

RESEARCH ON PRODUCTION INDICATORS OBSERVED OF AUBRAC CATTLE BREED EXPLOITED IN ROMANIA

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Abstract

The present research consists in highlighting the production indicators observed in young Aubrac cattle, exploited in Romanian conditions. Data were collected from the zootechnical records of 20 beef cattle farms. These include information on the calving weight of calves, the average daily increase and the weight at 7, 12 and 18 months, respectively. Performance indicators were compared according to sex, with an average birth weight of calves of 35 kg in females and 35.2 kg in males. Higher average daily increases were observed in males. At the age of 7 months, an average daily increase of 1083 grams/day was observed in males and 944 grams/day in females. At the age of 12 months, an average daily increase of 959 grams/day was observed in males and 808 grams/day in females and at the age of 18 months, 935 g/day in males and 811 g/day in females. The productive performances observed after conducting this study are satisfactory for Romanian farmers, being in accordance with the exploitation conditions in our country.

Key words: Aubrac, performance, average daily increase

INTRODUCTION

The Aubrac breed is a very old breed from France, originating from the Aubrac mountains (south of the Massif Central), which in recent years has become an important object of interest for beef cattle breeders in our country. In general, the representatives of this breed are of medium size, reddish-brown color, darker around the eyes and snout that continues with white color, black skin, lyre-shaped horns, short neck, broad chest, muscular rump, short and strong legs [1]. They are rustic animals that have special biological properties, high resistance and adaptability to diseases and severe environmental conditions, with a very long longevity, being recognized for light calving. The breed is exploited mainly for meat production, although initially in the nineteenth century, this breed was highly valued for milk quality, with a production of about 2,200 kg of milk/lactation, containing about 4.13% fat [3;5]. They are very easy to maintain cattle, they make very good use of all categories of fodder, they adapt quickly to feeding on large,

poor pastures, without significantly influencing their level. productiv. They are well adapted to harsh local climates and can thrive very well when fed on poor quality pastures. Also, their body is very well adapted to store energy during periods of abundant food and then can reserve energy for less favorable periods. The Aubrac breed is famous for the special aroma and tenderness of the meat, with a high protein content, having a high degree of marbling, special taste and a very good bone/meat ratio. This ratio between meat and bones leads to a good carcass weight, consistent with a superior quality of meat, its subtle aromas make it one of the tastiest and most appreciated beef [2]. The first Aubrac cows from Romania were imported in 2013, directly from France. The acquisition of this breed was not a coincidence, but made after extensive documentation. The most important characteristics of the Aubrac breed were the extraordinary qualities of adaptation, the superior taste of the meat, as well as due to the very good growth increase [4].

MATERIAL AND METHOD

The data collected for the realization of this research come from the records of the ANGUS RO association, registered between 01.01.2019 - 30.09.2021. In this research, 20

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farms in which Aubrac cows are exploited were studied. The database included information on calving weight of calves, average daily increase and body weight of animals at 7, 12 and 18 months. Based on the collected data, the average of the productive indicators for each farm studied was calculated, according to sex. Thus, the productive performances of the studied animals were compared, according to sex. The obtained results being interpreted statistically.

RESULTS AND DISCUSSIONS

The weight of a newborn calf is about 10% of the weight of an adult cow, which is 30-40 kilograms [6]. The weight of calves born depends on sex and breed. Also, calves obtained from meat breeds have a higher

birth weight than calves obtained from dairy breeds. Average daily gain (ADG) is a performance measure that many beef cattle producers monitor. Average daily gain is simply the rate of weight gain per day over a specified period of time [7;8].

Table number 1 shows the average values of production indicators, reported by each of the 20 farms under study between 01.01.2019-20.09.2021. Thus, a sex division of Aubrac cattle was performed, for which the following indicators are represented: birth weight, average daily increase and weight at different ages (7 months, 12 months, respectively 18 months). In the case of some farms, no data could be obtained for the entire study period, but this was not an impediment in conducting this research.

