

## THE AGRICULTURAL SYSTEM FROM THE LUNCAVIȚA LOCALITY, CARAȘ SEVERIN COUNTY

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### **Abstract**

*In the researched area the fields are not favourable for cereal cultivation. The main products obtained are fodder and potatoes. The cereal demand is supplemented by potato exchange or by acquiring them at the market. Animal husbandry functions pretty well, capitalizing the agricultural potential of the area. Producers are well equipped with agricultural machines, so that most works are mechanized with a very good rate. The productions obtained vary each year in accordance with climatic conditions, price evolution in cereals, and the material and financial equipment level of farmers. Animal species, cattle, sheep, swine and poultry, with variable live stocks in individual households, have completed the local activity pallet. But, due to difficult conditions for grant application in this sector, financing is yet to come. The only real way to develop agriculture on this area is to obtain a good price while commercializing potatoes and animal and fruit products, and their derivatives. The results led to the identification of an agri-zoological system. Art and science, at the same time, agriculture is of great social and economic importance. Primary branch in material production, agriculture also represents the basis of the social work division, through the occurrence and development of new material production branches, derived from agriculture or based on the producer food supply through agriculture. As a result, agriculture is still the economic basis for modern and contemporary states, regardless their current status. The economic importance of agriculture, for all times and peoples, also results from the fact that it is the only material production branch which accumulates the new solar energy. All other material production branches only consume, and transform the energy accumulated under various forms by nature or agriculture. That is why the nations' fortune increase depends on agricultural development. Right now, it is the only material production branch able to enrich human kind's energetic resources.*

**Key words:** agriculture, systems, land, crop, Luncavița, animal husbandry,

### **INTRODUCTION**

The Luncavița village is situated in the south-western part of Romania, the Banat region. It belongs to the Caras-Severin county. Luncavița is situated in the basin of the south-western slope of the watershed called Poarta Orientala, at a 4 km distance from the train station Poarta, on the side of the Luncavița river, which springs near the Semenici mountains (Loga's Hill, Trastura). On the eastern side Luncavița borders the Domașnea commune, on the southern side the Mehadica commune (also called by the people Megica), on the western side the Verendin village, and on the northern side the Teregova commune. To the commune hall Luncavița belong: the Luncavița village and the Verendin village, situated at a 4 km distance.

**Relief** The relief is hilly. Situated on the Luncavița river valley, Luncavița opens up to the Cernei Mountains (south-east) and Țarcului Mountains (north-east) in a fascinating way. Towards north-west the Semenici mountains sub-mountainous relief opens slightly. Main activities of the inhabitants are: agriculture, fruit tree culture, growing animals and handicraft (furrier, carpentry, tinning, masonry etc.).

**Climate** As it is situated in the south-western side of the country, under direct influence of the Adriatic Sea and sheltered by the Carpathian Mountains, the area is integrated in the sub-Mediterranean climate. The climatic subtype of southern and south-eastern Banat is characterized by the contact between the Atlantic air masses and the pressure of the

Mediterranean air masses, which gives the moderate character of the area's thermal regime. Winters and summers are of short duration, and springs and autumns, longer - temperatures are moderate with both extremes, the warm as well as the cold one. Average temperatures range from -5° to 1° C during winter months, and in summer, they vary from 25° to 28°C, which demonstrates the southern influence in this part of the Banat region. The almost 4 months of spring and of autumn offer the main characteristic of the area from a climatic point of view – the average temperature being of 11.5°C. Analysing the precipitation regime, at Luncavița we find an average of 737.2 mm a year. The highest precipitation quantity falls in May and June, as well as in autumn, in October and November. Snow days vary between 25 and 30 a year. The snow layer may reach a height of max. 70 cm. Dominant winds directions are oriented after the Luncavița valley, generally from north to south.

### MATERIAL AND METHODS

For the elaboration of the present paper we used data obtained from MADR and INSSE and data supplied by the commune hall Luncavița. The regional distribution of agricultural land according to its usage is differentiated in relation to relief conditions, with pedoclimatic characteristics and crop suitability. As a whole, only 25% from the agricultural land total are of higher quality, with a good and very good productive potential. The agricultural production manifested very diverse specific dynamics, sectorial (vegetal and animal), as well as regionally, depending on the diverse agro-pedoclimatic conditions, but also on the production factors usage degree.

### RESULTS AND DISCUSSIONS

The Luncavița commune being situated in the central part of the Caras-Severin county, on the eastern slopes of the Semenic mountains, its administrative territory surface is predominantly hilly, covered by forests and agricultural. Agriculture is the main occupation of the Luncavița commune inhabitants, over 80 % of the active population working in this sector. The commune land fund situation as well as that of the usage categories from the year 2010 is as follows (Table 4.1)

Table 1.

