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TECHNICAL-ECONOMIC ANALYSIS OF A FAMILY FARM CASE STUDY – GHERASENI PARISH , BUZAU COUNTY

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Summary

In Romania, family farms strengthen agriculture stability wise through structural changes in multifunctional development, merchandising of vegetable products, making investments and depositing products.

The family farms production structure was formed under factors like: natural environment, market, financial capital, the risk and uncertainty related to selling products, consumption.

At the same time it's considered to be the central element of the agricultural structures and it's regarded in independence with the elements that contribute in obtaining agricultural products.

Key word: production structure, agricultural production, work productivity

INTRODUCTION

The farm's orientation towards these crops is given by the necessity of ensuring vegetable products for the family from their own production and of trading on the market of an important part of the acquired products. The manpower is represented, usually, by the family members and sometimes by the temporary staff in order to meet work requirements in optimal time.

MATERIAL AND METHOD

The research methodology consisted in a documentation study accomplished with the help of a direct interview with questions regarding different aspects of economical activity of the farm. The internal records of the farm were the sources of information.

RESULTS AND DISCUSSIONS

The farm has a mixt vegetable profile, characterised by the grain, oleaginous, leguminous crops. The household orientation towards these crops is given by the necessity of ensuring vegetable products for the family from their own production and trading on the market of an important part of the acquired products.

How the land is used

Table 1

Specification	Hectare	Property	Rent	% arable form the agricultural area
Agricultural area	32	23	9	-
Arable	32	32	9	100

The agricultural area is represented by the arable (table 1), made by plots, located at 3 km distance from the holding office.

The region had a mild climate typical for the Sub Carpathians of Curbature. The local landscape of depression closed all around by high hills has created topoclimatic conditions for sheltering against the continental tinted climate from the Romanian Plain. From a geological point of view the soils are represented by brown chernozems, with pH 6,3-6,7. From a geotechnical point of view, the land consists of a clay or macropores sandy powder with a 2,5-3,0 m thickness, and the ground water is at a 6-7 m depth from the natural ground which increases during rainy seasons and decreases during drought. Regarding environmental quality, no negative aspects were reported. The entire area belongs, with property title, to the head of the holding.

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The main technical means**Table 2**

Facilities	2012	2013
Tractor	1	1
Plows	2	2
Disc harrow	2	2
Seeders for straw	1	1
Seeders for weeding	1	1
Transport trailers	1	1

Noted that the supplied machines are maintained in proper technical condition consisting, mainly of those that are necessary for the basic ground-work and for seeding the crops. Not found among the technical resources, combines for harvesting grains and oleaginous, which, in case of dysfunctions in the relation with the services providers, there can be delays in carrying out work (table 2).

Income, expenses and financial results**Table 3**

Specification	2012	2013
Total income, from which:	30685	35177
-Operating income	27131	31660
-Other income	1066	1055
Total expenses, from which:	30385,8	32508,9
-Expenses from operation	30005,8	32101,9
-Financial expenses	380,0	407,0
Financial results, from which:	299,2	2668,1
-Gross profit	299,2	2668,1
-Net profit	251,3	2241,2
-Profit rate %	0,8	6,8

The economical results of the farm show that it pursued an activity that led to a relatively low profit, but allowed the resumption of the production process(table 3).

Generally, the vegetable production, does not generate high values of economic profitability, therefore, a measure would be to orient the producer towards intensive nature crops, such as vegetables or mushroom farm.

The dynamic and structure of the production expenses

In the production expenses structure the largest share is held by the operation expenses which show the effort made by the farm in order to obtain production.

Structure of the production expenses**Table 4**

Specification	2012	2013
Material expenses, from which:		
-seed	7872,1	7718,2
-fertilizer	8684,2	10237,0
-materials	1088,7	1287,0
-fuel	6644,0	7321,0
-other expenses	113,8	121,7
Manpower expenses	5063,0	5417,0
-salary	3592,0	3851,0
Rent	1471	1566
Financial expenses	380	407
Total expenses	30385,8	32508,9

This makes analysing them, the share that they hold necessary and finding a solution in order to reduce their volume.

