ANALYSIS OF FARMING TYPES’ CHARACTERISTICS
IN THE BOIANU PLAIN (ROMANIA)

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Abstract: The aim of this paper is to analyze the distribution and dimensional structure of the farms depending on their legal status, and the owners’ perceptions on the current status. The main research methods used in the study were: direct observation method, digital mapping, statistical analysis, surveying (semi-structured interview) and SWOT analysis. The Boianu Plain is by excellence an agricultural region. Its arable land is worked/operated by three main categories of farms: individual holdings, family farming associations and farming societies. Production obtained within individual holdings is always lower comparative to family farming associations and especially to farming societies. Partnership helps farmers to join their technical and financial means in order to increase the annual production and, implicitly, gain profit. In this respect, the farmers’ perception resulted from the semi-structured interviews is a good evaluation instrument. The most critical issue at local level is making individual farmers aware of the benefits of family association and/or farmland leasing. The SWOT analysis reveals the possibility of an efficient management as driven by the way that the existing opportunities are able to mitigate or completely remove the weaknesses. The Boianu Plain has a very good agricultural potential in a highly favourable environment, but poorly capitalized.

Key words: Agricultural exploitation, Farming choice, Subsistence, Individual holding, Family farming association, Farming society.

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Introduction

Agricultural exploitation size at global scale. The problem of the rational size of the agricultural holding has been a subject for scientists separately or inside large organizations (FAO, World Bank) for a long time. On the world’s farming system sizing is a controversial debate. Thus, adepts of the large farm underline the rising of crops productivity for the medium and large farm in South America (Helfand & Levine, 2004), or on the palms’ plantations in South Asia (Deininger & Byerlee, 2011). Moreover, in Africa, many countries attempted to transform and modernize agriculture through large-scale farming, providing subsidized credit, machinery, and land, but all efforts have generally failed (Eicher & Baker, 1992).

Many debates are around small and medium sized farms functioning. Despite that the USA is seen having large units, most farms in the United States are small farms, defined since 1975 as those which obtain at least 1000$ yearly. The US Department of Agriculture estimates that about 92% are small farms. Even there are government supported agencies that provide technical and educational support to the farm community, small farms are confronted with several issues among are: limited resources (land and equipment), purchasing power (small quantities and no discount), limited availability of custom field work (Poole, 2003).

While many small farmlands trend to be unified in rental forms or associations in Africa or America, in Eastern Europe has recently undergone from the former Soviet system of collectivization and state farms to new private agrarian structures. Thus, the land has unfolded in many ways, leading to the appearance of medium and small properties, depending on countries political legacy. But in these countries after several years the plots were quickly rented back by companies with access to finance and machinery, because small dimensions of farm lead to
decreasing of agricultural products in Russia, Kazakhstan, Ukraine, and the movement toward largest holdings, corporate farms (Deininger & Byerlee, 2011).

Farming system changes in the post-communist Romania. Romania subscribes to the Eastern European pattern, the Boianu Plain farming system being a similar case to other Romanian areas. During the socialist era it was one of the countries depicting the highest economic size of the agricultural exploitations. The situation dramatically changed after the Land Reform – Rule no. 18/1991 was implemented, Romania becoming the country with the lowest economic size of these exploitations (Popescu, 2011). The individual holdings have sizes between a few acres and tens of thousands hectares; nevertheless, the great exploitations in Romania together hold 2.9 million ha of arable land, meaning 30% of the total arable land of Romania (Otiman, 2012).

Nowadays, Romania confronts the same problems. The Land Reform, through the actions of restoration and creation of property rights, get to Romania after 1990, new types of agricultural entities engaged in farming. In the literature and official statistics main existing names as agricultural units, agricultural societies (companies), farms, agricultural holdings, etc. are used (Rusu, 2005; Simion, 2010; Vijulie, 2010, etc.).

Farm classification is a compulsory action to correct perception of the current status and mutations that occur in agricultural structures in Romania (Rusu, 2005). The applied organization is dependent on the legal form of organization. In fact, there are two types in this respect: unincorporated farms and agricultural units with legal status. Unincorporated farms are represented by individual holdings and family farming associations.

After the Land Reform adoption (Rule no. 18/1991 and Rule no. 1/2000), the individual holdings were established (Glogovean et al., 2011). They are difficult to define, although efforts in this direction were made.

The individual holding is “an economic and social unit compound of all persons living in the same house, related by blood or not, who regularly administer the available resources. Usually, these are small affairs based on the family relationship and resources” (Rusu, 2005: 97).

