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IMPACT OF COUPLED SUPPORT ON THE ROMANIAN DAIRY COW AND BUFFALO COW SECTOR – A REGIONAL PROFILE ANALYSIS

MARIANA GRODEA[1]

Abstract*: The coupled support is a production limiting system, which is granted under the form of an annual payment, to those sectors or regions in a Member State, where certain types of agriculture or certain agricultural sectors, which are very important from economic, social or environmental reasons, are affected by certain difficulties. In the year 2019, at EU 28 level, the largest amount of coupled support payments was allocated to the livestock farming sector (73.2%), out of which 20.1% to the dairy sector. In Romania, the dairy sector was allocated the amount of 88 million euros, i.e. 59.1% of total livestock sector. The obtained results highlight that the impact of the scheme application is not significant as regards the sector development, having in view that the share of cows and buffaloes authorised for payment in total herds ranged from 7.1% in 2015, 9.2% in 2016, 18.6% in 2017to 22.5% in 2018.*

Key words**:** *dairy cows, buffalo cows, coupled support, production*

JEL Classification: *Q10, Q13, Q19*

INTRODUCTION

Although the budget allocated to the Common Agricultural Policy accounted for 36.25% of total European Union Budget (2018), the EU citizens had a positive perception of the support provided to agriculture, as they consider agriculture particularly important, not only as regards production of safe and healthy foods, but also in terms of reaching the rural development and environmental objectives (Hayden,A. et al., 2019).

In the current Common Agricultural Policy (2014-2020), the value of direct payments is 291.3 billion euros, i.e. 71.3% of the total budget allocated to CAP (European Commission, 2017). In the proposal for the future CAP (2021-2027), they will remain the main part of farmers' support, yet they will be moderately reduced and better targeted (Chelmu, S., 2020).

For the financial exercise 2014-2020, the allocations for Romania are around 19.43 billion euros (current prices) for direct payments and market-related expenditure (Pillar 1) and for rural development (Pillar 2) (Drigă, D., M., 2018),

As a result of the 2003 CAP Reform, as a general rule, the link between receiving a direct payment and the production of a certain product was progressively eliminated ("decoupling") (European Commission, 2017). Nevertheless, the member states can condition (or continue to couple) a limited volume of direct payments on certain products (European Commission, 2017).

The coupled support is one of the main payments scheme from the category "optional direct payments" introduced in 2015, financed from the European Agricultural Guarantee Fund (EAGF). In 2019, the total budget allocated to coupled support at European Union level was 4.2 billion euros (around 10% of total direct payments), out of which 39.7 % beef, 20.9 % milk and dairy products, 12.6 % sheep and goats, 11.2 % protein crops, 4.3 % fruit and vegetables, 4.3 % sugar beet and 7.1 % other products (cereals, olive oil, rice, leguminous crops, potatoes, nuts, hops, hemp, oilseeds, silk worms) (European Commission, September, 2019).

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In the next period (2021-2027), the Common Agricultural Policy will also support those sector facing difficulties, which are considered as important out of economic, social or environmental reasons, so that these sectors can improve their competitiveness, sustainability or quality, through supplementary support, known as coupled income support (European Commission, June, 2018). The eligible member states can allocate maximum 10% of direct payments to the coupled income support, and a supplement of 2% can be reserved to support protein crops (European Commission, June 2018).

MATERIAL AND METHOD

The research work from the present paper was based on a comprehensive quantitative analysis, consisting of a descriptive part of the dairy cow and buffalo cow raising sector in Romania in the post-accession period and an explicit analysis of the impact of the payment scheme implementation –*the coupled support*– upon the sector, across regions, in the period 2015-2018.

The coupled support is granted to those sectors or regions in a member state in which certain types of agriculture or certain agricultural sectors that are extremely important out of economic, social or environmental reasons are affected by certain difficulties (Matthews, A., 2018). Except for the protein crop sector, the coupled support can only be granted to the extent necessary to create an incentive for maintaining current production levels in the sectors or regions concerned (Matthews, A., 2018).

