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## THE IMPACT OF FINANCIAL SUPPORT EXERTED ON DAIRY CATTLE FARMING

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### ABSTRACT

The product Support Estimation indicator (PSE) is used to determine the extent of financial support – equivalent to a grant to the producer. The size and extent of financial support to a single dairy cattle farm is calculated using the methods of the Organization for Economic Cooperation and Development (OECD).

The following indicators are being used:

- The amount of general support;
- The amount of support per unit of output;
- The percentage of financial support.

Measures to improve the funding mechanisms of dairy cattle farming in the country are suggested, based on these indicators. The levels of minimum financial assistance for various types of cattle farms are justified, including small, medium and large cattle farms in areas of disadvantaged conditions.

**Key words:** dairy cattle, financial assistance, grants, financial mechanism

### PRESENT SIGNIFICANCE, REFERENCE OVERVIEW AND PURPOSE OF THE INVESTIGATION

The assistance of the agricultural producers is mainly on the line of the subsidies and tax concessions and, to a less extent in the form of preferential credits (G a n e v, 2009).

An element of the Common Agricultural Policy (CAP) is the Common Market organization for milk and dairy products, set up in 1968. It includes “classical” elements of the CAP of the day – relatively high support prices sustained by subsidies withdrawal and storage of surplus product (“public intervention”), subsidized schemes to dispose of surpluses on the EU market (the European Union) and export subsidies for penetration on the international markets.

The financial support for the dairy livestock farms, following the reform of the EU’s CAP from 1992, changed from direct subsidies for the quantity of milk to direct payments for the milk producers, however, Bulgaria preserved certain payments, connected with the output. These payments are decoupled and transferred to the Single Area Payment Scheme (SAPS), except for the Suckler Cow Premium Scheme.

The classical system of financial support is implemented through the instruments of the European Agricultural Guidance and Guarantee Fund (EAGGF). The financial package of EAGGF for our country covers 814 million Euro annually for direct payments and 130 million Euro annually for various market measures, respectively. After the accession of Bulgaria to the European Union, our country applied the single payment per hectare, produced by dividing the annual aggregate amount of direct payments for the country by the used agricultural area, eligible to subsidies. Specific subsidies for

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the dairy sector are envisaged within the sector market measures.

In 2005, within the frames of the CAP reform, two new agricultural funds were set up to finance agriculture and rural areas – the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD). EAGF is aimed to finance direct payments for farmers and measures to regulate the agricultural markets – such as intervention and export refunds while EAFRD finances the rural development programs of the EU member-states.

After the accession to the European Union, Bulgaria was included in the schemes of the Community's financial support and for the period 2007-2010 it received a substantial aid for the agricultural branches in the form of a number of subsidies.

The purpose of this investigation is to reveal the impact of the financial support on the milk specialized farms for the period, following our EU accession.

#### **MATERIAL AND METHODS – OBJECT, METHODS OF INVESTIGATION**

The subsidy as a measure of direct financial support<sup>1</sup> for agriculture has not been explicitly envisaged in the terms and conditions of the Treaty on European Community, (TEC), signed in Rome on 26.03.1957 regardless that the national aid for the member-states of the Community has been a fact already before their union. In section II “Agriculture” of the same treaty, within the frames of CAP, measures have been outlined to achieve the goals of this policy through submission of support within the frames of programs for economic development (Art. 36 of TEC).

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<sup>1</sup> The notions assistance, support, protection, transfers are used here as synonyms. The financial support measures for agriculture in the EU countries are direct – subsidies, grants, loans, share participation in companies, etc, and indirect – loan guarantees, tax concessions, subsidized interest rates, support for creation of favourable investment environment for agricultural development, etc. (Nanev, N., K. Nedeva, 2005)

For the first time the term “subsidizing” has been mentioned in an official document of the European Community in 2001 in the Treaty of Nice (TNC, 2001) as a specific supporting measure “subsidies for payment of interests” on the line of the structural funds (Official Journal, 2002). Consequentially, the area of their application was extended and after the CAP reform of June 2003, the focus of granting subsidies was moved from assistance for the products and the output to support for the income of the agricultural producers<sup>2</sup>.

**The subsidies and the tax concessions** represent the major share of the measures for financial support of the agrarian sector.

According to Regulation (2004) **the subsidies** are continuing free contributions which the government or the EU institutions pay to local producers in order to affect the level of production, the prices of the products or the remuneration for the factors of production.

