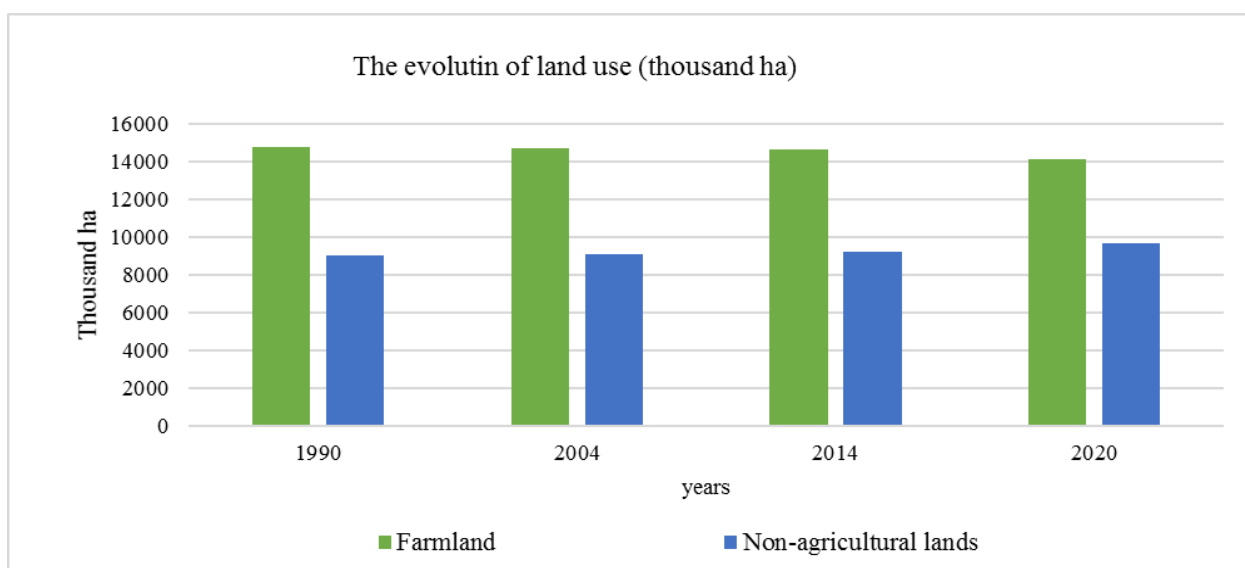


Fig. 1. The evolution of land use (thousand ha)
 Source: Own design based on the data from [17].

In 2020, out of the total agricultural area of Romania (14,133.15 thousand ha), about 60.60% has been represented by the arable land, decreasing by 3.38%, compared to 1990 year (Table 2).

The same downward trend was recorded for the use of pastures and meadows, with a difference of 5.66 % currently, compared to the year 1990.

Table 2. Dynamics of the structure of agricultural land according to the mode of use, in the period 1990-2010

Category of use	Year 2020		Year 2010		Year 1990	
	Thousand ha	%	Thousand ha	%	Thousand ha	%
Arable	8,564.91	60.60	9,404.00	64.25	9,450.39	63.98
Pastures	3,723.52*	26.34	3,288.72	22.46	3,262.50	22.08
Meadows	-	-	1,529.61	10.45	1,465.36	9.92
Wineyards	1,500.88	10.62	213.57	1.45	277.37	1.87
Fruit plantation	343.83	2.43	198.57	1.35	313.38	2.12
Totally agricultural	14,133.15	100	14,634.43	100	14,630.07	100

* 3,723.52 thousand ha – Pastures + Grassland

Source: Own calculations based on the data from [17].

The area covered by vineyards and wine nurseries in the period 1990-2010 showed a regression due in particular to the restitution of land occupied by vines, to their rightful

owners, from 277.37 thousand ha in 1990 to 213.57 thousand ha in 2010.

Due to the interest in cultivating new varieties, the areas with vineyards has touched 1,500.88 thousand ha, in 2020, increasing from 213.57 thousand ha in 2010, to 1,500.88 thousand ha in 2020, so in a range of more than 1,100 thousand ha.