The coupled zootechnical support (CZS) for raising Romanian dairy cows and buffalo cows is granted to active farmers owning a minimum number of 10 and maximum 250 dairy cow heads (for the mountain region, minimum 5 to maximum 250 heads); for buffalo cows, support is granted to active farmers with maximum 100 heads. The livestock herds must be identified and registered in the National Register of Holdings (NRH) and entered in the Genealogical Registry of Breeds (GRB) and the Official Control of Production (OCP). The applicants must have a contract concluded on minimum 6 months, valid at the moment of submitting the single payment request, with a first buyer and at least one fiscal document attesting milk delivery or, in case when the producer owns his own milk processing unit. Granting the coupled support for the milk sector does not have any connection to the breed, but only to a minimum milk yield per animal head alongside with the proof that this is sold with legal documents. Breeds are mentioned only for investment projects, making reference to the local breeds, those already acclimatised to the conditions in Romania.

The data necessary for this study have resulted following consultation of a large amount of specialty materials (workpapers and articles, scientific treatises and other scientific materials published in the country and abroad by specialised bodies). The statistical information was taken from national databases (Tempo Online, NIS, APIA, MARD), community databases (Eurostat database, the European Commission) or international databases (FAOSTAT), as well as from specialised websites. Some data of interest were taken from official announcements or from the economic media.

RESULTS AND DISCUSSIONS

Starting with the year 2015, in order to increase productivity, maintain yields and decrease the abandonment risk in the livestock sector activities, a new direct payment scheme was introduced at EU level, funded from the European Agricultural Guarantee Fund, namely: *Coupled Zootechnical Support (CZS)*.

In Romania, from the perspective of the sector to which the coupled support was provided, it can be mentioned that in the period 2015-2019, the livestock sector benefited from a total amount of 679.3 million euros, with an increasing share in total coupled support value (crops and livestock) from 52% in 2015, to 67% in 2019. In the same period, 416.4 million euros were allocated to the dairy cow and buffalo cow sector, i.e. 61.3% of the value of the coupled zootechnical support. In evolution, although the value of the coupled support to the sector increased from 69.9 million euros in 2015 to 96.6 million euros in 2019, the share in total livestock support diminished from 69.3% in 2015 to 55.7% in 2019 (Table 1)

Table 1. Evolution of total amount authorised for payment (Coupled Zootechnical Support) in the milk sector – thousand euros

Item	**2015**	**2016**	**2017**	**2018**	**2019**
Dairy cows (thousand euros)	68584	75592	83172	86165	94999
%	68.0	66.9	58.3	57.8	54.8
Dairy buffalo cows (thousand euros)	1312	1474	1627	1867	1610
%	1.3	1.3	1.1	1.3	0.9
Total livestock sector (thousand euros)	100919	113043	142783	149014	173509

Source: author's calculations based on data from the Agency for Payments and Intervention in Agriculture

By regions, in the milk sector (cows and buffalo cows), the largest amount authorised for payment was allocated to the region Centru, i.e. 41.0% in 2015 and 32.3% in 2018, and the lowest amount (except for Bucharest – Ilfov Region) was allocated in the region Sud-Vest Oltenia (2.0% in 2018). On the second and third place we have the regions Nord-Vest and Nortd-Est, with 24.9% and 16.0% respectively in the year 2018 (Table 2). We should also mention that the counties Harghita and Mureș from the region Centru requested coupled support representing 24.4% and 22.4% respectively of total livestock coupled support in the region for the milk sector in the year 2018.

