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SIZE ECONOMIC AND TECHNICAL GUIDANCE FROM THE FARM ECONOMIC DEVELOPMENT SOUTH REGION FOR ECONOMIC CLASS SIZE X. CASE STUDIES

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Summary

One of the most important structural problems of the agricultural sector is the formation of economic size of an agricultural holding. Even if they have their own specialized production structure within the agricultural unit size of branches and activities are established in shaping the economic dimension, which requires knowledge of economic indicators of production and their influence on the results effectively. Economic size of a farm is given by the optimal combination of inputs for each product and the minimum production costs which could achieve the highest profit.

Keywords: *economic dimension, structure of production, technical and economic indicators, economic efficiency*

INTRODUCTION

Technical-economic dimension and economic orientation of farms can be considered to be of prime importance in increasing their economic performance. Studied farms must adapt production structures with the development of sustainable agriculture. Structure of agricultural holdings must satisfy the technical requirements of production, economic and managerial and contribute to efficient End-use resources available to them. In these circumstances, the economic size of farms can be played and turnover that can be associated profits from other economic indicators that help raise their economic performance.

General indicator used in the analysis of farms in South Development Region is standard gross margin element used in assessing the technical and economic potential crop and animal species in the area analyzed to assess the technical and economic farm size and in determining their technical and economic orientation.

Analytical research methods used to determine the economic size and orientation techno-economic farm in South Development Region based analysis of technical and economic results of farms analyzed. These technical and economic results are based on the concept of statistical correlation, given the links between potential indicators and results indicators and economic efficiency of agricultural farms.

MATERIALS AND METHODS

The methodology used in data collection is based on techno-economic system forms - questionnaires and achieving technical and economic classifications by size of farms in South Development Region.

To the smooth conduct case studies on implementation of agricultural holdings by size classification of technical and economic, as methodological support to reflect real issues of structure, organization and management of farms in the study area was prepared questionnaire form the main synthetic economic indicators. Form questionnaire design was done taking into account the specifications for the data to be used information from surveys.

In determining the sample were considered following known variation in the southern region development: the number of individual households, existing companies; areas planted with wheat, corn, considered major crops (have a high level of frequency and size of cultivated area).

Investigative methods used in the field:

- Based on existing economic evidence;

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- Based on survey by direct query of individual producers in the village of residence of the village, on the information contained in the observation schedule;
- Based on opinion surveys (demoscopic) who had a different character as a method of investigation in the form of:
    - survey targeted (directed) performed on a set of questions (written or verbal) on the subject seated in a certain form and order established by forms and instructions and
    - untargeted survey interviewed on the topic of conversations without questions prepared in advance.

RESULTS AND DISCUSSION

Data processing at farm level is based on the collection and processing of information. Agricultural units analyzed were selected on the basis of scientific criteria of size and organization thus ensuring an appropriate level of representation for the area under study. Depending on the number of ESU agricultural units analyzed were grouped by economic size classes. Economic size class X were selected and analyzed every three farm units so:

Table 1: Land resources, and technical workforce in 2010

Specification	UM	unit A	unit B	unit C
Organizational form		Limited liability company SRL	Limited liability company SRL	Limited liability company SRL
Profile agricultural unit		Mixed (vegetable + animal)	vegetable	vegetable
UAA (surface agricultural used)	**ha**	1789.97	1400	1856
cultivated area	**ha**	1789.97	910	1828
Number of heads that:	**nr.**	80	-	-
-dairy	**nr.**	80	-	-
Permanent staff	**nr.**	14	8	11
Number of tractors	**nr.**	8	5	8
Surface resting on a tractor	**ha**	223.7	182	228.5
Number of combine	**nr.**	3	3	3
The surface is a combined	**ha**	596.6	303.3	609.3

Organizational form of agricultural units under study is limited liability company (SRL). A unit owned the entire area is leased. In unit B of the 1400 ha, 600 ha are owned remaining 800 hectares are leased. In unit C of the 1856 ha, 28 ha and 1828 ha property leased.

The main activity of units B and C is crop and in unit A profile is mixed (plant and animal).Providing agricultural machinery agricultural units is very good and it sure works under its own technology. Permanent labor used is the unit managers and specialists in the field and during periods of peak resort to personal work seasonally.

