

STUDY ON THE COMMON AGRICULTURAL POLICY INFLUENCE ON ECONOMIC EFFICIENCY OF AGRICULTURAL HOLDINGS (CASE STUDY AT SC AGRO INTERNATIONAL SRL GALAȚI)

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Abstract

Creating a performing management in agriculture, as in any branch of the national economy is possible only knowing the perfect evolution of various economic and financial phenomena during a year of activity, their variation from the provisions and the dynamic evolution.

Based on these data, corrective measures of the negative findings can be determined and extending the positive ones, to raise to a top speed the return of all financial and economic activities of farms, at the level of competitiveness imposed by the requirements and the market economic demands.

Such competence can be gained through economic and financial analysis on the farm activities.

Theoretically, the economic and financial analysis, study the methodology of financial and economical knowledge of the agricultural enterprise, the factors and causes that caused it, and internal reserves to improve results through more efficient use of available resources.

Basically, economic and financial analysis tool acts as a scientific research of farms. It is equally a **diagnostic function** - helping to highlight various economic and financial results in terms of causal relations that have determined the stage requirements, and also a **control function** - helping to improve these results.

The study was conducted in S.C. AGRO INTERNATIONAL S.R.L Galati, who owns a farm specialized in raising dairy cows located in the Branișteea village, Galati county, and was based on the following system of indicators: -total expenditure by category of animal; production cost and selling prices; total revenue and grants, by category of animals; net profit and net return rate on total farm activity; gross profit and gross return rate on total farm activity; gross profit and gross return rate on types of activities (operating activities, financing activities and exceptional activity); gross profit and gross return rate on organizational structure; gross profit and gross return rate on various products.

Key words: agricultural policy, farms, cow milk, economic efficiency

In an agricultural commercial company, with complex profile, achieving a competitive return from the sale of production is a fundamental management problem. For reasons of efficiency, a diagnosis analysis is necessary, with synthetic character on gross profitability dynamics of total production, as final expression of the economic efficiency of the entire activities of the company.

In the various organizational structures of holdings, total profitability of production analysis involves certain features, being needed a research of causal system on its most concrete aspects.

Whatever the business objectives are, to ensure continuity of its activity, must be satisfied two major limitations, namely:

- **profitability**, that company's ability to obtain a monetary surplus, that allows it to meet commitments and to ensure development;

- **financial balance**, expressing the company ability to harmonize the resources and their uses, restriction that must ensure a permanent solvency of the company.

Profitability is a restriction that is manifested in different but interrelated aspects: ensuring remuneration of production factors and invested capital, and resources management in terms of efficiency and effectiveness. A complete economic and financial diagnosis can not be achieved by neglecting the couple return-risk.

The risk is an exogenous variable, antonyms to profitability. Risk effects are contradictory; the question is a certain level of risk rule to achieve expected profitability. Risk can be translated as the return variability against the average profit in the last years, the company's inability to adapt in time and at lowest cost, to

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changes in environment conditions. Consequently, profitability is subject to the general risk condition in which businesses operate.

Risk assessment is performed using the operating break-even point, met in literature as the critical point, neutral, or equilibrium point.

Breakeven point allows linking the outcome variation and activity variation volume of the enterprise, marking that volume of company activity, which provides operating expenses, in the condition of a null result. Threshold of profitability ensures in fact a profitable business.

By the breakeven point analysis, are provided information on the volume of activity that allows profit, the period for covering the expenses, the utilization degree of production capacity accordingly.

MATERIAL AND METHOD

Economic and financial analysis uses a series of specific methods of analysis, namely:

- **qualitative methods:** *the concordance method, difference method, combined method, the method of concomitant variations, decomposition on elements method, division in time and space method, group method, comparison, balance method;*
- **quantitative methods:** *methods for determining of dynamic type, chain substitution method, the method of determining the action of isolated factors, matrix calculation method, the balance method, all methods for operational research, linear programming, dynamic programming, decision theory, game theory, critical path method;*
- **determining methods of statistic – probabilistic type:** *correlation method, operational research methods (Markov chains, Poisson processes, threads waiting theory, Pert method, etc.).*

To analyze the general situation of the profitability of a farm is considered the following system of indicators (C. Cojocaru, 2000):

- net profit and net return rate on total farm activity;
- gross profit and gross return rate on total farm activity;
- gross profit and gross return rate on types of activities (operating activities, financing activities and exceptional activity);
- gross profit and gross return rate on organizational structure;
- gross profit and gross return rate on various products.

