

DEVELOPMENT CAPABILITIES AND EFFICIENCY OF AGRICULTURAL PRODUCTION IN BOTOȘANI COUNTY, BY ACCESSING STRUCTURAL FUNDS (CASE STUDY AT S.C. AGROMECH DRAGALINA S.R.L., BOTOȘANI)

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Abstract

Adherence to the European Union (including the pre-adherence period) has enabled the 10 candidate countries, including Romania, to receive non-redeemable funds from the European Union in the process of transition to a market economy and the alignment of activities and infrastructure to western European standards. Financial support was achieved through several programs in the pre-adherence (PHARE, ISPA, SAPARD) and also in the post-adherence period (PNDR, FEADR), so that, by several measures, based on submitted and approved projects, financial support has been provided for:

- modernizing agricultural holdings;
- setting up of young farmers;
- improving and developing infrastructure related to the development and adaptation of agriculture;
- adding value to agricultural and forestry products;
- support for semi-subsistence farms;
- setting up producer groups;
- providing advice and consultancy services to farmers.

The authors present, based on a case study, the evolution of the main economic and financial indicators and techniques after Romania joined the European Union and started accessing European funds, compared to the previous condition, without this financial support (before the pre-adherence period).

Key words : agriculture, development, efficiency, structural funds

The financial instruments provided by the EU in the pre-adherence period for countries in Central and Eastern Europe were: PHARE, ISPA and SAPARD (Bold I., Russian Gh, 2003; Josip CD, Rușeț V., 2008; Goșa V., 2000 Otiman PI, 2000).

After the adherence of 10 candidate Central and Eastern Europe countries in 2004, only Romania and Bulgaria benefited from the PHARE program.

PHARE program focused on the following areas:

- Institutional Development;
- Investment to support the implementation of Community law;
- Investment in economic and social cohesion.

ISPA program functioned between 2000 and 2006 and funded projects in transport and environment infrastructure.

SAPARD was a Special Pre-Adherence Program for Agriculture and Rural Development and had the following objectives (Cîmpanu MB, Chiran A., 2012; Maria Niculescu, G. Lavalette, 1999):

- improving the lives of rural communities;
- establishing a competitive production and processing of agricultural products sector;
- creating jobs in rural areas;
- ensuring adequate income of rural residents;
- ensuring sustainable development of these regions.

Setting priorities in terms of funding was based on several strategic documents such as the Accession Partnership (AP); National Programme for Adoption of the EU Acquis (NPAA); National Development Plan (NDP); Roadmap for Romania and Bulgaria.

ISPA offers financial support to align environmental standards of Romania to the

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European Union, aims at expanding and connecting transport networks of Romania with the Trans-European ones and considers acquaintance with the policies and procedures that are applied within Structural and Cohesion Funds of the EU.

Financial support under the SAPARD program focused on the following areas:

- Investments in agricultural holdings;
- Improving the production and marketing of agricultural and fishery products;
- Improving the quality and health standards of animal and vegetable products;
- Production methods that take into account environmental protection and landscape conservation;
- Development and diversification of economic activities;
- Creating groups of farmers;
- Creating support services and farm management services;
- Renovation and development of villages, protection and conservation of rural heritage;
- Improving the quality of land and re-parcelling;
- Creation and updating of land registers;
- Management of water resources;

MATERIAL AND METHOD

To highlight the influence of attracting and using structural funds offered by the European Union for the development and improvement of agricultural production, the case study was located in Botosani County, at S.C. AGROMECA Dragalina S.R.L., which has accessed SAPARD European funds on the "Purchase of agricultural machinery S.C. AGROMECA Dragalina S.R.L." project, amounting to 605.353 EUR, of which the eligible amount was 500.000 EUR. The amount of obtained grants was 246.872,91 EUR.

The comparative analysis comprised two periods: 2005-2007 and 2009-2012. The analyzed indicators included both technical and economic and financial indicators: acreage, commodity production, total unit cost, selling price, turnover, total revenue, value added, gross surplus, rates of return, the fund working capital, net cash, self-financing, liquidity and solvency, etc.

RESULTS AND DISCUSSION

S.C. AGROMECA Dragalina S.R.L.'s activity is plant cultivation and the products are intended for the following: sunflower, wheat, corn, rapeseed, sugar beet and soybean.