Crop structure in the total utilized agricultural area in 2010 is as follows:

Table 2: Structure of crops and animals in 2010

Structure	unit A		unit B		unit C	
	ha	%	ha	%	ha	%
Wheat	483.11	27	430.0	47	601.0	33
Corn	528.92	29	100.0	11	32.0	2
Barley	105.05	6	-	-	151.0	8
Sunflower	572.59	32	180.0	20	480.0	26
Rrape	100.30	6	200.0	22	354.0	19
Mustard	-		-	-	210.0	12
TOTALvegetables	**1789.97**	**100**	**910**	**100**	**1828**	**100**
Dairy	80	100				
TOTAL animal	**80**	**100**				

In general, agricultural enterprises have heterogeneous production structure.Thus, the unit A has a high share of 62% grain group, the difference being occupied by oil seed crops, 32% sunflower and 6% rape. Besides crop production, the unit A also has a herd of 80 head of dairy cows, herd which had a downward trend since 2008.Unit B, in terms of production character has a specialty in cereals accounted for 58% and crop oil at a rate of 42%.Unit C, with heterogeneous production structure has a profile characterized by cereal crops production (48%), followed by oilseed crops (45%) and seasoning cultures (12%).

The average yields per hectare are as follows:

Table 3: Average yields per hectare and per animal

Specification	UM	unit A			unit B			unit C		
		2008	2009	2010	2008	2009	2010	2008	2009	2010
Wheat	Kg/ha	3617	3919	3829	3750	3800	3837	3020	2497	2689
Corn	Kg/ha	3650	4418	4159	3000	3200	3100			6563
Barley	Kg/ha	5112	5063	6245				3667	2000	4570
Sunflower	Kg/ha	1286	1892	1484	1800	2000	2111			1779
Rape	Kg/ha	2312	2038	2293	1700	1600	2000	2364	1229	2887
Mustard	Kg/ha							722	342	848
Melons	Kg/ha							12600		
Dairy	l/cap	2414	3313	3500						

The production structure of the 3 units used agricultural developments average yields per hectare for cereals and oilseeds are oscillating from one year to another. In general, average yields achieved in the period specific level of intensification of agriculture with the environment. They were influenced by the climatic conditions of those years, the failure to implement fully the relevant technologies and unused irrigation system to all cultures.

Main economic indicators resulting from the processing of synthetic components in the 3 study agricultural units, include: agricultural output value, total spending, total income from farm unit level, grants and subsidies received by farmers and the finally, calculation and presentation of standard gross margin, the synthetic indicators, high complexity and in accordance with EU norms and standards.

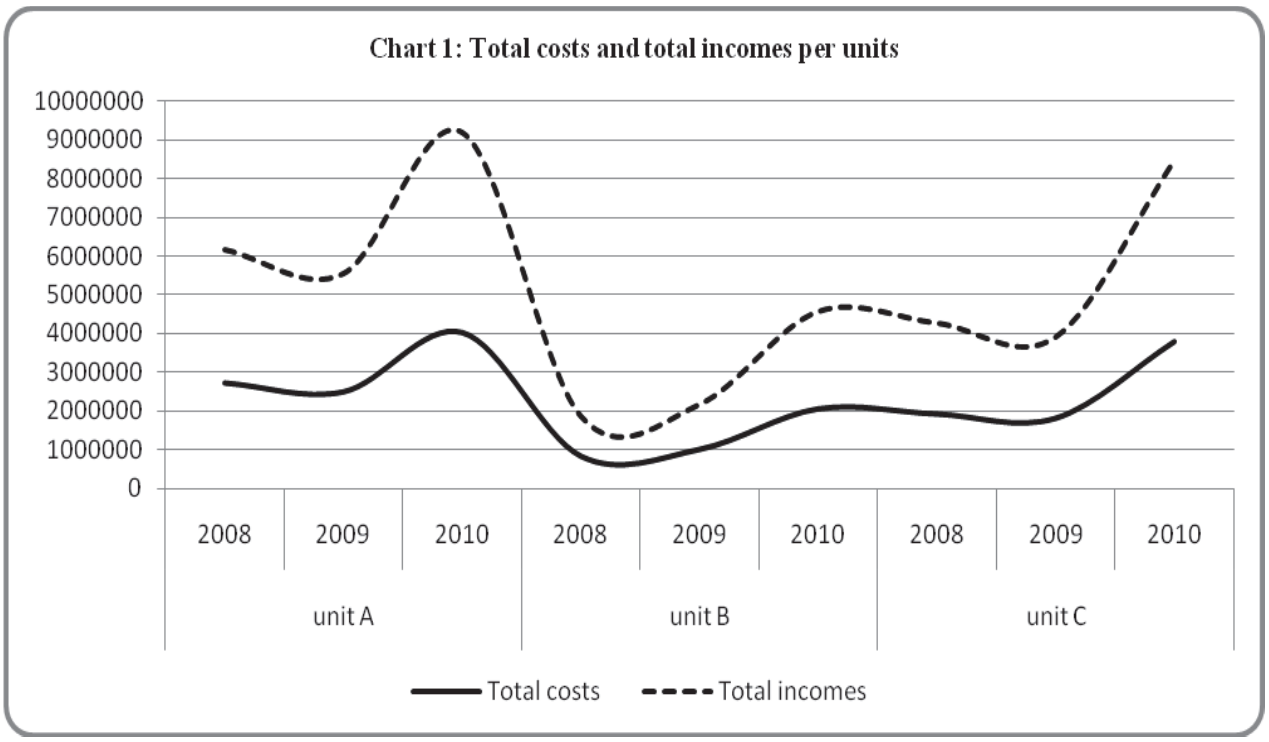
Level indicators are as follows::