**The tax concession schemes**, which are presently operative within the CAP system, have been complied with the specific conditions in each separate EU member-state. In addition, most countries do not apply a single scheme decoupled, they, however, often apply a combination of several schemes.

The EU subsidies and the national budget do not submit the overall support payment, made to the agricultural producers. The agricultural producers until 2010 had different tax preferences, set out in a number of tax acts<sup>3</sup>.

The determination of the level of financial support for the milk specialized farms is based on the PSE coefficient. For the first time this coefficient has been substantiated by the American economist Josling (1973) for FAO in the beginning of the 70-ies. In 1982 OECD approved this approach and adopted it as a basis to measure the level of support for agriculture (OECD, 1999).

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<sup>2</sup> After 2007 Bulgaria applied the Single Area Payment Schemes (SAPS).

<sup>3</sup> Here apply the Corporate Income Taxation Act, the Physical Persons' Income Tax Act, the Value Added Tax Act, the Excise and Tax Stores Act, and the Local Taxes and Levies Act.

The producer subsidy equivalent - PSE (Producer Support Estimate) is an aggregate indicator for measurement of the support in the agrarian sector. This is an indicator for the monetary value of the transfers from the consumers and taxpayers in a given country to the national producers as a result of the implemented agrarian policy for the respective period of time.

The methodology to calculate the indicators of financial support is available in a special Method of the Organization for Economic Co-operation and Development (OECD) (2008).

The monetary value and level of financial support per separate milk specialized farm according to the Method of the Organization for Economic Co-operation and Development are calculated by the following formulae:

a) Total Producer Support Estimate (PSE);

$$PSE = Qp \cdot (Pd - Pw) + D - L + B, (\text{€})$$

б) Unit Producer Support Estimate (PSE<sub>per ton</sub>);

$$PSE_{per\ ton} = \frac{PSE}{Qp}, (\text{€} / t)$$

в) Percentage Producer Support Estimate (% PSE).

$$\% PSE = 100 \frac{PSE}{[Qp \cdot (Pd) + D - L]}, (\%) ,$$

where:

$Qp$  - quantity of fresh milk, produced by a specialized farm;

$Pd$  - national market price per ton fresh milk;

$Pw$  - international (reference) price per ton fresh milk<sup>4</sup>;

$D$  - direct payments per specialized farm;

$L$  - levies, paid by the milk producers average per farm;

$B$  - other financial support for the milk producers average per farm;

<sup>4</sup> The International price adopted for calculation of the financial support for the dairy farmers in Bulgaria is the price of the fresh milk in New Zealand for the respective reference period.

The positive values of the PSE indicator reveal the monetary value of the financial support, transferred to the milk producers at the expense of the remaining economic branches or, how much the income of the milk producers will fall down, if the state does not interfere.

If the equivalent of the subsidy for a milk producer is negative, this shows what part of the producer's income (in absolute value or in percentage) has been withdrawn as a result of the implemented CAP and is transferred to other branches.

## RESULTS AND DISCUSSION – DATA ANALYSIS

Totally, over 20 types of subsidies are allocated for agriculture and for the rural areas in EU-27. In the period 2007 – 2008 in order to support the milk specialized farms in the country and in the EU, the following types of subsidies have been granted per farm: (Table 1).

What is characteristic for the support for the national dairy sector in the first two years after out accession is that:

- The aggregate subsidies per farm in Bulgaria are 17 and 5,6 times lower than the average aid per milk farm in the remaining 26 EU countries, respectively.

- Bulgaria has used a rather tiny proportion of the support for development of milk cattle-breeding in the rural areas for this period<sup>5</sup>. This is a proof for the significant delay in the harmonious development of the rural areas which is the goal today of EU's CAP.

- Almost half of the subsidies are paid on the basis of used farm area which is in conformity with the support scheme opted by Bulgaria, however, it does not affect immediately the specialization of the milk farms.

- The share of the subsidies for support of intermediate consumption in our country exceeds in times their share in the dairy sector of the Community. The effect of this subsidy on the final product is lost, and this is confirmed by the lower efficiency of fresh milk production in our country, proven in the previous analyses.

<sup>5</sup> This negative tendency is also confirmed by the analyses of Ministry of Agriculture and Food in the Agrarian Report for year 2010.