The family farming associations represent the second type of farming with no legal status (Rusu, 2005; Bold & Crăciun, 2005). These structures were incorporated under the Rule no. 36/1991. They do not have legal authority, being constituted on the basis of the verbal agreement between two or more families who get to work the land, heard, process and sell the products together. The average size is about 150 hectares. The difference between this type and a farming company is given by the smaller size and the lack of employers (Sarris & Gavrilescu, 1996).

The farming societies were established by the Rule no. 36/1991 and they are also known as associations with legal status or formal farming associations. They do not have a commercial character. They have legal status, some of them keeping elements of the cooperative organization, but on totally new bases; now, every owner knows where his plot is located; he has the property right over the assets of the association (equipment, herds etc.); the society defends the farmers’ rights in the market relationship (Rusu, 2005; Bold & Crăciun, 2005).

A significant part of the farm land in the association comes from persons, who regained their property right, but they live in the urban environment, abroad or they consider themselves too old to work their land (Rusu, 2005; Simion 2010).

In 2007, the number of farms in Romania was 3,931,350, about 8% lower as compared to the number registered at the Structural Research in Agriculture 2005 and over 12% lower than the Agricultural Universal Census in 2002 (NSI, 2008). The number of the individual farm exploitations (holdings) was 3,913,651 which is about 7.7 (%) lower than in 2005 and 12.3 (%) lower than in 2002, and the number of units with legal status was 17,699 which is 3.1 (%) lower than in 2005 and 21.9 (%) than in 2002 (NSI, 2008).

The increase of the physical dimension of the farms in Romania represents a significant issue to be solved in order to reduce the gap between Romania and the other Member States of the European Union (Luca et al., 2012).

Among the actions designated to increase the physical dimension of the farms is primarily to proceed on the structural reform. The following tasks are aimed to: to complete the process of ceding the farm lands back again; to clarify the legal status of the farm lands; to intensify the action of the National Agency of Land Survey and Real Estate Advertising in order to reduce the identification, measurement and registering the property rights in the Land Registry costs; to activate the area changing between owners in order to ease the process of farm lands merging into larger farms (Popescu, 2011).

An important action taken in 2005 (Rule no. 247/2005) and applied between 2006 and 2009, which contributed to amalgamating of the farm lands was to grant the life annuity of 100€ in case of property selling and 50€ if only leasing it by the owners over 62 years old. At the beginning of 2010, the life annuity was repealed by Ministry of Agriculture and Rural Development (MARD), a new form of stimulation. 

1 National Statistical Institute
having to be negotiated with the European Commission – the retiring of the farmers over 55 years old (Popescu, 2012; Luca et al., 2012).

Another crucial measure taken by the government to increase the physical dimension of the farms in Romania is to grant the financial aid for the young farmers who settle in the country, have the necessary preparation in the field and establish or register for the first time a farm (Popescu, 2011).

The National Program for Rural Development 2007-2013 (NPRD) provided the young farmers grant funds with total value of 333,221,484 € to establish farms by Measure no. 112 – “the settling of the young farmers” (MADR², 2008). The grant funds are provided for farmers younger than 40. They can be normal or juridical persons who primarily develop farming activities.

The farmer, a potential beneficiary of the Measure no. 112, also has to own a farm having an economical dimension between 6 and 40 European Size Unit (ESU); the value of a unit is now 1,200 €. A weighty statement is that the farm must be situated on Romanian territory and registered in the Land Registry of the Agency for Payments and Intervention in Agriculture (APIA).

Achieving this objective would have positive consequences in improving the design of farmers – by age, studies, affinity for modernization and advanced management and marketing (Popescu, 2011).

The introduction of fallow land tax would generate a part of the merger, and, on the other hand, this measure would reduce the national agricultural sector that is being left uncultivated, named “fallow”. In Romania there are still some unclarified issues regarding the statute of uncultivated farm land. In order to gain a statistical control over their number and size, but also to reduce the abandonment phenomenon, the government has prepared a draft law on the approval of the Emergency Ordinance no. 8/2013 amending and supplementing Rule no. 571/2003 (Fiscal Code).

According to official estimates Romania has between 1.5 and 2.5 million hectares of fallow land, representing at least 20% of the cultivated area of the country (APIA, 2011). In this matter, we deal with an unwanted place in the European Union. This was and is possible because local taxes on land do not distinguish between work and uncultivated land.