Luncavița commune land fund 2010

USAGE	SURFACE (ha)	Percentage %
Tillable	1022	19.8
Grass lands	1219	23.62
Meadow lands	1500	29.06
Vineyards	0	0
Orchards	259	5.02
Agricultural total	4000	77.50
Forests, bushes	1009	19.55
Waters	30	0.58
Unproductive	29	0.56
Roads	73	1.42
Constructions	20	0.39
Non-agricultural total	1161	22.50
General total	5161	100

( Source: Luncavita Commune Hall Statistics 2012)

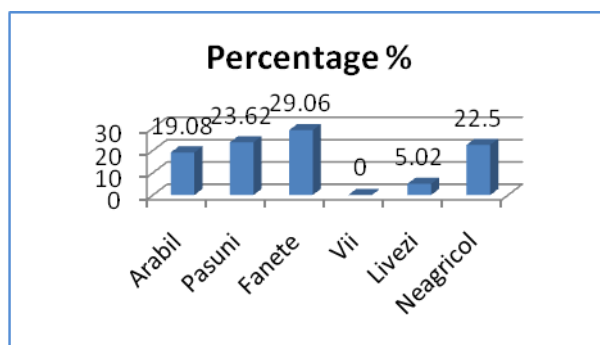


Fig. 1 The Luncavița land fund situation 2010

For 2011 and 2012 the situation of the land fund is the same as for 2010, without major modifications, only with unproductive land which has suffered a slight modification, as 2 ha were transferred from unproductive land to forest surfaces by planting shrubs.

Table 2.

The Luncavița commune land fund 2011-2012

USAGE	SURFACE (ha)	Percentage %
Tillable	1022	19.8
Grass lands	1219	23.62
Meadow lands	1500	29.06
Vineyards	0	0
Orchards	259	5.02
Agricultural total	4000	77.50
Forests, bushes	1011	19.58
Waters	30	0.58
Unproductive	27	0.52
Roads	73	1.42
Constructions	20	0.39
Non-agricultural total	1161	22.50
General total	5161	100

(Source: Luncavita Commune Hall Statistics 2012)

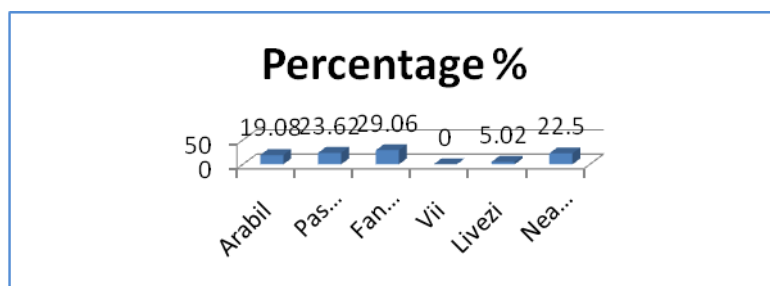


Fig. 4.2 The Luncavița land fund situation 2011 -2012

We underline the fact that, at the level of the Luncavița commune, there are no association forms and no commercial societies activating in the agricultural sector, although traditional agriculture is practiced.

Recouped on commune component villages (Verendin and Luncavița), the land fund situation is as follows:

Table .3.

Commune land fund situation (Verendin and Luncavița)

Village	Total surface (ha)	tillable (ha)	Grass lands (ha)	Meadow lands (ha)	Vineyards (ha)	Orchards (ha)
Luncavița	1578	400	420	644	0	114
Verendin	2422	622	799	856	0	145
Total	4000	1022	1219	1500	0	259

Source: Luncavita Commune Hall Statistics

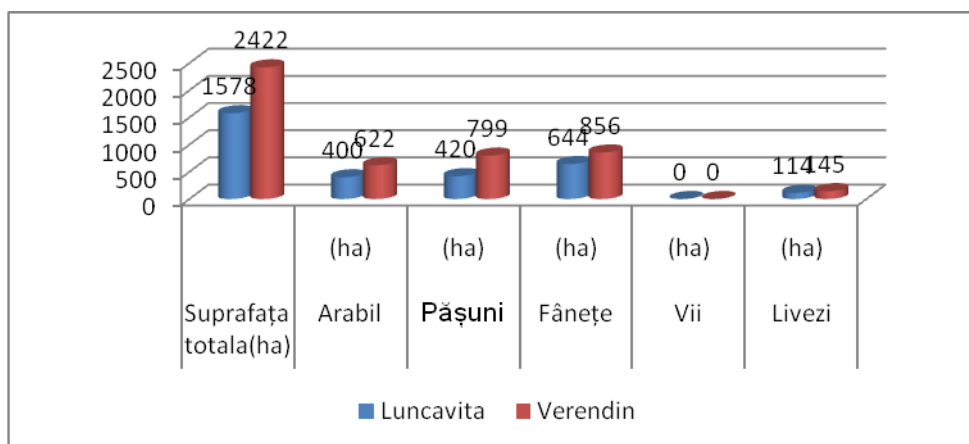


Fig. 3. The commune land fund situation (Verendin and Luncavița)

Regarding the distribution in quality classes (favourability) for the tillable usage category, on commune level the situation is as follows: 2<sup>nd</sup> class 152 ha, 3<sup>rd</sup> class 346 ha, 4<sup>th</sup> class 398 ha, 5<sup>th</sup> class 126 ha. The production capacity of formerly presented diverse soils is influenced by a series of factors, of which the most important are:

- Land slope – which requires a deficient usage of the agricultural land. (the great majority of land works are done in spring);
- Climate (temperate- continental) – since the commune is situated at the root of the Semenic Mountains, with temperature and humidity variations;
- The humus deposit - very low.

