

GEOGRAPHICAL TYPES OF AGRICULTURE AND
THEIR EVOLUTION IN THE ROMANIAN SUB-CARPATHIANS BETWEEN
ȘUȘIȚA-ZĂBRAUȚ AND BUZĂU

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The presence of depressions, the great depth and width of valleys side by side with heights running over 800 m /Răchitașul Mare - 937 m, the China Hill - 854 m, Răiuțul - 966 m, Bisoca - 373 m, etc/, the complex geological structure, the highly varied lithology and the frequent landslides, divide the sub-Carpathians between Șușița - Zăbrauț and Buzău into geographical units with a highly fragmented relief, which are differently turned to account as regards agriculture.

These particularities of the natural environment lead to local differences in the geographical distribution of agricultural branches and sub-branches as a consequence of the early economic development of this territory through the utilization of the natural conditions propitious to the improvement of some highly economically efficient agricultural branches /viticulture, pomiculture, husbandry, etc./.

This paper deals with the geographical types of agriculture starting with the second half of the nineteenth century up to the present-day stress being laid upon the types of culture specific to this area in certain periods of time. By type of culture we mean "the economic character of a culture or, in other words, the relationships between culture and the destination of the product" /Max Derruau, 1963, p. 189/.

The approach to the problem of the geographical types of agriculture varies in the literature in respect in to the country where such research is being conducted, the goal of such research and the general economic trend of the country in certain periods of time.

The definition and characterization of these types starts from two points of view: one based on the economic factors /social organization, destination of the output, etc/ /P. George, 1963/ and the other one outlines the geographical type of agriculture in terms of geographical environments, these being directly connected with the economic, political and social factors which contributed to their transformation /Max Derruau, 1963/. A blend between these two viewpoints provides, in our opinion, a true definition of the concept of geographical type of agriculture /J. Kostrowicki, 1962, 1964; Asztalos, István et al., 1966/.

Although the influence of natural conditions is not decisive, yet agriculture is much more influenced by them than any other economic branch. Therefore their major significance in defining the geographical type of agriculture from a functional viewpoint is quite obvious.

A study of older chartographic material /Chart of Southern Romania, 1864/ and bibliographies /B. Iorgulescu, 1892; Gr. Dănescu, 1896; M. Canianu and A. Candrea, 1897/ enabled us to outline some former geographical types of agriculture in this region in terms of the natural conditions, land use, structure of cultivated lands and density of animals. The other economic indicators /profits obtained, valuation of agricultural products, etc./, represented in points of their value are not comparable to present figures /Fig. 1/.

The present-day geographical types of agriculture have been delimited in space on the ground of field investigations, statistical evidences found in the Vrancea and Buzău county departments of statistics, Gauss maps-scale 1 : 50.000, field mappings and bibliographies. On characterizing the geographical types of agriculture account has been taken of the natural conditions, land use, structure of cultivated areas, technical endowment, gross output and commodity output, manpower, etc. /Fig. 2/.

1/ Geographical Types of Agriculture in the Second Half of the Nineteenth Century.

A study of the geographical distribution of the big categories of land use on the basis of the Chart of Southern Romania /1864/ reveals that 70 per cent of the whole surface of the region was covered by forests.

As regards the distribution of the main branches of agricultural production, three types of agriculture can be depicted: raising of livestock, mixed and cultivation of vine.

Raising of livestock was the prevailing type in the inner sub-Carpathians and sub-Carpathian depressions in the second half of the nineteenth century. Because of the natural conditions of the region viz, a rather cold and humid climate, brown, brown-yellow and podzol forest soils and a rough relief, the main agricultural grounds consisted in pastures and hayfield which covered smaller or larger surfaces in-between the forests. The rather few agricultural grounds and orchards were located on the mild-dipping slopes. Toward the end of the nineteenth century as a consequence of massive forest clearing, natural pastures and hayfields were extended so that by 1890 they covered 62,2 per cent of the agricultural grounds. In this way, animal breeding developed. Ovines were grown mostly for their milk and wool, a basic economic agricultural branch in that period; bovines ranked second.

