

THE MAIN FEATURES OF RURAL AGRICULTURAL AREA OF WEST REGION

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Abstract: Rural and agricultural areas represent one of the most significant contributions regarding the natural capital, the cultural heritage and the social cohesion that Romania brings to the European Union. The agricultural area is a sector with a considerable potential, occupying, by tradition, an important place in the structure of the Romanian economy. It is an important factor in social stability and maintaining ecological balance; it is the branch that provides food for the population and important quantities of raw materials for the food and other non-food industries. The development of the West Region has been influenced and continues to be supported by the important natural resources existing in this region with diverse relief, which includes both the particularly fertile plains in the west of Timis and Arad counties, hilly areas with important mineral resources, as well as an important segment of the Southern and Western Carpathians, which includes one of the most important natural parks in Europe, the Retezat National Park. Given this rich endowment, at present it is not possible to speak of a full development of the natural resources of the Western Region.

Key words: rural area, agricultural area, features, West Region

INTRODUCTION

The Organization for Trade and Economic Development (OECD) has developed a simple definition of rural area, with the aim of making international comparisons of rural conditions and trends. The OECD gives the concept of rural a strictly geographical meaning, designating territories rather than communes and cities, with a low population density and a diverse and dispersed economic activity, relatively independent of the direct influence of metropolitan areas [14, 15, 16].

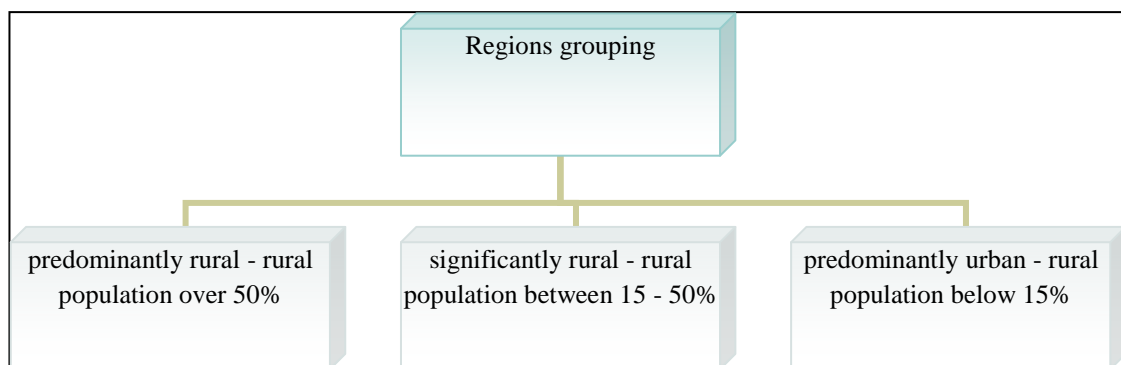


Figure 1. Regions grouping

Source: own processing

The definition has proved useful despite the great differences that exist in rural areas, in the perspective of rural policies at national level. The definition distinguishes two hierarchical levels of territorial units: local and regional. At the local community level, the OECD identifies rural areas as communities with a population density of less than 150 inhabitants per square kilometer. At the regional level, the OECD distinguishes between larger functional or administrative units, their degree of rurality depending on the percentage of the population living in rural communities. To facilitate the analysis, the regions are grouped into three categories:

1. predominantly rural - rural population over 50%;
2. significantly rural - rural population between 15 - 50%;
3. predominantly urban - rural population below 15%.

Consequently, an area (a region) is considered rural if the share of the population living in rural settlements exceeds 15%.

In Sweden, Finland and Denmark, the percentage of those living in predominantly urban areas is the lowest, but is increasing in the intermediate and predominantly rural categories of the region. In the most urbanized countries, the Netherlands, Belgium, the United Kingdom, Germany and Italy, the phenomenon is reversed. Ireland, Austria, Greece and Portugal are characterized by a dual structure, with an increased percentage of the population in the two extremes: predominantly rural and predominantly urban. In France and Spain, most people live in the intermediate category, in significantly rural areas.