Agricultural production

The cultivated area is divided by the farm manager in three groups of crops: grain, oleaginous and leguminous beans. The largest share is held by grain, given their extensive nature, which needs large areas, in order to obtain a certain level of total production (table 5).

Agricultural production

Table 5

Specification	2012		2013	
	ha	%	ha	%
Total grain, from which:	22,0	68,8	19,5	61,0
Wheat	10	31,3	9	28,2
Corn	12	37,5	10,5	32,8
Total oleaginous, from which:	8,7	27,2	11,2	35,0
Sunflower	5,7	17,8	7,2	22,5
Canola	3,0	9,4	4,0	12,5
Total leguminous beans, from which:	1,3	4,0	1,3	4,0
Beans	1,3	4,0	1,3	4,0
Total arable	32	100	32	100

Average and total productions

Good average productions have been registered for all crops, but with variations within the last two years of analysis. There have been large oscillations for the sunflower and the canola crops due to the lack of irrigation, which led to the decrease of the production level. Therefore, production factors allocation is necessary so that it can stimulate production growth to a higher level.

Evolution of average and total productions

Table 6

Specification	2012		2013	
	Kg/ha	tons	Kg/ha	tons
Wheat	2320	23,2	3070	27,6
Corn	3100	37,2	3510	36,9
Sunflower	1090	6,2	1350	9,7
Canola	1210	3,6	1080	4,3
Beans	2060	2,68	2670	3,47

Family farm staff

The manpower situation is typical to that of the family, the number of existing person being reduced and partially unqualified. They call day workers that contribute to making the harvest production.

The management is tentative, the decisions regarding the structure of the crops or production factors allocation belong to the operation manager.

Work productivity

Operation income per employee are bigger than the salary expenses, within the two years of analysis.

Corelations within work productivity and salary expenses

Table 7

Specifiction	UM	2012	2013
Operation income	Lei	27131	31660
Salary expenses	Lei	3592	3851
Salary expenses share in the operation expenses	%	13	12
Staff	Nr.	6	7
Operating incoims	Lei/pers	4521,8	4522,9
Salary expenses	Lei/pers	598,7	550,1
Dymanic of income form operation per person	%	76,4	100,0
Dymanic of the salary expenses per person	%	83,9	91,9

Production and selling prices level have influenced income in a positive way. The increases were made on the aoleaginous products and regarding grain products, the income value was decreasing determined by the merchandise production and less by the prices which had a growing tendency. The wheat and the corn represented the rent, hence the differences compared to the other products from the structure.

SWOT Analysis**Strenghts**

- The farm has an acceptable dimension that allows production activity;
- The owned surface belongs to the arable category which can be accessible to diversification of the production structure by joining some intensive natured crops, that are profitable, by introducing vegetable crops.
- Orientation toards inputs procurement, on which production system can be modernised and increase work productivity.

Weaknesses

- The low degree of profitability of some crops, which affects the financial state of the operation;
- The lack of irrigation generates malfunctions in production results (corn);
- Increasing the technical equipment degree is necessary, especially for harvesting and transport;
- Preparation of the manpower and using the knowledge in order to develop the farm;

Opportunities

- Targeting a wider market outlet;
- Buying performant technical equipment which reduces consumption and is adapted to the existing structure;
- Combining vegetable production with animal production, under the conditions of a land area for cultivation of fodder plants;

Threats

- Increasing competition in farms with similar activity;
- Increasing expenses due to production factors.

CONCLUSIONS

Production structure defines the activity of a farm and has a different relevance for how to ensure enhancement of operating capital and the economic results they will achieve. Practical viability of a solution obtained by the use of modeling the structure of production depends on the veracity of " input " and the ability to identify environmental behavior.

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