The agriculture of the region supplied the market with ever more products /Romanian pressed cheese, cheese in sheephide leather bags, pastrami, etc./ the period being characterized by a large cattle market, a phenomenon specific to the whole country. In the culture of plants, maize covered 95 per cent of the whole arable land.

The mixed type was characteristic at that time of intra-hilly depressions, the inner ridge of the outer sub-Carpathians and the piedmont area between the localities of Rimna and Buzău. The natural conditions in these places viz, brown forest soils and podzol soils, as well as the 600-700 mm precipitations that fell in a year favoured the growth of cattle due to the rather great expanses of natural pasture land and hayfields /53,5 per cent of the arable land/, of fruit-trees, and cereals /maize and wheat/ and in part of fowl. Speaking of fruit-trees, the plum-tree prevailed.

Viticulture was well represented in the terraced piedmont between Zăbrăuț and Rimna. The highly favourable climatic conditions, the Ca-rich soils, the eastward, southward and southeastward exposed slopes, rendered the cultivation of vine a most economically efficient occupation. Except for cattle breeding, husbandry was rather poor.

Cultivation of vine, this basic agricultural branch, was steadily developing up to the end of the nineteenth century when the attack of phylloxera /1883/ destroyed vast viticultural areas which in this way became unproductive or were later on turned into pasture lands. Consequently vine was cultivated on much smaller areas as compared to the year 1857 so that by 1890 only some 37,8 per cent of the arable land was covered by vineyards.

2/ Geographical Types of Agriculture in the Twentieth Century.

In the first half of the twentieth century, the important changes occurring in land use were caused by the degrading of some grounds on the one hand, and by the extension of some highly economically efficient cultures, on the other. Thus, development of wood processing and export of wood enhanced the exploitation of some afforested massifs which, when cleared, became unproductive /the upper basin of the Buzău, Slănic, Râmnic, Milcov, Putna, Șușița etc./, and were turned into pastures.

Highly efficient cultures such as vine and fruit-trees have largely developed by the planting of vine in phylloxera-destroyed vine-yards or beyond these, and of fruit-trees in the outer sub-Carpathians, intra-hilly depressions and on the eastern ridge of the inner sub-Carpathians. The result of these changes was that as compared to 1857 vine started being cultivated as far as the piedmont plain, and fruit-trees were planted over important areas.

With a view to improving land use and extending the agricultural grounds in respect to the natural and socio-economic conditions, huge afforestation works, terraces for the plantation of vine and fruit-trees, pastures and hayfields started being made in the course of the years 1950-1968. It should be remembered that, due to a better utilization, the agricultural area of this region was extended by some 20.700 ha in the years 1890-1968, the weight of fruit-trees and vine increasing from 3,1 % to 8,1 % and from 10,9 % to 13,5 %, respectively, at the expense of natural pasture lands and hayfields.

The territorial distribution of the main cultures and the specializing of the various branches of the agrarian economy as a result of intensive agriculture after the process of socialization led to the formation and individualization of four geographical types of agriculture, each with its specific features: animal breeding, mixed, cultivation of vine, cereal cultures and animal breeding.

Animal breeding, more limited than in the past, is restricted to the inner sub-Carpathians and intra-hilly depressions. This type covers some 40,2 per cent of the total surface of the region. In the total arable land, natural hayfields and pastures amount to 82,5 per cent. The great weight of these natural hayfields and pastures is due in part to the melioration and reclaiming of some grounds considered as unproductive. Only in the years 1956-1968, some 9.500 hectares were turned into hayfields and pastures most of them in the Buzáu, Slánic, Putna, and other basins. Due to the large areas covered by natural pastures and hayfields and to their nutritive qualities, animal breeding, mostly ovines, developed /180,5 ovines per 100 ha of agricultural ground/. Arable lands and orchards located on the mildly dip-

ping slopes have a smaller weight than natural pastures and hayfields /12,1 per cent arable land and 5,3 per cent orchards/. The culture of cereals, of maize in particular, prevails. As regards the value of the agricultural output, over 70 per cent is represented by animal output and natural pastures and hayfields.