**Table 1.** Types of subsidies in Bulgaria and in the EU per milk specialized farm on average (€)

Indicators	2007				2008			
	RB		EU-27		RB		EU-27	
	€	%	€	%	€	%	€	%
Total subsidies, without those for investments	922	100	15724	100	3040	100	17005	100
Total subsidies for farm cultures	0	0	298	1,9	0	0	309	1,8
Compensatory payments (payments per area)	0	0	210	1,3	0	0	225	1,3
Premiums per land set-aside (fallow land)	0	0	2	0	0	0	0	0
Other subsidies for other cultures	0	0	86	0,5	0	0	84	0,5
Total subsidies for farm animals	187	20,3	1129	7,2	969	31,9	1153	6,8
Subsidies for milk production	185	20,3	497	3,2	964	31,7	604	3,6
Subsidies for other cattle	0	0	303	1,9	0	0	318	1,9
Subsidies for sheep and goats	1	0	4	0	5	0,2	6	0,0
Other subsidies for livestock breeding	0	0	324	2,1	0	0	225	1,3
Subsidies for environmental protection	0	0	1587	10,1	14	0,5	1793	10,6
LFA <sup>6</sup> subsidies	0	0	1493	9,5	33	1,1	1707	10,0
Other payments for rural development	0	0	130	0,8	28	0,9	135	0,8
Total subsidies for rural development	0	0	3210	20,4	75	2,5	3635	21,4
Subsidies for intermediate consumption	108	11,8	218	1,4	968	31,8	331	1,9
Subsidies for external factors	3	0	141	0,9	28	0,9	166	1,0
Coupled payment scheme	452	49,1	10059	63,9	597	19,6	10375	61,0
Single payment per farm	0	0	9448	60,1	0	0	9548	56,1
Single payment per area	452	49,1	483	3,0	597	19,6	699	4,1
Complementary aid	0	0	128	0,8	0	0	128	0,8
Other subsidies	172	18,8	669	4,3	403	13,3	1036	6,1

Source: FADN,2010

<sup>6</sup> Specific subsidies for less favourable regions

The national financial aid for the dairy sector is implemented through: complementary national payments<sup>7</sup> along with the EU's direct payments; co-financing of the measures for rural development; state aid; state aid coupled with the measures for rural development and some specific market measures.

The overall budget of the Rural Development Program (RDP) is 3,2 billion Euro, 2,6 billion Euro of which coming from the EU and 0.6 billion Euro of national co-financing. One portion of these funds is allocated for financial support of dairy livestock breeding. Since the launch of RDP until 15.09.2010, projects at the amount of 0.56 billion Euro have been paid which represent 17,3% of the EU's budget. The current implementation of the program with the basic measures to the same date for implementation of the measures, including the dairy cattle-breeding sector is, as follows:

- Creating farms for young farmers – implementation – 30%;
- Modernization of farms – 57%;
- Support for semi-subsistence farms in process of restructuring - 20%.

An *I n t e r i m R e p o r t* for the expenditure of the EU funds (2010) states the following major issues:

- existence of substantial deficiencies in the statutory regulations, concerning the application of the RDP measures;

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<sup>7</sup> In regards to the complementary national payments coupled with the EU's direct payments, Bulgaria has the opportunity, upon authorization of the European Committee (EC), to supplement the direct payments from the national budget with 30% above the applicable thresholds for direct payments for the respective year, and from 2010 on – with 50%. The Council of Ministers is entitled to the right upon motion of the Minister of Agriculture and after coordination with EC to approve the schemes for the complementary national payments for the respective year and the amount of the financial resource. These funds are allocated only under direct payment schemes which are set out in the EU legislative instruments, within the limits of the respective scheme. Only for the period 2007-2009 the complementary national aid can be partially financed from the rural development funds, as follows: 20% of the rural development package (25% in 2007, 20% in 2008 and 15% in 2009).

- objective impossibility the experts from the State Fund Agriculture – the Paying Agency (PA) to take decisions for approval or rejection of the filed applications, thus contributing to delay of the measures;
- the admission to open and close time periods for submission of support applications is not well organized.

„The funds granted by the EU, reach slowly and difficultly the agricultural producers. The examples are many – delayed consideration of the RDP projects, delayed payment of the amounts for contracts, already signed under the program, the funds for direct payments per area and the complementary national aid are also delayed” ( S t a n k o v, 2010 ).

