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THE AGRICULTURAL SYSTEM FROM THE ȘAGU VILLAGE AREA, ARAD COUNTY

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ABSTRACT
The economic and social importance of agriculture, as single source providing for the satisfaction of some basic human needs – food and clothing – and without which one cannot consider normal social peace and economic development, is known in countries all around the world.
The purpose of this paperwork is to present a common agriculture in Șagu with the land, crop structure and companies in the agriculture of the village, soil types and subtypes of the Șagu village area, environmental factors that influence these traits, the study of important processes and soils of the area was investigated. The objective of this study was to present the agricultural system and the improvement of the city and its possibilities. As research materials and methods were field observations, discussions with farmers and agricultural engineers from the Șagu village. The results obtained were identified agricultural system with real opportunities for improvement.

Key words: soil, Șagu, agriculture, agricultural systems, land fund,

INTRODUCTION

The economic and social importance of agriculture, as single source providing for the satisfaction of some basic human needs – food and clothing – and without which one cannot consider normal social peace and economic development, is acknowledge in countries all around the world. The considerable increase in number to 5 million agricultural owners, of which 1.2-1.5 million active, raises complex problems regarding the accomplishment of efficient agricultural exploitations, which should ensure decent incomes for the family and accumulation possibilities for its modernization. Considering the fact that, at a national level, the average size a property is under 2 ha and of 2.6 ha in the Hunedoara county, there is a need for further studies regarding the establishment of a minimum exploitation size, which should be efficient from an economic and social point of view. Nowadays, in the agricultural field, most Central and Eastern European countries are confronted with the new experience of the transition towards a market economy. Today, Romanian agriculture finds itself, from the point of view if agricultural structures, in a similar situation as most European countries some 40 years ago.
All these processes create difficulties with regards to the agricultural production growth, the viability and competiveness of agricultural exploitations, endangering the country's food security.

MATERIAL AND METHOD

For the elaboration of the present paper, we used data obtained from MADR and INSSE. The share of agriculture within Romania's economy decreased constantly since 1990 (the decrease rhythm being more slowly during the first transition years and more rapid after 1997). The regional distribution of agricultural land according to its usage is differentiated in relation to the relief conditions, with the pedo-climatic and crop suitability characteristics. As a whole, only 25% from the land total observe a superior quality and a good and very good productive potential.

RESULTS

„Situated in the south-western part of the Arad county, on DN 69, the Şagu village, residence of the township bearing the same name, is located at a 13 km distance from the town of Arad and 37 km from the town of Timişoara. The Şagu township is extended on a 10602 ha surface, of which 9476 ha represent agricultural land. In its administrative composition one can find the following villages: Şagu, Cruceni, Fiscut, Firiteaz and Hunedoara Timişană.

The annual average temperature is of 10.80C (Arad station), and annual average precipitations range between 580-600 mm at Şagu, Cruceni and Hunedoara Timişană and between 620-640 mm at Fiscut and Firiteaz (Climatologic Atlas, 1966). The land unit (U.T.) dominant soil types:

Table 1. Soil percentage from Şagu township total

	Soils	Percentage
1	Black carth	17.5 %
2	Faeoziom	25.3 %
3	Preluvosoils	25.4 %
4	Luvosoils	17.2 %
5	Gleysoil	12.1 %
6	Erodisoil	2.5 %