Due to the particularities of this type of agriculture 42-47 per cent of the existing labour potential is employed during top months /July, October/, in the other months much lower values /below 40 per cent/ are recorded.

The mixed type covers at present 35,4 per cent of the whole surface of the region. Agricultural grounds, particularly pastures and hayfields, rank first /56,7 per cent/ followed by arable land /25,8 per cent/, fruit-trees /13,7 per cent/ and vine /3,8 per cent/.

Although fruit-trees cover smaller areas than other agricultural categories /arable land, pastures, hayfields/, yet due to their economic efficiency, they represent the main agricultural branch in the outer sub-Carpathians and intra-hilly depressions. Therefore in the period between 1952-1968, as a result of new plantations in the Buzău, Slănic, Rimna, Putna, Șușița and other basins, the area planted with fruit-trees extended so that 71 per cent of the regions orchards are found in these places.

The vast pasture lands and hayfields as well as the culture of fodder plants led to the raising of livestock, especially sheep for their milk and wool, and cattle. This is the second agricultural branch in the outer sub-Carpathians and the intra-hilly depressions.

Arable lands cover 33,1 per cent of the region. Cereals, maize in particular, fodder plants, potatoes and vegetables are preferentially grown. Maize amounts to 78,5 per cent of the cultivated area as a direct consequence of the favourable pedoclimatic conditions for its culture. As regards the value of the agricultural output, in the year 1968 the vegetal output represented some 56 per cent, fruit-trees amounting to 27,6 per cent.

As regards manpower, the mixed type is characterized by a rather higher employment of the existing potential due to the development of some agricultural branches and sub-branches which require more labour. In spring and autumn, that is almost five months a year 47-52 per cent of the local labour potential is used.

Viticulture represents only 17 per cent of the total surface of the region yet cultivation of vine is the most important branch of the agrarian economy in the piedmont area between the localities of Zăbrăuț and Rimnic. Here are the famous vineyards of Panciu, Odobesti, Cotești, etc. which produce high-quality yields, amounting to 76,5 per cent of the region's viticultural patrimony.

Vine amounts to 43,0 per cent in the structure of agricultural surface. As regards the arable land, cereals, particularly maize /61,7 per cent of the cultivated area/, and fodder plants /6,9 per cent/ are preferentially grown due to both the favourable pedoclimatic conditions for this culture and the needs of an ever more numerous population and a rather great number of animals. Sheep, fowl and swine prevail and also horses, the latter being required by vineyard works. Because vine is highly profitable, starting with the year 1952, the existing vineyards, deg-

raded through ageing, were steadily improved and new plantations were made on terraced grounds. To the extension of vine-growing surfaces contributed also the development of the wine-consuming centres within the region and in its vicinity and the setting up of big vinification complexes /at Focsani, Costesti/.

As regards the value of the agricultural output, 94 per cent is represented by the vegetal output, 91,5 per cent by the cultivation of vine.

Due to the steady specialization of this territory, 80-100 per cent of the existing local labour potential is employed, and in top months, this potential cannot even cope with the volume of agricultural works.

Cereals cultures and animal breeding is specific to the piedmont between the localities of Rimnic and Buzáu. Formerly, this territory had a mixed agrarian economy with no characteristic branches. In the past few years, as a result of the urban development of the adjoining towns /Buzáu, Rimnicu Sărat/ and the consequent increase of the town population, agriculture has acquired some specific features determined by the very consumption needs of this population. Arable lands rank first /73,7 per cent of the agricultural surface/ followed by vineyards /12,3 %/. The great weight of the latter is the result of local propitious natural conditions and the old tradition in cultivating vine on the one hand, and the demand of grapes for the supply of the fully developing urban centres, on the other. At the same time, some important changes occurred in the structure of arable lands. Besides cereals, which prevail, industrial plants /sugar beet, tobacco/ cover large areas due both to propitious climatic conditions /soil, climate/ and the need of supplying the adjoining units which process such plants. Fodder plants are also largely

grown, hence, animal breeding developed too /especially cattle, swine and fowl/ for the supply of towns with animal products /milk, meat/.