Between 2009 and 2012, compared to the average of the 2006-2007 period, the unit followed a positive trend, which resulted in increased

- Development and improvement of rural infrastructure;
- Forestry measures including afforestation of agricultural land holdings, private forestry and processing / marketing of forest products;
- Improving professional training;
- Technical assistance, including studies to assist in the preparation and monitoring of the program;

In the post-adherence period, the Rural Development Program 2007-2013 intended to achieve the following objectives:

- improving the competitiveness of the agri-food and forestry sector, Community strategic guidelines being approved;
- improving the quality of life in rural areas and diversification of the rural economy;

P.N.D.R. objectives and financial allocation will focus mainly on competitiveness, environment and quality of life (Alecă I. *et al.*, 2001 Ciurea IV, 1999, Gîndu Elena, 2006 E. Dinu, 2000 Sâmbotin L., 2003).

production of commodity and its value, with obvious differences in cultures (*tab. 1*).

Thus, except sugar beet, where total production was reduced due to a decrease of cultivated area, in other cultures, increases were obvious: 10.1 times - sunflower, 5.8 times - corn, 75.8 % - soy, 23.8% - wheat and 13.0% - rape.

If cultivated areas and crop structure showed some changes from one year to another, proceeds from the sale of production goods have risen, so that on average over the period 2009-2012 there was an increase of 79.7%, compared to the average of 2006-2007, and, in 2012, the production of goods was 2.2 times higher than in 2007 (*fig. 1*).

Also, between 2009 and 2012, unit costs were much lower due to land use conditions with superior technology investments accessed with structural funds. Achieving a higher output in 2009-2012 assumed the increase in operating expenses - their share in 2012 reached 96.4%, compared to 94.4% in 2007 (*tab. 2*).

Following the evolution of unit revenues recorded during 2009-2012 in relation to 2007, we can see certain differences (*fig. 2*).

From the figure we can observe the evolution of turnover in this period, which illustrates best the economic growth in the period after the implementation of EU funds and improvement of technical exploitation conditions.

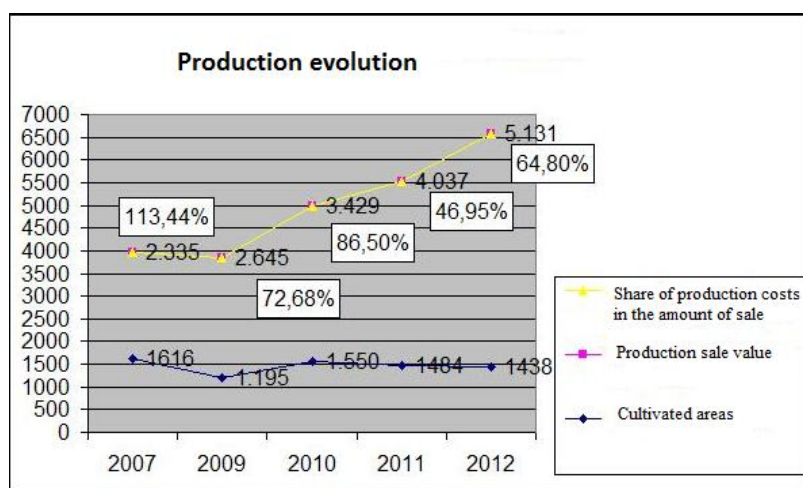


Figure 1 Evolution of cultivated area, unit cost and value of commodity output in 2007 - 2012

Table 1

Main technical and economical indicators achieved by S.C. AGROMECA Dragalina S.R.L in 2006 - 2012

Culture	Area - ha	Commodity output - tons	Unit cost - lei/Kg	Selling price - (lei/Kg)	Total expenses - ths. lei	Value of commodity output - ths. lei
Average 2006 - 2007						
Wheat	550	939,7	0.69	0.624	648,4	586,4
Rape	225	266,1	0,75	0.60	199,6	159,7
Soy	283	238,8	1,56	0,94	372,5	224,5
Sunflower	34	52,3	0.88	1.15	46,0	60,1
Sugar beet	400	12249,7	0.075	0.081	924,8	992,2
Corn	66	152,5	0.62	0.627	94,6	95,6
TOTAL	1558	-	-	-	2.285,9	2118,5
Average 2009 - 2012						
Rape	139	300,7	0,875	1.82	263,1	547,3
Wheat	331	1162,9	0.54	0.75	628,0	872,2
Soy	240	419,8	0.68	1,18	285,5	495,4
Sugar beet	229	5449,9	0.10	0.132	545,0	719,4
Corn	222	886,0	0.41	0.659	363,3	583,9
Sunflower	256	530,0	0.836	1,11	443,1	588,3
TOTAL	1417	-	-	-	2528,0	3806,5
% compared to the average of 2006 - 2007	90,9	-	-	-	110,6	179,7