Developing the real estate also has a pivotal role with the main components: agricultural land sale and purchase, lease, concession, etc. (Popescu, 2011; Luca et al., 2012). Each landowner has the option to choose the form of transfer (complete or partial) of property in their possession.

In Romania, the lease is a notable concentration of viable agricultural land holdings to increase their physical size (Popescu, 2011).

Aims and objectives of this study

The aim of the study is to analyze the distribution and dimensional structure of the farms depending on their legal status, and the owners’ perceptions on the current status and future land use.

The main objectives include the following: spatial distribution and statistical analysis of the agricultural exploitations (farming choice), analysis of the farmers’ perception in the communes dealing with individual farming, on farm size, output destination, constraints, expectations; development prospects of the agricultural communities in the studied area through the SWOT analysis.

Study area

The Boianu Plain is located in the south of the country; its boundaries are given by the Olt Valley and Romanați Plain to the west, Vedea Valley and Găvanu-Burdea Plain to the east, Danube Valley to the south, and Getic Plateau to the north (Figure 1).

The reasons we chose this tableland as a case study for is that it is a part of the Vallachian Plain – the landform facing the highest fragmentation degree of agricultural land in Romania (the average farm size is less than 1.5 ha according to NSI, 2008), but its superior bioclimatic and soil characteristics have a significant potential to rapid productivity growth, for solving or mitigating the occurrence of the agricultural land fragmentation.

Figure 1. Geographical location of the Boianu Plain

² Ministry of Agriculture and Rural Development
**Research methods**

The study is based on a dataset provided by MARD about the local share of the main types of farms in 2011 and the field-collected information during the July-November 2011 conducted by the authors. The main research methods used in the study were: direct observation method, digital mapping, statistical analysis, surveying (semi-structured interview) and SWOT analysis. Successive observations in the study area conducted in the summer and autumn of 2011 allowed assessing visually enhanced atomization of the land (as a consequence of land re-ownerships and ownerships after 1991) on one hand, and the amount of uncultivated plots (fallow land) on the other hand.

The GIS approach allowed the visualization of percentiles distribution per commune in the Boianu Plain. In the ArcInfo™ environment, three maps on which values grouped within equal percentile categories per communes are shown resulted. There are mainly five classes, each 20%-sized (0-20%; 20-40%; 40-60%; 60-80%; and 80-100%). The number of classes was kept equal for each farming choice, in order to perform a frequency analysis and outline the absence of values for specific classes (60-80% and 80-100%). The indicator value for family farming associations and farming societies is null (0) for 3 communes. It was given separately, as independent class; as a consequence, there are six classes found for these farming choices.

Statistical analysis used for calculating the participation of each farming choice (individual holdings, family holdings and farming societies) is based on the total arable land datasets provided by the Ministry of Agriculture and Rural Development (MARD, 2011). The arable land is the main farming category of agricultural land, followed by vineyards, orchards and pastures/haylands (Table 1). For this reason, in this study we calculated only the percentage of arable land indicator for each farming choice – individual holding, family farming association and farming society.

**Calculation of the arable land indicator per farming choice.** The indicator is given in percentiles, in order to better reveal the participation of each farming choice to the total arable land area (Table 2). These percentiles were calculated using the following formulas:

\[(A)\quad x_{i,n} = \frac{(Ih_{i,n} \times 100)}{T_{ar}(i...n)}\]
\[(B)\quad y_{i,n} = \frac{(Fh_{i,n} \times 100)}{T_{ar}(i...n)}\]
\[(C)\quad z_{i,n} = \frac{(Fs_{i,n} \times 100)}{T_{ar}(i...n)}\]

**Table 2.** Variables used for calculation of the percentiles per communes

<table>
<thead>
<tr>
<th>ID</th>
<th>Farming choice</th>
<th>% of the total arable land</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Ih</td>
<td>x</td>
</tr>
<tr>
<td>(B)</td>
<td>Fh</td>
<td>y</td>
</tr>
<tr>
<td>(C)</td>
<td>Fs</td>
<td>z</td>
</tr>
</tbody>
</table>

\[\text{Ih} = \text{individual holdings}; \text{Fh} = \text{family farming associations}; \text{Fs} = \text{farming societies}; T_{ar} = \text{total arable land per commune}; x = \% \text{of the arable land in individual holdings}; y = \% \text{of the arable land in family farming associations}; z = \% \text{of the arable land in farming societies}.\]

The surveying method based on semi-structured interviews includes a set of ten predefined questions, which allowed addressing specific questions to respondents without following a plan. It was applied on 30 persons aged over 40 years, in Izvoarele (Olt County), Izvoarele (Teleorman County), Icoana, Corbu, Schitu, and Tufeni communes. Despite its appearance of an informal discussion, the benefit of semi-structured interview before the structure is that it closely follows the debate objectives, is more flexible and can adapt easily to farmers. We have chosen the semi-structured interview surveying method, and not a more elaborate one (e.g. questionnaire method) because of the high average age and poor education level of the local population.