Specialization of this territory as reflected in the indicators of the value of agricultural output emphasizes that within the whole vegetal output /76 per cent of the gross output/ cereals rank first /35,8 per cent/ followed by vine /33,4 per cent/ and industrial plants /22,2 per cent/.

From those reported above it is evident that the geographical types of agriculture in the region studied have been functionally differentiated as against the past. The type of animal breeding agriculture has been restricted to ovines because of natural pastures. The mixed type has been much extended in the outer sub-Carpathians and intrahilly depressions and restricted in the piedmont area between Rimnic and Buzáu.

At the same time, as against the past, owing to natural pastures and in part to the favourable conditions for cultivating fodder plants, agriculture specialized in the culture of fruit-trees and the raising of livestock /sheep, cattle/.

Cultivation of vine is much more extended than in the past; it covers an uninterrupted surface in the piedmont area between Zábrait and Rimnic; cultivation of vine is a major branch of the agrarian economy in these parts.

Finally, in the piedmont area between Rimnic and Buzáú cereal cultures and animal breeding is being individualized in the framework of the former mixed type of agriculture. The delimitation of this territory as a geographical type of agriculture was favoured both by propitious natural conditions /grounds appropriate for the cultivation of cereals and vine/ and economic factors.

The neighbourhood of two important, fully developing urban centres /Buzáú and Rimnicu Sárát/ whose inhabitants are steadily increasing, stamped the adjoining agricultural area with some specific features imposed by the supply of these towns with agricultural products.

However, the geographical types of agriculture are not developed everywhere in agreement with the natural environment and the economic requirements. Therefore, works for meliorating barren lands and improving the existing vineyards and orchards are provided for in the long-term plan. The areas covered by vines and fruit-trees should improve in agreement with the natural and economic conditions so that the geographical type of agriculture be a steadily developing geographical category.

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Figures

Fig. 1. Geographical types of agriculture in the year 1890.

- A. Animal breeding;
- B. Mixed type;
- C. Viticulture;
 - a./ Structure of the agricultural grounds;
 - 1/ Arable lands;
 - 2/ Pastures and hayfields;
 - 3/ Vineyards;
 - 4/ Fruit-Trees;
 - b./ Structure of arable land:
 - 1/ Cereals;
 - 2/ Other cultures;
 - c./ Structure of the animal stock /conventional units/;
 - 1/ Cattle;
 - 2/ Sheep;
 - 3/ Swine;
 - 4/ Horses.

Fig. 2. Geographical types of agriculture in the year 1968.

- A. Animal breeding
- B. Mixed type
- C. Viticulture
- D. Cereal culture and animal breeding:
 - a/ Structure of agricultural grounds:
 - 1/ Arable lands;
 - 2/ Pastures and hayfields;
 - 3/ Vineyards;
 - 4/ Fruit-trees;
 - b/ Structure of arable land:
 - 1/ Cereals;
 - 2/ Other cultures;
 - c/ Structure of the animal stock /conventional units/:
 - 1/ Cattle;
 - 2/ Sheep;
 - 3/ Swine;
 - 4/ Horses;
 - d/ Labour employment:
 - 1/ Field cultures;
 - 2/ Vineyards;
 - 3/ Fruit-trees;
 - 4/ Husbandry;
 - 5/ Other works;
 - e/ Value of commodity output:
 - 1/ Field cultures;
 - 2/ Vineyards;
 - 3/ Fruit-trees;
 - 4/ animal breeding;
 - 5/ Other sources;