Table 2

Evolution of operating expenses, financial expenses and total expenses in 2007 – 2012

Expense category	2007	2009	2010	2011	2012	% compared to total expenses
Operating expenses – ths. lei	3975,5	4234,3	7430,7	5972,5	7279,3	96,4
Operating expenses – ths. lei	238,2	279,2	338,9	220,0	272,5	3,6
Total expenses – ths. lei	4213,7	4513,5	7769,6	6192,5	7551,8	100,0
% compared to 2007	100,0	107,1	184,4	147,0	179,2	-

Comparative analysis of added value and gross operating surplus certifies the positive influence of structural funds (tab. 3).

Thus, averaged over 2009-2012, compared to the reference year 2007, the added value per employee increased 1.6 times and the gross operating excess, over 3.5 times.

Compared to 2007, from 2009 to 2012, value growth rates of return were recorded, except 2010, in which economic performance lowered visible (fig. 3).

Economic rate of return and net economic return rate followed an upward path (except 2010).

Return on equity showed a fluctuated, but superior rate, compared to 2007.

The manner in which the unit used equity and borrowed assets to achieve financial equilibrium is visible through the "working capital fund" indicator (tab. 4).

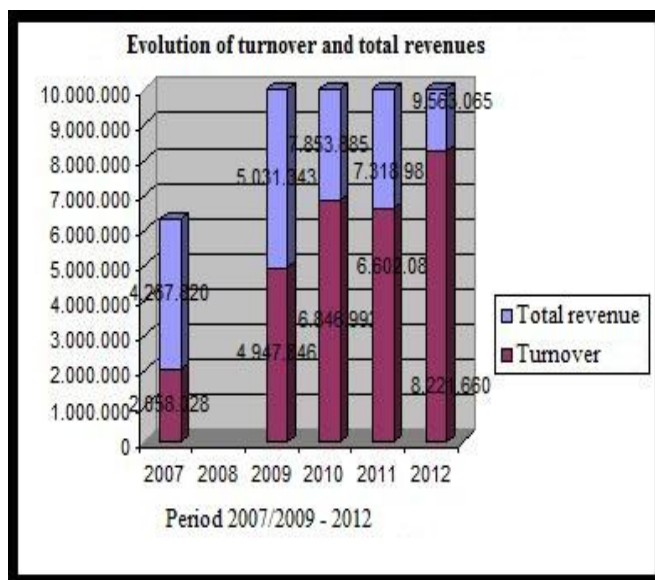


Figure 2 Evolution of turnover and total revenue in 2007 - 2012

Table 3

Evolution of value added and gross operating surplus in 2007 – 2012

Indicators	M.U.	2007	Average 2009 -2012	% compared to 2007
Added value	ths. lei	252,0	353,1	140,1
Gross operating surplus	ths. lei	571,9	1754,5	306,8
Average no. of employees	no. of pers.	25	21,75	87,0
Added value / employee	ths. lei	10,08	16,23	161,0
Surplus profit / employee	ths. lei	22,88	80,67	352,6