Table 2. Evolution of the Coupled Zootechnical Support (CZS) by regions, for dairy cows and buffalo cows

	2015		**2016**		**2017**		**2018**	
	Thousand euros	**%**	**Thousand euros**	**%**	**Thousand euros**	**%**	**Thousand euros**	**%**
Nord-Est	9941	*14.2*	10980	*14.2*	12496	*14.7*	14109	*16.0*
Sud-Est	5054	*7.2*	6321	*8.2*	7021	*8.3*	7191	*8.2*
Sud Muntenia	5544	*7.9*	6790	*8.8*	7057	*8.3*	7424	*8.4*
Sud Vest Oltenia	1108	*1.6*	1109	*1.4*	1394	*1.6*	1777	*2.0*
Vest	5604	*8.0*	6222	*8.1*	6424	*7.6*	6817	*7.7*
Nord-Vest	13246	*19.0*	19162	*24.9*	21167	*25.0*	21953	*24.9*
Centru	28675	*41.0*	25812	*33.5*	28856	*34.0*	28440	*32.3*
București-Ilfov	724	*1.0*	672	*0.9*	385	*0.5*	320	*0.4*
TOTAL	69895	*100.0*	77067	*100.0*	84800	*100.0*	88032	*100.0*

Source: author's calculations based on data from the Agency for Payments and Intervention in Agriculture

In the case of dairy buffalo cows, we can see that 77% of the total amount was granted to the regions Nord -Vest (46%) and Centru (31%). The counties with the largest number of animals authorised for payment in the year 2018 were Brașov (22%), Cluj (17%), Sălaj and Sibiu with 15% each.

In the analysed period (2015-2018), as we can see in Table 3, the largest amount (euros/head) for dairy cows was received in the year 2015 (Table 3).

Table 3. Evolution of coupled support in dairy cows (euros/head)

	2015	2016	2017	2018
Nord-Est	869	768	391	335
Sud-Est	845	677	297	333
Sud Muntenia	739	722	395	333
Sud Vest Oltenia	823	712	324	329
Vest	852	716	351	370
Nord-Vest	855	728	392	335
Centru	868	734	453	355
București-Ilfov	847	723	397	326
	850	729	395	343

Source: author's calculations based on data from the Agency for Payments and Intervention in Agriculture

After 2015, the amounts granted per dairy cow head started to decrease, as in the next period more and more farmers were interested in this payment scheme and were ready to fulfil the conditions to be eligible for payments.

Although in the period 2015-2018 a new direct payment scheme was introduced (the coupled support) financed from the European Agricultural Guarantee Fund (EAGF), in the year 2015, only 84901 cow and buffalo cow heads (7.1% of total herds) were authorized for payment under this scheme, and in the year 2018, 259990 heads (22.5% of total herds). Even with the introduction of this payment scheme, the female breeding stock continued to decrease both at national and regional level (Table 4).

Table 4. Evolution of total cow and buffalo cow herds (thousand heads)

	2015	2016	2017	2018	2018/2015
Nord-Vest	219	222	217	214	-5
Centru	208	208	212	211	3
Nord-Est	285	280	275	270	-16
Sud-Est	124	125	125	127	4
Sud Muntenia	144	141	140	135	-9
București-Ilfov	3	5	4	3	0
Sud Vest Oltenia	115	116	109	105	-10
Vest	92	96	93	93	0
TOTAL	1191	1193	1175	1158	-33

Source: Tempo online, National Institute of Statistics

Thus, in the analysed period, the total livestock number decreased by 33 thousand heads; by regions, the decrease ranged from 5 thousand heads (Nord-Vest) to 16 thousand heads (Nord-Est). Nevertheless, the number of herds increased in the region Sud-Est (4 thousand heads) and Centru (3 thousand heads).

The total production of cow and buffalo cow milk decreased from 42.7 million hl, in 2015, to 40.6 million hl in 2018 (-4.7%), mainly due to the decrease in the number of cows in the mentioned period by 2.8%. By regions, as we can see in Table 5, milk production increased only in the region Centru (+365 thousand hl); in the remaining regions, production decreased by percentages ranging from 0.2% (Vest) to 9.2% (Sud-Est), except for the region București-Ilfov.

