

## SOME ASPECTS OF MILK PRODUCTION IN ORODEL COMMUNE (2011-2013)

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### **Abstract**

*Orodel Commune, after the last administrative division in 1968, is composed of five villages: Bechet, Călugărei, Cornu, Tei and Orodel villages whose old names have been preserved over the time. Currently, Orodel commune covers an area of 83.72 km<sup>2</sup> having almost a hexagonal shape. It has the following "lands": North - Carpen Commune, South - Caraula Village, West - Verbița Commune and Plenița Commune and East - Vârtope Commune and Vela Commune. Orodel Village is located in the high plain of Bălăcița at the Southern limit of the Getic Plateau. In order to characterize milk production in the area, there were considered three species (cattle, sheep and goats) raised for milk production, total production and average yield per animal.*

**Key words:** milk production, livestock, potential

### **INTRODUCTION**

Orodel Commune, after the last administrative division in 1968, is composed of five small localities: Bechet, Călugărei, Cornu, Tei and Orodel villages whose old names have been preserved over the time, but they changed their affiliation and composition from an administrative census to another.

Currently, Orodel Commune covers an area of 83.72 km<sup>2</sup>, with a nearly hexagonal shape. It has the following "lands": North - Carpen Commune, South - Caraula Village, West - Verbița Commune and Plenița Commune and East - Vârtope Commune and Vela Commune. Orodel Village is located in the high plain of Bălăcița at the Southern limit of the Getic Plateau. [1], [2].

Orodel village has a population of about 5,000 inhabitants. The basic occupation is agriculture (livestock and crop production).

The commune has four kindergartens (Orodel, Cornu, Călugărei, Tei) and four schools (Orodel and Cornu - schools with classes I - VIII respectively Călugărei and Tei - schools with classes I - IV).

In the village there are two medical offices served by family doctors and health workers with secondary education [3].

Concerning the climate, the village is situated in the temperate continental with Mediterranean influence area, with hot summers and cold winters. The winds characteristic in the area are Crivățul, Austrul and Zephyr.

The communication paths are the roads, the village being crossed by DJ 561 D and a number of communal roads, some of them being modernized.

As mentioned, landforms are Belcigul Hill (14 m) and Glogovăț Hill (12 m), Ulmulețului, Cornului, Mare, Udubașniței, Vântului, Orodel, Scripețoaia, Bivolitei valleys. Besides these relief units, there are areas or plain plateau in the Southern and Northern of the village (the Călugărei-Bechet, consisting of Padina Mica and Padina Mare).

The hydrographic network is represented by the Vâlcău creek and Balaurului Water, which join together and flow into the Baboia or Baboiașul River. The village also has a hydrological planning of 11 hectares (about 150 million cubic meters of water).

For the period 2011-2013 one can observe a total area of 9,095 ha, of which 94.93% is agricultural land - 8634 ha and 5.07% is non-agricultural area - 461 ha.

**MATERIALS AND METHODS**

In order carry out this research work, it was needed a field documentation travelling in the territory to the Orodel Village Hall where the primary data where collected and then processed.

The data processing was based on the comparison method over time and the formation of structures related to certain indicators was also used. The data collected and analyzed covered the period 2011-2013, operating with average period.

**RESULTS AND DISCUSSIONS**

Table 1 shows the coordinates of milk production in the Orodel Commune, analyzing the herds in operation (Fig. 1), the total output which was obtained (Fig. 2) and the average production (Fig. 3) [8].

Milk production structure includes amounts provided by the following species of animals: cattle, sheep and goats.

For the production of cow's milk, the number of cattle used ranged from 216 heads in 2012 to 245 heads for 2013, while the average period reached 229 heads (Fig. 1).

The dynamics of the indicator highlighted uneven evolution of herds: -4.0% in 2012 compared to 2011, + 8.9 and 13.4% for 2013 to the terms of reference (2011 and 2012 respectively). Average ahead of 1.01 times the first term of dynamic series, but it was by 6.5 % lower compared to its previous term.

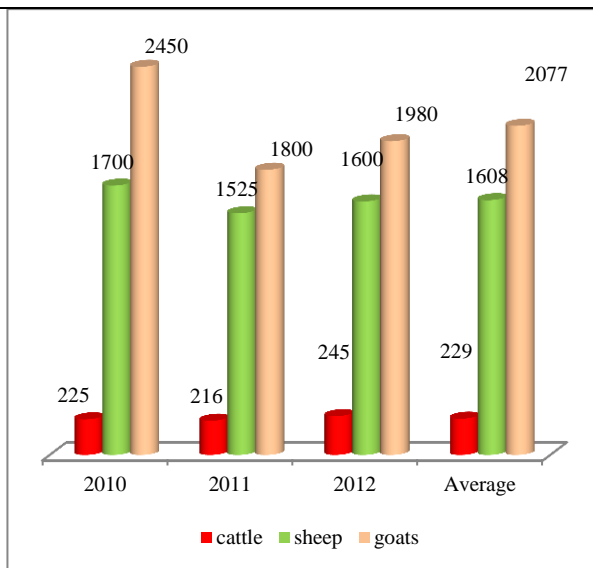


Fig. 1. The livestock (heads) used in total milk production (heads)

The sheep herds used for milk production ranged between 1,525 to 1,700 heads for the years 2012 and 2011 (Fig. 1). Under these circumstances, the average of the period was 1,608 heads (-5.4% compared to 2011 and + 0.5% compared to the specific situation of 2013-1,600 heads). An uneven trend was noticed, the annual declines of 10.3% in 2012 and increases for 2013 were of 4.9% compared to the previous year.