In the composition of the corresponding expenditures of revenues are included the income

tax expense calculated and shown (paid) during the year.

The accounting system in Romania, according to tax laws and regulations, namely the Income Tax Ordinance nr.17/2000, the gross profit is determined based on taxable profit relationship (Ristea M., C. Cucu, C. Lazarescu, 1997):

$P_{fb} = V - Ch + Ch_n - D_f$, in which: V – income; Ch – the cost corresponding to the income; Ch_n – non-deductible costs; D_f – tax deductions.

The structural analysis of the total net income from farm activity is carried out using two methods corresponding to the two ways of determining the net profit at this level of investigation:

a) as part of the total farm added value, using the following relations:

$P_{fn} = VA - E_a$, in which: VA – added value of the total activity of the unit; E_a – elements comprising the total added value;

b) as part of the economic-financial activity of the total farm, using the following relations:

$P_{fn} = P_{fb} - I_{pf} = (V - Ch) - I_{pf}$, in which: P_{fb} – total gross profit from the farm activity for sold products; V – total income from farm activity; Ch – total costs on total agricultural holding activity; I_{pf} – income tax (related to income earned and unearned).

An analysis of gross profit and rate of return by type of activity, allows the drawing of conclusions which covers all sides of profitability to the most concrete aspects.

Gross profit for total production for sale

is a direct function of two factors namely:

- **total value of production for sale**, respectively, total revenue from production for sale (turnover);
- **gross profit at 1,000 lei income for total production for sale**, ie expenditure in 1,000 lei income from total production for sale – profitability rate on such income (factor with qualitative character).

Also, according to this model, total gross profit from the sold production depends on the following indirect factors:

- through total revenues from sold production, depends on the physical volume of sold production (Q_v) and the average selling price (p), excluding VAT, per unit of sold product;
- through gross profit at 1,000 lei income for total production for sale, respectively through 1,000 lei income from total production for sale, depends on the structure of total production for sale (s), the average selling price (p), excluding VAT, per unit of sold product and the cost per unit of product for sale (c).

The study was conducted in S.C. AGRO INTERNATIONAL S.R.L. Galati, who owns a specialized farm in raising dairy cows located in the village Braniște, Galati County.

RESULTS AND DISCUSSIONS

S.C. AGRO INTERNATIONAL S.R.L. Galați owns a farm with dairy cows in the village Branistea, Galați County, located in two stable taken in the free use by Government Emergency Ordinance no. 168/2002. Feed are made in the

farm, by cultivation of rented land. In the structure of feed, alfalfa hay is predominate (34.6%), followed by corn for grain and silage corn (tab. 1).

Table 1

The structure of cultivated forage in arable land

No.	The culture name	2008	2009	2010	Average	
		hectare	hectare	hectare	hectare	%
1	Alfalfa hay	24.78	27.98	27.98	26.91	34,6
2	Corn for silage	18.45	16.50	21.50	18.81	24.2
3	Corn for grain	23.70	16.50	18.56	19.58	25,2
4	Other forage plants	7.98	13.60	15.70	12.42	16,0
TOTAL FORAGE PLANTS		74.91	74.58	83.74	77.72	100.0

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

The number of cows increased from 66 to 80 heads, with calves and young cattle in 2010 are 210 heads (table 2).

As regards subsidies, it was in each of the three years analyzed in dairy cows, and in 2009 and 2010, at the youth cattle.

In 2009 at dairy cows, grants accounted for 44.36 % of revenues and increases in 2008 by 55.20 % and in 2010 the increases were 95.60 %, determined by the grants for milk delivered to processing (table 3).