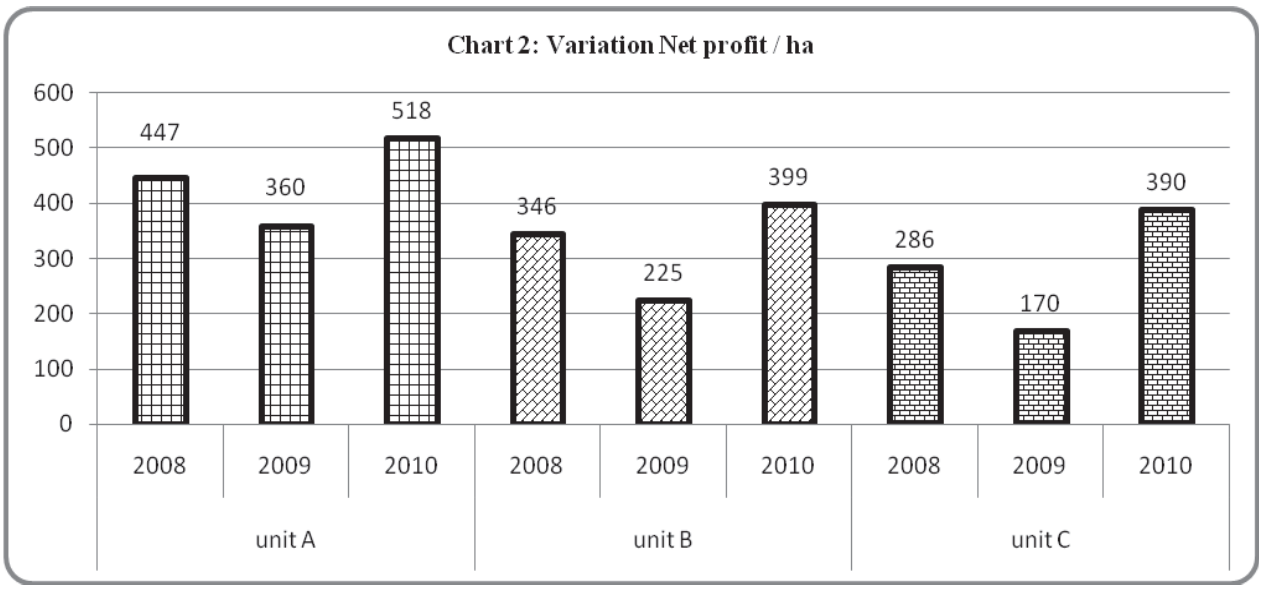
- ✓ The cost of agricultural units had a fluctuating trend during the analyzed period. A unit within most expenditures were made in 2010, expenses increased by approximately 61% compared to 2008. In units B and C shows that the expenditure was doubled in 2010 compared to 2009 levels influenced by the cost of inputs (oil, pesticides, fertilizers, etc.) Applied mechanical works and labor costs etc.
- ✓ In the agricultural units is found that revenues are greater than costs incurred, leading to a positive outcome, resulted in profit or benefit. Thus: in drive A is an increase of revenues in 2010 to approx. 69% compared to 2009, in units B and C value income more than doubled from the same year, production-level influence, the prices of agricultural products and inputs and support policies for farmers.
- ✓ Agricultural prices at the 3 agricultural units did not increase in the same proportion as those of the inputs. Even if the price of agricultural products has been liberalized, it remains under the influence of processors that have an interest in that price to their advantage so as to be reduced.
- ✓ Level of subsidies had a progressive disease; the share of total income per unit for the year 2010 was about 18% in unit A and C and approx. 19% in unit B.
- ✓ Net profit hectare varies from one unit to another. Thus, the unit A recorded a profit in 2010 of 518 lei / ha, profit was approx. 15% higher compared to 2008.Unit B make a profit in 2010 of 399 lei/ha, profit was higher by approx. 15% compared to 2008 and Unit C make a profit in 2010 of 390 lei/ha, profit by approx. 36% higher than 2008.