Table 5. Evolution of total cow and buffalo cow milk production by regions (thousand hl.)

Region	2015	2016	2017	2018	2018/2015
Nord-Vest	7976	7604	7653	7410	-566
Centru	7064	7074	7209	7429	365
Nord-Est	10638	10182	9752	9694	-944
Sud-Est	4386	4338	3954	3982	-404
Sud Muntenia	4965	5086	4792	4816	-149
București-Ilfov	182	202	187	133	-49
Sud Vest Oltenia	4185	4125	3745	3924	-261
Vest	3267	3409	3272	3259	-8
TOTAL	42663	42020	40564	40647	-2016

Source: Tempo online, National Institute of Statistics

The average milk yield per dairy cow, in the analysed period, had a slight decreasing trend, from 3583 litres/head (2015) to 3510 litres/head (2018); compared to other new EU member states (Czech Republic, Hungary, Slovakia, Slovenia, Poland, Bulgaria), Romania had the lowest evolution of yields, by only 3.8%, in the period 2007-2016, as compared to 60.1% (Poland) and 23.2% (Czech Republic).

Milk collection is the decisive factor for each processing unit profitability, and this is still an insufficiently solved problem in Romania. The main reason is represented by the high milk production fragmentation, which increases transport costs; experts consider that transport costs represent around 30% of the procurement price for raw milk (Adrian Stoica, 2018).

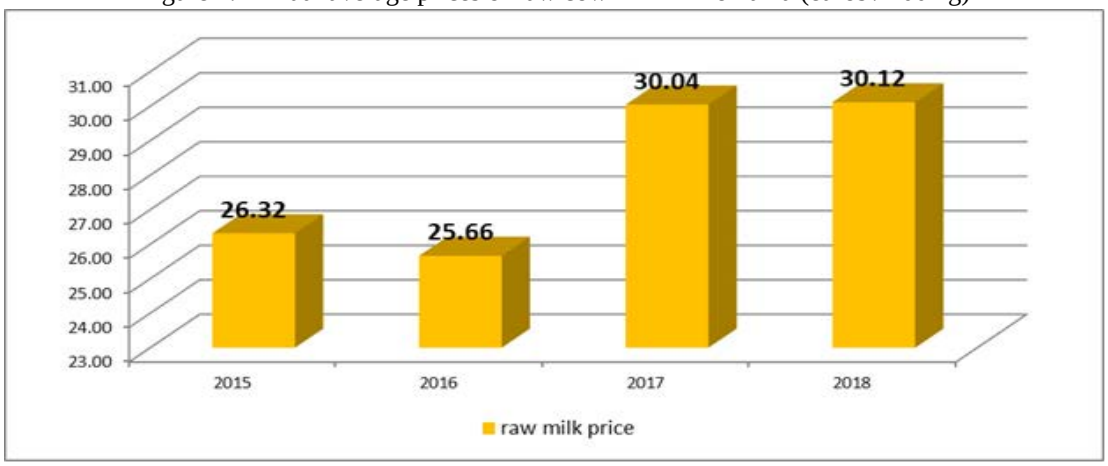
The medium size of a dairy cow farm did not evolve significantly, in the period 2015-2018, continuing to be low (2.74 heads / farm in 2018, as against 2.28 heads / farm in 2015). We can also mention the diminution of the total number of farms from 619864 in 2015, to 531851 in 2018

(-14.2%) and the increase of the number of commercial farms (with over 50 heads) from 1096 in 2015, to 1319 in 2018. Although these commercial farms have a low share in total farms (0.25%), they concentrate 12% of the female breeding stock.

In the period 2015-2018, the quantity of raw milk collected for processing increased from 1068 thousand tons (2015) to 1291 thousand tons (2016), based on the increase of milk quantities collected from the Romanian farms by 20.2% and on the increase of raw milk imports by 26.6%.