The SWOT analysis aimed at identifying favourability and the restrictive elements that should be taken into account in making effective planning scenarios for agricultural activities, as anchored in objective reality. Each strength, weakness, opportunity and threat finding was evaluated by one point and then digitized as polar diagram (Figure 5). This diagram has four quadrants – A, B, C, and D – defined by two perpendicular axes intersecting at the point O (QX and YZ). The OY segment will register strengths enjoying the territory considered; the OZ segment is allocated weaknesses; the OX segment...
corresponds to opportunities, and the OQ to risks. The extent of each quadrant shows the development state (Ianuș, 2000).

**Indices and spatial distribution of the main agricultural exploitation types**

Statistical analysis and surveying (semi-structured interview) combined were helpful in analyzing the spatial distribution of the following indicators (in percentiles): the independently operated arable land in total arable area (individual holdings); the associatively operated agricultural area (family farming associations) and the arable land structured in farming societies. Separately for each type of agricultural exploitation (farming choice), the results highlight the following aspects:

**Individual holdings.** The share of arable land in the individually farmed total arable land (Figure 2) shows that the communes Nanov (9.95%), Troianu (10.36%), Slobozia-Mândra (11.44%), Plopii-Sâvitești (15.24%), and Radomirești (18.60%) have the smallest arable land areas farmed in individual holdings. The mean level of this indicator in the Boianu Plain is 39.00%, close to the average levels of the following communes: Stoicănești (36.88%), Șegarcea-Vale (37.59%), Peretu (41.99%), and Movileni (42.29%). The highest values recorded by the communes Izvoarele in the Teleorman County (82.91%) and Izvoarele in the Olt County (96.21%).

**Family farming associations.** The spatial distribution of the associatively exploited agricultural land reveals that the highest percentage values occur in the communes Mărunți (61.44%) and Vâlcele (76.81%), while the lowest (0%), meaning no family farming associations, occur in Izvoarele (Olt County) and Tufeni. In the following communes: Dăneasa (6.19%), Corbu (6.32%), Izvoarele – Teleorman County (7.81%), and Valea Mare (9.79%) the relationship degree is quite low. The mean of this indicator is 34.03%, close to which are the following communes: Buzescu (34.06%), Bragadiru (34.19%), Smârdioasa (34.78%), and Seaca – Teleorman County (35.75%) – Figure 3.

**Farming societies.** This analysis refers to farmland leased by the farming societies (in percentage). The spatial distribution of the leasing phenomenon in the Boianu Plain in Figure 4 shows strong disparities in the northern and eastern areas. The majority of communes register low values (0–20% class): Seaca – Olt County (0.63%), Izvoarele – Teleorman County (3.78%), Potcoava (3.96%), Călmățuiu de Sus (6.28%), Perieți (6.55%), and Mihăești (7.50%), while a few have quite high values (40-60% class): Brebeni (41.12%), Troianu (43.47%), Nanov (44.52), and Dăneasa (45.8%).

Only one value exceeds 50%: Șerbănești (52.62%). The administrative units located in the south-central plain register a medium-high tenant level: Bogdana (37.36%), Ciuperceni (37.5%), Furculești (38.67%), and Bujoru (39.96%). The mean percentage is 26.97%, close to which are the following communes: Pietroșani (25.56%), Scrioaștea (25.88%), Tufeni (26.02%), Stoicănești (26.8%), and Peretu (27.26%). There is also one commune with no leased arable land – Vâlcele (0%).
Statistical patterns of the farming choice categories

This section reveals the main statistical data given on tables and graphs related to spatial distribution of the farming choice types (Table 3). There are also more obvious the null values, meaning the communes where the specific farming choice is missing (Table 4 and Figure 5).