European Union experts have given a broader meaning to the concept of rural: "the notions of space or rural world involve more than a simple geographical delimitation; they refer to an entire economic and social context, which includes a set of activities of the most diverse". Apart from its function of living and economic activity, starting from the opinions of the specialists of the European Union, it can be considered that the rural area presents vital functions for the whole society. As a buffer and regeneration area, the rural space is indispensable for the ecological balance and it will have to be more and more a place of relaxation and recreation.

From the point of view of the European Union, which is based on a generally accepted meaning in Western European countries, the rural area would cover regions and areas with diverse activities and would include, in these regions, natural and cultivated areas, villages, towns, small towns and regional centers as well as industrialized rural areas [3, 4]. This means that in the European Union, 50% of the population of the component countries live in rural areas and occupy 80% of its territory. The European Commission views the countryside as a spatial phenomenon that extends into regions, landscapes, natural and agricultural areas, villages and regional centers. This definition illustrates how all these elements co-exist but is not analytically eloquent.

In the current language there is often confusion between rural and agricultural area. These two expressions are not synonymous. They are in an inclusive relationship. That is, the rural area has a much wider scope than the agricultural area. Agricultural area is a component of rural area. In Romania, the agricultural area is still the most important component of the rural area, but it is not the only one, even if it has the largest share. In developed countries in Western Europe the agricultural component of rural areas has a much smaller share - only 20-25%. It has come to the point that the low share of agricultural production in the structure of rural production is one of the most important indicators of rural development. However, the rural area remains a predominantly agricultural area [1, 2, 9, 10, 12, 13].

MATERIALS AND METHODS

Through this paper the authors try to make an analyze of the West Region, taking in consideration the agricultural potential of the land. So it was used a multi-criteria analyze to highlight some of the main aspects of this rural area.

RESEARCH RESULTS

The West Region was established with governmental approval on October 28, 1998 and is composed from the counties of Arad, Caras-Severin, Hunedoara, Timis. Historically speaking, the region includes the province of Banat, a historical Romanian province with an early and stronger economic development compared to other provinces in the country.

The Western Region is part of the Danube-Cris-Mures-Tisza Euroregion (DCMT), which involves the four counties of the Western Region, three counties from Hungary and the autonomous region of Vojvodina from Serbia. The Euroregion was established in 1997 based on a cooperation protocol signed by the representatives of the local authorities within the component regions.



Figure 2. West Region in Europe

Source: <http://www.regiuneavest.ro/en/business-environment/location-in-europe>

From the total area of the Western Region, 59% is agricultural land, respectively 18911.26 km². The largest agricultural areas are in the counties with predominantly plain relief, Timis (80.6% of the County area) and Arad (66% of the County area). In Hunedoara and Caras-Severin Counties, the share of agricultural areas is much lower (39.7% and 46.7%).

Table 1.

Total land fund and property structure, 2014

Indicator name	U.M	Romania	West Region	Share %
Total area	km ²	238,390.71	32,033.17	13.44%
Agricultural area, in which:		147,412.14	18,911.26	12.83%
Private property		140,871.25	18,170.76	12.90%
Arable		94,202.05	10,888.09	11.56%
Pastures		33,640.41	5,533.83	16.45%
Grassland		15,146.45	2,126.59	14.04%
Vine		2,240.82	87.36	3.90%
Orchards		2,182.41	275.39	12.62%
	hectares			
Forestry	hectares	6,742.82	1,0983.54	16.29%
Waters and puddles		8,413.94	454.42	5.40%
Other surfaces		15,136.38	1,683.95	11.13%

