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FARM MANAGEMENT THROUGH COSTS AND ECONOMIC PERFORMANCE OF ACTIVITIES

MANAGEMENTUL FERMEI PRIN COSTURI SI REZULTATE ECONOMICE ALE ACTIVITATILOR

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Abstract: *Agricultural producer has as objective either the maximization of the profit, or the determination of the combination of production factors so as to achieve a certain amount of products at a minimum cost. The economic behaviour of the agricultural producer is an expression of its involvement in the market economy realities. Estimation of unit cost for each product, is a priority for farmers, because it characterizes farm's consumption and is the premise of the economic mechanism of recovery costs through revenue. Determination of cost production and financial result for existing crops in a vegetable farms, can be used as tools of management, that summarizes the quantity and quality of effort and effect, for increasing the economic efficiency of activities.*

Key words*: farms, production cost, financial results, economic performance*, *management tool.*

INTRODUCTION

Agricultural producers want to obtain maximum results with limited and expensive resources, and they need flexibility to find out optimal solutions. Through the economic management's process they insist upon efficient use of all resources that the farm has. The analytical information about the efficient use of production factors are obtained by determining costs. [2] The cost of production and the knowledge of its level, structure and dynamics are indispensable for the agricultural producer in order to carry out an optimal activity The cost designates a part of the selling price, and some expenses supported by the traders; the price surplus (over the cost of production) represents the profit or the benefit. [4]. The cost of production ensures the measurement of the monetary effort to achieve the

unit of product, the profit reveals the effect obtained, and they are principal instruments in a rational management at microeconomic level. [1]

MATERIALS AND METHOD

The present work is a case study in one of the vegetable farms in the South-Muntenia Region, with a total surface of 15 ha, specialized in the early potato crop, (the potato being cultivated on the entire surface) and the cabbage (on half of it). At this crops was determined the direct and total cost of production, the incomes and the financial results, taking into account a minimum and maximum level of: production, inputs/outputs quantities, average prices of production factors used and of actual expenditure made. Determination of the cost and economic results were done for one cultivated hectare as reference unit, using the maximum and minimum level of direct expenditure and the actual total expenditure made by the producer in the operating activity, correlated with the production obtained per hectare.

RESULTS AND DISCUSSIONS

The cost of production is an indicator of reference at the level of economic efficiency. Tracking the actual cost of production expenses offers to the agricultural producers the possibility to know the volume of production factors consumed and the efficiency of these expenditures, compared with the rules of expenses stipulated, with the level of expenditures that other farmers make or with the planned level. Through all these given information, costs stimulate agricultural producers to introduce the technical progress, to rise workers qualification, to organise production and labour, to administer with maximum efficiency production factors. As part of the sale price, the cost of production is the essential indicator to determine the offer cost by the agricultural producer in the act of production negotiation made directly with buyers or economic agents. Knowing the exact level of production expenses, the agricultural producer will know between what limits to negotiate the selling price, so as to recover these expenses and achieve also a profit.

The economic behaviour of the agricultural producer taken into study, as an expression of its involvement in the market economy realities, relates to the necessity of optimal administration of resources, that are

objectively limited, in order to satisfy as fully as possible and balanced the unlimited needs and in continuous diversification.

The agricultural producer has as objective either the maximization of the profit, or the determination of the combination of production factors so as to achieve a certain amount of products at a minimum cost.

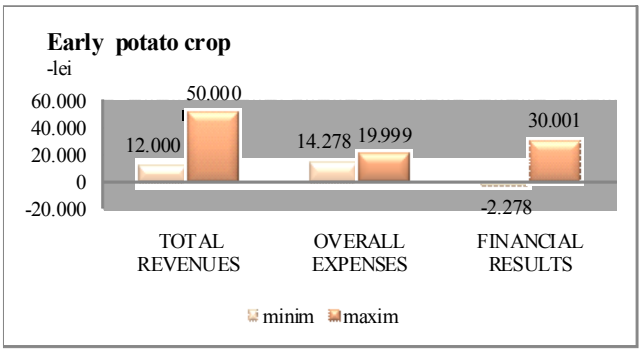
In the crops examined was taken into account the version A (the minimal version) and the version B (the maximal version). At the crop of early potato, (table 1) the total expenses are composed, in the case of the minimal version, from 83% direct expenses per crop and 17% common expenses per farm, that are for the potato crop, and in the case of the maximal version from 87.86% direct expenses per crop and 12.13 % common expenses per farm, that are for the early potato crop.

