

# STUDIES REGARDING THE ADAPTABLE CAPACITY OF AGRICULTURAL EXPLOITATION FROM CENTRAL MOLDAVIAN PLATEAU TO THE MARKET ECONOMY

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## Abstract

*As regards competition, we should mention the following aspects: on the internal market, the company has many important competitors who try to obtain a larger share on the market. As the policy of the firm is oriented on the market of Iasi County, the pressure on short term does not seem to affect the farm's activity. But on the local market, the company faces very strong competition from the foreign companies that offer the same products, but superior from the qualitative point of view, which forces us to offer lower prices in order to maintain the share market, but with no special effect, as the products of the society are goods with inelastic demand since the modification of the price can determine the modification of their demand to a lower extent. The survival and development of the agricultural exploitation depend on its capacity to adapt and answer to the external exigencies, on the competitive advantages and distinctive competences which they have in comparison to the rival companies. Having in view the extension and specificity of the competition, as well as the characteristics of the micro-medium of the firm, in this stage it is important to reveal the main characteristics and tendencies which manifest themselves in different sectors of the macro medium i.e. economic, technical, social-cultural, political and physical. The price of the products – is not influenced by the competition's price, as in case in which the demand for a certain product is lower, the firm lowers the price by reducing the profit obtained on product unit, the decrease being compensated by selling other products – with a larger demand – with a price which is included a larger profit than the regular one. Inflation and the financial blocking represent the factors that have had a negative impact on the firm's activity, as well as of other firms that collaborate with it; they are on the top list of the negative phenomena that the transition process reveal.*

**Key words:** development, agricultural exploitation, competition, market economy, Central Moldavian Plateau

## MATERIAL AND METHOD

Central Moldavian Plateau has 68 communes and 3 urban centers (Vaslui, Husi, Negresti) related to Vaslui, Iasi, Bacau and Neamt this way: 26 communes in Iasi County, 28 in Vaslui County, and 7 in Neamt and Bacau counties each. The source of information which formed the basis for this study is the statistical data from the Departments of Agriculture and Rural Development of the 4 counties and some collected data directly from some representative agricultural units.

Data processing was carried out by specific diagnostic analysis methods resulting in a series of indicators and indicators that enabled the evolution and trends of specific inputs for agricultural production.

Given the above considerations we proposed modeling agricultural production and 80 farms 110 hectares that may become associations of families. These distinctions we have made light of reports indicated the Ordinance 108/2001 and the information collected from the literature on farm size in different areas of agricultural production.

## RESULTS AND DISCUSSIONS

Diversity of ownership and an overwhelming share of land ownership, the gradual disappearance of the monopoly position of state-owned enterprises and privatization of their specific operation generates multiple forms of agricultural activity essential element - earth.

Farmers can use land as owners, managers, lessees or contractors.

Agricultural potential of an area is characterized by three economic indicators: per capita agricultural land, agricultural use by the structure and load the animals in 100 hectares.

Agricultural land per capita is an indicator area, expressing the ratio of agricultural area of the village and its people. This indicator provides information on overall agricultural production potential in the investigated territorial administrative unit.

As an indicator of high variability in space, the result of geographical conditions, economic and social-specific common knowledge of its values may be a function of orientation for agricultural strategy of the various rural areas. Indicator value is the average total rural area of 1.40 ha per capita and high national average (0.65 ha / inh.). The value of this indicator in the municipalities of Central Moldavian Plateau Vaslui County is 0.65 to 1.22 Bacau county to county 0.73 Iasi, Neamt county and of 0.93, values that are below the national average for space areas.

Examination of field data show wide differences due to the fact that agricultural land occupy different areas in the villages, because their position in the geographical

units and the total rural population also varies according to the degree of economic and social development in territorial. Not meet large homogeneous in terms of territorial distribution of this indicator.

The structure of agricultural land by categories of use, characterized in general agricultural production potential, the directions of specialization and intensification of agriculture and the overall production profile.

Knowing in detail the structure of agricultural use by the decision-making bodies can provide a tool for economic and social application of those measures leading to full and proper use of land resources (economic objectives in rural location, concentration and specialization of production, etc..).

Fund resources attracted the circuit of agricultural land is a factor of production - which, by quantity (area), features, quality (level of fertility) and determine potential cost, the organization, structure and economic efficiency of agricultural production.

For comparison data from the Central Moldavian Plateau and 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 Romania. (table 1, table 2.)

