

STUDY OF CONDITIONS AND NATURAL RESOURCES OF THE CENTRAL MOLDAVIAN PLATEAU FOR INCREASING THE POTENTIAL OF AGRICULTURAL EXPLOITATIONS VIABILITY

Carmen Olguta Brezuleanu, S. Brezuleanu, I.V. Ciurea

University of Agricultural Sciences and Veterinary Medicine Iasi, Romania
e-mail: olgutabrez@yahoo.com

Abstract

The Central Moldavian Plateau has 68 communes and 3 urban centres (Vaslui, Huși and Negrești) belonging to Vaslui, Iasi, Bacau and Neamt counties this way: 26 communes in Iasi county, 28 in Vaslui county and 7 communes Neamy and Bacau counties each. The settlement network is strongly conditioned by the characteristics of the relief, and their physiognomy, the type of localities and households reflect the long process of disforest for the necessary lands of agricultural economy. The large majority of localities have mostly agricultural economic functions and only some of them are agro-industrial (Raducaneni). In more important localities, townies or polarization centres, other functions are present: commercial, crafty, local industrial. Those who predominate are the cereal-based establishments, but in a part of the localities belonging to the Central Moldavian Plateau, we can add the industrial cultures and animal husbandry. The enumerated factors do not influence just independently the agricultural activity, but also through their combination, reason for which there is the need of knowing the environment of agricultural farms of the Central Moldavian for counter-balancing the negative effects and fructifying the competitive opportunities and advantages. The adaptation of measures of economic policy, the optimization of agricultural activities as well as the elaboration and implementation of the different technological solutions together with the increase of the dimension are the means that determine the efficiency of agricultural exploitations in the zone.

Key words: Central Moldavian Plateau, diagnosis, agricultural exploitations, strenghts, weaknesses

MATERIAL AND METHOD

In order to achieve this study diagnostic analysis method we followed the description of natural conditions, accurate characterization of the natural resources of the area, highlighting the positive aspects and those of failure, for formulating global strategies and intervention methods to improve its performance, taking into account the influence of disturbances from the environment in which farms operate.

RESULTS AND DISCUSSIONS

The Central Moldavian Plateau has 68 communes and 3 urban centers (Vaslui, Husi, Negrești) related to Vaslui, Iasi, Bacau and Neamt counties: 26 communes in Iasi County, 28 in Vaslui County, and 7 communes to Neamt and Bacau counties. [1]

The network of settlements is strongly conditioned by relief characters, and their physiognomy, the types of towns and farms reflect the lengthy process of deforestation for land required agrarian economy.

Most municipalities have agricultural dominant economic functions and only some of which are agricultural-industrial (Raducaneni). In the major towns, borough or centers of polarization, there are also present other functions: trade, craft, local industry. The prevailing are settlements with grain profile, but in some of the localities in southern Central Moldavian Plateau there can be added industrial crops and livestock.

The listed factors influencing not only independent agricultural activity but also their combination, which is why we need a knowledge of the whole environment of Central Moldavian Plateau farms in order to

counter the negative effects and taking advantage of opportunities and competitive advantages.

The adaptation of economic policy measures, optimization of agricultural activity and development and implementation of various technology solutions together with the increased size of leverage is to determine the efficiency of farms in the area. [2]

Currently distinct agricultural systems are delimited in each area, depending on conditions or non-irrigation of crops, the orographic terrain, the nature of soil, climate regions, the presence and extent of natural grasslands and use of other perennials.

Such farming systems are designed to their specificity and functionality of the territory, depending on natural conditions and especially data in relation to the water adjustment factor.

The need of water adduction through irrigation works associated mostly with the required coverage for draining large areas of irrigated crops in the system.

In the depression areas with excess moisture a separate system of agriculture has consolidated based on the need to eliminate excess water.

In areas with high fragmentation of land, with a strong inclination to it, the soil eroded and erodable, it is creating an anti-erosion system of agriculture, a set of measures designed to combat and prevent erosion.

Deforestation in the fragmented landscape, especially on slopes, has led to expansion of land degradation. They have made significant contributions and increased flooding, especially in the main valleys and led to the disappearance of villages, the movements of hearths and limit agricultural area.

The best land crops are terraces of rivers, but they do not occupy large areas. Degraded slopes and alluvial plains of improvement works required to use them in good condition.

Most individual holdings of Central Moldavian Plateau are dominated by subsistence and underdevelopment, lack of capital and of scientific organization.

The dimensions and features of farms allow implementation of their ideas, whose originality can provide great results but they need to strengthen the foundation of scientific management. [1]

The elements underlying the organization of farms include all internal and external factors affecting agricultural activity in a given area. These factors form the basis for determining the information required for decision-efficient agriculture and proper use of existing resources in space as it evolves.

