

## DESIGNING AN AGRICULTURAL SYSTEM IN THE SELEUŞ LOCALITY, ARAD COUNTY

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**Abstract:** The Seleuş commune is situated on the Eastern side of the Crişului Alb Plane, on the Cigher river. It is situated 12 km away from Ineu, 6 km from Pâncota and 45 km away from the city of Arad. It is also crossed by the Cigher river, the Morilor Canal, Crişul Alb to the North and the Matca Canal. The Seleuş commune comprises three localities: Seleuş, Moroda and Iermata. The commune borders on the Pâncota and Ineu towns, a fact that has influenced its economical and social development. The first documented attestation of the Seleuş locality dates from 1489. The Iermata village is first documented in 1387, and the Moroda village 1508. The locality is situated in the Crişurilor Plane in the centre of the Arad county. Thus, we are dealing with the Western Plane's low altitude, with soil predominantly from the 1<sup>st</sup> and 2<sup>nd</sup> fertility groups, favourable for doubling the current cereal, technical plants and vegetables, with sub-hilly land and those in inter-mountain depressions, where large cattle, pomiculture and, at large, viticulture have represented the blazon of these region for centuries, and alpine grasslands, where sheep breeding is a part of history.

**Key Words:** agriculture, systems, land, crop, Seleuş

### INTRODUCTION

The Seleuş commune is situated on the Eastern side of the Crişului Alb Plane, on the Cigher river and comprises an administrative surface of 4,122 ha. The commune comprises the villages: Seleuş – commune residence, situated at a 44 km distance from Arad city, the Iermata village and the Moroda village.



Fig.1. Seleuş locality map location

On a North-South direction, the commune and locality are crossed by DJ. 709 Arad – Lipova highway, being the only paved road in the Seleuş commune. The Seleuş locality is located at the Crişurilor Plane access point in the Zarandului Depression.

Where the low plane meets the glacial in the Eastern part of the Seleuş commune, a series of marsh areas and small lakes have emerged. The general tendency of the relief created by these type of alluviation processes is of higher relief. This plane is in a marsh to semi-drained alluvial plane transition stage.

The Cigher, because of its depth, rectification and channelling, as well as the creation of a dam lake (Taut) at its upper course, has decreased in force. The plane is characterised by a plane surface with numerous abandoned beds and bends, rivulet fragments with no spring and no inflow, everglades and marshes. All of these prove the plane's eomorphologic youth. The Seleuş area is situated in the central part of the Romanian sector of the Panonic Depression, ca. 5 km North of the Zarand Mountain rim. As a result of this positioning, at the inferior structural layer, elements could be identified which certify the Western extension of the Carpathian units.

In the Seleuş area, due to the relatively reduced distance to the mountain rim, the subsidy phenomena manifested later with a reduced magnitude, which led to the accumulation of a relatively small heap of sediments.

The area is characterised by a temperate climate with moderate continental climate accents, with mild winters, characteristic for the Western Plane. As a sum-up one can affirm that the commune's administrative territory, there are relatively small risk areas, most of them outside the build-up areas. Thus, we mention that the Cigher river is under-traversed, through siphoning, by the Morilor canal. In case of blockage, crashing, ethnic accident, there are conditions to localize the effect (valves, canal locks etc.). Water, air and soil pollution causes are various, thus:

#### **MATERIAL AND METHODS**

For the elaboration of this paper, data resulting from own observations were used, data from the Romanian Statistical Directory, from M.A.D.R. and I.N.S.S.E and from the Seleuş locality mayor hall. The agricultural production manifested very diverse specific dynamics, from a sector point of view (vegetal and animal), as well as from a regional point of view, depending on the diversity of agri-climatic usability conditions, as well as the production factor usage degree. The vegetal production registered a higher growth rhythm, because it requires lower material and financial effort, since there is no capital market. During the last decade, the animal live stocks have registered significant decreases. At the current level, this fact may lead to compromising the genetic fund in animal husbandry.