Becomes conspicuous the share growth of direct expenses in the maximum version, which demonstrates the fact that the agricultural producer uses inputs of high quality with higher prices, but which are correlated with the increase of production and of received incomes. In the direct expenses were included the material expenses: seed expenses (30.37%, version A and 44%, version B), chemical fertilizers (29.95%, version A and 22.19 %, version B) pesticides (10.88 %, version A and 7.34%, version B) and other direct material expenses (14.28%, version A and 12.55%, version B), expenses with works and services rendered by third parties with values of 2-3% in total of direct expenses, expenses with mechanical and manual labour (11.79%, version A and 9.82%, version B), expenses with crop insurance (1.01%, version A and 2.84%, version B). Common expenses are composed of administrative expenses, amortization and repairs, rents as well as expenses with taxes and duties that are common to the farm.

Only through a more accurate simultaneous estimation of the production expenses and of the alleged selling price of agricultural products, can be appreciate if obtained incomes will exceed expenses and will be obtained an acceptable rate of return. Therefore, the calculation of the cost of production is recommended to be done before moving to the actual production.

Table no. 1 Early Potato Crop **1 hectare**

Specification/Variante	Quantity (kg)		Price - lei/ UM		Value (lei)	
	min	max	min	max	min	max
I. PRODUCTION (UM - kg)	**15.000**	**50.000**	**0,8**	**1,0**	**12.000**	**50.000**
II. OVERALL EXPENSES (A+B)					**14.278**	**19.999**
II. A. DIRECT PRODUCTION EXPENSES					**11.851**	**17.572**
1. Potato seed (kg)	2.400	2.500	1,50	3,10	3.600	7.750
2. Fertilizers					3.550	3.900
3. Pesticides					1.290	1.290
4. Other direct expenses					1.693	2.206
5. Works and services performed by third parties					200	200
6. Labour expenses					1.398	1.726
6.1. Mechanical (hours)	60,0	61,0	6,5	7,2	390	439
6.2. Manual (ZN)	16,8	19,8	60	65	1.008	1.287
7. Crop insurance					120	500
II. B. JOINT EXPENSES					**2.427**	**2.427**
III. DIRECT PRODUCTION COST (lei/kg)					**0,79**	**0,35**
IV. PRODUCTION COST (lei/kg)					**0,95**	**0,40**
V. TOTAL REVENUES					**12.000**	**50.000**
VI. FINANCIAL RESULTS					**-2.278**	**30.001**
VII. RETURN RATE OF COSTS					**-16%**	**150%**



The direct cost of production varies between 0.79 lei/kg (minimum version) and 0.35 lei/kg (maximum version), and the total cost is 0.95 lei/kg (minimum version) and 0.40 lei/kg (maximum version) which denotes the fact that by increasing expenses correlated with the increase of production, can be obtained a lower cost of production than in the case in which the total expense are minimum. At the crop of early potato, the production obtained in the minimum version's case was 15000 kilos, and in the maximum version's case 50000 kilos. The difference of production over 3.33 times higher in the maximum version's case can be explained through the acquisition of some potato varieties for seed with high biological value,

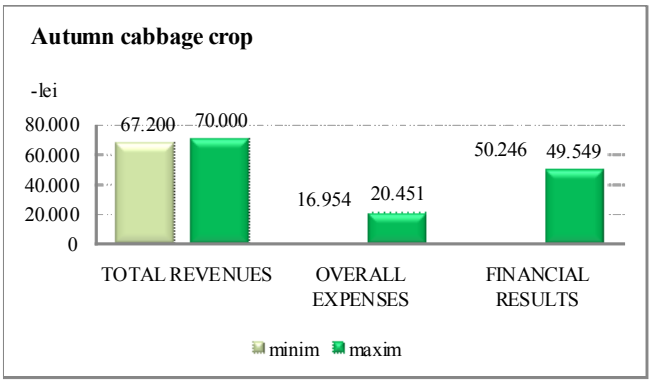
free of pathogens and with high productivity. Correlated with the production obtained, the incomes obtained in the case of version B have exceeded 4.16 times the incomes obtained by trading production in the case of version A, which had a selling price lower with 25% than the version B because of the poorer quality of the potato obtained. The economic calculation, the functioning and development of activity on the principle of efficiency take into consideration the relation between cost and the selling price of every economic good, relation as from a part to a whole.

In the case of A, the society registers a loss of 0.15 lei/kg, and in the case of version B, it's registered a profit equal with 0.6 lei/kg. The efficiency of expenditures can be appreciated in relation with the results obtained, based on the return rate of the consumed resources, known also as the return rate of costs (Profit for turnover/ Expenses for turnover x100). [3] In the case of version A, stands out the fact that the incomes obtained by production capitalization are lower than the total expenses per crop, so the crop is unprofitable, and the return rate of costs is in this case -15.96%, and in the case of version B, the return rate of costs is 150% .