The stock of goats accounted for 2,077 heads with variation limits from 1,800 heads in 2012 to 2,450 heads in 2011 (Fig. 1). The indicator score registered both sub- and supra-unit value indices of components (73.5% in 2012, 80.8 and 110.0% in 2013, 84.8 and 104.9% for the period average).

Table 1. Milk production \*

Nr.	Specification	Year									Average 2011-2013			
		2011			2012			2013			Livestock	Dynamic		
		Livestock	I <sub>bf</sub>	I <sub>bm</sub>	Livestock	I <sub>bf</sub>	I <sub>bm</sub>	Livestock	I <sub>bf</sub>	I <sub>bm</sub>		I <sub>bf</sub>	I <sub>bm</sub>	
1	<b>Herds raised (heads)</b>													
1.1.	- cattle	225	100	100	216	96.0	96.0	245	108.9	113.4	229	101.6	93.5	
1.2.	- sheep	1700	100	100	1,525	89.7	89.7	1,600	94.1	104.9	1,608	94.6	100.5	
1.3.	- goats	2450	100	100	1,800	73.5	73.5	1,980	80.8	110.0	2,077	84.8	104.9	
2	<b>Total production (hl)</b>													
2.1.	- Cow milk	6412,5	100	100	6,264	97.7	97.7	6,630	103.4	105.8	6,435.5	100.4	97.1	
2.2.	- Sheep milk	2125	100	100	1,753.75	82.5	82.5	1,920	90.4	109.5	1,932.92	91.0	100.7	
2.3.	- Goat milk	5292	100	100	4,104	77.6	77.6	4,873	92.1	118.7	4,756.3	89.9	97.6	
3.	<b>Average yield (l / heads)</b>													
3.1.	- Cow milk	2850	100	100	2,900	101.8	101.8	2,706	94.9	93.3	2,810	98.6	103.8	
3.2.	- Sheep milk	125	100	100	115	92.0	92.0	120	96.0	104.3	120	96.0	100.0	
3.3.	- Goat milk	216	100	100	228	105.6	105.6	246	113.9	107.9	229	106.0	93.1	

Orodel Town Hall, statistical reporting data

The total cow milk production ranged between 6,264 hl in 2011 and 6,630 hl in the year 2013, the average of the period being 6,435.5 hl ( Fig. 2). The dynamics highlighted its fluctuation, the trend in 2012 is a decreasing one (-2.3% compared to the first term of the dynamical series) and one upward for 2013 (+3.4 and + 5.8% compared to the terms of reference). The average exceeded by 0.4% the first term of the dynamical series, but it was by 2.9% lower than the previous term (2013).

For sheep, it was recorded an average milk production of 1,932.92 hl (-9.0% compared to 2011, + 0.7% compared with the previous term of the dynamic series), which was based on the average levels sequential yearly from: 1,753.75 hl in 2012 (-17.5% compared with 2011), 1,920 hl in the year 2013 (-9.6% compared to the first term of the dynamical series and + 9.5% over the previous year of the dynamic series) 2,125 hl in 2011 (Fig. 2).

The goats supplied between 4,104 and 5,292 hl milk (2012 and 2011), meaning an average of 4,756.3 hl (in terms of a level of 4,873 hl 2013) as shown in Fig. 2.

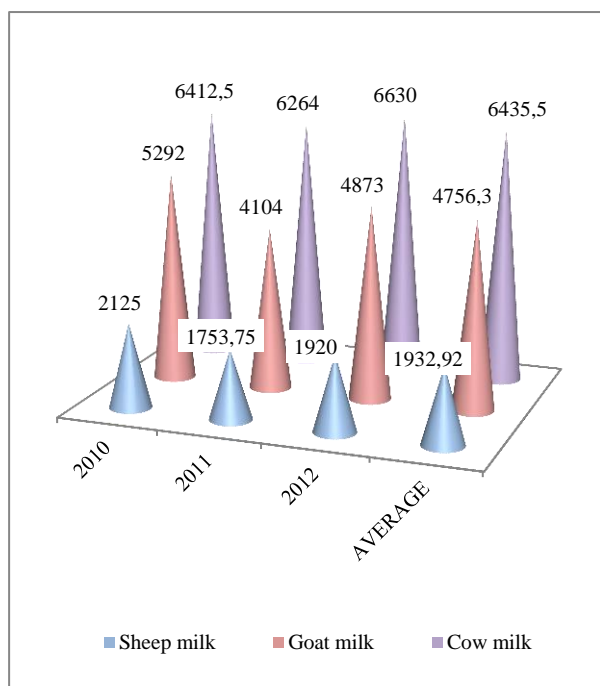


Fig. 2. Total milk production (hl)

The dynamics of the indicator highlighted the uneven development, decreased by 22.4% in 2012 compared to 2011, 7.9% compared to

the first term of the dynamical series in 2013, 10.1 % and 2.4% for the period average. The only value above the mobile base indices 118.7% appears in 2013.