All the farming choice types are found together in the 0-20%, 20-40% and 40-60% frequency classes, with the majority grouping in the 20-40% class (especially the values indicating the frequency of farming societies). The other classes (0%; 60-80%; and 80-100%) include only specific types of farming choice (Fig. 5). There is a higher homogeneity degree in case of the individual holdings, which are missing only in the null class. On the other hand, the values representing farming societies are very heterogeneously distributed in terms of frequency, with strong preference for the 20-40% class and total absence in the superior classes (60-80% and 80-100%). An explanation for these grouping patterns is given in the subsection below.

Farmers’ perception on farming choice typology and patterns

In the semi-structured interviews with farmers and local authorities we have found that the most individual farms in Boianu Plain are characterized by a reduced economic power, mostly oriented to self-consumption, which is typical for the subsistence and semi-subsistence model (Table 5).

Table 3. Statistical patterns of the farming choices in the Boianu Plain (values in percentiles except counts and frequency)

<table>
<thead>
<tr>
<th></th>
<th>(A) Individual households</th>
<th>(B) Family farm associations</th>
<th>(C) Farming societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>68</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>Minimum (%)</td>
<td>2.20</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Maximum (%)</td>
<td>96.21</td>
<td>76.81</td>
<td>52.62</td>
</tr>
<tr>
<td>Mean (%)</td>
<td>39.00</td>
<td>34.03</td>
<td>26.97</td>
</tr>
<tr>
<td>Median (%)</td>
<td>33.62</td>
<td>36.35</td>
<td>28.57</td>
</tr>
<tr>
<td>St. Dev. (%)</td>
<td>19.29</td>
<td>14.15</td>
<td>12.37</td>
</tr>
</tbody>
</table>

Table 4. Communes grouping on farming choices class frequency (counts)

<table>
<thead>
<tr>
<th>%</th>
<th>(A) Individual households</th>
<th>(B) Family farm associations</th>
<th>(C) Farming societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0-20</td>
<td>8</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>20-40</td>
<td>32</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td>40-60</td>
<td>18</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>60-80</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>80-100</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Figure 5. Farming choice class frequency (related to Table 4)

The value of trading products. The barter (troc in Romanian) is based on the following products exchange: farming products (wheat, maize), țuică (a Romanian traditional alcoholic drink). It can be carried out either by the locals themselves (with local, typical products) or both by locals (plain-dwellers) and remote farmers (mountain-dwellers).

The trading value for agricultural products (e.g. wheat, maize) has annual variability, depending on weather conditions. According to farmers’ statements, the 2007-2009 “wheat double” (a unit of measurement equal to 15 kilograms of wheat) was priced at 8-10 RON, and in 2011 its value raised up to 12-15 RON. However, this is the price they get if selling products directly in traditional markets (without involving any intermediary). Farmers use only 30% of the total crop production for their own household requirements, being forced to trade the most of the crop in order to cover the costs (plowing, sowing, weeding, harvesting, and harvest transport). As a consequence, there is no profit obtained at the end of the agricultural year.

In the semi-subsistence holdings, farmers carry out different types of crop and livestock based on specific traditions of the Romanian village. These farms are characterized by a relatively diversified production structure, driven both by the household needs and insufficient, inadequate and ancient technical equipment, which hinders productivity and achieving a surplus of products for sale.

The farming societies give the owners the opportunity to choose the form of profit (products or cash) at the end of the agricultural campaign. They also own a significantly larger arable land area, qualitatively superior technical equipment for mechanization, use of herbicide and other chemical substances, and land irrigation.

Evaluation of the development prospects for agricultural communities in the studied area by SWOT analysis

The SWOT analysis diagram shows that the possibilities for an effective management of the agricultural land in Boianu Plain depend on how efficient would the opportunities that currently dispose the analyzed farmland mitigate or remove the weaknesses. The diagram further shows a particularly low potential for a competitive development of agriculture in an extremely favourable environment. In the Boianu Plain, land leasing could be an important way to combine the viable agricultural land holdings, to increase their physical size, but the awareness among local communities’ members about this phenomenon is often remarkably low (Figure 6).

Conclusions

The Boianu Plain is by excellence an agricultural region. Its arable land is worked by three main categories of farms: individual holdings (34.76%), family farming associations (36.20%) and farming societies (29.04%).

Although it is not the highest, the total participation of the individual holdings shows once again the subsistence and semi-subsistence pattern of the agriculture practiced in the Boianu Plain. There are still some communes with the individual holding being the major type of farming choice (e.g. Izvoarele in Teleorman County, and Izvoarele in Olt County).