In regards to the **tax policy** in the dairy sector, the financial stability of the milk producers after 2009 was negatively affected by the withdrawal of the existing tax concessions, namely:

- remission of 60% of the corporate tax of the agricultural producers, registered as bodies corporate;
- Complete remission of the corporate tax of the other tax-obliged persons;
- Non-taxation of income from agricultural activity of the agricultural producers, registered as physical persons;
- Non-taxation of the real estates of farm land owners;
- Exemption of the agricultural producers from levies on farm buildings used for agricultural activities;
- Application of preferential excise rates on motor fuels used for farm land cultivation.

In addition to the withdrawal of the tax concessions since January 2010, the total amount for insurance coverage of the milk producers has increased as a result of the changed insurance status - from 65 to 240 BGN.

The determination of the level of financial support for the milk producers is made according to the PSE indicator. For the first time in our country in 2000 this indicator was calculated totally for the Bulgarian agriculture and separately per culture and product. The general conclusion in the OECD Report is that until 1999 milk was the most supported product in Bulgaria among the livestock products. (O E C

D, 2008). After 2001, the financial support for livestock breeding and for the dairy sector has been increasing inconsiderably.

The algorithm for determination of the financial support per milk specialized farm in Bulgaria and in the EU by the three PSE formulae is presented in **Table 2**.

**Table 2.** Determination of the financial support per milk specialized farm in Bulgaria and in the EU for the period 2007-2008

Indicators	Measure	2008/2007 (%)	
		BG	EU
Domestic quantity produced (Qp)	t	108	101
Domestic market price (Pd)	€/t	103	101
World price (Pw)	€/t	147	147
Direct payments (+D)	€	330	108
Levies (-L)	€	436	54
Other financial support (+B)	€	-	104
Amount (D - L + B)	€	328	105
Total support (+ subsidies and levies)	€	124	103
Total support (- subsidies and levies)	€	111	102
PSE	€	612,97	150,03
%PSE	%	576,63	144,93
PSE/Qp	€/t	567,50	148,18

Sources: <http://ec.europa.eu/agriculture/rica/>; <http://ec.europa.eu/agriculture/markets/milk/>

1. Calculation of the amount of the total Producer Support Estimate (PSE) for milk producers from the milk specialized farms:

a) **for Bulgaria**

б) **for the EU**

2. Calculation of the Percentage Producer Support Estimate (%PSE) for milk producers from the milk specialized farms:

a) **for Bulgaria**

б) **for the EU** -;

3. Calculation of the Unit Producer Support Estimate (PSE<sub>per ton</sub>) for milk producers from the milk specialized farms:

a) **for Bulgaria**

б) **for the EU**

- The subsidies spent per farm in Bulgaria are considerably less than the average amount per dairy farm in the remaining EU member states - 17 and 5,6 times, respectively.

- Bulgaria has used an inconsiderable portion of the financial support for development

of dairy livestock farms in rural areas in this period. This is a proof for the substantial delay in the development of the rural areas.

- Almost half of the subsidies have been paid on the basis of used farm land (UFL) which corresponds to the support scheme, opted for Bulgaria, however, it does not affect immediately the development of the milk farms specialization.

- The share of the subsidies for support of the intermediate consumption in our country exceeds in times their share in the EU's dairy sector. The effect of these subsidies on the final product is lost and this is confirmed by the proven lower efficiency of our milk production.

The financial support granted for the milk specialized farms in the period 2007-2008 allow to draw the following **conclusions** (Table 26):

- The financial support for the milk specialized farms (being insufficiently used in 2007) has increased over 6 times whereas it has increased 5.7 times average per 1 ton milk;

- Notwithstanding the considerable financial funds granted for the dairy sector in our country, the total amount of the subsidies for the other EU member states is 7 times bigger.

- The Bulgarian export of dairy products for the EU is in more unfavourable competitive positions as a result of the different level of support for these products.

## CONCLUSIONS

The results for the analyzed period and the financial support received by the milk specialized farms allow to make the following **conclusions**:

- The financial support for the milk specialized farms (being insufficiently used in 2007) has increased over 6 times whereas it has increased 5.7 times average per 1 t milk;

- Notwithstanding the considerable financial funds granted for the dairy sector in our country, the total amount of the subsidies for the other EU member states is 7 times bigger;

- The Bulgarian export of dairy products for the EU is in a more unfavourable competitive position as a result of the different level of support for these products.

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