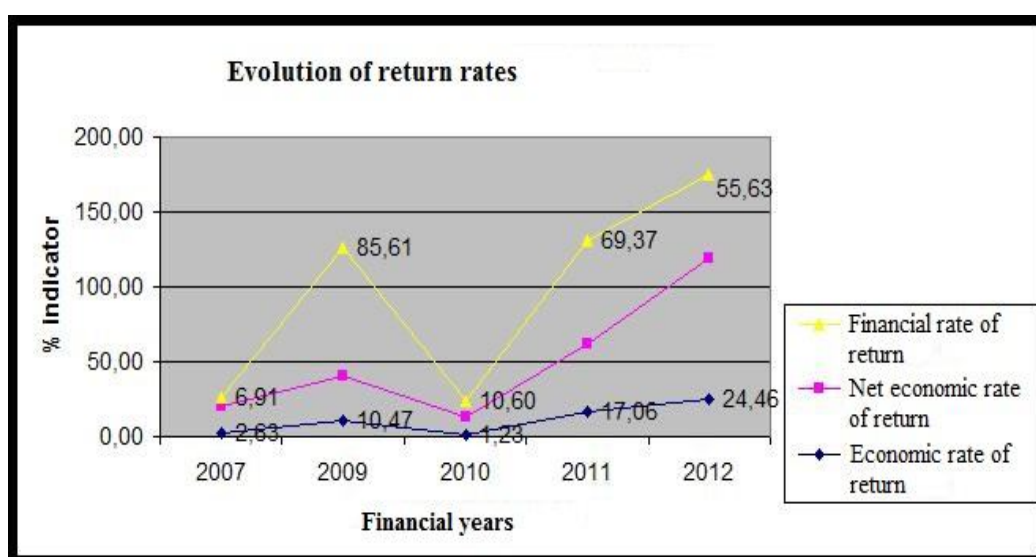


Figure 3 Evolution of return rates in 2007 - 2012

Table 4

Liquidity and solvency indicators in 2007 - 2012

Indicators	M.U.	2007	2009	2010	2011	2012	% / 2007
General liquidity	Coef.	2,10	1,79	0,85	1,02	2,90	138,1
Reduced – current liquidity	Coef.	0,43	1,05	0,49	0,31	0,88	204,7
Immediate liquidity	Coef.	0,053	0,01	0,002	0,057	0,261	492,5
Solvency indicator	Coef.	1,60	8,54	8,25	3,52	1,82	113,8

Thus, the crop production cycle is quite high and the working capital must reach important values to ensure stable financing assets and partly satisfy operational needs.

Rotational speed of the net working capital through turnover represents the "company's security margin", with a recommended value between 30 and 90 days (85.5 days in 2012 to 257.8 days in 2007). Calculating the financing rate of current assets in net working capital, substantial coverage of current assets of permanent resources is observed, reaching 78% in 2007 to 65.5% in 2012.

Production financing and operating cycle needs are normally covered by appropriate temporary sources. The differences between cyclical allocations and cyclical sources represent the working capital needs.

For the 2009-2012 period, self-financing and self-financing capacity showed higher values than those of 2007, with the exception of the non-performing year 2010.

Global financial autonomy rate exceeded the recommended value of 33%, reaching 54.83% in 2012, compared to 16.29% in 2007.

Regarding the unit's solvency and its ability to pay debts, in 2007 there was an overall capital ratio of 4.54, a satisfactory value for the company's situation. The solvency ratio shows coverage of total debt at the expense of total assets of 1.6 times, somewhat a satisfactory level, given the fact that a normal situation requires total assets to represent twice the total debt.

Overall liquidity was 2.10 in 2007 and 2.90 in 2012.

Given the increasing value of inventories (the least liquid assets), current ratio required attention, which recorded a satisfactory value in 2007 (0.43) and after accessing the European funds it reached 0.88 (in 2012).

Immediate liquidity and fast repayment capacity of payable debts on existing account registered a value within the recommended range only in 2012.

CONCLUSIONS

Technical, economical and financial indicators used in the retrospective analysis of S.C.

AGROMECA Dragalina S.R.L. Botosani'

results represent the "vital signs" of the company, helping in monitoring the unit's state of affairs, to signal potential problems and identify trends.

Patrimonial situation presented for the period 2009-2012 showed that the unit has grown substantially and is engaged in a comprehensive investment, whereby the fixed capital has increased several times, using structural funds for investment and long-term financial loans as main sources. Equity and, to some extent, even temporary sources have been added to these existent sources, partially using even short-term funding.

Analyzing the unit's capacity of dealing with the total debt, by calculating the solvency ratio, it has been observed that it has improved in the recently analyzed years. The company's solvency depends on the assets available and the amount of debts to which it has committed. Solvency calculated as overall leverage ratio shows that the company can cover its total debt by approximately 75-85% of the total available assets. The value of this ratio indicates an increased risk, the debt service is quite high and the pressure on cash-flow is higher.

Management and profitability indicators highlighted a relatively low capacity of mobilizing resources (by performing rotational speeds) or of creating greater resources from the newly created value (profit).