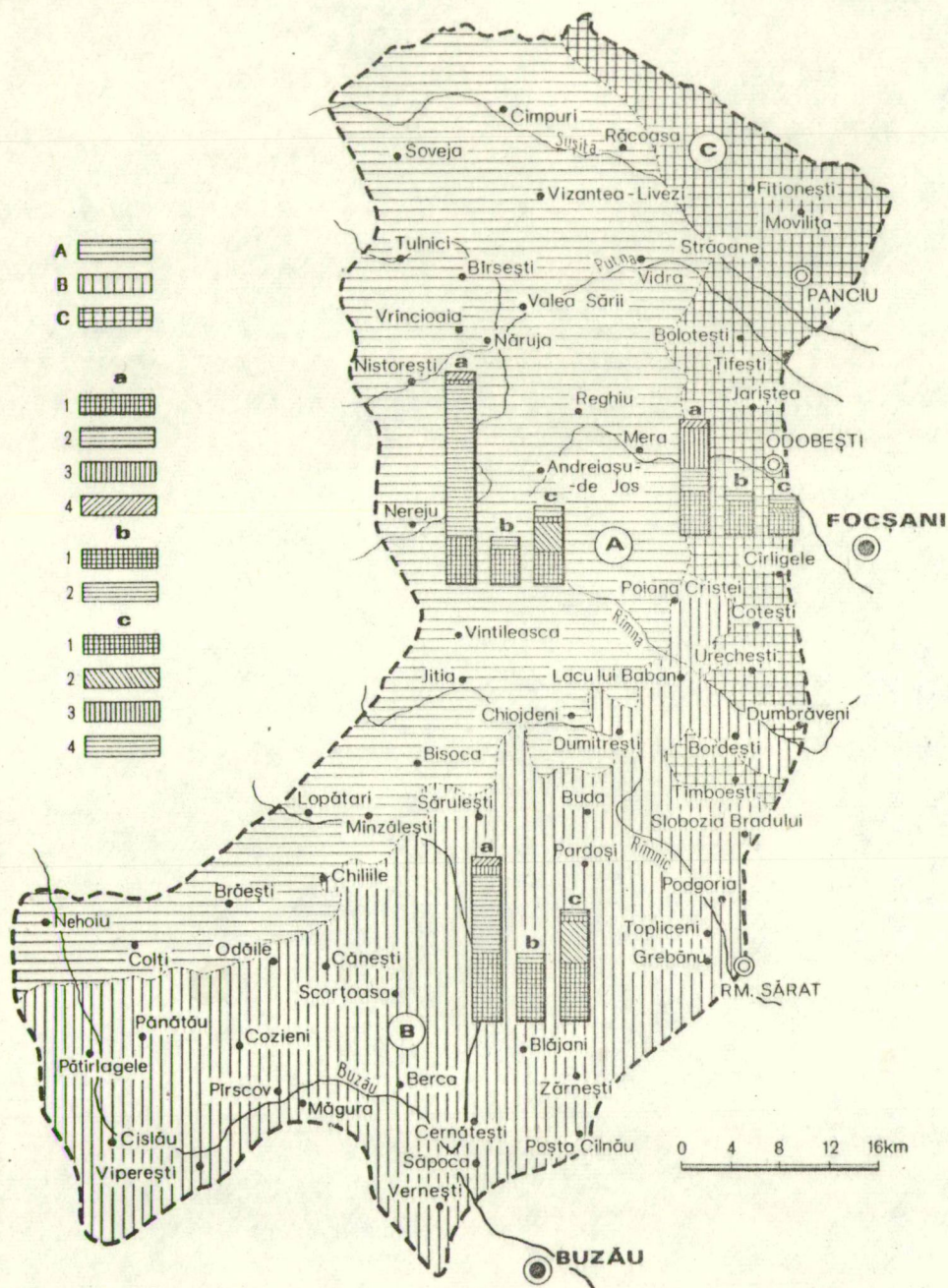


Fig. 1.