Surfaces with fruit plantation have been recorded the same trend as vineyards and wine nurseries, the causes of the decrease being similar, the cultivated areas varying very little, remaining within the limits of 313.38 thousand ha and 343.83 thousand ha. However, in the last 10 years, we noticed that the areas occupied by fruit plantation have increased by 57.75%, from 198.57 thousand ha in 2010, reaching a total of 343.83 thousand ha in 2020, due to the interest of farmers in this sector.

Agricultural holdings without legal personality included: authorised natural

persons, individual companies, family companies.

In 2003, after the full restitution of land ownership rights, in Romania there were around 4.5 million agricultural holdings with an average size of 3.1 ha of agricultural land per farm. Until 2013, the situation did not change significantly, there were 3.6 million agricultural holdings with an average size of 3.6 ha [25].

During the period 2013-2020, there were 3.6 million small holdings, but the situation has not improved much, because the number of holdings up to 5 ha was almost the same, namely 2.56 million.

The largest number of holdings (1,060,025), own areas of less than 0.5 ha, summing a total area of 261.92 thousand ha, followed by the 519,436 agricultural holdings, that hold between 2 - 5 ha with a total area of 519.36 thousand ha and 511,457 agricultural holdings owned between 1 - 2 ha, totalling an area of 728.64 thousand ha (Table 3).

Table 3. The used agricultural area, by size classes (0 – 20 ha) of the used agricultural area, thousand ha, year 2022

Owner type	Size classes individual agricultural holdings					
	Below 0.5 (ha)	0.5 – 1 (ha)	1 – 2 (ha)	2 – 5 (ha)	5 – 10 (ha)	10 – 20 (ha)
Agricultural holdings with or without legal personality, natural persons, individual persons, companies/ agricultural associations, etc. (thousand ha)	261.92	325.25	728.64	160.03	108.81	763.09
Number of holdings	1,060,025	471,148	511,457	519,436	161,021	56,200

Source: Own determination based on the data from [17].

Table 4. The utilised agricultural area in agricultural holdings, by size class (20 – over 1,000 ha), thousand ha, year 2022

Owner type	Size of holding					
	20 – 30 (ha)	30 – 50 (ha)	50 – 100 (ha)	100 – 500 (ha)	500 – 1,000 (ha)	Over 1,000 (ha)
The area of agricultural holdings with or without legal personality, natural persons, individuals, companies, etc. (thousand ha)	442.00	664.18	784.39	2,773.09	1,330.99	2,000.75
Number of holdings	18,161	16,890	11,148	13,082	1,925	1,003

Source: Own determination based on the data from [17].

Also, the agricultural holdings that have areas between 0.5 – 1 ha are very numerous, respectively 471,148, these holdings using a total area of 325.25 thousand ha of arable land (Table 3).

In Romania, the division of land and the agriculture on small areas are obviously, as

from the total of 14,133.15 thousand arable ha, only 1,003 holdings, with a total area of 2,000.75 thousand ha, own areas between 500 - 1,000 ha (Table 4).

The following intermediate class is represented by a number of 18,161 agricultural holdings with areas between 20-

30 ha, 16,890 holdings with areas between 30-50 ha, and 11,148 holdings with between 50-100 ha of agricultural land, representing a total area of 1,890.57 thousand ha (Figure 2).