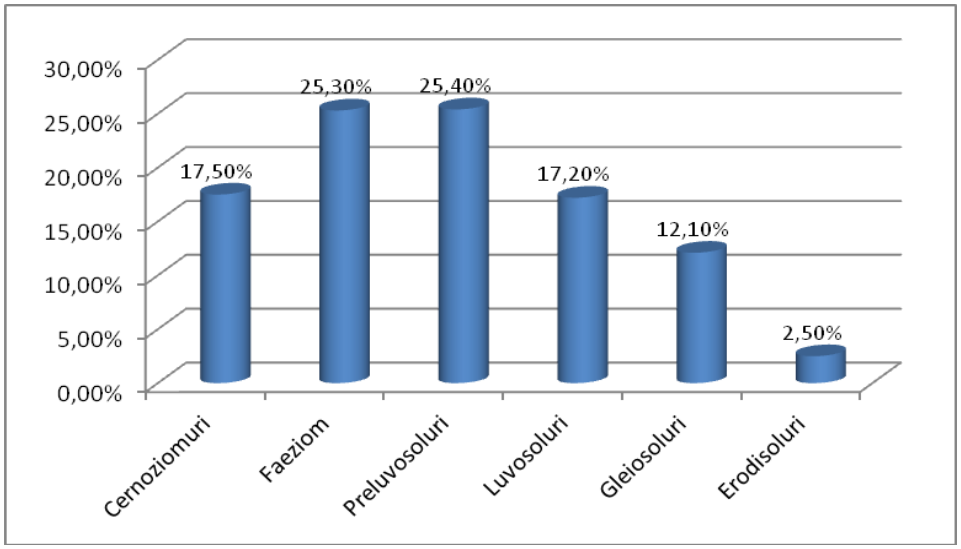

Figure 1. Soil percentage from Şagu township total

The township's agricultural land is used as follows: 8596 ha plough land, 785 ha grass land, 288 ha meadow land, 22 ha vineyards, 9691 ha total agricultural land. Regarding the distribution into quality (fertility classes), for the "plough land" usage category, the situation is as follows: cl. I 4388 ha (46.3%), cl. II 1876 ha (19.8%), cl. III 2008 ha (21.2%), cl. IV 137 ha (11.9%) and cl. V 76 ha (0.8%). Limitative factors, which significantly influence the soil surface quality, are dimensioned by the humus fund (small on 2.3% of the surface), fine texture (80%), compaction (66%), low bearing capacity (17%), surface erosion (2.7%), underwater humidity excess (11%), stagnant humidity excess (very strong 1.4%, strong 30%, moderate 16%, week 21%). In order to fight the limitations already mentioned, radical improving fertilization activities are required, as well as some deep soil loosening workings, ploughings on the level curve, the installation of grass bands, fighting humidity excess through surface drainage and mole drainage.
The land fund situation of the corresponding villages is the following:

~Sagu-5352 ha
~Cruceni-2396 ha
~Firiteaz-745 ha
~Fiscut- 798 ha
~Hunedoara Timisana-400 ha

Table 2. The Sagu township land fund situation in 2012

Usage	Surface (ha)
Plough land	8596
Grass land	785
Meadow land	288
Vineyards	22
Agricultural land total	9691

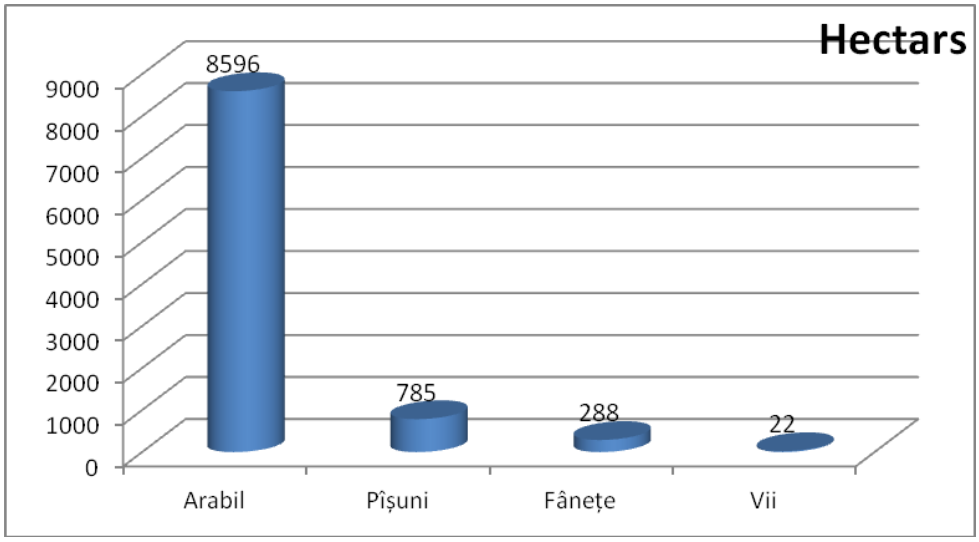

Figure 2. The Sagu township land fund situation in 2012

During the period 2010 - 2012 the crop structure was the following according to *Table 3.*

Table 3. Crop structure 2010 - 2012 (ha)

Crops	2010	2011	2012
Wheat	2473	2041	3115
Rye	53	80	69
Barley	200	158	74
Two-rowed barley	100	89	4
Corn	3460	2368	1963
Sun flower	1154	1604	1504
Rape	80	61	6
Potatoes	80	14	19
Tomatoes	10	8	1
Cabbage	15	5	1
Pepper	3	1	1
Lucerne	276	467	288

(Data delivered by the Șagu township mayor's office)

As one may observe from *Table 3*, the predominant culture is that of corn with a 3460 ha surface, followed by wheat with 2473 ha, sun flower with 1154 ha and lucerne with 276 ha. Vegetables occupy a quite significant surface of the Șagu township agriculture, with tomatoes cultivated on a 10 ha surface, cabbage 15 ha and pepper with a 3 ha surface. These surfaces occupied by vegetables, even if it represents only 0.3 % of the total agricultural land, bring an important benefit to producers because of the quantity and value obtained per hectare. The surface cultivated with vegetables has decreased dramatically as well, cabbage reaching 5 ha from 15 ha, tomatoes 8 from 10 ha, and pepper 1 from 3 ha. However, a green melon crop has occurred on a 2 ha surface.