- ✓ Turnover in agricultural units studied had an increasing trend in the period under review, thus increasing the premise that draws profit growth in future perspective.
- ✓ Within the structure of each studied farm units for each activity was estimated standard gross margin area or number of heads. MBS estimated production activities obtained in each agricultural unit is widespread scientific support at EU level to determine the economic size and technical-economic orientation of agricultural units under study, while giving a key dimension of economic efficiency achieved within agricultural activities.

Table 5. Indicators synthetic

Specification	UM	unit A			unit B			unit C		
		2008	2009	2010	2008	2009	2010	2008	2009	2010
Total costs on holding	lei	2736410	2504600	4043236	839400	1013600	2066000	1931790	1820635	3808500
Total income per farm	lei	3421463	3036716	5147184	1020400	1150020	2498300	2331810	2083018	4656160
Profit Margin on farm	lei	685053	532116	1103948	181000	136420	432300	400020	262383	847660
Product Margin / holding	lei	3421463	3036716	5147184	1020400	1150020	2498300	2331810	2083018	4656160
Total subsidiers / holding	lei	334733	540216	948684	142000	205020	482300	386600	441798	857540
Turnover	lei	3421463	3036716	5147184	1020400	1150020	2498300	2331810	2083018	4656160
Net profit / holding	lei	575444	446977	927316	152040	114593	363132	336017	220402	712034
Net profit / ha	lei	447	360	518	346	225	399	286	170	390
Standard gross margin	euro	619112	456060	789040	170053	154754	357281	514914	388669	884180
Economic size	class			X			X			X
ESU	number	515.9	380.0	657.5	141.7	129.0	297.7	429.1	323.9	736.8





CONCLUSIONS

Based on data obtained in a study of the 3 agricultural units A unit was selected as being representative of the economic size class X in the south of the country.

Table 6: Indicators synthetic agricultural unit - 2010

Indicators	UM	Total agricultural unit A - X
The value of farm production, d.c.:	**lei**	4198500
- **Value of crop production**	**lei**	3935300
- **Value of livestock production**	**lei**	263200
Subsidies	**lei**	948684
Product Margin	**lei**	5147184
Total expenses	**lei**	4043236
Profit before tax	**lei**	1103948
Profit rate / holding	**%**	23
Standard gross margin / farm	**Lei /euro**	3313968 lei / 789040 euro
UDE	**Nr.**	657.5
European size class after MBS		X

- ✓ At this profile production predominates the value of crop production to livestock done, because that includes cereal-grain production for feed consumption.
- ✓ Crop production in 2010 had a total value of 3935300 lei and animal production had a value of 263200lei, which resulted in a value of agricultural output unit at 4198500 lei. Comparison with the area of culture, this indicator is 2345 lei/ha.
- ✓ Total subsidies in the agricultural unit in 2010 was 948684 lei, the average about 530 lei/ha. This is a high amount of subsidies to support domestic agricultural production, which may impact the overall level of production achieved and incentives to producers.
- ✓ Gross product in this way has a value of 5147184 lei and 2875 lei/hectare, including livestock.
- ✓ Total expenses recorded in the agricultural unit are 4043236 lei, of which 3763236 lei for vegetable production and 280.000 lei for animal production. It is noted that the value of crop production and the total expenses of this type of activity, have a dominant proportion to animal production, but that while economic efficiency achieved is superior in crop production, livestock from which they directly reflected in the gross margin.

- ✓ The standard gross margin achieved in crop production was 3087308 lei, representing about 60% of the gross product. Standard gross margin levels obtained in animal production was 226660 lei, which recorded a lower value than crop production and a lower rate of about 4%.In all production activities performed in this type of agricultural unit were obtained 3313968 lei, MBS efficiency rate of about 64% can not ensure expenses.
- ✓ Standard gross margin (euros) at the rate of 2010 is 789040 euros. Is determined based on its economic dimension is of 657.5 agricultural unit ESU, the Class X fits in economic size.

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