Statistical analysis demonstrated that most of the farms group within the 20-40% frequency class, in which farming societies are prevalent (in 42 communes).

At a qualitative and quantitative stage, production obtained within individual holdings is always lower and insufficient comparative to family farming associations and especially to farming societies. Partnership helps farmers to join their technical and financial means in order to increase the annual production and, implicitly, gain profit. In this respect, the farmers’ perception resulted from the semi-structured interviews is a good evaluation instrument. The most critical issue at local level is making individual farmers aware of the benefits of family association and/or farmland leasing.

\[\text{As stated in the MARD Technical standard of 21.04.2010 on filling in the agricultural register.}\]
Table 5. Farmers' perception on the farming choice patterns

<table>
<thead>
<tr>
<th>Farming choice type</th>
<th>Production (t/ha)</th>
<th>Why?</th>
<th>Where does the production go?</th>
<th>Farmers' complaints</th>
<th>What are the expectations?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual holdings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productive years (e.g. 2003, 2004):</td>
<td>- Wheat 2.4-2.6</td>
<td>- Maize 3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unproductive years (e.g. 2011):</td>
<td>- Wheat 1.6-1.8</td>
<td>- Maize 2.5-2.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular production:</td>
<td>- Sunflower 1.5</td>
<td>- Soybean and rape: non-cultivated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Agricultural land returned within 10 ha / owner;</td>
<td>Subsistence, semi-subsistence.</td>
<td>• Local authorities;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Allotment of land to former members up to 0.5 ha PCFs after '89;</td>
<td></td>
<td>• Ministry of Agriculture and Rural Development.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Indivisible inherited agricultural land;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Age of farmers (over 60);</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Fear of the communist collectivization association generated in the 50s;</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• The exodus of youth to urban areas and the western European countries.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family farming associations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productive years (e.g. 2003, 2004):</td>
<td>- Wheat 3.2-3.8</td>
<td>- Maize 4.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unproductive years (e.g. 2011):</td>
<td>- Wheat 3.0</td>
<td>- Maize 3.6-3.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular production:</td>
<td>- Sunflower 2.2-2.8</td>
<td>- Soybean and rape: 2.0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Association to negotiate the prices of farming inputs (seeds, fertilizers, herbicides);</td>
<td>Semi-subsistence and commercial crops.</td>
<td>• Increasing agricultural subsidies;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Performing the agricultural works in common.</td>
<td></td>
<td>• Stimulating the forms of association with agricultural and social policies.</td>
</tr>
<tr>
<td><strong>Farming societies</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Productive years (e.g. 2003, 2004):</td>
<td>- Wheat 3.2-3.8</td>
<td>- Maize 4.6</td>
<td></td>
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<tr>
<td>Unproductive years (e.g. 2011):</td>
<td>- Wheat 3.0</td>
<td>- Maize 3.6-3.8</td>
<td></td>
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<tr>
<td>Regular production:</td>
<td>- Sunflower 2.2-2.8</td>
<td>- Soybean and rape: 2.0</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Able to work the land applying modern technologies;</td>
<td>Financial benefits or semi-subsistence and commercial crops.</td>
<td>• Increasing the profit percentage to owners;</td>
</tr>
<tr>
<td></td>
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<td>• Increasing the productivity;</td>
<td></td>
<td>• Increasing transparency on the arable land management.</td>
</tr>
<tr>
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<td>• Ageing population or owners settled in urban areas.</td>
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</table>

Finally, the SWOT analysis reveals the possibility of an efficient management as driven by the way that the existing opportunities (e.g. existent infrastructure, if rehabilitated; large farmland area; directing crops to local markets or giving farmers the opportunity of accessing the large markets) are able to mitigate or completely remove the weaknesses (e.g. farmland fragmentation/individual holdings; very low accessing degree of the European funds; urban exodus; ageing rural population).

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**References**

Agency of Payments and Interventions in Agriculture 2011; Statistical data, in Recolta Magazine 2013, viewed on
Luca, L, Ciongă, C & Giurcă, D 2012, Consolidarea exploatațiilor agricole, Editura Economică, București.
Poole, T 2003, Introduction to small scale farming, Frederick, Maryland - Local
Romanian Government 2013, OUG nr. 8/2013 pentru modificarea și completarea Legii nr. 571/2003 privind Codul Fiscal și reglementarea unor măsuri financiar-fiscale, Monitorul Oficial nr. 54.