At the Luncavița commune level there are no commercial societies or associations in the agricultural field, people practice agriculture in a traditional way and individually in their household.

Table 4.

Field crop structure in the Luncavița commune in 2012

Crop	Surface (ha)
Barley	0
Wheat	25
Two-rowed barley	0
Corn	268
Oat	26
Vegetables	4
Fodder	123
Potato	576
Total	1022

Source: Luncavita Commune Hall Statistics

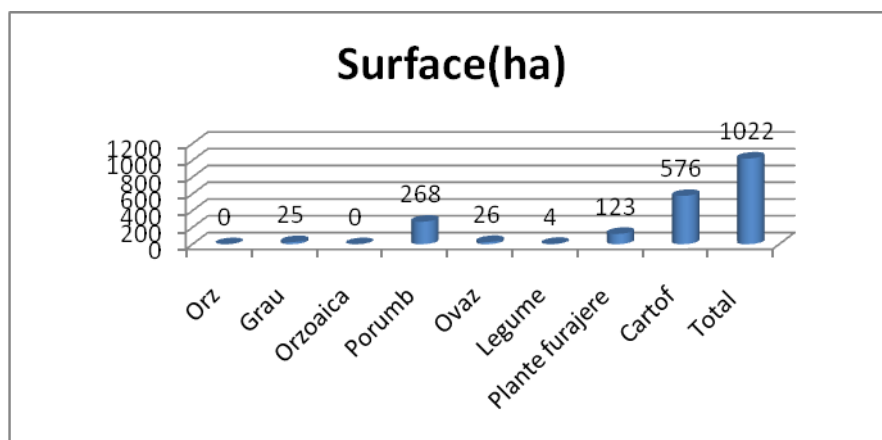


Fig. 4. Crop field structure in the Luncavița commune in 2012

In 2012 as one may observe from figure 4.7. and table 4.6. the surface cultivated with wheat decreased to 25 ha, vegetables registered a slight increase of 1 ha, corn decreased as surface to 268 ha, and the potato registered a spectacular rise of 106 ha. Simultaneously, the surface cultivated with fodder increased from 15 ha to 123 ha. Of the agricultural crops, the largest percentage was registered by the potato, followed by corn and fodder.

#### Technologic park of the Luncavița commune

For the cultivation of these crops, the Luncavița commune possesses the following machinery:

Table 5.

Technologic park of the Luncavița commune

Machinery	Number
Tractors	284
Attachments	270
Electric mowers	176
Ploughs	256
Herbicide sprayers	77
Potato planting machines	52
Mills	44
Discs	123
Potato harvesting machines	184

Source: Luncavita Commune Hall Statistics

From table one may observe the fact that the technologic park of the Luncavița commune is especially designed for the potato culture with 184 potato harvesting machines and for the fodder culture and meadow lands, since in the commune one can find 176 electric mowers. The 284 tractors and 270 attachments only complement the needs of the people in the area.

#### Animal husbandry

**Animal livestock** during the last three years show a slightly increasing tendency due to subsidies on animal head as well as on cultivated land surface. Thus, at the Luncavița commune level, when it comes to meadow lands, at the end of 2012, a number of 9605 animals are registered in categories as presented in the following table:

Table 6.

## Animal live stocks in the Luncavița commune in 2012

Locality	bovines	Sheep	swine	horses	poultry	bees
Verendin	995	1881	557	237	2877	200
Luncavița	325	693	193	154	1443	50
Total	1320	2574	750	391	4320	250

Source: Luncavita Commune Hall Statistics

Regarding the zootechnical sector of the commune, we may claim that the 1320 bovines and 2574 sheep as resulting from table 4.8. and figure 4.9. insure a stable income for the breeders in the area. Also, the surfaces cultivated with fodder, amounting to 123 ha and the meadow lands and grass lands which occupy a surface of 1200 ha respectively 1500 ha insure the fodder necessity for animals which agriculturist in the area keep in their households.

**CONCLUSIONS**

- In the studied area the land is not favourable for cereal crops;
- Main products are fodder and potatoes;
- The cereal requirement is complemented by potato exchange or by acquiring it on the market; Animal husbandry is quite well developed, capitalizing the agricultural potential of the area; Producers are well equipped with agricultural machinery, thus most works are mechanized with a good ratio;
- Obtained productions vary every year, depending on the weather conditions, the cereal price evolution and the level of the agriculturists' material and financial equipment. Animal species, bovines, sheep, swine and poultry, with variable live stocks within individual households come to complete the locals' activity range.
- However, due to difficult conditions for project application, financing in this sector is still to come;
- The only real way to develop agriculture in this area is to receive a good price from commercializing potatoes and animal and fruit products and their derivatives;
- Following the results obtained, an agricultural system and a zootechnical one have been identified in the area.

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