It is necessary to improve the activity's efficiency and the company's profitability by: maximizing the added value, a better use of company's resources in order to display a higher added value on the market (entry cost as small as possible, high processing degree = better price recovery).

It is necessary to optimize the structure of crops in order to get better results, with a higher quality index, according to the requirements of the internal and European market.

REFERENCES

- Alecu I. și colab., 2001** – *Managementul exploatațiilor agricole*. Editura CERES, București.
- Barbu C.M., 2006** – *politici și strategii în susținerea agriculturii prin mecanismul plăților directe din bugetul comunitar*. ARTIFEX Publishing House, Bucharest Cardwel, M. (2004). The European

- Model of Agriculture. Oxford University Press, Oxford.
- Bold I., Rus Gh., 2003** – *Strategii pentru agricultura românească*. Editura Mirton, Timișoara.
- Cîmpanu M.-B., Chiran A., 2012** - *Tendențe privind restructurarea și dezvoltarea agriculturii județului Botoșani după anul 1990*. Lucrări șt. U.S.A.M.V. Iași, vol.55, nr.2, seria Agronomie.
- Cîmpanu M.-B., Chiran A., 2012** - *Managerial strategies concerning the optimisation of agricultural units from Botoșani district (Case study at S.C. MULTIAGRA S.R.L. Vlăsinești, Botoșani district)*. Lucrări șt. U.S.A.M.V. Iași, vol.55, nr.2, seria Agronomie.
- Chiran A. și colab., 1999** - *Piața produselor agricole și agroalimentare - abordare teoretică și practică*. Editura CERES, București.
- Chiran A., Dima Fl. M., Gîndu Elena, 2007** - *Marketing în agricultură*. Editura Alma Pint, Galați.
- Ciurea I. V., 1999** – *Managementul exploatațiilor agricole*. Ed. Agroprint, Iași.
- Constantin M. și colab., 2009** – *Marketingul producției agroalimentare*. Editura AgroTehnica, București.
- Cristea H., Ștefănescu N., 1996** – *Gestiunea financiară a întreprinderii*. Editura Mirton, Timișoara.
- Dinu E., 2000** – *Strategia firmei. Teorie și practică*. Editura Economică, București.
- Gîndu Elena, 2006** – *Marketing – organizare, strategii,decizii, comportamentul consumatorului*. Editura TEHNOPRESS, Iași.
- Goșa V., 2000** – *Sisteme de finanțare a agriculturii*. Editura Mirton, Timișoara.
- Iosip C.D., Rușeț V., 2008** – *Managementul dezvoltării spațiului rural prin implementarea politicilor europene, naționale și regionale*. Editura Solness, Timișoara.
- Mărculescu D., Niculescu M., 1994** – *Diagnosticul economico-financiar*.Editura Romcart, București.
- Niculescu Maria, Lavalette G., 1999** – *Strategii de creștere*. Editura Economică, București.
- Oțiman, P.I., 2000** - *Restructurarea agriculturii și dezvoltarea rurală a României în vederea aderării la U.E.* Editura Agroprint, Timișoara.
- Sâmbotin L., 2003** – *Managementul producției agricole*. Editura Agroprint, Timișoara.
- Stamoulis K., Zezza A., 2003** – *A. Conceptual Framework for National Agricultural, Rural Development, and Food Security Strategies and Policies*. .ESA Working Paper No 03-17. Agricultural and Development Economics Division, The Food and Agriculture Organization of the United Nation, Rome, Italy.
- Stăncioi Aurelia-Felicia (coord.) și colab., 2003** – *Marketing. Abordare instrumentală. Ediția a II-a revăzută și adăugită*. Editura Scrisul Românesc, Craiova.
- Staniu Sica, 2002** – *Bazele generale ale marketingului*.Editura Universitatea din București, București.
- Stoica Maricica, 1999** – *Managementul bancar*. Editura Economică, București.
- Tufescu V., 1977** – *Județul Botoșani*. Editura Academiei R.S.R., București.
- Turcu I., 1994** - *Operațiuni și contracte bancare – introducere în teoria și practica dreptului bancar*. Editura Luminalex, București.
- Zaharia R. și colab., 2000** – *Marketing strategic*. Editura A.S.E., București.
- Zyman S., 2003** - *The and advertising as we know it*. Editura John Wiley & Sons, New York, U.S.A.