Source: www.insse.ro

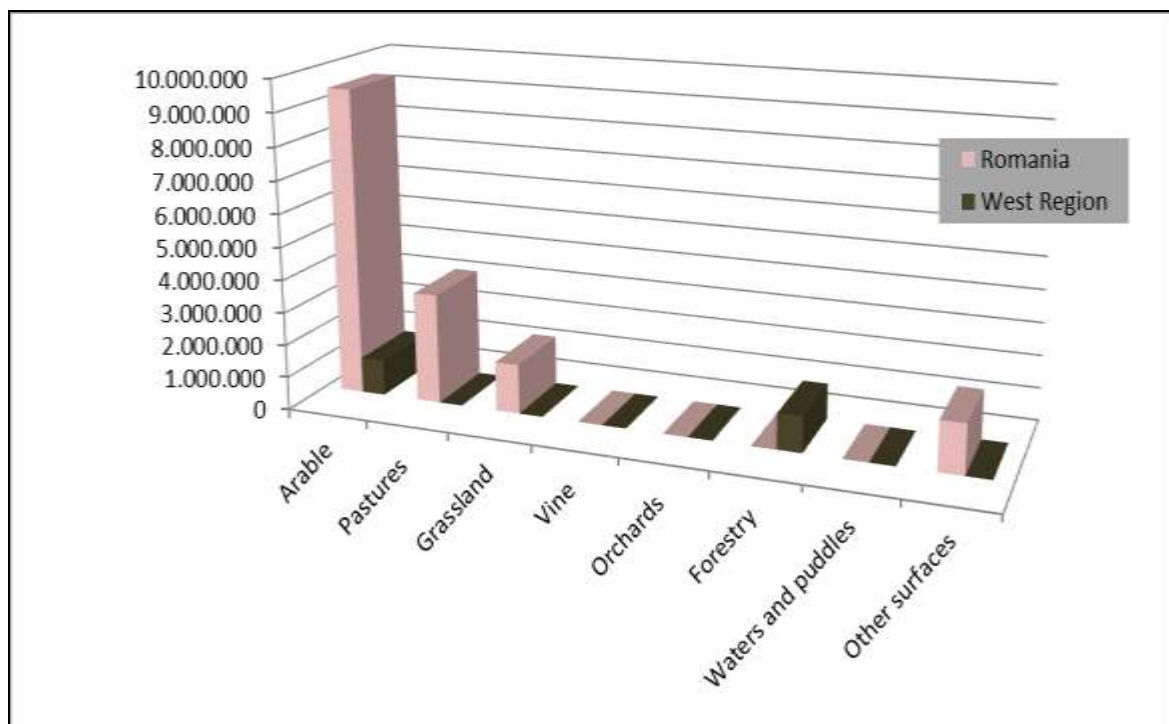


Figure 3. Total land fund and property structure

Source: own processing

The general capacity to support agricultural production is medium [5, 11] due to the high share of some types of soils with low natural fertility or affected by excess moisture (entricambosols, gleiosols, stagnosols, vertisols, etc.), but compensated by the presence of chernozems and preluvosols molice, with a notable share in the area of Sacalaz, Dumbravita and Sanmihaiu Roman communes.

Table 2.

The main indicators for agricultural sector, 2014

No.	Indicator name	U.M	Romania	West Region	Share %
1.	Area cultivated under exploitation, of which:	hectares	8,467,892	908,639	10.73%
	Privately owned				
2.	Total agricultural production	Million lei	46,539,540	4,828,241	10.37%
	Vegetable	current prices	27,958,975	3,139,890	11.23%
	Animal		18,185,748	1,651,774	9.08%
	Agricultural services		394,817	36,577	9.26%
3.	Average production per hectare	Kg/ha			
	Maize		3,952	4,272	108.10%
	Wheat		2,965	3,244	109.41%
	Barley		2,227	2,706	121.51%
	Textile plants		2,245	5,347	238.17%
	Sugar beet		28,932	33,678	116.40%