Table 1 Production indicators (males/females) - Aubrac cattle breed reporting period: 01.01.2019-30.09.2021

Farm no.	MALES							FEMALES						
	BW kg	W 7M kg	ADG 7M g/day	W 12M kg	ADG 12M g/day	W 18M kg	ADG 18M g/day	BW kg	W 7M kg	ADG 7M g/day	W 12M kg	ADG 12M g/day	W 18M kg	ADG 18M g/day
1.	35	276	1225	305	750	503	989	34	277	1058	331	1059		
2.	37	233	842	367	1025			35	243	1128	317	757	448	893
3.	33			372	850	497	954	33	180	878	362	725	401	744
4.	35	188	787	372	970	475	774	31			331	889	441	777
5.	34	217	925	354	703			37	209	988				
6.	38	255	986	331	867			36	221	1008	306	966		
7.	37			360	1037			36	223	942	327	858	423	830
8.	33	180	811	308	841			38	220	875				
9.	36	250	1076			510	1002	33	199	861	334	854		
10.	36	284	1263					36	239	981	328	838		
11.	33			465	973			34	207	786	322	619		
12.	30	290	1161	366	1179			35	207	748	251	671		
13.	33	283	1310	391	1269			35			286	779		
14.	40	200	667					37	223	881				
15.	31			311	836			35	212	885	343	860		
16.	40	303	1266			670	1024	37	227	901				
17.	34	265	1081	482	1350			36	287	1221	255	773		
18.	36	267	889	433	1028			30			287	721		
19.	34			418	1038			34	222	867				
20.	39	276	1225	305	750	503	989	38	251	906	336	763		

Birth weight (BW), Weaning weight at 7 months (W-7M), average daily gain at weaning at 7 months (ADG-7M), Weight at 12 months (W-12M), average daily gain at 12 months (ADG 12M), weight at 18 months (W-18M), average daily gain at 18 months (ADG-18L)

As can be seen in Table 1, the weight of calves at calving varies between 30 and 40 kilograms. In the case of both males and females, at the age of 7 months when they

were weaned, average daily increases of approximately 700 grams/day were recorded, in some cases exceeding 1300 grams/day.

Table 2 Descriptive Statistics – Differences in body weight at birth by sex

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std.Error	Statistic	Std.Error
BW_M	20	30	40	35.20	2.764	.135	.512	-.452	.992
BW_F	20	30	38	35.00	2.128	-.765	.512	.445	.992

In table number 2 it is observed that in the case of males (BW-M) the minimum birth weight is 30 kg and the maximum weight is 40 kg, being obtained based on the statistical calculation an average of 35.2 kg

of males at calving compared to all 20 farms studied. In the case of females the weight (BW-F) the minimum at birth is 30 kg and the maximum 38 kg, being obtained based on the statistical calculation an average of 35 kg.

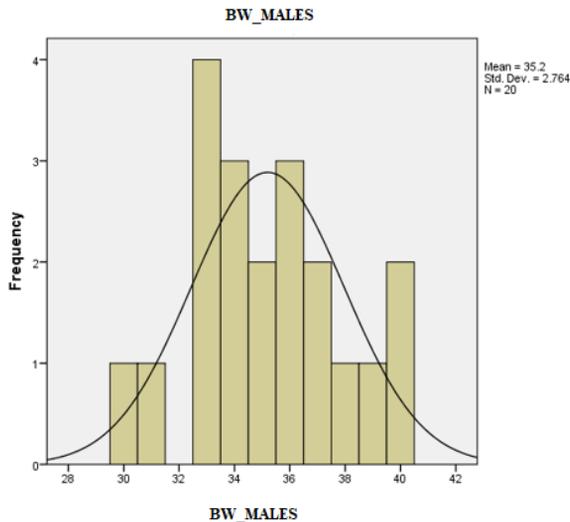


Figure no.1 Average birth weight for Aubrac males

The figure shown above (Fig.1) shows that four of the twenty farms studied reported in males an average calving weight of 33 kg. The highest calving weight was recorded in the case of two farms, reporting an average

of 40 kg. Carrying out the statistical average of all the averages reported by the 20 farms studied, an average weight of males at calving of 35.2 kg can be observed.