In Romania, compared to the EU 28 member states, prices has constantly been under the European average, the Romanian raw milk being one of the cheapest in the EU, only the Baltic countries ranking behind us (Figure 1). Prices recovered in 2017 and 2018, and their increase towards the levels of previous years was quite significant (14.4% in 2018 as against 2015).

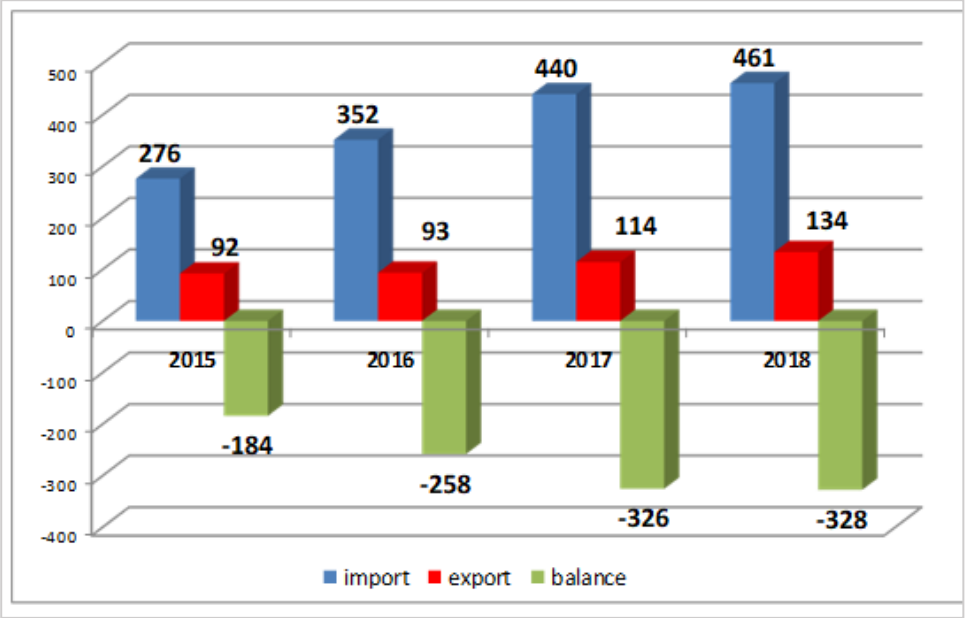
Figure 1. Annual average prices of raw cow milk in Romania (euros / 100 kg)



Source: DG Agri data

In the period 2015-2018, Romania constantly had a trade balance deficit in the milk and dairy trade. In the year 2018, the highest trade deficit was registered (-327.7 million euros), 1.8 times as high than the trade deficit in the year 2015.

Figure 2. Romania's trade balance in milk and dairy products (million euros)



Source: Export Helpdesk-Europa EU

The main cause was VAT reduction in June 2015, which led to the increase in the consumption of dairy products, but the additional demand was covered from imports mainly in butter, cheese and drinking milk. More important increases of the imported quantities of dairy products were mainly registered starting with the year 2014, the year of the removal of milk quotas in the European Union and milk market liberalization, but also in the next period: 2015-2018.

Measures for supporting the milk sector as a result of crisis induced by the Coronavirus pandemic

The Coronavirus pandemic started under the background of a large raw milk supply. School closing in Romania starting with March 14, 2020 has resulted in a significant quantity of milk from the domestic production not being delivered any more under the *'milk in schools'* scheme to the final consumer (pre-school children and pupils). At the same time, the closing down of an important part of the HORECA industry selling points has resulted in the decrease of consumers' demand for a certain classical category of dairy products. All these have negatively influenced the entire milk chain in Romania, but mainly the primary sector, milk producers in particular, who are mostly affected by their business vulnerability. In the situation in which processors cannot collect the entire raw milk supply from the farm gate, as they do not have not having sufficient processing and storage facilities, there is a clear situation that farmers must accept low prices or they may be forced to dispose of (throw away) the milk on the farm, which would have huge implications, both ecologically and financially. On the other hand, farmers claim that as long as the dairy products prices have not decreased on the shelves of supermarkets, processors have no reason to raise prices when buying raw milk at the farm gate.