Source: ADR Vest

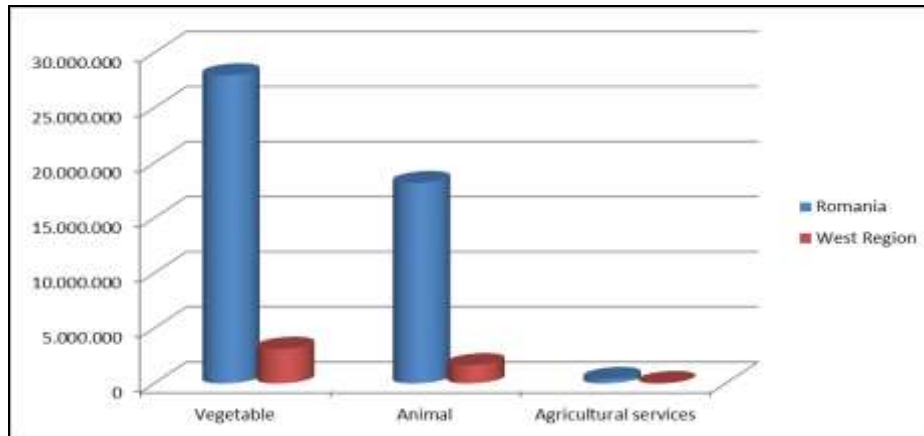


Figure 4. Total agricultural production

Source: own processing

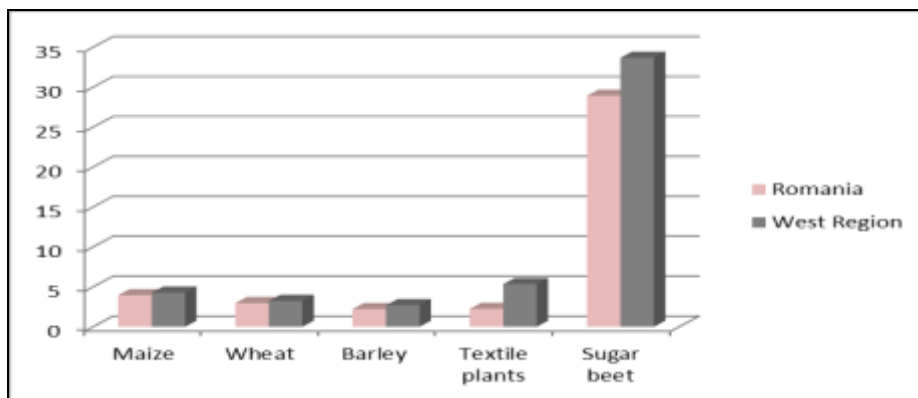


Figure 5. Average production per hectare

Source: own processing

The arable lands correspond to those areas with a special productivity, with fertile soils, suitable for plant cultivation. These are especially characteristic of open spaces in the Western Plain, where the share of arable land in the agricultural total frequently exceeds 80% and in almost all cases 60%.

The largest shares of arable land are owned by the communes from the west and southwest of Arad County, as well as in the west and northwest of Timis County, respectively Arad Plain, Nadlac Plain, northwestern half of Vinga Plain, Aranca Plain and Jimbolia Plain. These constitute a compact territory, with weights exceeding 80% and, in some cases 90%: Semlac 98.6%, Nadlac 96.8% and Seitin 95.2% in Nadlac Plain, Zimandu Nou 95.7% and Livada 93.5% in Arad plain, Dumbravita 94.2% and Fantanele 91.7% in Vinga plain, Lenauheim 95.7%, ComlosulMare 94.3% etc. in Jimbolia Plain, Cenad 90.1% in Aranca Plain. The absolute maximum is registered in the commune of Peregu Mare from Nadlac Plain-100% arable land from the total agricultural. The only exception in this territory is the commune of Teremia Mare, with "only" 78.4%, due to the high percentage of vines. Also, for similar reasons, in the eastern part of the Arad Plain, the communes of Covasant, Ghioroc and Paulis, belonging to the Vineyard, owns less than 80% of arable land.