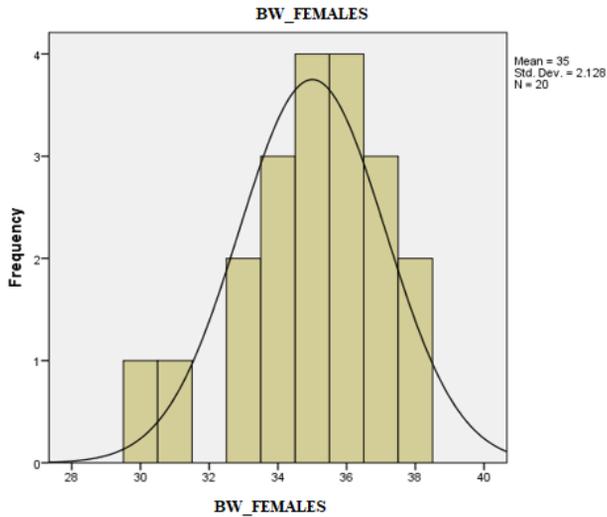


Figure no.2 Average birth weight for Aubrac females

Figure 2 shows the averages reported, by all 20 farms studied, on the weight of females at birth. It can be seen that 4 farms reported an average birth weight for the female of 35 kg and another 4 reported a weight of 36 kg.

The lowest average was reported by a farm, respectively 30 kg. It can also be seen that the maximum reported weight was 38 kg in the case of two farms.

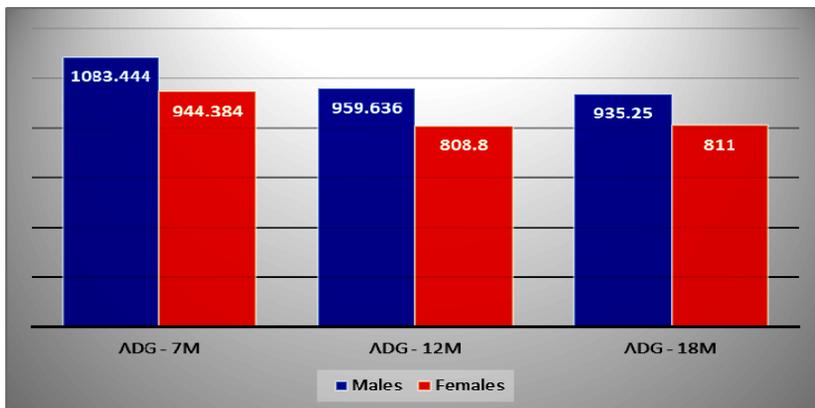


Figure no. 3 Average daily gain at different ages (males and females)

Figure 3. showed the average daily increase, determined at 3 different ages (7, 12 and 18 months) in both males and females. They are represented in the graph average values calculated from the data collected from all 20 farms studied. In the case of the Aubrac breed, the weaning of the calves is done at the age of 7 months, at which time a first weighing was performed, subsequently calculating the average daily increase, the

average obtained in the present research being 1083,444 grams/day for males, respectively a much lower average for females of only 944,384 grams/day. At the age of 12 months, a higher average daily increase can be observed also in the case of males, being observed an average of 959,636 grams/day compared to 808.8 grams/day in the case of females. At the age of 18 months, the last weighing of the Aubrac youth was

performed, with an average of 935.25 grams/day for males and 818 grams/day for females. From figure no.3 it can be seen that the average daily increase is higher in the case of males, females registering a lower average daily increase. In previous research, some researchers have observed that males have a higher body weight than females by 10-25%. Also, feed conversion, growth spurt and meat-to-fat ratio are better than in females [9].

CONCLUSIONS

The present research highlights the productive indicators of the youth of the Aubrac breed exploited in the Romanian conditions, observing average birth weights between 30 and 40 kg and average daily increases between 700 and 1300 grams / day. The observed performances are satisfactory for the Romanian farmers, being in accordance with the exploitation conditions in our country. Performance may vary considerably depending on the farming system, so it is recommended that Aubrac cattle benefit from a balanced diet with a high nutritional value.

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