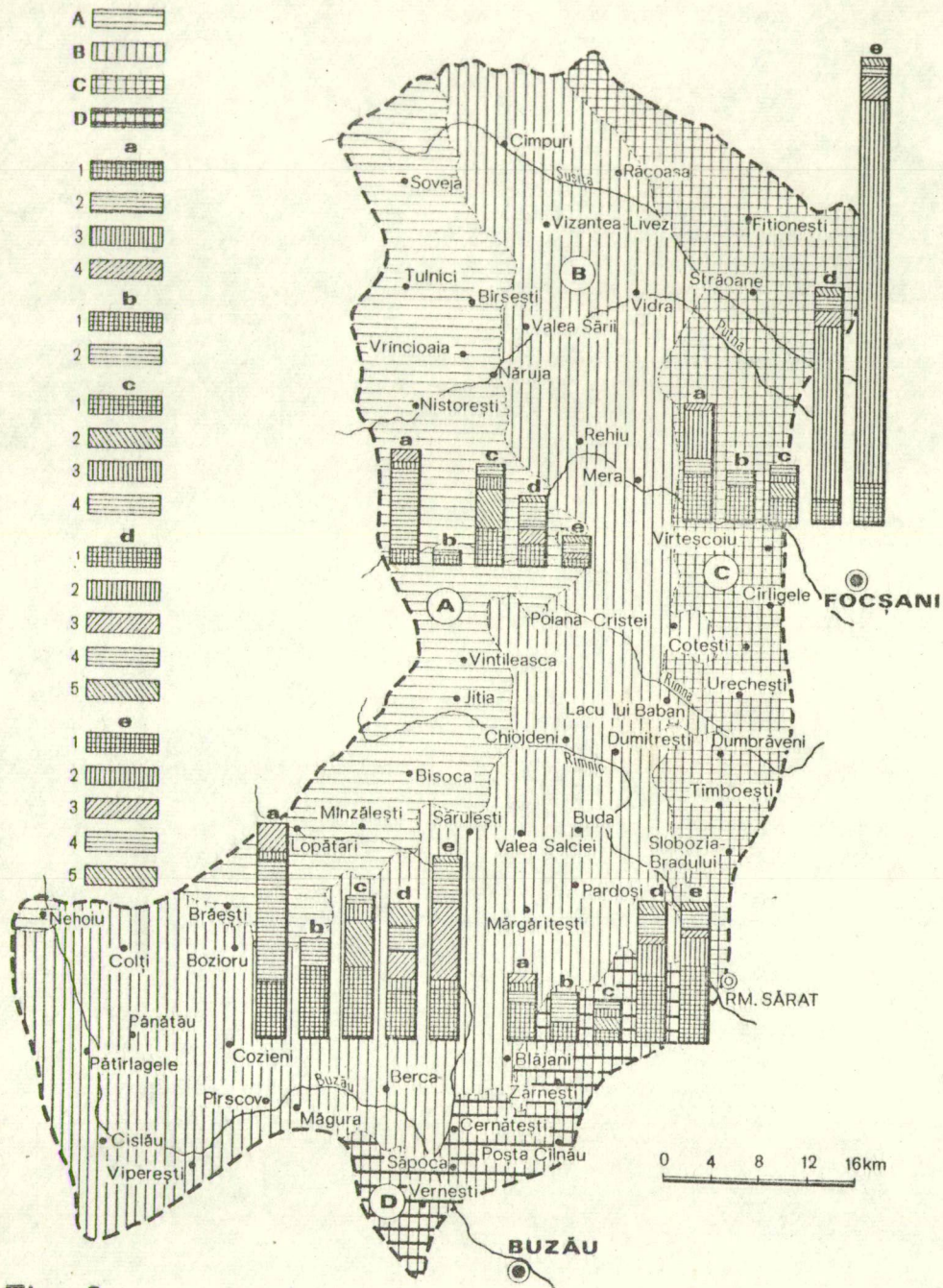


Fig. 2.