To the south, in the Timis Plain, there are two categories of communes: those that exceed 80% and those with weights between 60 and 80%. The first category includes several communes from the High Plain of Gataia, with just over 80% (Maureni 84.5%, Tormac 84.3%, etc.), those at the edge of the low Plain of Timis (Cenei 87.6%, Timisoara 87.3%, Sacalaz 86.2%, Liebling 84.3%), and, exceptionally, Boldur (85.3%) - in the Lugoj

Plain. In the second category there are several communes from the low plain of Timis (Ciacova, Giulvaz, Jebel, Peciu Nou etc.), the high plain of Gataia (Moravita, Jamu Mare, Berzovia) and most of those from the plain of Lugoj, entering the Bega corridor.

To the north, the Cris Plain holds, on the territory drained by the Crisul Alb and partially by the Crisul Negru, shares of arable land between 60 and 80%. Only one commune, Socodor, slightly exceeds 80%, while Sicula commune has only 40.8%. There are no significant differences in this respect between the low plain area and the high plain area (Cermei Plain, Zarand depression bay).

A significant agricultural territory but limited in area and slightly isolated from the others, is the Caras Plain, in the west of Caras-Severin County. Three communes of this plain have shares of arable that exceed 80%: Racasdia and Berliste, both with 87.4%, and Vrani 85.3%, while the communes of Ciuchici and Gradinari have over 65%, and the others exceed 40%, values higher than the surrounding hilly and mountainous regions.

In hilly and mountainous regions, the share of arable land frequently decreases below 50% and even below 20%, being used for this purpose the lower terraces of the main rivers (Danube, Mures, Crisul Alb, Timis, Bega, Nera), slopes with a reduced inclination from the low altitude hilly lands (Lipova Hills, Poganis Hills, Doclin Hills) or the low areas of the depressions (Gurahont Depression, Bozovici Depression, Domasnea-Mehadia Depression, Halmagiu Depression, etc.). In Mures Corridor and Lipovei Hills, the usual percentages are between 20 and 60%. In Poganis Hills, the communes on the northern slope, which also include significant plain areas, have high shares (Darova 77.5%, Buzias 67.9%), while in the localities on the southern slope and from the mountainous area of Semenici, the arable land has less than 40%: Brebu 29%, Copacele 31.3%, Paltinis 32% etc.

In Caransebes Depression, on Timis and Bistra Corridors, the shares of arable land in isolation exceed 40% in isolation (C. Daicoviciu 50.1%) and rarely 20% (Caransebes, Obreja, Glimboca), being often reduced due to high percentages of pastures and hayfields. A similar situation is in the Bozovici and Domasnea-Mehadia depressions, where, along with pastures and hayfields, orchards are present. E. Murgu has 27.4% of arable lands over 27.4%, Prigor 27.2%, Dalboset, Sopotu Nou in the Bozovici Depression, respectively Cornea 36.5%, Iablanita 33.4%, Mehadica. On Cerna Valley, Toplet commune owns over 27% arable land.

The lowest shares are registered in the mountainous areas, especially in the case of the localities that do not have the afferent extended territory and in other spaces, hilly or depression. This is the case of the communes Brebu Nou (1.2%) and Valiug (1.7%) situated in Semeniciului Mountains, Ocna de Fier (1.3%) in Dogneca Mountains, Anina (3%) in Anina Mountains, Rusca Montana (1%) in Poiana Rusca Mountains. In general, arable land from mountain areas belongs to individual households, in the form of gardens, and has low productivity.

In the Banat agricultural area, pastures and hayfields together cover an area of almost 766,042 ha, representing 17.94% from the total agricultural land. The share of pastures and hayfields from Banat confirms the attributes of pastoral space that can be identified in the mountainous, hilly and depressions areas of Banat. However, it should be noted that the highest share is recorded in Caras-Severin County, where pasture lands represent almost 65% from total agricultural land (over 45% pastures and 19% hayfields), which entitles the researcher to consider this county as one with an agricultural economy predominantly of pastoral origin.