Average production per cow was 2,810 l, with limits of variation from 2,706 to 2,900 l in the years 2013 and 2012 (Fig. 3).

The indicator has evolved unevenly, but at low limits (maximum exceeding benchmark was 3.8% for mobile based indices at period average, while the largest decrease was -6.7% in 2013 compared to the previous term of dynamical series).

In sheep, the average milk yield ranged from 115-125 l (2012 and 2011), the average period is 120 l (same level as in 2013) (Fig. 3).

The dynamics of indicator highlighted an uneven development, a decrease of 8.0% in 2012 (compared to 2011), followed by increases at the level of 2013 by 4.3% compared to the previous term of the dynamical series.

The goats are characterized by an average milk production of 229 l (period average) whose absolute variations were:- 13 l in 2011, -11 in 2012 and +17 l for year 2013 (Fig. 3). The indicator performed strictly ascending for the period under review (dynamics is dominated by above par levels of the components indices, except for those with mobile basis for period average, 93.1%).

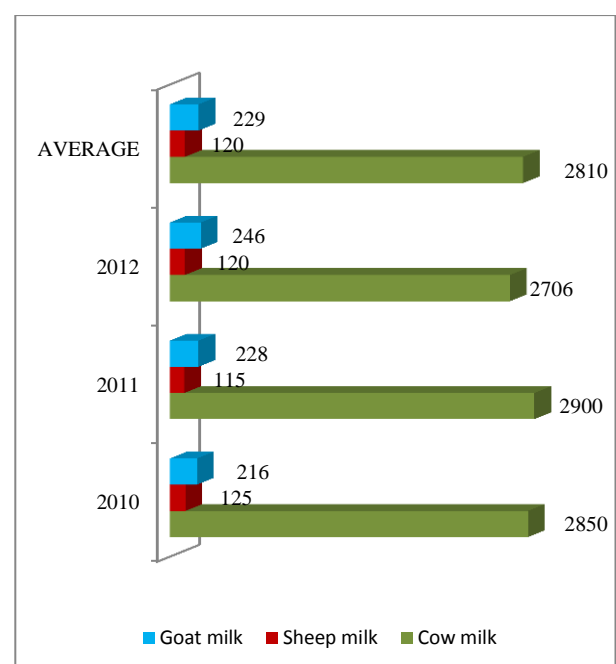


Fig. 3. Average milk production (liters / head)

## CONCLUSIONS

Orodel Commune due to its surface accounting for 9,095 hectares, representing 1.23% of the total county (741,401 hectares) [4], could be considered a medium-sized locality for Dolj County, due to the existence of 114 administrative territorial units (municipalities, cities and municipalities) [5]. Regarding livestock, the locality registered variable weights compared to the county level as follows: 2.47% for goats (2,282 to 92,192 heads); 0.89% for sheep (1,890 compared to 211,418 head); 0.68% in cattle [6].

If we compare the total production related to the livestock sector, the situation of the county highlighted the following shares: 2.50% of the production of sheep and goat (6,689.22 to 267,000 hl); 1.16% of total milk production (13,124.72 to 1.131 million hl); 0.74% of the total milk production of cows (6,435.5 to 864,000 hl) [7].

The structure of the total production of milk (13,124.72 hl) was as follows (Fig. 4): 49.04% cow milk hl 6,435.5; 14.72% sheep milk 1,932.92 hl; 36.24% goat milk 4,756.3 hl.

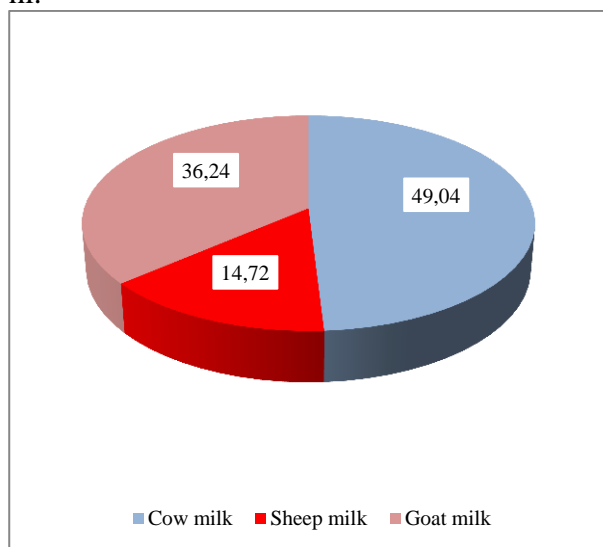


Fig. 4. The structure of milk production (%)

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