The subsistence family farm in Central Moldavian Plateau produces mainly for their own needs, but has its role in rural community as it creates stability and protects the rural environment.

Commercial family farm in Central Moldavian Plateau increases a greater number of animals, growing a wide variety of plants, especially industrial crops that bring high returns to unit area, has a moderate capital, the employment use, mainly producing for the market to obtain the largest possible income. [3]

The family farms are the future shape of agriculture organization of the Moldovan Central Plateau, and thus the Romanian agriculture.

The family associations have formed the basis of free agreement between related families, neighbors and friends, aiming to: agricultural land, livestock, processing, packaging and sale of products and provision of services of agriculture.

The agricultural companies with legal personality of Central Moldavian Plateau are established based on Law 36/1991. The object of activity is the exploitation of the earth, animals and agricultural investment interest.

From the compared data of the Central Moldavian Plateau and at national level there is a higher proportion of arable land and vineyards in the Central Moldavian Plateau towards Romania and pastures, hay fields and orchards are smaller in size to the Central Moldavian Plateau in comparison to Romania. (Table 1, Table 2)

Table 1

Structure of categories of use, on county areas of the Central Moldavian Plateau – ha

Nr.crt.	County	Agricultural	Arable	Orchards	Vines	Pastures	Grassland
1	VASLUI	140263	96892	1174	7372	30427	4996
2	BACĂU	27459	19523	758	243	6130	805
3	IAȘI	90943	59306	2812	4681	19461	5383
4	NEAMȚ	29382	20837	480	490	6570	1005
	TOTAL	288047	196558	5224	12786	62588	12189

Table 2

Structure of categories of use, on county areas of the Central Moldavian Plateau – %

Nr.crt.	County	Agricultural	Arable	Orchards	Vines	Pastures	Grassland
1	VASLUI	100	69,08	0,84	5,26	21,69	3,56
2	BACĂU	100	71,10	2,76	0,88	22,32	2,93
3	IAȘI	100	65,21	3,09	5,15	21,40	5,92
4	NEAMȚ	100	70,92	1,63	1,67	22,36	3,42
	TOTAL	100	68,24	1,81	4,44	21,73	4,23

The analysis of the structure on categories of use on the county areas of Central Moldavian Plateau shows some differences. Thus, if arable land, the first place is situated in Bacau County towns with 71.10%, followed by Neamt County (70.92%) and Vaslui 69.09%. In the orchards, Iasi and Bacau counties have higher percentages and vineyards, Vaslui and Iasi. Pastures have similar rates in all

counties, in contrast to the meadow, Iasi County is first.

The agricultural companies with legal personality of Central Moldavian Plateau specialized cooperatives will become core services (areas of mechanization, the supply of parts for mechanical means, fertilizers, seeds, biological material, animal drugs, herbicides, insecticides fungicides) or will off gradually undifferentiated forms of activity, poor productivity. (Table 3)

Table 3

Agricultural exploitations and area on categories of use of the used agricultural area, the un-used agricultural area and other areas – ha

County		Vaslui	Bacău	Iași	Neamț
1		2	3	4	5
Arable agricultural area used	Arable land	102525	130979	127872	112494
	Family gardens	84841	99079	112582	84916
	Natural meadows and grasslands	39607	72558	52724	62609
	Permanent cultures	66738	54123	49031	13929
	TOTAL	118698	158187	145724	133166
Unused agricultural area	Agricultural area used for recreational activities	66	87	30	49
	Other agricultural areas unused	6284	6502	3752	2396
	TOTAL	6343	6586	3778	2444
Other areas		108279	141528	130300	119038
TOTAL		120892	162753	148115	135945

The number of individual farms of Central Moldavian Plateau is predominant (approximately 99%) compared to the number of units with legal personality (approximately 1%) (Table 4).

The application of Law 18/1991 determined, by its contents, a process of

economic differentiation of households. That was taken as the basis for the establishment and restoration of property rights situation in 31.XII.1990 so cooperative property, which practically correspond to the establishment of these units and thus the size of agricultural area that had a peasant farms, and fix

maximum area of 10 ha, irrespective of the number of owners, favored the spraying of the land tenure review.

Table 4
The structure of agricultural holdings by their legal status in Central Moldavian Plateau

Nr. crt.	County	Total agricultural exploitations	Individual agricultural exploitations		Units with legal personality		Agricultural area used ha
			4	5	6	7	
1	2	3	4	5	6	7	8
1	VASLUI	50215	49879	99,33%	336	0,67%	169910,5
2	BACĂU	8836	8781	99,38%	55	0,62%	24705,13
3	IAȘI	38948	38773	99,55%	175	0,45%	75939,38
4	NEAMȚ	11660	11624	99,69%	36	0,31%	23676,86
	TOTAL	109659	109057	99,45%	602	0,55%	294231,87

We appreciate that the way the application of Law 18/1991 was led to an excessive parceling of land, reducing the economic efficiency of individual farms of Central Moldavian Plateau.