Table 1  
Structure of categories of use, on county areas from the Central Moldavian Plateau – ha

Nr. crt.	County	Agricultural	Arable	Orchards	Vines	Grassland	Pastures
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

The structure analysis by use of 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%.

Table 2.  
Structure of categories of use, on county areas from the Central Moldavian Plateau –%

Nr. crt.	County	Agricultural	Arable	Orchards	Vines	Grassland	Pastures
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

Structure analysis by use, the county areas of Central Moldavian Plateau shows some differences. Thus, if arable land, the first place is situated in Bacău County towns with 71.10%, followed by Neamț County (70.92%) and Vaslui 69.09%. In the

orchards, Iasi and Bacău counties have higher percentages and for vineyards, Vaslui and Iasi. Pastures have similar rates in all counties, in contrast to the meadow, Iasi County is first.

Table 3.  
Structure of cultures on county areas within the Central Moldavian Plateau- %

Nr. crt.	Commune	Wheat and rye	Maize grains	Potatoes	Sunflower	Sugar beet	Vegetables
1	Vaslui	11,2	56,7	1,2	12,6	0,5	2,1
2	Bacău	19,5	44,4	4,1	6,2	0,6	2,8
3	Iași	8,0	50,3	3,3	7,4	0,5	5,1
4	Neamț	19,0	44,1	3,7	5,5	0,8	3,4
	TOTAL	11,9	52,2	2,4	9,6	0,5	3,2

Structure of cultures of Central Moldavian Plateau reveals a majority share for maize crop (accounting for 52.2%) followed at a considerable distance by the wheat crop (accounting for 11.9%).

Total production and average production of agricultural units of Central Moldavian Plateau are relatively modest, but are close to the national average obtained from cultures analyzed. (Table 4, Table 5)

Table 4  
Total production at main cultures - t

Nr. crt.	County	Wheat and rye	Maize grains	Potatoes	Sunflower	Sugar beet	Vegetables
1	Vaslui	45207	138886	9780	16685	10185	14834
2	Bacău	11462	30295	13636	1747	2630	7917
3	Iași	24208	81853	27134	5013	8337	41725
4	Neamț	11613	28219	11918	1577	7924	10130
	TOTAL	92490	279253	62468	25022	29076	74606

Table 5  
Average production at main cultures – t/ha

Nr. crt.	County	Wheat and rye	Maize grains	Potatoes	Sunflower	Sugar beet	Vegetables
1	Vaslui	2,4	2,8	1,0	1,8	11,3	7,5
2	Bacău	2,6	3,6	14,5	1,4	1,4	14,9
3	Iași	2,9	3,0	13,8	1,4	18,5	13,1
4	Neamț	2,5	3,5	14,4	1,6	21,4	13,6
	TOTAL	2,6	3,225	10,925	1,55	13,15	12,275

Based on information gathered we proceeded to the design of the second component of the plant i.e. crop structure. Provisions O.U.G. no. 108/2001 states that commercial farms should hold property with or without lease area at least 110 meters. To respond to such tasks farmer should have high power tractor - 280 - 320 hp and agricultural machines with large working width corresponding to power tractors. In

essence, Romanian farmers will be given high-yield agricultural machinery, appropriate technologies applied in countries with developed agriculture.

Given the above considerations we proposed modeling agricultural production and 80 farms 110 hectares in the hill area. These distinctions we have made light of reports indicated the Ordinance 108/2001 and the information collected from the literature

on farm size in different areas of agricultural production.

The methodology involves very diverse cultures, from the simplest to economic modelling mathematical method that requires computer use. This latter method should be used only to large programs, aimed at very large areas and differentiated in terms of productivity, hence a number of restrictions or conditions to be included in economic and mathematical model structure. In our case, due to a relatively small number of cultures and of conditionality restrictions or lower in number, we applied the method of multiple variants.

For each mode it was taken into calculation a number of conventional livestock - AC, which is determined by opportunities of farmers to ensure production of milk, especially with respect hygienic-sanitary requirements of the European Union.

In essence, the proposed dairy herds appear to be low, but in subsequent periods they will be able to increase the speed with which farmers can ensure the investment with modern farming techniques. In relation to farm size, which differ in relation to the production area is located, we planned a number of 15-30 conventional animal heads (the number of animal species conventional cattle is the number of animals jelly, that cows milk), and high plain zone, 5-20 planned a number of conventional animals, depending on the size of those farms.