Table 2

Trends in livestock cattle, by age, in the period 2008-2010

No.	Category of animal	2008	2009	2010	Average	
		heads	heads	heads	heads	%
1	Dairy cows	66	73	80	73	30.9
2	Calves 0-3 months	32	30	34	32	17.5
3	Calves 3-6 months	8	30	32	23	12.6
4	Youth cattle 6-12 months	17	24	12	18	9.8
5	Youth cattle over 12 months	29	29	52	37	20.2
TOTAL LIVESTOCK CATTLE		152	186	210	183	100.0

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Table 3

The evolution of total revenues and subsidies in the dairy farm S.C. AGRO INTERNAȚIONAL S.R.L. Galați, in the period 2008-2010

No.	Category of animal	2008		2009		2010	
		Subsidies lei	Revenues lei	Subsidies lei	Revenues lei	Subsidies lei	Revenues lei
1	Dairy cows	186780	421080	287985	508664	365360	558240
2	Calves 0-3 months	4800	17152	-	16020	-	19346
3	Calves 3-6 months	1200	4480	-	12570	-	16128
4	Youth cattle 6-12 months	0,00	6426	11880	18888	5940	11436
TOTAL		192780	449138	299865	556142	371300	605150

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

In absolute values, the subsidies increase was due to herd increase from 152 heads in 2008 to 210 heads in 2010 as a result of accessing European funds by the company by submitting a project on the measure 3.1-Investments in farms.

Due to livestock increase, the need for labor increased from 8.98 to 10.78 workers and the salary increased by 78.6% over the same period.

The recovery of production leads to incomes, which are different depending on quantity and market prices. Total revenues correlated to the quantities of products and the sale

price, which is less than in the last two years, remained the same. However, revenues increased in 2008-2010 from 449,138 lei to 605,150 lei (+ 34.73%). In the average of analyzed period, the largest share in the revenue structure, is hold by dairy cows, with 90.5%, followed by young cattle over 12 months (4.9%) etc. (table 4).

Analyzing the total costs of production, there is an insignificant change from year to year, the largest share is holding by feed costs which are 78.76% of total (table 5).

Table 4

The evolution of total operating revenues by category of animals, at S.C. AGRO INTERNATIONAL S.R.L Galați, in the period 2008-2010

No.	Category of animals	2008	2009	2010	Average	
		Thousand lei	Thousand lei	Thousand lei	Thousand lei	% of total
1	Dairy cows	359.7	477.4	523.2	453.43	90.5
2	Calves 0-3 months	4.4	4.6	5.2	4.73	0.9
3	Calves 3-6 months	2.2	9.2	9.9	7.10	1.4
4	Youth cattle 6-12 months	10.4	16.4	8.2	11.66	2.3
5	Youth cattle over 12 months	17.8	19.9	35.6	24.43	4.9
TOTAL		394.5	527.5	582.1	501.35	100.0

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Table 5

Total production costs by category of animals, at S.C. AGRO INTERNATIONAL S.R.L Galați, in the period 2008-2010 – lei/head

Year	Category of animals			
	Dairy cows	Calves 0-3 months	Calves 3-6 months	Youth cattle 6-12 months
2008	3756	360	389	307
2009	3783	416	328	321
2010	3856	421	381	532
Average	3798	399	366	387

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Table 6

Profitability of animal production, by category, at S.C. AGRO INTERNATIONAL S.R.L Galați, in the year 2008

Indicators	Category of animals			
	Dairy cows	Calves 0-3 months	Calves 3-6 months	Youth cattle 6-12 months
Total income (lei/head), of which:	6380	536	560	378
Income from subsidy	2830	150	150	-
Total costs of main production (lei/ head)	3756	305	389	307
Gross profit (lei/ head)	2624	231	171	71
Net profit (lei/ head)	2282.88	200.97	148.77	61.77
Net profit rate - %	60.78	65.89	38.24	20.12
Costs at 1000 lei incomes - lei	588.71	569.03	694.64	812.17
Incomes at 1000 lei costs (with subsidy) - lei	1698.62	1757.38	1439.59	1231.27
Incomes at 1000 lei costs (without subsidy) -lei	945.15	1265.57	1053.98	1231.27
Gross margin	1.70	1.76	1.44	1.23

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Assessing the profitability of production, there is obtained a net profit in the three years between 2282.88 lei - 2716.14 lei / head in dairy cows and lower in calves and young cattle. An income of 1000 lei is obtained with a cost of 542.91 to 588.71 lei in dairy cows under the conditions of subsidy production (table 6, 7 and 8). In 2009, in dairy cows, there was an increase in net

profit compared to 2008, from 60.78% to 73.25%. Also, the costs for 1,000 lei revenues, falls by 7.78%, and gross margin increased by 8.23%.