#### **RESULTS AND DISCUSSION**

The situation of the Seleuş locality land fund is presented in table 1. As one may observe in the table the tillable land area is of 4033 ha surface, meadows 1377 ha, hay fields occupy 662 ha, and orchards 25 ha, most of which are private property.

Table 1

Seleuş commune administrative territory	Surface in ha
Tillable	4,033.00
Meadows	1,377.00
Marshes	8.62
Loan pits	2.04
Cloughs	0.15
Forests	25.00
Waters	325.00
Roads	130.00
Constructions + annexe facilities	318.19
TOTAL	6102.00

The main activity carried out in the Seleuş commune, is market gardening [truck farming]. Almost 1,000 families activate in this field, at a subsistence level. Some members of these families are employed in other private or state institutions as well. The inhabitants' main occupation is market gardening [truck farming] and around 6% of the population work in the commune limitrophe Ineu and Pâncota towns. There are also trade companies in the commune, and the functional ones are presented in the table below, including their activity field.

Table 2

Crt. no.	Name of the economic agent	Activity field
1.	ECO-HORTICULTURA SRL	Growing vegetables and melons, root vegetables and tubers
2.	BIO FRUCT SRL	Growing fruit shrubs, strawberries, nut trees and other fruit trees
3.	SELAGRO SELEUŞ S.R.L	Fruit and vegetable whole-sale trade
4.	BIO PLANT S.R.L	Growing vegetables and melons, root vegetables and tubers
5.	PROLEGUME S.R.L.	Fruit and vegetable whole-sale trade
6.	CARMEL SERE SRL	Growing vegetables and melons, root vegetables and tubers
7.	HESSENLAND SRL	Breeding milk cattle

Due to the main commune preoccupation, market gardening, at the Seleuş commune level, the unemployment rate is of 2%.

The predominant economic activity is agriculture (market gardening ) and animal breeding, although the number of employees in the field is of only 24 persons. Due to the climatic conditions, and especially the commune's location in a plane area, the agricultural land lots are small and spread across a large area, thus making it impossible to practice a modern and efficient agriculture. From an agri-economic point of view, the commune's administrative territory can be found in the 4<sup>th</sup> agri-forest area (zoo-pastoral). The profile is determined by the percentage of natural meadows and hay fields. Vegetal production aims at integrally insuring the feed base for animals and significant vegetal product quantities (cereals, plants, vegetables) for the population's use and for sales.

Their gardens are literally "packed" with numerous green houses, each more "imposing" than the other. In the county, Seleuş people are famous for their diligence and material achievements, of which they benefit by growing vegetables.

Market gardening [truck farming] (with ecologic market gardening [truck farming] development tendencies) is the main economic activity of the commune inhabitants, the obtained products being traded on markets in large cities in Transylvania and Banat. The following are grown: early cabbage, kohlrabi, peppers, eggplants, tomatoes, autumn cabbage etc. Aside from market gardening [truck farming], cereals and technical plants growing as well as animal breeding are the main agricultural sectors sustaining the local economy.

The internal market for requesters' products is are the counties Arad, Caraş-Severin and Timiş, where he, as an agriculturist may sell his vegetal products.

In the near future, it is foreseen that a biogas station will be built in Seleuş, where all vegetal residues and animal dejections will be used for obtaining energy.

## CONCLUSIONS

In conclusion we may affirm that the Seleuş commune in the Arad county disposes of:

- Important resources for agricultural development
- Good specialists trained in agriculture, High soil fertility
- Optimal conditions for market gardening growing land fund market
- Existent preoccupations for the modernization of agricultural farms
- Rural tourism development potential

The accomplishment of the following desiderata is aimed:

- Increase in number of economic agents
- Human potential for enterprise development in all domains
- Financial means investment in the market gardening [truck farming] field
- Building a watering and water reservoir system
- Rural household association , opening agricultural production collecting and processing points, insuring agricultural fields against risks, Improving the meadow quality
- Attracting local and foreign investment in the commune economy development
- Implementing measures for the stimulation of capital investment in agriculture

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