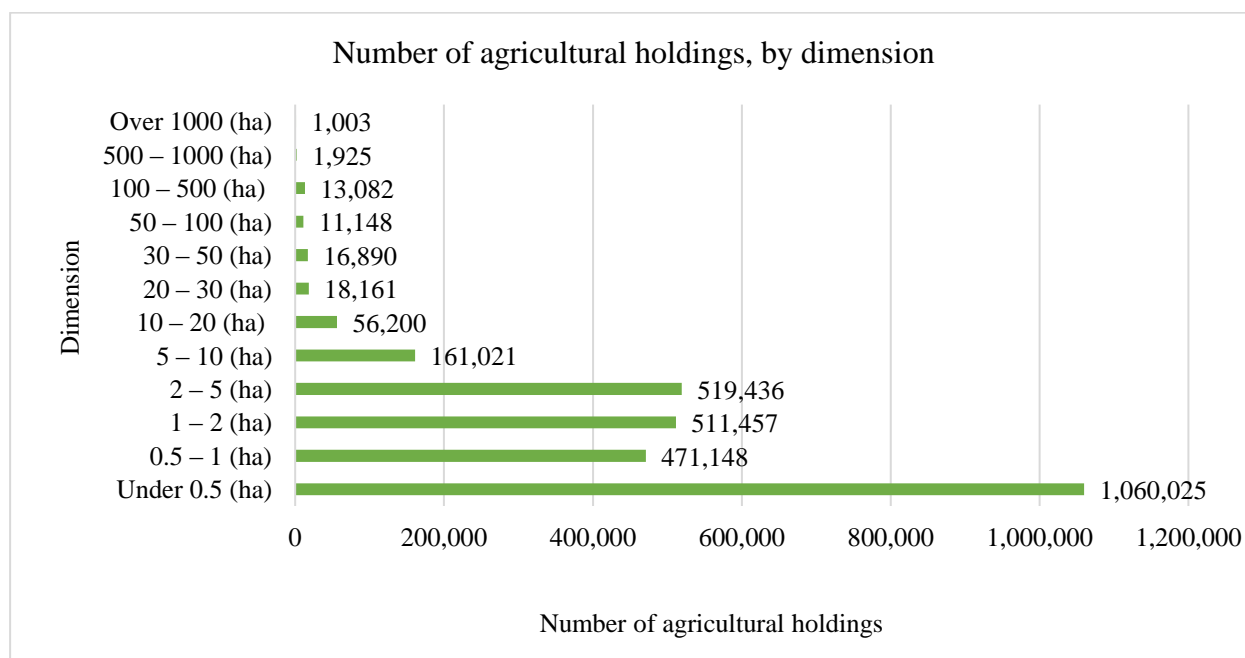


Fig. 2. Number of agricultural holdings by size class, year 2022
 Source: Own design based on the data from INSSE.ro, Accessed on June 10, 2023 [17].

The number of agricultural holdings in 2020 is very bad as follows - out of a total of 2.84 million holdings, 2.56 million work land up to 5 ha, and only 44.04 thousand have areas larger than 50 ha.

In Romania, the division of agricultural land is a result of the fact that the process of land restitution of agricultural properties was not supported by structural agricultural policy measures implemented in proper time and with the appropriate financial allocation, thus, the Land Fund Law is considered the weaker legal construction of agrarian reform, with the most serious consequences for rural areas [5].

CONCLUSIONS

This study led to the following conclusions:

-The socio-economic process of the last 30 years, determined by the post-communist period, caused sharp changes in the evolution of the structure and the way that agricultural land is used.

-Following the decollectivization and privatization of agriculture, respectively the adoption of several strategies for the implementation of land reforms, agriculture went through deep transformations, which led

to the expansion of private ownership of agricultural land.

-Although the Romanians initially enjoyed the re-appropriation and the regaining of land machinery and agricultural equipment to work the land, led them to establish themselves in diverse forms of association, so that the land would later be given to tenants (land leases/those who rent the land), in many cases to be abandoned or even to be sold.

-In 2020, from 14,133.15 thousand ha of agricultural land, a share of 60.6% was occupied by arable land, 26.34% was covered by pastures and hayfields, 10.62% by vines and only a part of 2.43% of the agricultural area was occupied to the orchards and fruit trees.

- The dynamics of the Romanian agriculture has made incontestable the high level of land division, these being reflected by the small area of land (under 0.5 ha) that most of the agricultural holdings own (1.06 mil) and the large number of plots returning to the holding, followed by another 1.5 million holdings that own equally small areas, between 0.5 - 5 ha.

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