In Vaslui it shows a concentration of individual holdings within size 2.5 ha with a total of 34,932 farms. In Bacau County

shows a concentration of individual holdings within size 1.2 ha with a total of 36,350 farms. In Iasi County shows a concentration of individual holdings within size 1.2 ha with a total of 36,517 farms. In Neamt County shows a concentration of individual holdings within size 1.2 ha with a total of 32,395 farms (Table 5).

Table 5
The structure of individual holdings by size class of the area used

County	Vaslui		Bacău		Iași		Neamț	
	Nr.	%	Nr.	%	Nr.	%	Nr.	%
1	2	3	4	5	6	7	8	9
< 0,1	10738	9.10	16263	10.33	12654	8.73	12924	9.74
0,1 – 0,3	11066	9.38	21362	13.56	17722	12.22	18539	13.98
0,3 – 0,5	7061	5.99	17457	11.08	12676	8.74	14508	10.94
0,5 – 1	18344	15.55	35550	22.57	28635	19.75	29349	22.12
1 – 2	29521	25.02	36350	23.08	36517	25.18	32395	24.42
2 – 5	34932	29.61	25786	16.37	32360	22.32	22150	16.70
5 – 10	5701	4.83	4024	2.55	3967	2.74	2408	1.82
10 – 20	420	0.36	428	0.27	332	0.23	252	0.19
20 – 30	64	0.05	104	0.07	50	0.03	43	0.03
30 – 50	45	0.04	83	0.05	37	0.03	31	0.02
50 - 100	60	0.05	70	0.04	33	0.02	44	0.03
Peste 100	15	0.01	30	0.02	17	0.01	14	0.01
TOTAL	117967	100.00	157507	100.00	145000	100.00	132657	100.00

In Vaslui we noticed a concentration of units with legal personality in the size range of over 100 hectares with a total of 184 farms. In Bacau County shows a concentration of units with legal personality in the size range of over 100 hectares with a total of 159 farms. In Iasi County shows a

concentration of units with legal personality in the size range of over 100 hectares with a total of 221 farms. In Neamt County shows a concentration of units with legal personality in the size range of over 100 hectares with a total of 148 farms. (Table 6.)

Table 6
The structure of legal personality in the size class of the area used

County	Vaslui		Bacău		Iași		Neamț	
	Nr.	%	Nr.	%	Nr.	%	Nr.	%
1	2	3	4	5	6	7	8	9
< 0,1	35	4.79	27	3.97	3	0.41	14	2.75
0,1 – 0,3	46	6.29	45	6.62	30	4.14	30	5.89
0,3 – 0,5	28	3.83	27	3.97	19	2.62	15	2.95
0,5 – 1	30	4.10	31	4.56	35	4.83	14	2.75
1 – 2	42	5.75	58	8.53	152	20.99	72	14.15
2 – 5	133	18.19	129	18.97	152	20.99	72	14.15
5 – 10	127	17.37	93	13.68	124	17.13	79	15.52
10 – 20	31	4.24	39	5.74	46	6.35	32	6.29
20 – 30	39	5.34	17	2.50	11	1.52	11	2.16
30 – 50	18	2.46	20	2.94	13	1.80	7	1.38
50 - 100	49	6.70	35	5.15	24	3.31	36	7.07
Over 100	184	25.17	159	23.38	221	30.52	148	29.08
TOTAL	731	100.00	680	100.00	724	100.00	509	100.00

CONCLUSIONS

The size of agricultural companies with legal personality of Central Moldavian Plateau is low given the scale of farm economic optimum.

In the Central Moldavian Plateau optimal size of farms is 100-300 ha for cereal and technical plants, 50-100 and 50-100 ha for fruit growing hectares for viticulture. These limits are informative but can guide farmers to achieve production scale to allow technical and economic standards as high.

To reach an optimal level of farm size we believe that there are means like association and cooperation. Current legislation is gradually harmonized with the EU but can be improved to stimulate and support the process of creating optimal farm size economically.

There are several reasonable estimates of farm size on production profiles, the climate zones, but they are adapted to specific local or area, the experience of other countries and especially the current requirements for

management, production and economic efficiency of agriculture.

These mandatory rules can be achieved by a dimension that takes into account the application of current technologies, the mechanization, chemicalization, irrigation by means of appropriate of technical and productive works.

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