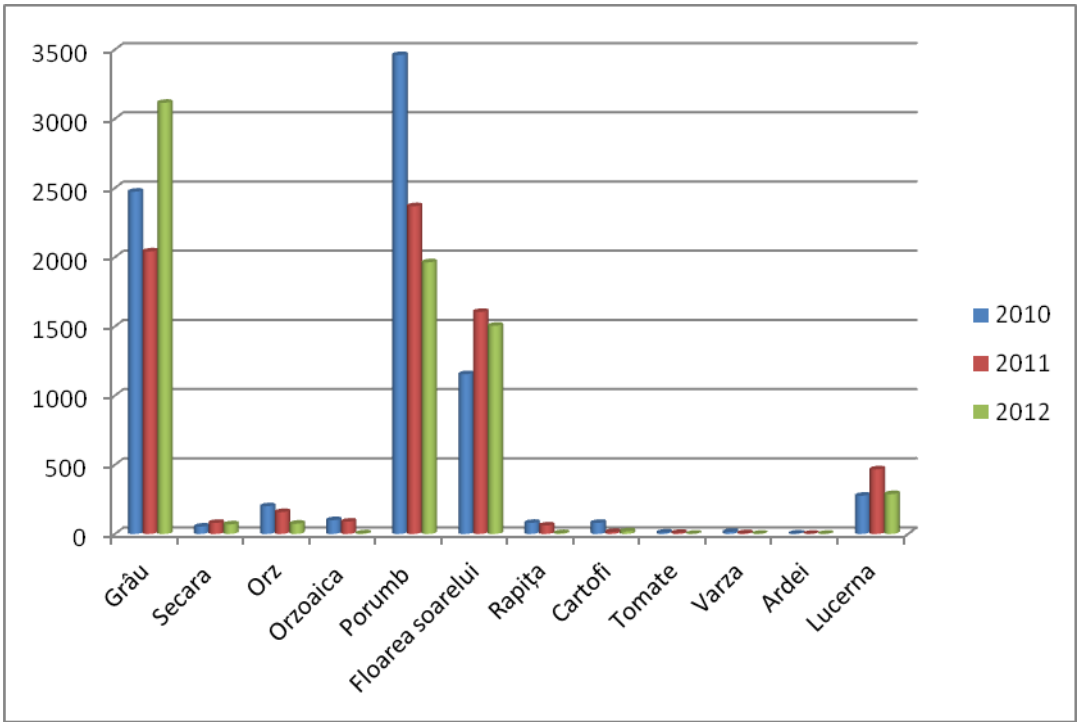

Figure 3. Crop structure during the period 2010 - 2012

As one may observe from *Table 3* and *Figure 3*, the crop culture has suffered a major change from 2010 and 2011, presenting surfaces cultivated with different crops as follows: wheat had a strong come-back and occupied a 3115 ha surface with 1130 ha more than in 2011 and 700 ha more than in 2010, corn occupied a 1963 ha surface, with 400 ha lower than in 2011 and 1497 ha lower than in 2010, sun flower occupies a 1504 ha surface with100 ha lower than in 2011.
Vegetables drop reaching 3 ha, from a 38 ha total in 2010. Fodder occupies a larger surface each agricultural year reaching 592 ha and mustard occurs as a crop on a 4 ha surface. In the Șagu township area a series of agricultural field firms activate, such as: The Agricultural Society Șagu, BIOFARMLAND BETRIEBS (bio products), S.C. AGROGIL S.R.L., S.C. DEMUTH AGRO, AGRIMAL CERES SRL.

CONCLUSIONS

In the Șagu village area, plough land is favourable for agricultural crops and allows the cultivation of a large range of crop plants. However, the lack of speciality knowledge, difficulties in market capitalization of the agricultural products and especially the low economic power of locals, determined the main crops to be straw cereals wheat, corn, sun flower and, on smaller surfaces, potato, vegetables and sugar cane, a culture which was dropped due to capitalization reasons.
Within individual households, there is a reduced number of animals, which capitalize a part of the vegetable production.
In most cases, agricultural systems developed by locals had subsistence character, without implying any economic performances.
In the mean time, local exploitation conditions associated with other problems of the transition period, which have profoundly affected this branch, led to a reorientation towards agriculture, many locals giving up working the land. A part of them has sold their land or have leased it to associations formed in time.

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