In the module 80 ha (Table 6) cereals are designed to occupy 65.7%, technical plants 15.86% and 18.44% of fodder plants. In this way in the area of favourability 1 of total profit of 46,598 lei result, and 582 lei / ha. In area 2 of favourability resulted in a slightly lower profit for 41,464 lei and 518 lei / ha.

Table 6  
Designing crop structure - Module 80 ha

Nr. crt.	Culture	Arable area	weight	Area ha	Profit F <sub>1</sub> lei/ha	Profit total F <sub>1</sub> lei	Profit F <sub>2</sub> lei/ha	Profit total F <sub>2</sub> lei
1	Wheat consumption	80	24,5	19,60	634	12.426	580,2	11.372
2	Two-row barley beer	80	13,2	10,56	535	5.650	461,5	4.873
3	Maize grains	80	28,0	22,40	724,5	16.229	653,6	14.641
4	Sunflower	80	12,5	10,00	804,6	8.046	652,9	6.529
5	Soy	80	3,36	2,69	583,5	1.570	510,1	1.372
6	Fodder plants	80	18,44	14,75	181,5	2.677	181,5	2.677
7	TOTAL	80	100	80,00	-	46.598	-	41.464

For the module with the maximum size set by Gov. 108/2001, of 110 ha were developed conventional strength of 30 animals, ie dairy, which require a forage base area of 17.70 hectares and 16.09% of total arable land. The remaining area was divided grain crops - 76.67 meters, which means 69.7% of technical plants - 15.63 hectares and 14.21%. In this way the total profit 1 of favourability was 65,093 lei, representing 592 lei / ha and the area of favourability 2 total profit was 58,024 lei representing 527 lei / ha.

It should be noted that with increasing the total area of the module increased the share of grain crops. This was not accidental, but was caused by a relatively simple logic. Forage crops are strictly determined by livestock queen planned, so appears as a restriction of minimum technical plants in general are characterized by an attractive economy, but requires a strictly individual machine systems, such as sugar beet, why which we have not got it in crop structure, although it finds very favourable conditions found across the plain of Moldavia.

Table 7  
 Designing crop structure - Module 110 ha -

Nr. crt.	Culture	Arable area	weight	Area ha	Profit F <sub>1</sub> lei/ha	Profit total F <sub>1</sub> lei	Profit F <sub>2</sub> lei/ha	Profit total F <sub>2</sub> lei
1	Wheat consumption	110	26,20	28,82	634	18.272	580,2	16.721
2	Two-row barley beer	110	14,50	15,95	535	8.533	461,5	7.361
3	Maize grains	110	29,00	31,90	724,5	23.111	653,6	20.849
4	Sunflower	110	11,70	12,87	804,6	10.355	652,9	8.403
5	Soy	110	2,51	2,76	583,5	1.610	510,1	1.408
6	Fodder plants	110	16,09	17,70	181,5	3.212	181,5	3.282
7	TOTAL	110	100	110,00	-	65.093	-	58.024

On the other hand, cereals are major crops in the technological opportunities, precisely because of their relative simplicity. In addition, the finished product with the characteristics of cereal crops have a high capacity storage without altering their quality indices. Therefore, Romanian farmers prefer cereal crops at the expense of other crops that require more complex technology and fewer opportunities for recovery and collection mainly technical value of products sold. It is well known tendency of the sugar refineries and oil to pay late value of those offered by farmers, which is why they turned their attention to other criteria profitable, technological facilities, with increased storage options for more particularly long and greater opportunities for recovery of costs incurred by the collection amount in question offered industries processors.

## CONCLUSIONS

A healthy agriculture under the structural aspect, mainly involves increasing the share of commercial farms owned by farmers of Central Moldavian Plateau. They represent the future of agriculture in the area studied; they have directed attention to the makers of the North-eastern agriculture.

It is necessary to resort regularly to optimize the size of farms in the area taken in the study, because the current size is not an agricultural practice performance. This should take account of the zone of agricultural production, because each county for the Central

Moldavian Plateau is characterized by the climate, soil, their economic and social conditions that promote agricultural production as a whole or certain branches of crop production (vegetables, flowers, trees, vines) to a greater or lesser extent. These conditions must be measured precisely and then must determine the degree of favourability for the industry. Only zone optimal conditions, yields per unit, respectively, economic efficiency is maximum.

It also required the establishment of economic structures both upstream and downstream of agricultural production structure to ensure supply farmers with production resources required, that the recovery of agricultural products produced.

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