In 2010, revenues and expenses were close to 2009 and calculated profitability indicators have changed slightly, but were higher in 2008.

Table 7

Profitability of animal production, by category, at S.C. AGRO INTERNATIONAL S.R.L Galați, in the year 2009

Indicators	Category of animals			
	Dairy cows	Calves 0-3 months	Calves 3-6 months	Youth cattle 6-12 months
Total income (lei/head), of which:	6968	534	419	787
Income from subsidy	3945	-	-	495
Total costs of main production (lei/ head)	3783	416	328	321
Gross profit (lei/ head)	3185	118	91	466
Net profit (lei/ head)	2770.95	102.66	79.17	405.42
Net profit rate - %	73.25	24.68	24.14	126.30
Costs at 1000 lei incomes - lei	542.91	779.03	782.82	407.88
Incomes at 1000 lei costs (with subsidy) - lei	1841.92	1283.65	1277.44	2451.71
Incomes at 1000 lei costs (without subsidy) -lei	799.10	1283.65	1277.44	909.66
Gross margin	1.84	1.28	1.28	2.45

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Table 8

Profitability of animal production, by category, at S.C. AGRO INTERNATIONAL S.R.L Galați, in the year 2010

Indicators	Category of animals			
	Dairy cows	Calves 0-3 months	Calves 3-6 months	Youth cattle 6-12 months
Total income (lei/head), of which:	6978	569	504	953
Income from subsidy	4567	-	-	495
Total costs of main production (lei/ head)	3856	421	381	532
Gross profit (lei/ head)	3122	148	123	421
Net profit (lei/ head)	2716.14	128.76	107.01	366.27
Net profit rate - %	70.44	30.58	28.09	68.85
Costs at 1000 lei incomes - lei	552.59	739.89	755.95	558.24
Incomes at 1000 lei costs (with subsidy) - lei	1809.65	1351.54	1322.83	1791.35
Incomes at 1000 lei costs (without subsidy) - lei	625.26	1351.54	1322.83	860.90
Gross margin	1.81	1.35	1.32	1.79

Source: Processed data after primary evidence of S.C. AGRO INTERNATIONAL S.R.L Galați

Net profit rate has the highest value to dairy category, 73.25% in 2009, dropping to 70.44% in 2010. The lowest rate of net profit was recorded in the "calves 3-6 months". The rate of

net profit of 126.30% for 2009 to "youth 6-12 months" is inconclusive because it is just a random annual variation.

Revenues at 1000 lei costs ranges from 1698.62 -1841.92 lei in dairy cows in the case with subsidies. The lack of subsidies leads to income that does not cover the cost of milk production, which is between 625.26-945.15 lei at 1000 lei costs.

CONCLUSIONS

Creating a performance management in agriculture is closely linked to production and economic-financial results of agricultural holdings.

To highlight the issues of economic efficiency of farms is necessary to make a synthetic diagnosis analysis aimed at profitability trend, as an expression of final economic efficiency of the entire business.

Accessing EU funds by submitting projects for Measure 3.1.-Investments in agricultural holdings, is an essential factor of development and efficiency of agricultural holdings in Romania.

The case study conducted in S.C. AGRO INTERNATIONAL S.R.L. revealed that, by the investment allocation from EU funds, to set up a dairy farm, the results of production and economic efficiency of the farm were positive, recorded a

significantly increased net profit, with an average net profit rate of 64.07% on holding.

To achieve profitability of an agricultural holding is absolutely necessary the subsidy of production, otherwise, the activity ends with losses.

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