Special weights of hayfields from the total agricultural area, of over 35%, are registered in the communes from the upper basin of Bistra (Marga 63.8%, Bautar 45.8%), Cerna Valley (Baile Herculane 41.1%, Toplet 40, 4%), Anina Mountains (Anina 45.8%,

Carasova 36.2%), Danube Gorge (Sichevita 35.7%), Semenicului Mountains (Brebu Nou 56.1%, Slatina Timis 45.3%, Tarnova 44, 6%), Dogneca Mountains (38.5%), Domasnea-Mehadia Depression (Lapusnicel 37.2%, Luncavita 37.5%).

CONCLUSIONS

The characteristics of the rural area from the west of the country represent important landmarks in achieving a sustainable development. The rural has the capacity to conserve and rebuild the natural environment, as a result of a lower anthropogenic pressure, associated with the type of economic exploitation and the general level of development of the production forces.

Statistics from recent years show a recovery of the rural environment from the west of the country. According to the National Institute of Statistics, the Romanian village from the western area continues to go through a process of depopulation and impoverishment, helped in this sense by the disastrous infrastructure in some places, the inability of local governments to attract European funds and the lack of substantial investment.

The agricultural potential is remarkable, due to the large agricultural areas and good quality soils. Although it is currently undervalued, it is forecast that in the future it will become one of the most attractive for foreign investors.

Favorable soil and climatic conditions offer the development of agriculture multiple chances for the future. At present, agriculture is characterized by the emergence and development of individual farms, as basic structures of traditional agriculture and as a support for the development of the competitive agricultural system of the region.

One of the oldest and most important agricultural activities from the county, with favorable climatic conditions is the cultivation of cereals and technical plants, and in most communes in the plain and hill area is successfully practiced viticulture. Localities like Recas, Buzias and Giarmata are famous names both in the country and abroad in terms of wine production. The production of vegetables in individual micro-farms is also a traditional economic activity, especially in the rural localities from the vicinity of urban centers. Animal husbandry is also an important branch of tradition, in recent years there has been a significant increase in the number of animals in the private sector.

Lack of alternative crops, storage and capitalization of agricultural production, loss of significant areas of meadows by invading them with worthless woody vegetation, low productivity in agriculture, caused by land fragmentation, uncultivated and undervalued agricultural areas, aging labor, the lack of information networks in agriculture and the neglect of the works to combat soil erosion and landslides are aspects that make the Timisoara agricultural sector a marginal one for the county's economy. In addition, there is no real financing and subsidies, and product prices are very low, so there is a deadlock that can become chronic on the agricultural market, with even more disastrous effects.

But in the future some objectives must be followed in order to sustain the future development of agriculture [6, 7, 8]:

a. reducing the size of the population employed in agriculture and ensuring employment and income alternatives, in the broader context of approaching the issue from the perspective of rural development, correlated with the creation of viable economic holdings, through efforts to reduce the fragmentation of land use;

b. the development of an infrastructure and services specific to rural areas, to support the development of these regions, both from the perspective of increasing the commercial character of agriculture, but also from the one of offering alternatives of employment and income for the rural population. And we refer here both to road networks, communications, etc., as well as to health services, education, consulting;

c. increasing the administrative-institutional capacity to attract financial resources for empowerment and capitalization of local resources. The solution of these problems involves simultaneous actions, on several fronts, interdependent with each other, subordinated and in close correlation with the strategic objectives at the level of the national economy.

The competitiveness of agriculture must not be judged strictly, in the general sense of immediate and substantial profitability. It is not always the cost of production and the cost-value ratio that are decisive. It should not be overlooked that the level of development of this branch depends on the food security of the entire population.

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