At the autumn cabbage crop, (table 2) the total expenses of production are composed, in the minimum version's case from 84.48% direct expenses per crop and 15.51% common expenses per farm, that go to potato crop, and in the maximum version's case from 86.97% direct expenses per crop and 13.02% common expenses per farm, that go to the autumn cabbage crop. Becomes conspicuous the share growth of the direct expenses in the maximum version, which demonstrates the fact the agricultural producer uses inputs of high quality with higher prices, but which are correlated with the increase of production and of the incomes obtained. In the direct expenses were included the material expenses: expenses with seedling (20.10%, version A and 28.10%,version B, the difference coming from the possibility of procuring the seedling: from the own production, version A, or purchase, version B), expenses with pesticides(4.88 %, version A, and 4.49%, version B) and other direct material costs(5.77%, version A and 4.90%,version B), expenses with works and services provided by third parties with values of 1-1.5 percent total direct expenses, expenses on mechanical and manual labor (62.79%, version A and 57.15%, version B), crop insurance costs (4.69%, version A and 3.93%, version B).

Table no. 2 Autumn cabbage crop **1 hectare**

Specification/Variante	Quantity (kg)		Price (lei/ UM)		Value (lei)	
	min	max	min	max	min	max
I. PRODUCTION (UM - kg)	**67.200**	**70.000**	**1,0**	**1,0**	**67.200**	**70.000**
II. OVERALL EXPENSES (A+B)					**16.954**	**20.451**
II. A. DIRECT PRODUCTION EXPENSES					**14.323**	**17.788**
1. Cabbage seedling (thousand blades)	48	50	60,00	100,0	2.880	5.000
2. Fertilizers					0	0
3. Pesticides					700	800
4. Other direct expenses					827	872
5. Works and services performed by third parties					250	250
6. Labour expenses					8.994	10.167
6.1. Mechanical (hours)	36,0	38,0	6,5	7,2	234	274
6.2. Manual (ZN)	146,0	152,2	60	65	8.760	9.893
7. Crop insurance					672	700
II. B. JOINT EXPENSES					**2.631**	**2.663**
III. DIRECT PRODUCTION COST (lei/kg)					**0,21**	**0,25**
IV. PRODUCTION COST (lei/kg)					**0,25**	**0,29**
V. TOTAL REVENUES					**67.200**	**70.000**
VI. FINANCIAL RESULTS					**50.246**	**49.549**
VII. RETURN RATE OF COSTS					**296,4%**	**242,3%**



Common expenses represent 15.51% (minimum version) and 13.02 (maximum version) consisting of administration expenses, depreciation and repairs, rentals and as well tax expenses and common farm taxes.

The production obtained from the crop of autumn cabbage in the minimum version case was of 67200 kilograms, and in the maximum version case of 70000 kilograms, which was sold at the price of 1 RON /kg. Related with the production obtained, the incomes in version B exceeded 4% revenues by selling production in case A. The direct cost of production

on autumn cabbage varies between 0.21 RON/kg (minimum version) and 0.25 RON/kg (maximum version), and total production cost is 0.25 RON/kg (minimum version) and 0.29 RON/kg (maximum version) which shows the fact that on this crop, reducing costs, given that the production does not record significant oscillations, it is important to get a lower production cost.

In version A case, the society records 0 profit on the product unit of 0.75 RON/kg, and in the version B case, is recorded a profit equal to 0.71 RON/kg and we can say that in conditions of a certain profit margin, the size of the costs puts pressure on the price.

The consumption efficiency compared with the obtained results, on the return rate of consumed resources, or the return rate of the costs, in minimum version case, 296.37%, and in the maximum version 242.29%,which shows that the return rate is better in case of lower expenses.

To reduce the cost the producer must look and find reserves to reduce consumption of inputs, to act simultaneously on all factors of production in all phases of economic activity to apply possible measures for reduction on the costs according with the competition requirements imposed by the market. The reduction of production cost should not take place without negative influences on the quality of agricultural products, but rather, simultaneously must ensure a quality bonus. If the reduction of the costs will be made due to lower quality is anti-economical.

CONCLUSIONS

1. The economic behaviour of the agricultural producer is an expression of its involvement in the market economy realities, relates to the necessity of optimal administration of resources, which are objectively limited.

2. In the decisions on the resources allocation, production and structure volume, size or restriction of finished products, technological innovation, the production cost represents an extremely useful economical instrument etc.

3. The producer must look and find reserves to reduce consumption of inputs, to act in all phases of economic activity, to apply possible measures for reduction on the costs, according with the competition requirements imposed by the market.

4. By increasing expenses correlated with the increase of production, can be obtained a lower cost of production than in the case in which the total expense are minimum.

5. Reduction of costs causes stability or even the reduction of the prices, leads to increase economic performance and provides special advantages on the market.

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