On the other hand, this year's drought, as well as other logistical constraints related to transport and handling represent clear premises that dairy farmers will be mostly affected by the

increase of costs both in concentrated feeds (cereals), and in bulk fodders (green fodder, fibre feeds, etc), which will have an impact on the milk price, as it is known that feeds represent around 60% of the cost of producing cow milk.

In order to optimize and manage some specific agricultural activities, in the period when the COVID-19 pandemic affects the EU member states, a series of normative acts adopted by the European Commission have been published in the Official Journal of the European Union (APIA, 2020). These regulations also refer to market intervention through granting an aid for the private storage of certain agri-food products, such as beef, goat and sheep meat, butter, skimmed milk powder and cheese. Thus, the Application Rules (EU) 2020/597/591 of the Commission from April 30, 2020 were issued, establishing the legal framework for granting aid for the private storage of butter, skimmed milk powder and cheese and establishing the aid value in advance (APIA, 2020).

Taking into account the difficulties facing the livestock sector farmers, namely decrease of procurement prices, restrictions to the livestock transport to processing/direct sales, decrease of livestock herds, of live animals export, as well as the many claims from the cattle farmers' representatives, and to compensate losses caused by the COVID 19 pandemic, Romania's Government issued the Emergency Ordinance no. 149/2020 establishing a state aid scheme to support the activity of cattle farmers in the context of the economic crisis generated by the COVID 19 pandemic**.** The state aid is granted to the beneficiaries owning minimum 91 adult female bovine heads registered in the National Register of Holdings (NRH) on July 1, 2020, and its value represents the equivalent in RON (national currency) of 100 euros/head of adult female cattle, the maximum value of this state aid scheme being 35700 thousand RON.

Farmers owning less than 91 bovine heads will receive financial support during the crisis through a new temporary measure from the National Rural Development Program (NRDP) 2020 **(**Measure 21, which will be opened until the end of the year 2020, after approval by the European Commission). The eligibility conditions are that the applicant must own minimum 5 LLU (Large Livestock Units) adult females from the bovine species, registered in the National Register of Holdings (NRH), aged minimum 24 months on July 1, 2020. The support for the cattle sector/farm will be: 1000 euros for 5 LLU - 10 LLU; 2500 euros for 11 LLU - 20 LLU; 3500 euros for 21 LLU-30 LLU; 4750 euros for 31 LLU-40 LLU; 5000 euros for 41 LLU-50 LLU; 6000 euros for 51 LLU-60 LLU; 7000 euros for 61 LLU-90 LLU.

CONCLUSIONS

In the period 2015-2018:

- The amount authorised for payment for total livestock sector increased by 47.7%, with the highest increase in the sheep and goat sector (133.4%), and lowest in beef cattle (13.3%); in the cow and buffalo cow sector, the increase was by 26%;
- The number of dairy cows and buffalo cows authorised for payment increased by 175 thousand heads;
- The share of cows and buffalo cows authorised for payment in total livestock number increased from 7.1% in 2015, to 9.2% in 2016, to 18.6% in 2017, to reach 22.5% in 2018;
- Both the raw milk quantity collected from the Romanian farms and the imported raw milk increased by 20.2% and 26.6% respectively;
- The average dairy cow farm size did not evolve significantly, in the period 2015-2018, continuing to be low (2.74 cow heads /farm in 2018, as against 2.28 cow heads /farm in 2015)
- The total number of farms diminished by 14.2%

- The number of commercial farms increased (farms with 50 heads) from 1096 in 2015, to 1319 in 2018
- A price recovery was noticed in 2017 and 2018, the increase towards the levels in previous years being quite important (14.4% in 2018 opposed to 2015).
- Imports of dairy products continued their upward trend, with the market dominated by imports from Hungary and Poland.

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